



NATIONAL DEVELOPMENT PLAN 2013-2017



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REPUBLIC OF IRAQ
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Preface

A clear and defined path for development can only be mapped out through the creation of medium- and long-term plans and strategies built on sound methodology and an accurate reading of the economic, social, urban, and environmental reality. All the possibilities, problems, and challenges of distributing the available material and human resources across competing uses must be taken into consideration to maximize results for the national economy and the broader society.

Three years of implementation of the 2010-2014 National Development Plan have resulted in important successes in certain areas and setbacks in others. It's not fair to say that responsibility for the failures lies with the policies and programs adopted in the previous plan. The security and political dimensions of the surrounding environment, the executive capabilities of the ministries and governorates, the problems that continue to hinder the establishment and implementation of projects, weak commitment to the plan, and the weak link between annual investment budgets and plan priorities, along with the plan targets and the means of reaching these targets are all factors that contributed to these setbacks in certain areas and require that this plan be met with a high degree of compliance.

The official decision announcing the 2010-2014 National Development Plan document included following up on plan goals in 2012 to monitor achievements and diagnose failures. In addition, it included keeping up with world economic developments and the effects and repercussions of the financial crisis on all economic conditions, in particular oil prices and developments in oil production and exports in Iraq, expectations of increasing it over the medium term through oil licensing rounds, and the effects of this on the great increase anticipated in the resources available for development and relative improvement in security. All of these factors called for the creation of a new plan for 2013-2017 to align the data and transformations above so as to better respond to reality.

The 2013-2017 National Development Plan was created amid better security circumstances, relying on more precise and available data and information, and with financial resources expected to double what was available for the previous plan. More significantly, this plan built on the successes and failures that accompanied the previous plan, providing the circumstances and information to draft a plan that is more precise and comprehensive and capable of setting at its end stage the conditions for the Iraqi economy to take off and start to free itself from a revenue-generating economy dependent on a single resource, oil, to expanding its base to depend on other activities, whether production, service, or distributional.

The plan was prepared in accordance with the latest methods used in preparing national development plans, starting from its methodology and comprehensiveness to the cooperative method adopted at the various stages of its preparation. The 2013-2017 Plan defined the roles of the public and private sectors and civil society in achieving its developmental, economic, human resource, and environmental goals. Guidance was sought from governmental executive programs and the strategies and sectoral plans for all of the ministries and governorates, wherever located. Representatives from these ministries and governorates participated in building this plan alongside representatives from the private sector and civil society, and academic specialists. Donors and the international community also weighed in during the plan preparation stages, enriching the plan and deepening its transparency.

The national team has again proven its ability to carry out complex and complicated strategic national tasks in less than ideal circumstances. No matter how advanced and modern, this document remains one that will bear full fruit only by providing further security and political stability, blocking corruption and limiting its reach, and involving all development partners in the acceptance and implementation of the plan's programs.

Dr. Ali Yousef Al-Shukri
Minister of Planning
Head of the Higher Planning Committee
Baghdad, January 2, 2013

Acknowledgements

This national strategy document was completed after a full year of intensive and methodological work on the part of the leadership and specialist teams at the Ministry of Planning, with the active and dedicated participation of all ministries and non-ministerial agencies, governorates, private sector representatives, some civil society organizations, and a number of academics. On this occasion we must offer our thanks, appreciation, and acknowledgement to all who contributed to and participated in its preparation and production. First of all we thank His Excellency, the Minister of Planning, Dr. Ali Yusuf al-Shukri, Head of the Higher Planning Committee, who ably led and oversaw preparation of the plan and directed the Higher Planning Committee sessions, for the flexibility he gave to the technical and sectoral working groups to carry out their work, which had a tremendous effect on what was accomplished in the plan.

We also offer our thanks and appreciation to the Council of Representatives, the General Secretariat of the Council of Ministers, the Advisory Panel, the Office of the Deputy Prime Minister, and the Chairman of the Economic Committee. We thank all of the ministries and non-ministerial agencies, the Kurdistan region, all governorates, the unions and professional syndicates and their representatives on the plan preparation committees for their cooperation and active participation in the preparation of the plan. The Ministry also offers its utmost thanks and best wishes to *Tarabot*, especially the experts Mr. Nael Shabaro and Mr. Behnam Elias Putrus and their assistants for technical and logistical support during the development of the plan and their great work for the plan conferences in Baghdad and Erbil. We'd like to thank the United Nations Assistance Mission for Iraq and all affiliated agencies. We would specifically like to mention the Deputy to the Special Representative of the United Nations Secretary General, Amb. Jacqueline Badcock, and Mr. Peter Batchelor and his assistants for their continual support and ongoing follow-up and active participation in conferences and workshops related to the plan, and for providing their opinion on the draft plan and securing the expertise of two national experts for the entire plan preparation period.

The Ministry would also like to record its high regard and appreciation for the efforts expended by the heads and members of the plan's technical and sectoral committees and the ministry affiliates who effectively participated in the various phases of plan preparation, transforming the Ministry of Planning into a hive of activity during 2012 in order to complete this strategy document.

We also cannot forget to offer our highest appreciation for the efforts exerted by the national experts, Dr. Adnan Yasin Mustafa, Dr. Wafaa Al-Mahdawi, and Eng. Hisham Qasim Saoudi, for their distinguished technical contributions and active role in preparing the draft and final documents for the plan. We also value the great efforts that were exerted by the plan's higher and technical committee rapporteurs, Dr. Mays Sahib and Mr. Qais Ali Abdelhussein, as well as their assistants.

We hope this national effort forms a comprehensive development program putting Iraq at the starting point for building an efficient national economy that is competitive, diversified, and sustainable.

Dr. Sami Mati Polous
Deputy Minister of Planning for Technical Affairs
Head of the Technical Planning Committee
Baghdad, January 2013

Foreword

The plan seeks to lay a brick in the road of Iraq's return to the way Iraqi journalist Hussein Ali Mahfouz described it:

"Iraq is the Garden of Eden. This is where Adam fell. This is where humankind was born. This is where calligraphy was born. This is where history was born. This is where laws and legal codes were born, where civilization was born... a garden of plenty, an amazing carpet woven over the ages by many hands and cast in all colors, bringing together all forms. What a unique and exquisite tissue; a country of culture and civilization. Over every inch of Iraq's land is presence and civilization, and under every inch city after city... A country of gifts and achievements, a country of inventions, innovations, and discoveries, a country of messengers and prophets, saints and forefathers, the Companions and the Followers, honored by the imams, and boasting scholars, sheikhs, men of letters, writers, and poets. Truly get to know Iraq, and appreciate its true value..."¹

¹ *Hala Magazine*, Vol. II, February 2006, p.3

Introduction



I – Iraq's Geostrategic Importance

From time immemorial, Iraq has been described as the skull of the Arabs, the center of the earth, the material of cities, the heart of the world, the greatest of regions, the most noble of rank. It is said that "Iraq" means a water shore or sea shore and that it was named this because it is on the shore of the Tigris River or due to its proximity to the sea, or for the interlocking roots of its trees and palms. The name "Iraq" is Arabic or Arabized and has existed since long ago.¹ The name "Iraq" is mentioned in Arab historian and geographer al-Masudi's history of nations and kings more than 300 times.

Iraq is defined by its two great rivers. Humankind's response to the challenges posed by these rivers led to the construction of advanced irrigation systems and the flourishing of a civilization defined by water and the existence of a unified power capable of managing life. Its geographical location and topography of fertile oases and open borders made Iraq a center for diverse civilizations as well as conflicts inhabiting the wide hills and mountain ranges, fighting off migrations and invasions over history, and having a definitive effect on the population and cultural makeup of Iraqis as well as on the country's own makeup, existence and practices.

Defining the geostrategic role of any country depends, among other things, on the available potential and the relative characteristics of that country, aside from its location within the surrounding region and its demographic and ethnic characteristics, etc. Moreover, some countries have economic and cultural roles that go beyond the immediate area. A preliminary reading of the relative characteristics of Iraqi resources and potential shows that "according to geologic studies" Iraq contains around 530 geologic structures where the presence of a tremendous quantity of oil is strongly indicated. Of these, only 115 have been drilled, and 71 have proven to contain confirmed large oil reserves distributed across many fields. Seventy-one fields have been discovered, out of which only 27 fields have been used, and ten of these are immense. The spatial, economic, and geologic maps also show that Iraq contains a distribution of areas with metal deposits, and provinces rich with metal resources, whether in terms of the size of the reserve quantities available or the variety of these resources.

This great potential has made Iraq, with its tremendous resources, the holder of the three largest oil reserves in the world. It is tenth in natural gas reserves, making it an influential player among civilizations, a main actor in the world economy, and a strong competitor at the regional level.

¹ Longrigg, S. Hemsley, *Four Centuries of Modern Iraq*[1925], translated by Ja'afar Al-Khayat, 1425 AH, p.9.

This is aside from high capabilities on the level of production of oil derivatives at competitive prices to lower the costs of oil production and extraction in Iraq compared to other countries. Iraq also possesses competitive capabilities and expertise in the field of sulfur-related industries, in addition to the broad production of nitrogen and phosphate fertilizers aside from very high reserves of silicates that are considered among the purest in the world.

In addition to its outstanding human resources, God blessed the land of the Euphrates and Tigris rivers with diverse natural resources and a strategic position placing it in a geographic location opening out to the east and west. This provides an opportunity to build a dry canal for transportation to shorten the distances between the two and the economic and geopolitical advantages enriching the status and future importance of Iraq.

II – Why the 2013-2017 Plan?

Preparation of the 2013-2017 National Development Plan depended on a number of justifications which may be grouped as follows:

- Translating the official decision announced in the 2010-2014 National Development Plan document that there be developmental review of plan goals in the middle of 2012 based on Council of Ministers Decision No. 189 of 2010, to monitor achievements and diagnose failures to correct the plan's course and train its trajectories to harmonize and suit the directions of the country's economic policy at this phase.
- Keeping pace with world economic developments and the effects and repercussions of the financial crisis on overall economic conditions, especially oil prices and exports, considered among the issues governing identification of the financial resources available to Iraq.
- Developments in oil production and exports and expectations of increasing such over the medium term through oil licensing rounds and the ensuing increase in federal resources, for which planning must take place to ensure they be invested effectively.
- The nature of the challenges of the transformation to a market economy faced a troubled environment whose effects covered all elements of the Iraqi economy, as well as the delay in carrying out the stages and methodologies of transformation and the delay of supporting legal legislation such as the privatization law to an unnamed period, not to mention the faltering restructuring of the public sector and public institutions and the absence of the institutional environment supporting the private sector. These facts imposed a reality requiring a renewed planning vision to keep up with these challenges.
- Relative improvement in the level of security, although the political scene is still unstable.

III – Plan Preparation Methodology:

Building the plan depended on a realistic method for analysis and reasoning. A comprehensive analysis was done of the spatial, sectoral, and overall dimensions of the Iraqi economic reality for 2010-2011 and, wherever available, data for 2012. Public services, [central structures], the environment, and all different community and human development indicators were analyzed with a focus on vulnerable groups (women, children, the disabled, etc.).

The plan has strived [within its logical method] to analyze the development yield achieved in the implementation of the 2010-2014 Development Plan annual programs and the achievements and setbacks in the targets set in the plan in order that they might guide the elaboration of the visions, targets, and means of achieving these targets for each activity or service discussed. In summary, the plan, through its diagnosis of the reality and of the problems, constraints, possibilities, and development opportunities for each activity or aspect, has extracted the long-term vision for the sector or activity and translated this vision into quantitative and qualitative mid-term targets so as to suggest the means by which these goals can be achieved.

This plan, like its predecessor, depended on the collaborative method in its preparation at all stages, from setting out the general framework to diagnosing the reality and possibilities to defining the problems and challenges. The vision was sketched and translated into goals and means of reaching the targets; and members of the Council of Representatives, the ministries, non-ministerial agencies, provinces, the private sector, professional unions, relevant academics, civil society organizations, international organizations, and donors were involved. The partnership took on various forms as follows:

A higher committee for leadership and oversight of the preparation of the plan document was formed, chaired by His Excellency, the Minister of Planning. Membership included the governors of Basrah and Ninewa, the Ministry of Planning of the Kurdistan region, a member of the Council of Representatives, ministry deputies, of the ministries and advanced cadres, a member of the advisory board, representatives of the Office of the Deputy Prime Minister for Economic Affairs and the General Secretariat of the Council of Ministers, and members of professional unions. The responsibilities of these individuals were centered on establishing the plan's general framework and development model as well as its development trajectories and priorities. Responsibilities also included establishing the plan's overall budget from revenues and expenses, determining the development of the percentage of investment expenses to operational expenses, and establishing the overall economic accounts for the plan and the population growth rate.

The technical committee was formed, chaired by the technical deputy to the Ministry of Planning. Members included representatives from the Ministries of Finance and Oil as well as the Central Bank of Iraq, heads of the plan's sectoral teams, and plan academic experts. The committee assumed the tasks of elaborating the work methodology, mechanisms, and overall framework for the plan, as well as setting out the background papers for the plan, distributing responsibilities and roles of the sectoral committees, following up on progress made, and submitting the results to the higher committee for approval.

Twelve sectoral committees were formed, chaired by a deputy minister or director general in the Ministry of Planning and members of the relevant sectoral ministries, local and international academic experts, and representatives of the relevant professional unions. All assistant governors and representatives of the Kurdistan region took responsibility for preparing the background studies and papers for the plan, each in their specialization. These committees are:

Macroeconomic Committee
Plan Fiscal Revenue Accounting Committee
Population Studies and Workforce Committee
Agriculture and Water Resources Sector Committee
Industry and Energy Committee
Transportation and Communications Committee
Building and Construction Committee
Human and Community Development Committee
Spatial Development Committee
Environmental Sustainability Committee
Private Sector Committee
Good Governance Committee

- The first conference was held in cooperation with the United Nations Development Program and the Tarabot program in May 2012 at the Al-Rasheed Hotel. In attendance was a representative of the Prime Minister and a number of ministers and others holding similar titles, the Secretary General of the Council of Ministers and a number of governors and heads of governorate committees and their assistants, deputy ministers and representatives of all the ministries and governorates, representatives of international organizations working in Iraq, donor country representatives, professional unions, and the private sector as well as a number of academics for a total of about 400 people. During the conference, the development yield realized during 2010-2011 from the previous plan was presented and the successes and failures of this yield were evaluated. A discussion was held about the philosophical framework and development model of the plan and the values adopted by the 2013-2017 plan. The visions and strategic targets for the plan sectors and their various activities

were presented, and the outcomes of this conference were used in constructing the plan chapters.

- The second conference for the plan was held in Erbil from November 11-13, 2012 under the sponsorship of the Prime Minister and head of the Economic Committee, Dr. Roz Nuri Shawees, in cooperation with the United Nations Development Program and the Tarabot program. In attendance were representatives from all of the international agencies and organizations. The number in attendance exceeded 500 people out of which 50 were specialists from the various international organizations working in Iraq. Twenty-five specialized papers were discussed in addition to the plan's general framework. Over three days, the results produced by the committee and the observations received by the ministry from the international organizations, professional unions, ministries, non-ministerial agencies, and governorates were reflected in the final form of the plan by the drafting committee, chaired by the technical deputy and plan experts.

This collaborative drafting process included absorbing the quantitative and qualitative trajectories, data, and indicators of all the ministries and the provinces and benefiting from international trends. Further, it is not possible to describe this as a national plan without mentioning the great effort of the Ministry of Planning in preparing this national strategy document.

V – Data and Information Sources

Creation of the plan depended on the Ministry's specific strategies and plans such as the energy and industry strategy, the environment, education, and youth strategy and others, aside from the plans and studies published by the Ministry of Planning and the relevant ministries and the governorate development plans which were the foundation for elaborating the plan's main sectoral visions and trajectories. The great improvement made by the Central Statistical Organization (CSO) in its surveys and periodical statistical reports actively contributed to the analysis of the current reality of all the plan's various development indicators, especially the human and community development indicators, the deprivation, poverty and unemployment indicators, and the Millennium Development Goals indicators.

The improvement in the abilities of the different ministries to elaborate detailed plans for their activities as well as the improvement in the specificity and comprehensiveness of statistical data was the main factor in increasing the degree to which the plan's targets and indicators were quantified as compared to its predecessor. This improvement eases follow-up on its implementation and ensuring the designated targets are reached.

VI – Obstacles to Plan Preparation

Elaborating realistic development plans requires a high level of security and political and economic stability. This requirement was missing to some extent during the preparation of this plan, making the opportunities for translating it into success on the ground uncertain, especially as concerns the contribution of the private sector to the local and foreign sides, forming a challenge for the plan drafters. Iraq's development continued to depend on oil as a sole resource, making the achievement of the designated targets sensitive to any changes in oil prices or any decreases in oil production or exports.

The plan preparation process also met with varying responses and weak representation of some agencies, which resulted in some gaps in coverage of certain aspects, especially as concerns the lack of qualitative information which in turn affected the ability to measure certain qualitative indicators.

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Development in Iraq: Trajectory and Horizons



1-1 Development Yield of the National Development Plan

Development Yield of the 2014-2010 National Development Plan

The first years of the 2010-2014 National Development Plan were witness to a series of factors, internal and external, some push and others pull. These factors positively or negatively impacted economic performance, leaving their mark on aggregate, sectoral, and spatial variables, and hence on development achievement rates as evidenced by 2009 base year values.

1-1-1 Economic Growth: Near-Target Rates

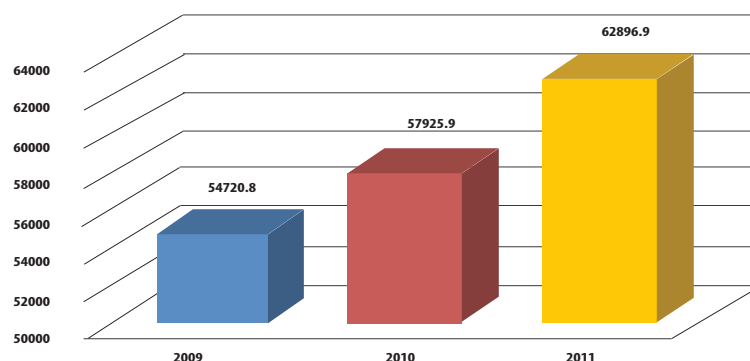
Iraq did not witness structural changes to its economy. The general trajectory confirms the precedence of the oil sector in driving GDP, and this is in line to some extent with the direction of the plan's investment policy at this phase, which calls for temporary acceptance of a single-commodity economy in order to increase oil production and export rates, boosting Iraq's financial position with a development financing incentive and a rebuilding program. For that reason, the structural imbalance of the economy in 2009-2011 was intentional on the surface, however, and could possibly be sustainable over the course of decades.

One: Gross Domestic Product: Quantitative and Qualitative Trajectories

Quantitative trajectories achieving the target:

- The plan aimed to achieve a 9.38% increase in the GDP as the average annual growth rate during the years of the plan. The data indicates that the GDP at constant prices achieved a growth rate of 5.9% in 2010 and 8.6% in 2011, which is good compared to the overall target rate of the plan. The government's continued efforts to implement the economic and social reform programs were supported by governmental initiatives like the agricultural initiative. In addition, the effort to improve and activate economic management efficiency, especially in the oil sector played a role in the progress made toward achieving the target.

Figure 1-1: GDP 2009-2011 GDP at constant prices in millions of IQD



- The Statistical Compass recorded a significant increase in the GDP including oil at constant prices for 2009-2011, increasing from IQD 54720.8 million in 2009 to IQD 57925.9 million in 2010. It continued to increase in 2011 to reach IQD 62896.9 million with an annual rate of change of 8.6% compared to 2010. The increases in the GDP played a positive role in the push toward reaching the target set in the plan of 9.38%. The GDP excluding oil at constant prices increased from IQD 36088.6 million in 2009 to IQD 34115.3 million in 2010 and to IQD 36088.6 million in 2011, for an annual growth rate of 5.7%.

Table 1-1: GDP Including and Excluding Oil and Per Capita GDP for 2009-2011 at Constant Prices (100=1988)

Section	2009	2010	2011
GDP including oil (millions of IQD)	54720.8	57925.9	62896.9
GDP excluding oil (millions of IQD)	30910.6	34115.6	36088.6
Per capita GDP (1000s of IQD)	1.7	1.8	1.9

- Per capita GDP increased from IQD 1.7 million in 2009 to IQD 1.8 million in 2010, with an annual rate of change of 5.9% compared to 2009, and continued to increase to IQD 1.9 million in 2011 for an annual rate of change of 5.6% compared to 2010, thereby exceeding the effect and ramifications of that crisis on the oil market.

Qualitative Trajectories: Imbalance and Distortion

- The contribution of commodity activities including oil to the GDP at current prices increased from 57.1% in 2009 to 60.8% in 2010 and to 66.9% in 2011, while the contribution of distributional activities including oil constituted no more than 15.3% in 2009, decreasing to 14.8% in 2010 and to 12.8% in 2011. Similarly, the contribution of service activities to the GDP decreased from 27.6% in 2009 to 24.4% in 2010 and to 20.4% in 2011.
- These facts confirmed that the oil sector continues to hold the leading position in generation of the GDP, perpetuating the seriousness of deformities in the economic structure and continuation of the single-resource economy. The target raised in the plan of distributing the production base was carried over to future stages.

Table 1-2: Relative Significance of Economic Activities to the GDP Including and Excluding Oil at Constant Prices for 2009-2010

Economic Activity	2009 %	2010 %	2011 %
Commodity activities including oil	59.1	58.9	59.5
Commodity activities excluding oil	27.4	29.8	29.1
Distributional activities	9.6	10.5	10.7
Distributional activities	17.1	17.9	18.7
Service activities including oil	31.3	30.6	29.8
Service activities excluding oil	55.5	52.3	52.2
Total	100	100	100

- The contribution of commodity activities excluding oil to the GDP increased from 27.4% in 2009 to 29.8% in 2010 and fell to 29.1% in 2011, while the contribution of distributional activities increased from 17.1% in 2009 to 17.9% in 2010 and to 18.7% in 2011. Service activities contribution excluding oil to the GDP was in a leading position over the remaining activities at 55.5% in 2009 and decreasing to 52.3% in 2010 and to 52.2% in 2011. The nature of the sectoral investment policy applied in 2009-2011 and the executive procedures relied on to translate these targets may be one explanation for this hierarchy.
- The agricultural sector contributed 7.3% of the GDP including oil in 2009 at constant prices, and increased to 8.1% in 2010 then fell to 7.6% in 2011, while the contribution of the manufacturing industries to the GDP was only 2.9% in 2009 and 2010 and decreased to 2.7% in 2011. The contribution of the oil, mining, and queries sector occupied the leading position in the GDP with 43.9% in 2009, decreased to 41.7% in 2010 due to the ramifications of the world financial crisis, then increased again to 42.9% in 2011.

Two: National Income and Per Capita Income: On the increase

- The size of the national income increased from IQD 120,428.4 billion in 2009 to IQD 143,029.6 billion in 2010 at current prices and to IQD 188,041.2 billion in 2011 for an annual rate of change of 18.8%. This increase was achieved through a concurrence of international and local factors together. The impact of the world financial crisis on oil prices and international demand for oil both lessened. This, in addition to investment policy responsiveness to the targets adopted in the plan to make the oil sector occupy the first position on the investment ladder allocations at 15% of total investments, all had an active effect on that increase.
- Per capita GDP at current prices increased from IQD 3,803,300 in 2009 to IQD 4,409,500 in 2010 and to IQD 5,659,300 in 2011 for an annual rate of growth of 15.9%.

1-1-2 Investment and Sources of Financing: Financing attained and completion delayed

One: Planned and Actual Investment

Ministry Annual Investment Programs

The idea behind the mid-term 2010-2014 National Development Plan was born out of the failures and problems faced in preparing annual investment programs after 2003 and the accompanying difficulties of instituting a comprehensive mid- and long-term development vision and defining and integrating program priorities. In addition, the gap between planned and actual investment expanded as evidenced by the financial implementation efficiency indicator. This indicator showed a decrease in most economic sectors, generating high risk consequences, increasing costs, leading to deterioration in public services and infrastructure and a failure to meet targets and establish the designated economic and social programs. All of this was reflected negatively in the performance of the national economy and the social welfare of citizens, specifically the poor segments of society, and the weakening of the large investment returns the state had worked to allocate to the investment areas.

Annual investment programs in 2010 included around 2,220 projects which increased to 2,371 in 2011, while the regional development program included 1,368 projects in 2010 rising to 2,161 projects in 2011. This plan was designed to express the development trajectories incorporated in the five-year plan, which the ministries and governorates are responsible for implementing, and strives to establish the following fundamentals:

- Provide the requirements for economical building by focusing on urban infrastructure projects.
- Generate work opportunities by implementing investment projects.
- Provide the necessities for making security and stability opportunities succeed by granting them priority in implementation.
- Improve quality of life by giving priority to meeting the basic needs of citizens and providing better services by the state.

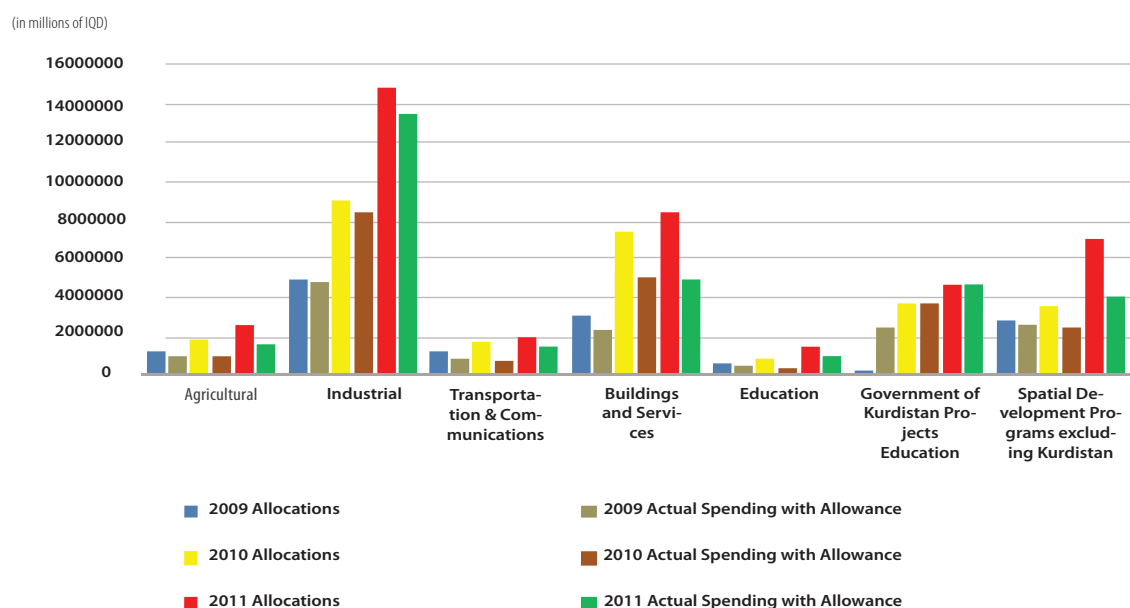
Allocations for investment programs planned for the first year of the plan, including the regional development program and the Kurdistan region and marshland restoration programs, recorded an amount of IQD 25,683,111.6 million, while actual investment spending reached IQD 19,895,190.0 million with a fiscal spending rate of 77.5%, which is less than 2009 which was 88.6% (Figure 1-2). The chart also indicates an increase in planned investment for 2011 where it reached IQD 38,212,789.8 million, while actual investment for the same year was IQD 28,809,059.66 million with a fiscal spending rate of 75.4%, which is less than 2009 and 2010. Delayed project implemen-

tation and the problems and obstacles faced by the ministries and governorates in implementing projects, especially those problems related to the inefficiency of the companies responsible for project implementation, the delay in the allocation of land, and contractual problems explain the decline in fiscal spending during plan years.

Sectoral distribution of those planned and actual investments reflect the following facts:

- Planned investment program allocations (including the regional development program, the Kurdistan region and marshland restoration programs) recorded an increase from IQD 15,083,111.5 million in 2009 to IQD 25,683,414.6 million in 2010 and to IQD 38,212,789.8 million in 2011, thereby harmonizing to a great extent with the plans' sectoral, social, and physical development priorities.
- National Development Plan investment priorities were distributed by giving the oil and electricity sectors advance priority, as the oil sector is the main source for development financing, and the electricity sector is a main foundational block for achieving any growth and development in the production and services sectors. Within in this pathway, the industrial sector enjoyed the highest share of planned investment allocations, increasing from IQD 4,577,404 million in 2009 to IQD 8,312,072.4 million in 2010 and to IQD 13,731,246.8 in 2011. However, fiscal spending decreased from 96.9% in 2009 to 93.5% in 2010 and to 91.1% in 2011.
- In terms of significance, the industrial sector follows the building and services sector where total allocations for this sector increased from IQD 2,859,392 million in 2009 to IQD 6,789,842.6 million in 2010 and to IQD 4,609,023.6 in 2011. However, financial implementation efficiency decreased from 75.7% in 2009 to 69.3% in 2010 and to 59.1% in 2011.
- Investment allocations for the agricultural sector increased from IQD 1,098,255 million in 2009 to IQD 1,633,233.0 million in 2010 and to IQD 2,310,672.4 million in 2011. However, financial implementation efficiency greatly decreased from 83% in 2009 to 52.9% in 2010 and rose again to 61.6% in 2011. This increase is explained by the state's enhanced interest in the agricultural sector and in agricultural initiatives.
- The education sector witnessed a decrease in fiscal spending from 75.4% in 2009 to 36% in 2010, and an increase to 57.8% in 2011. The transportation and communications sector indicated a fiscal spending efficiency of 73.7% in 2009, which decreased to 43.5% in 2010 then increased again to 71.9% in 2011. The result was a decrease in investment implementation efficiency at the level of all economic sectors from 88.6 in 2009 to 77.5% in 2010 and to 75.5% in 2011 for the Iraqi public including the Kurdistan region which saw an increase in investment allocations from IQD 2,303,338 million in 2009 to IQD 3,438,448.404 million in 2010 and to IQD 4,354,964.253 million in 2011. Investment implementation efficiency also increased from 99.2% in 2009 and settled at 100% in 2010 and 2011.

Figure 1-2: Planned and Actual Investment by Economic Sector, 2009-2011



Regional Development Program

The aim of the program is to reduce development fluctuation among the governorates and their administrative and services units, and the central support structure through allocating a certain percentage of the investment budget placed under the disposal of the governorates and its related councils for its distribution across the activities and sectors decided by the local administrations within its developmental priorities, encouraging decentralized development management in Iraq as a constitutional principal. In this regard, the most prominent features of this program can be summarized with the following:

- Inter-regional development program allocations (excluding Kurdistan) formed 12.7% of total investment allocations for 2010 and 12.8% for 2011, thereby agreeing with the percentage set out in the development plan of 12.5%.
- Total allocations of the interregional development program (excluding Kurdistan) increased from IQD 2,568,319 million in 2009 to IQD 3,265,644.3 million in 2010 and to IQD 6,534,790.6 million in 2011, while financial implementation efficiency decreased from 92% in 2009 to 67% in 2010 and to 56.6% in 2011, indicating a decline in development efforts and the inability of the governorates to translate the targets set in the program.
- There is a clear variation in the rates of program implementation in certain governorates; while implementation rates in Kurdistan and some central and southern governorates indicate an increase, there is a decline in implementation rates in other governorates due to security conditions or a decline in the executive power and capabilities there, as indicated in Figures 1-3 and 1-4.

Figure 1-3: Relative Significance of Inter-Regional Development Program Allocations for 2009-2011

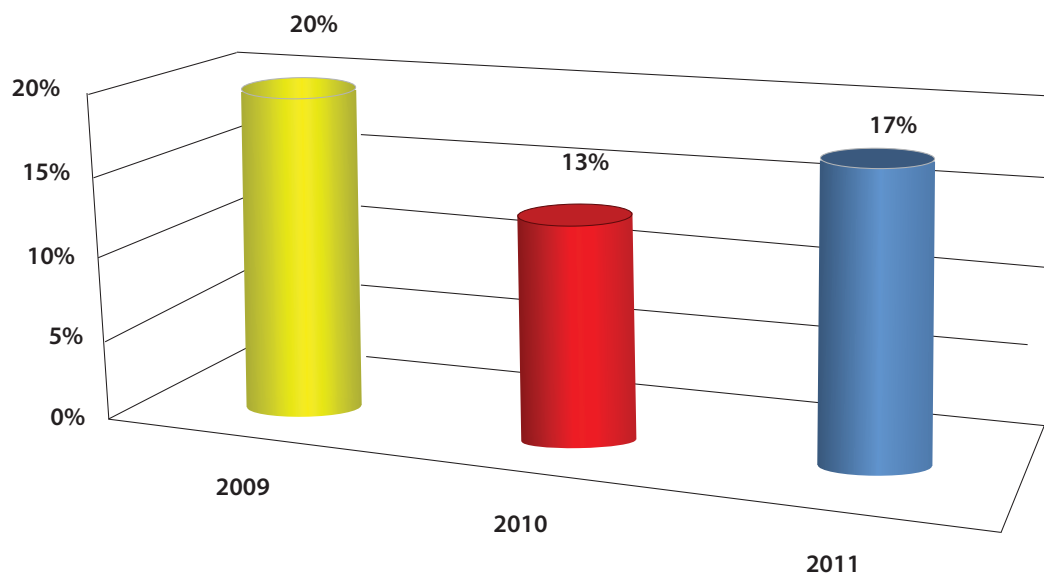
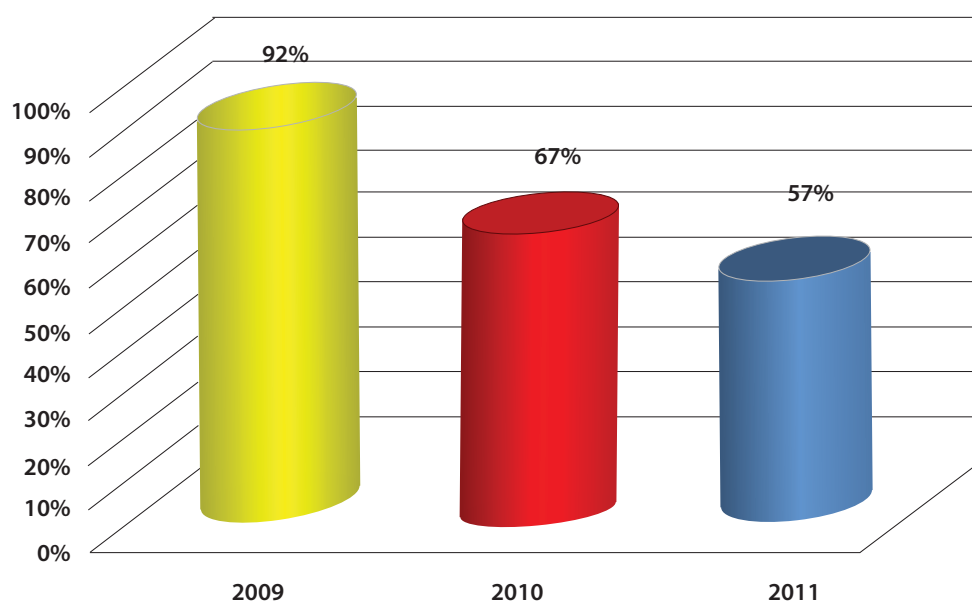


Figure 1-4: Inter-regional Development Program Project Implementation Rates for 2009-2011



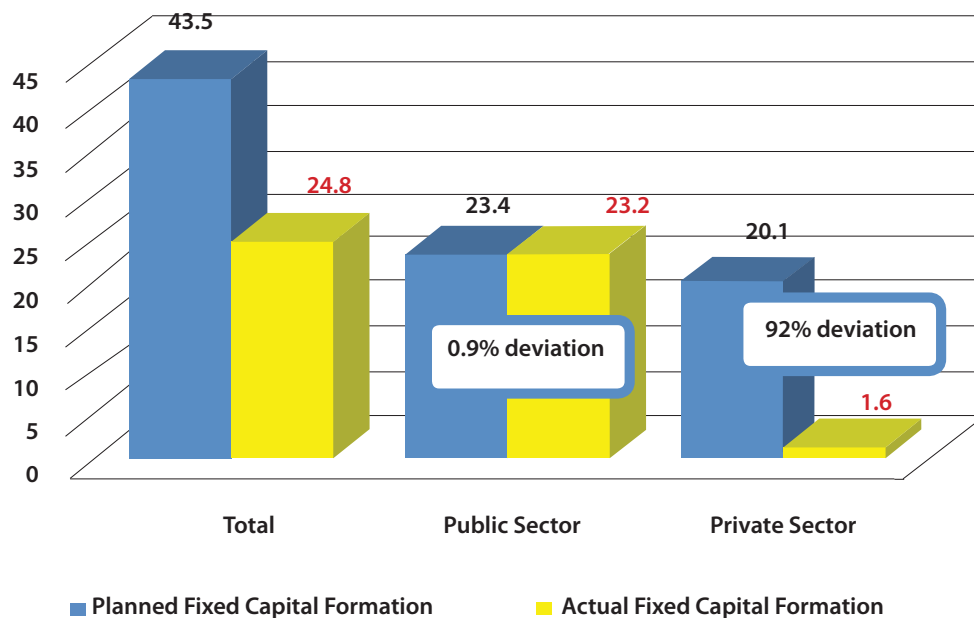
Two: Fixed Capital Formation

- Total fixed capital formation at constant prices increased from IQD 5,919.8 million in 2009 to 10,155.5 million in 2010, with an absolute increase of IQD 4,235.7 million and a percentage increase of 71.6%.
- The public sector played the role of the biggest investor during 2009-2010. It had the distinct role in fixed capital formation which increased its contribution

from 93.2% in 2009 to 96.3% in 2010. The oil sector's continuation to hold its position as a developmental pole and main source of hard currency and investment financing explains the central and distinct role of the public sector.

- The private sector contribution to fixed capital formation decreased from 6.8% in 2009 to 3.7% in 2010. This percentage makes us take great pause before the plan's presumptions regarding the responsibility of the private sector for financing 46% of total plan investment. The distance from this goal can be explained by the continued weakness of the investment environment and its inability to attract the private sector into investments.
- Total fixed capital formation fell short of the planned goal of IQD 37.3 trillion for 2011 at current prices and IQD 24.8 trillion at constant prices for 2010 with a deviation of -43%.
- The deviation of private sector contributions to fixed capital formation planned increased IQD 24.8 trillion compared to the actual contributions of IQD 1.6 trillion, for -92%, while the deviation of public sector contributions to fixed capital formation planned did not exceed IQD 23.4 trillion, reaching IQD 23.2 trillion for -0.8%.

Figure 1-5: Planned and Actual Fixed Capital Formation for 2010 at Current Prices Distributed by Public and Private Sector (IQD trillions)



1-1-3 Public and Private Sector Contribution: Silent Roles

- Both public and private sector contributions to the GDP at current prices for 2009-2010 are characterized by relative stability. Public sector contributions reached 66.1% in 2009 and decreased to 65.4% in 2010, while private sector contributions to the GDP did not exceed 33.9% in 2009 and raised slightly to

34.6% in 2010 to confirm the modest role of the public sector in development activity management, as evidenced by its contribution to fixed capital formation which didn't exceed 1.6%, constituting 6.4% of total fixed capital formation at current prices in 2010.

- The relative significance of private sector contributions to the GDP at current prices differed by economic sector. Agricultural, ownership of dwellings, and personal services activities reached 100%, while the private sector contribution to manufacturing industries reached 27.9% in 2009 and increased to 39.7% in 2010. This increase is explained by the increase in the number of private-sector industrial enterprises, whether large, medium or small scale. Large enterprises increased from 412 in 2009 to 420 in 2010, while medium-scale enterprises increased from 50 in 2009 to 55 in 2010. The number of small businesses increased from 10,289 in 2009 to 11,126 in 2010.
- The investment policy for the private sector was characterized by a lack of diversity and a reliance on traditional models despite the plan's aim to open investment fields in all the different economic, social, and service activities. The percentage of private-sector contributions to the GDP in the educational and health sectors did not exceed 15% of the total GDP in both sectors for 2009-2010. This indicates the lack of the sector's flexibility in diversifying its activities.
- The total number of investment projects for the private sector approved by the National Investment Authority at the governorate level reached 281 projects in 2010 valued at USD 10.1 billion and increased to 298 projects in 2011 valued at USD 13.2 billion. Total investment allocations for these projects reached USD 23.3 billion and constituted only 27% of the total private sector investment included in the plan, which is IQD 100 trillion, i.e., USD 86 billion. These contributions will seem more modest if reference is made to the amount of investments approved and which have actually gone into implementation.
- On the other hand, this percentage may appear to have decreased when it in fact has increased, as evidenced by the oil licensing rounds, construction activity, and growing population and urbanization, which are driven by private sector investments. However, the scarcity of data and information on the activity of this sector and the unavailability of data on investment in Kurdistan may be among the causes explaining the apparent decrease in the actual investment percentage stipulated in the plan.
- Despite the existence of laws supporting the private sector participation in qualifying public companies, like State Companies Law No. 22 of 1997 and the adoption of the annual plan to announce companies that the state wishes to qualify. Although 76 investment files were completed up to 2010 and the qualification of 18 industrial companies was announced in 2011, the openness of private sector investors to these companies was weak due to hesitation of the companies.

1-1-4 Financial and Monetary Targets: Harmony and Division

1-1-4-1 Financial Policy: Budgets Responsive to Consumer Spending

The goals of the fiscal policy applied in Iraq through its public budgets for 2010 and 2011 extended from government policies included in the Prime Minister's address to the national partnership government on December 22, 2010, the 2010-2014 National Development Plan, and the 2009 Poverty Alleviation Strategy. The fiscal reforms made are embodied in two federal budget strategies, first, the 2011-2013 budget strategy and second, the 2012-2014 mid-term federal budget strategy. The substance of the reform is represented by:

- ▶ Deficit reduction by establishing high aggregate expense ceilings.
- ▶ Development and rebuilding by raising investment spending to 50% of total public spending.
- ▶ Adoption of a fixed hedge price for oil based on realistic and rational estimates.
- ▶ Increase non-oil revenue by budget support for the mechanisms for the transition to a market economy by expanding the tax base.
- Iraq continued to adopt budget items in designing and implementing its fiscal programs with all the faults and loopholes involved but there were bright moments in the course of this trajectory, as follows:
 - ▶ Adoption of [a medium fiscal framework] to analyze the results of budget preparation and implementation in prior years.
 - ▶ Reliance of the 2010 and 2011 budget on poverty indicators when distributing spending allocations to certain activities among the governorates, based on degree of deprivation.
 - ▶ "The resource at the source": one of the standards approved in the 2011 budget allocating petrodollar returns to governorates producing and harmed by oil wealth production.
- The public budget for 2009-2011 continued to rely in estimating its revenues on a single probable hedging price that was characterized by rigidity and lack of flexibility toward influencing the mechanisms for changing public budget resource outflow, and hence its expenses. The Iraqi economy started to grow when it retained oil financial resources resulting from the positive external supply shock and this effect diminishes when spending leaks surpass the level injected into the economy.
- The 2009-2011 federal budget relied on oil revenues as a main source of financing its expenses at 88.47% in the 2009 budget, decreasing to 85.68% in the 2010 budget, and to 90.19% in the 2011 budget, making the performance of the fiscal policy and extent of the ability to achieve the targets related to or

concurrent with the positive and/or negative effects that the external supply shock left on the international energy market.

- Non-oil revenues formed only 11.53% of the 2009 budget, increased to 14.32% in 2010 and decreased to 9.81% in 2011. The percentage of tax revenues of total public revenues was 6.04% in 2009, decreased to 2.12% in 2010, and to 1.78% in 2011, indicating the lack of effectiveness of the tax policy in accomplishing its fiscal function.
- The federal budget did not witness a fundamental change in treatment of the imbalance in the public spending structure. Public spending continued to lean in the favour of operational expenses over investment expenses in the 2009-2011 budgets. Operational expenses made up 82.6% of total public spending in the 2009 budgets and decreased to 77.8% in 2010 then went on to increase to 80.44% in the 2011 budget. Hence, investment spending increased from 17.4% in 2009 to 22.2% in 2010 then decreased to 19.56% in 2011. This imbalance in the public spending structure can be explained by the consumer welfare indicators and the apparent expansion of [free riding] in the economy.
- Spending on salaries and wages out of the total operational spending increased to reach 52.8 in 2009, however, it decreased to 32.4% in 2010 then increased again to 54% in 2011. The remaining operational spending inputs that enter into the scope of manufacturing expenses formed 46.7% in 2009, increased to 67.5% in 2010, and decreased to 46% in 2011. These increased percentages place some of the investment goals announced in the plan beyond the reach of the deadlines of the plan and transfer the burden of the present period and its failures to the next generation.
- The Iraqi economy continued to be exposed to effective aggregate demand pressure, which had a major impact in doubling the spending budget. The effects of this started to surpass expansion limits in the fiscal policy itself generating an enormous gap. Monetary policy worked in excellent harmony to narrow this gap by using all available tools, decreasing the inflation rate from 7.1% in 2009 to 2.5% in 2010. It then rose to 5.6% in 2011. With this, the inflationary effects on the public budget became evident, as long as it was fed by income not subject to compound taxes which, if approved, would enable the public budget to reach an economic balance through a doubly balanced budget.
- The public budget swung between a deficit and a surplus during the 2009-2011 period, and then vacillated, influenced by external shock factors, whether positive or negative. This caused a deficit in the 2009 budget of IQD 346.2 billion in 2009, a surplus in the 2010 budget of IQD 116.023 billion, and a higher surplus in the 2011 public budget of IQD 30,359.3 billion, caused by the rise in the prices of crude oil and increasing production and export rates.

1-1-4-2 Monetary Policy: Functions Performed

Management of monetary policy is one of the most important functions of the Central Bank of Iraq based on Article 4 of Law No. 56 of 2004. That policy has strived to provide opportunities for economic stability by influencing and controlling liquidity levels and directions, stabilizing local prices, maintaining work opportunities, and achieving development. It also played a pivotal role in strengthening the essentials of economic growth through its indirect monetary policy tools such as the rediscount price, compulsory reserve requirements, open market operations, and options for managing liquidity like treasury transfer auctions and inter-bank loans.

The trajectories of that policy were tied to basic reform procedures. The target of strengthening monetary market ties and brokerage operations coincided with the needs of stabilizing the foreign financing market and supporting the stability of the foreign value of the Iraqi dinar. The concurrence of these two elements led to two strong pricing market indications which were adopted by the monetary policy to reach its stated targets: the interest rate and exchange rate indicators of the Iraqi dinar against the dollar. This strengthened the monetary transfer mechanism to affect the balance of the monetary market and hence the stability of actual activity. Thus, the monetary policy that has been adopted since 2003 produced its results by choosing the suitable nominal stabilizers. The monetary policy's interest rate indicator reached its goal in obtaining returns on the Iraqi dinar and transforming it into an attractive currency and strong buffer against inflation expectations. The bank's interest rate also decreased from 15% to 7% in 2009 and to 6% in 2010. The dinar's attractiveness, better management to improve cash stores, and financial brokerage became the sound and suitable way to face inflation expectations.

The exchange rate indicator had a greater effect on lowering inflation and raising the foreign value of the Iraqi dinar. With this, the monetary policy achieved its main target of affecting the nominal exchange rate to reach the real levels of the exchange rate weighted by the auction of foreign currency. That reflected positively on the general price level, especially final import commodity prices and production inputs, aside from the auction being a means to apply the monetary policy's indirect tools for managing the economy's liquidity, controlling liquidity levels, achieving the desired balance in the monetary market and strengthening opportunities for financial stability.

The monetary policy also contributed to building healthy reserves of foreign currency and led to building high-quality foundations for preserving external economic stability and establishing a suitable climate for launching investment. The achievements of the 2009-2011 period can be observed in:

- Increased money supply in its narrow concept (currency in exchange + current deposits) from IQD 37,300 billion in 2009 to IQD 51,743 billion in 2010, for an increase of 38.7%.
- Increased current deposits from IQD 15,524 billion in 2009 to IQD 27,401 billion in 2010, for a 76.5% increase.
- Change in cash supply components; the contribution of currency in exchange out of the total cash supply decreased from 58% in 2009 to 47% in 2010, in favour of deposits, which increased to 53% in 2010.
- Increased balance of net foreign assets to reach IQD 68,139 billion in 2010, for a 9.7% increase compared to 2009.
- Success in reducing the inflation rate to 2.5% in 2010; it then rose again to 5.6% in 2011.
- Spurred investment activity by reducing the interest rate four times in 2009, decreasing it 15% in February 2009 to 7% in June 2009. This period was permeated with treasury [rate] reductions. The Central Bank of Iraq reduced it once in 2010 from 7% to 6%.
- The exchange rate of local currency was stable against the dollar at around IQD 1170 in 2009 as a result of the preparation of the stability operation in the foreign monetary market. The amount of USD sold in the foreign currency auction increased from USD 34 billion in 2009 to USD 36 billion in 2010, noting that sold amounts include cash transfers and sales, and that the greatest percentage tends to be transfers at 94% and 85% for 2009 and 2010 respectively.
- Government banks continued to play the greatest role in granting credit at 66% in 2009 which increased to 75.4% in 2010. Private bank contributions in granting credit was not more than 34% in 2009 and decreased to 24.6% in 2010, suggesting that the local banks have a conservative nature when granting credit irrespective of the size of its capital or the credit capabilities granted to it by the executive regulations of eight times its capital.
- Until the end of 2010, the number of Iraqi banks was 7 government banks and 38 local and foreign banks. Of the latter, 7 were foreign banks and 7 were partner banks of foreign banks. Participation fluctuated between 20-75% of total capital. Capital in Iraqi banks also reached around IQD 2.4 trillion in 2009 and increased to IQD 2.9 trillion in 2010. The local bank share of this was 73.8% in 2009 and increased to 79% in 2010, distributed across the local commercial banks at 37.6%, to Islamic banks at 17.6%, and to branches of foreign banks working in Iraq at 18.6%.
- Despite the banking policy's aim of improving the bank density index for 2009-2011 by increasing the number of banks and expanding their spatial distribution horizontally and vertically, the results were modest. The number of banks increased by one in 2010 compared to 2009, and that bank is owned by the private sector. Therefore, the progress made toward reaching the target of reduc-

ing bank density is hardly indicated. The average density of banks per person decreased to 38,484 in 2010 compared with around 40,000 in 2009.

- Specialized banks did not see an observable expansion in number and we did not observe new activity, noting that the activities of these banks fall outside the rules of the market in that their credits are directed and supported by its service terms and conditions. There were only 3 such banks in 2010 (agricultural, industrial, and real estate cooperative), all of which are government banks having 67 branches. The value of credit granted was IQD 1,346 billion in 2010.

1-1-5 Population and Workforce: Strong Demographic Growth and Limited Work Opportunities

I. Population: Estimates without a Census

- The repeated delay in the census and limitation of its activities to numbering and listing weakened the opportunity available to Iraq to incorporate population data into development activities in a comprehensive way.
- The population growth rate maintained increasing rates that stabilized at around 3% in 2011, affected by the increased overall fertility rates of 4 births for each woman in 2009 to 4.6 in 2011.
- Life expectancy at birth increased from 58.2 in 2009 to 69 in 2011, which has clear effects on the urban makeup and hence the form of the population pyramid, which is characterized as being young and active.
- The percentage of people in the under-15 age bracket decreased from 41% in 2009 to 40.2% in 2011, while the percentage of people in the 15-64 age bracket increased from 56.1% in 2009, and to 56.9% in 2011, indicating an increase in the [propelling force] of the economy. The 65 and over age group formed only 2.8% of the total population in 2009 and increased to 2.9% in 2011. The stability of this figure is explained by the weak effectiveness of health policies especially preventative health policies.
- The percentage of youth in the 15-24 age bracket (the internationally known category) reached 20% in 2009, and increased to 20.2% in 2011. This requires comprehensive policies in the field of job training for youth and preparing and assisting them.
- Males made up 51% of the total population in 2009, decreasing to 50.9% in 2011 in favour of females who increased from 49% in 2009 to 49.1% in 2011.
- The percentage of the population in urban areas increased at 69% of the total population in 2009 while the population in rural areas accounted for only 31% in the same year. This imbalance continued in 2010 and 2011 which can be explained by the weak response of spatial policies to sustainable growth demands.

II: Workforce: Jobs without growth

- Unemployment rates decreased from 15% in 2009 to 11% in 2011, indicating the potential of meeting the 2014 plan target to reduce unemployment to acceptable levels.
- Participation in economic activities decreased from 46.25% in 2009 to 42.4% in 2011, affected by economic, social, and institutional factors.
- The gap between men and women's participation in economic activities expanded to 56.6% in 2011 after being 50% in 2005.
- The gap in women's and men's participation in the job market in urban areas decreased from that in rural areas, decreasing from 50.6% in urban areas and 57.7% in rural areas in 2003 to 57% in urban areas and 51% in rural areas in 2011 respectively.
- Protected work was 47.6% in 2011, and the percentage of women in protected work was 58.6%. This is higher than the percentage of men which was 45.6% in the same year.
- Rates of low employment, both visible and hidden, continued to increase at 38.6% and 61.4% respectively. The selective nature of the employment policies applied may explain the causes for the increase in rates.
- Underemployment and low employment are two closely connected states for workers. Unstudied employment decisions and laws generating these conditions may be a cause for the persistence of those qualities among those in the work force.
- Unemployment in the 15-29 age bracket increased, with 15.5% of men and 33.3% of women unemployed in 2011. This rate is higher than the overall unemployment rate of 11.1%.
- There is a relative link between educational level and unemployment, that increases with the level of education, where 12.7% of those with a secondary level of education were unemployed which is less than the 24.2% rate of unemployment for those with institute education or higher.

1-1-6 Sectoral Development: Uneven Development Efforts

I. Agricultural Sector: Signs of Diversification

The agricultural sector responded positively to the goals set in the 2010-2014 National Development Plan, affected by the pricing and marketing policy applied and the measures to protect the local producer that contributed to encouraging agricultural producers to expand production and brought them back to the production circle, generating new work opportunities in the Iraqi countryside and greater possibilities for absorbing the new numbers of unskilled workers and benefitting from the abili-

ties of rural women deeply rooted in poverty, according to the results of the National Strategy to Reduce Poverty (2009).

The factors pushing toward the diversification of plant and livestock production were not accompanied by notable progress in the creation of a legal and legislative environment that helps to stop the division of agricultural areas and holdings of lands and green areas to keep them within the production circle.

a. Agricultural Production:

Iraq possesses vast expanses of irrigated and dry arable land for cultivation, estimated to be 44.46m dunams. The greatest portion of this has been affected by salination and overwatering, especially in the central and southern regions due to poor operation and maintenance and the lack of integrated drainage networks. Although this has had implications for agricultural production both quantitatively and qualitatively, the policies that accompanied application of the agricultural initiative items and that were approved in 2010 had positive effects on production, dunam harvest, and crop composition.

Plant and livestock production indicators for 2010-2011 reflect the following:

- 99% of target production for wheat yields in 2011 was achieved and high production levels of 525.6 kg/dunam were reached for irrigated wheat, which represents 105% of the target harvest at the end of the plan. Baghdad achieved the highest harvest levels at the governorate level with 687.3 kg/dunam.
- Reasonable success and an increase approaching the target for plant yields was achieved, such as barley at 97%, yellow corn at 52%, rice at 81%, tomatoes at 69%, potatoes at 56%, and dates at 113% in 2011.
- Vertical expansion in strategic yields was attained as well as expansion in spray-irrigated areas, increasing production levels. Average per dunam harvest over all agricultural areas reached 429.3 kg/dunam for the 2011 winter season. However, this increase is less than 13.4% compared to 2010.
- Vegetable and tomato production rates increased in 2011 by 13% compared to 2010, while potato and date production rates increased 160% and 117% respectively in 2011 compared to 2010. These increases in vegetable production rates afford it second place in relative importance in plant production. There was a positive response to the use of modern technologies applied over small areas, such as greenhouses and spray and drip irrigation methods.
- Although the rice production rate decreased in 2010 by 89% compared to 2009 due to water legislation and decreasing agricultural area, it increased again in 2011 to 235,100 tons.

b. Livestock production

- The rate of increase in farm animal numbers in 2010 and 2011 achieved the target of 7% for sheep and goats, and fell short of target for cows and buffalo with an annual growth rate of 1.9%.
- Red meat production increased by 1.8% in 2011, fish by 12.7% and milk production by 3% compared to 2010. Main herd harvest and weakness of genetic traits of local varieties, in addition to fodder production harvest, and weak veterinary and guidance services, which lack contact with scientific research, may have affected livestock production growth rates in 2010 and 2011.
- The number of chicken farms increased from 1745 in 2010 to 2092 in 2011, thereby increasing chicken meat production by 5.7%, which is more than planned for 2011.
- Egg production increased from 704 million eggs in 2009 to 926.2 million in 2010 to 970 million in 2011, for a 4.8% increase compared to 2010, which seems modest. The failure to complete poultry infrastructure projects especially Al-Usul project in Abu Ghraib and Al-Ajdad project in Samarra may have had the greatest effect on the absence of rapid growth in this area, and hence weakened the competitive abilities of local products compared to imported products.

Two – Water Resources: Growing External Threat

The need for water resources in Iraq continued to grow. Continued population growth and economic and social development is met by a lack of water resources resulting from the expanding investment in water resources in countries that share Iraq's rivers. This has generated effects, positive and/or negative, on the efficiency of meeting the targets during the first years of the plan, as follows:

- No progress was made in increasing the water storage of existing dams or dams under implementation and reaching the plan target of around 33 billion cubic meters. This is due to a lack of a decision on Bakhma Dam, with a storage capacity of around 14.4 billion cubic meters, not to mention the failure to transfer implementation of the ongoing treatment activities for the foundations of the Mosul Dam to date, and delaying the Taq Taq Dam and the Khazar-Comel project, which led to failure to achieve increased storage of about 20 billion cubic meters.
- Water resources development efforts were translated by expanding the water yield in the suitable areas and using post-treatment waste water, adding 114.346 million cubic meters to the size of the reserve available at the end of 2010. Work is still ongoing to increase storage capacity by 127.4 million cubic meters by implementing 7 small dams (Al-Wand in the Diyala Governorate; Khassa Jay in the Kirkuk Governorate; Kara 2, Kara 4, and Al-Masar in Anbar Governorate; Shahabi in Wasit Governorate; and Dwirij in Maysan Governorate).
- A number of procedures were adopted aiming to guide water consumption by establishing water use associations in all governorates and spreading aware-

ness through participative management, limiting the expansion of agricultural plants that consume large amounts of water, and relying on new technologies in irrigation and farming such as irrigation systems and protected agriculture in order to achieve sustainable development.

a. Land Reclamation and Irrigation and Draining Projects: Modest Achievement

- The integrated land reclamation target of 1,600 dunams is still unreachable. Total land areas fully reclaimed during 2010 and 2011 did not exceed 84,000 dunams and those partially reclaimed were 192,000 dunams, which both form only 12% of the total land targeted for reclamation.
- Due to the lack of fiscal allocations, the enormity of the work to be done, and the scattered nature of the energies exerted, the number of projects supporting land reclamation did not exceed 47 in 2010 and decreased to 45 in 2011.
- Noticeable progress was made in completion of the main outlets, such as the Eastern Euphrates Drain where 200 km (or 77%) of the total length of 261 km was completed, with drainage of 385 cubic meters per second at the end of 2011. At the end of 2011, excavations were 100% completed on East Al-Gharraf Drain, the length of which is 172 km with drainage of 26 cubic meters per second.
- 2011 witnessed noticeable improvement in maintenance and repair of irrigation and canal projects, with 128% of the lengths completed compared to 2009, and the amount of sediment removed upstream from dams and in river excavation increased from 12.3 million cubic meters in 2010 to 12.7 million cubic meters in 2011. Concrete lining work also increased from 1.263 million square meters in 2010 to 1.668 million square meters in 2011. Streams and drains were cleaned with an increase of 22,757 km in length in 2010 to 23,562 km in length in 2011.

b. Groundwater: Sustainable Use

- 2010 and 2011 saw an increase in the numbers of actual wells drilled in relation to those planned. In 2010, drilling of 1200 wells was planned in the various governorates of Iraq and 1403 wells were created, for an implementation efficiency of 117%. Meanwhile, the drilling of 1300 wells was planned in 2011 and 1463 wells were actually drilled, for an implementation efficiency of 113%. One well secures water for drinking and other daily needs for around 30-40 people.

c. The Iraqi Marshlands: Returning life to a rare environment

- Water was restored to 38% of the total marshland area, reaching 5,589 km² in 2010, and the restoration rate increased to 46% in 2011.

d. Iraq's Share of Water: Urgent efforts for water security

- Political and social relationships were invested in as a way to apply pressure in order to secure Iraq's water needs.

- Efforts to sign the United Nations Convention on the Law of the Non-Navigational Uses of International Watercourses of 1997 were supported as the best legal framework for equitable and just division of water.
- Strengthening of negotiation abilities.
- Pressuring neighboring countries to share information and operation plans.
- Conducting joint measurements on the locations of key definitions as an important basis when determining the size of returns.
- 2011 saw the drafting of a limited negotiation strategy policy for negotiating with neighboring countries on determining Iraq's water share and supporting the negotiation system. Progress in this direction was made through preparation of a draft law for the National Water Council, and a higher national water council was formed, which is responsible for managing water resources in Iraq and pushing negotiations.

Three – Industry and Energy Sector: Leading Activities

- Investment allocations for the industrial sector increased from 32.4% in 2010 to 36.3% in 2011. Electricity, oil, and manufacturing industry shares were 16.6%, 12.1%, and 3.6% respectively in 2010, while the shares for these activities was 13.7%, 18.8%, and 3.6% respectively in 2011.
- The industrial sector's contribution to the GDP decreased from 48% in 2009 to 46% in 2010 then rose again a little to 47.4% in 2011. Despite the simple relative decrease, its contribution remained within half of the country's GDP.
- Extractive industries contributed 43.6% to the GDP in 2009, decreased to 41.7% in 2010 then rose to 43.2% in 2011. While electricity formed only 1.6% of the GDP in 2009, this settled around 1.5% in 2010 and 2011. Manufacturing industry contribution to the GDP was stable at around 2.8% for 2009-2011.

a. Oil and Gas: Generous Prices

- Crude oil production increased from 2336 thousand barrels/day in 2009 to 2554 thousand barrels/day in 2011, for an increase of 9% compared to 2009. This increase is a natural result of the increase in the number of fields discovered and an increase in the number of oil wells drilled. However, this increase is 11% less than that planned due to the complicated procedures involved in signing licensing rounds.
- Quantity of oil exported rose to 2165 thousand barrels/day in 2011 after being 1906 thousand barrels/day in 2009 and 1890 thousand barrels/day in 2010. This is a result of the development of crude oil transportation pipelines, the building of new pipelines, qualification of current export platforms, and building new floating platforms.
- Gas production increased from 1395 MMcf/day in 2009 to 1426 MMcf/day in 2010 and to 1574 MMcf/day in 2011. This increase is due to the expansion-

ist nature of the gas production policies that were applied in the oil sector during this period.

- In order to enhance the increase in the quantity of oil products, the current refineries were improved by increasing the refining capacity from 449 thousand barrels/day in 2009 to 598 thousand barrels/day in 2010 and to 605 thousand barrels/day in 2011, for an increase of 34.7%.
- 2010 and 2011 saw the continuation of the deficit in gasoline production and white oil production as well as gas oil. The long time period required to establish new factories to produce the derivatives may explain the deficit between the supply and the demand on those derivatives.
 - ▶ Some of the achievements made did not meet expectations due to the problems facing oil and gas activity in 2010-2011, including:
 - ▶ Reliance on routine, the administrative procedures used in transferring tenders, and the delay in opening credits, as well as the delay of some international companies in performing their obligations.
 - ▶ The age of the technology used in the gas oil separation plants and oil refineries as well as the age of gas pipeline networks.
 - ▶ The laws and legislation that hinder foreign company investment, including the law on government contracting and the investment laws.

b. Electricity: Long-awaited hopes

- Electrical power generation increased from 5258 megawatts in 2009 to 6149 megawatts in 2011, for an increase of 17%. However, actual production for 2011 is less than that planned by 25%. The directives on enforcing government contracts, the delay in opening credits, and the lack of expertise may be among the reasons explaining the production gap.
- Per capita electricity consumption increased from 1400 kWh in 2009 to 1700 kWh in 2010 and to 1800 kWh in 2011, for an increase of 29.5% for 2009-2011. However, this increase is still far from that planned due to the age of the network and its exposure to sabotage and trespass, and irrational power consumption by individuals and institutions.
- The efforts exerted to improve the performance efficiency of electrical systems and to stop their deterioration through restoring conversion stations and lines and cables achieved noticeable success, increasing from 5% in 2009 to 20% in 2010 and increased to 60% in 2011 for 400 k stations, while the success rate decreased 30% for 132 k stations in 2011. Concerning the length of time required to restore production lines, the lack of response from international companies to the calls sent, and the delay in opening documentary credits, are all causes that affected the achievement of the goal of improving electrical system efficiency in 2010-2011.

- An environmental strategy was elaborated for the electricity sector in cooperation with UNDP and UNEP in 2010; however, its goals were not fully achieved due to the limitations of using environmentally-friendly technology and the use of heavy fuels in operating gas stations.

c. Manufacturing Industry: Delayed Priorities

- The manufacturing industry contribution to the GDP for 2009-2010 was 2.9%, and increased to 2.7% in 2011.
- The manufacturing industry saw a deviation in actual production in 2009 compared to planned production by 51.5%, increasing to 52% in 2010, and decreasing again to 51.2% in 2011.
- An effort was made to improve the role of the private sector in the manufacturing industry during 2010-2011 by granting permission to establish and encourage investment in these activities. The number of projects increased from 213 fully established projects with an invested capital of IQD 67.3 million, to 452 projects in 2010 with an invested capital of IQD 102.3 million, then to 574 projects with an invested capital of IQD 221.8 million. This actual increase did not reach the level planned in the target due to the failure to identify the appropriate mechanism to effectively involve the private sector.
- In order to develop the industrial sector and strengthen the bases of private sector participation in the activities of this sector, three industrial cities were commenced in the governorates of Basrah, Dhi Qar, and Ninewa, aside from commencing topographical tests and preparing surveys and preliminary soil investigations for the industrial city in the Anbar governorate. The completion rate was 35% by 2011.
- Private sector contributions to industrial output reached 27.9% in 2009 and increased to 39.7% in 2010, due to the increasing number of private industrial enterprises during that period.

Four – Infrastructure: Achievements without meeting needs

a. Water and Sanitation: Projects Awaiting Completion

Pure water

- The number of water supply services projects increased from 245 in 2009 to 251 in 2010 and to 260 in 2011 throughout Baghdad and the governorates. Rehabilitation projects prepared increased from 275 in 2009 to 367 in 2010; however, they decreased in 2011 to just 72 projects. The reduction of allocations set aside for the projects and upgrades from 9.25% in 2009 to 3.57% in 2010 to 3.93% in 2011 may be reflected in the termination of most of the projects that needed upgrade.

- Individuals served by drinking water networks reached 100% in Baghdad. In the other governorates, the rate improved from 77.4% in 2009 to 80% in 2010 and to 82% in 2011. This increase is explained by the appearance of new projects to produce pure water.
- The quantity of drinking water production in Baghdad increased from 2250 thousand cubic meters/day in 2009 to 2350 thousand cubic meters/day in 2010 and to 2740 thousand cubic meters/day in 2011, which led to a decrease in water shortages by 35.8% in 2009 to 21.7% in 2011. Meanwhile, drinking water production capacities in the governorates increased from 3229 thousand cubic meters/day in 2009 to 3835 thousand cubic meters/day in 2010 and to 3945 thousand cubic meters/day in 2011. With the continued population increase, water shortages remained at 20% in 2009 and 2010 and decreased to 18% in 2011.
- Daily per capita share of drinking water in Baghdad increased from 300 liters/day in 2009 to 325 liters/day in 2010, thereby reaching the target by 98.5% of that planned, and then the share increased to 350 liters/day in 2011, thus achieving the target by 97.2% of that planned. With respect to the governorates, the per capita share improved from 300 to 320 then to 335 liters/day for 2009, 2010, and 2011, thus achieving the target by 96.9% in 2010 and 93.1% in 2011.
- As a result of the implementation of the large Al-Rasafa water project and the repair of the water networks and other projects still under implementation, waste decreased from 40% in 2009 to 35% in 2011.
- The number of water desalination projects increased in the governorates suffering from high salinity, especially the southern governorates, from 64 projects in 2009 and 2010 with a production capacity of 34,980 cubic meters/day to 959 projects in 2011 with a production capacity of 54,670 cubic meters/day.

Sanitation

- The number of qualified projects in the sanitation sector did not increase in Baghdad and the rest of the governorates, remaining at 3 projects in Baghdad for 2009-2011, and 29 projects in the governorates in 2009-2010, increasing to 31 projects in 2011. This confirms their inability to cover the population served 100% in Baghdad and 35% in the governorates.
- The length of the sanitation network in Baghdad increased from 21,444m in 2010 to 125,297m in 2011, while the length of rain water networks increased in the governorates from 3445.297m in 2009 to 3696.236m in 2010 and to 5077.647m in 2011.
- The absorptive capacity of the sanitation networks in Baghdad did not change, remaining at around 684,000 cubic meters/day for 2009-2011. Modest change occurred in the absorptive capacity of sanitation networks among the governorates, increasing from 551,652 cubic meters/day in 2011 for a change of 18.1%.

- The number of those served by the sanitation networks in Baghdad increased from 75% in 2009 to 80% in 2010 then to 82% in 2011, while the number of those served by the sanitation networks in the governorates rose from 25% in 2009 to 26% in 2010 and to 30% in 2011.

b. Transportation and Communications: Achievements below expectations

Roads and Bridges:

- Slow progress was made in improving the current road network; 254 km of arterial highways, 367 km of rural roads, and 46 km of secondary roads were completed in 2011. No progress was made in improving the border highways. Security conditions, lack of annual allocations for projects, lack of specialized technical teams, and administrative routine may have played a role in the delay in meeting the target set in the plan.
- More than 100 km of main and secondary roads were maintained.
- The number of bridges reached 1260 concrete and iron bridges; there are 52 floating bridges spread throughout all areas of Iraq and, according to 2011 data, more than 36 of these bridges were maintained in 2011.
- Weigh stations were not in fact established along all the main roads between the governorates and trade outlets between Iraq and the neighboring countries, yet 22 stations were transferred in 2012, distributed across five governorates and to be built in 2012.
- Work is ongoing to eliminate road and railway intersections, and rural roads were built according to programs covering the greatest percentage of villages and agricultural projects, securing a link between sites of agricultural production and the market. Work is also ongoing to refurnish the exterior highways with traffic signs, directional and warning signs.

Civil Aviation

- Until the end of 2011, construction did not begin on any new airports, and no planes were added to the Iraqi fleet. Work continued to be centered on renovating the Baghdad and Basrah airports, progressing slowly and not meeting the target. The dissolution and liquidation of Iraqi Airways also exacerbated the continued lack of strategic vision in spurring civil aviation activity.
- Development courses were held in Iraq and abroad to improve national cadres and create new qualified cadres, strengthening the Iraqi fleet.
- The ability to cover the increase in travelers on international and national transportation with Iraqi Airways planes faltered, decreasing from 99% in 2010 to 86% in 2011 compared to that planned, while national transportation decreased from 66% in 2010 to 42% in 2011.

- The movement of goods by air did not indicate a major quantitative advance, as the quantity of import goods shipments decreased from 8272 tons in 2010 to 7916 tons in 2011, while the quantity of export shipments was 128 tons in 2010 and increased to 400 tons in 2011.

Railroads

- Doubling of single-track railways was not finished; the lengths of lines actually completed is 108 km out of a total planned 220 km, for a rate of 49% for 2011. The low number of annual allocations for railroad projects and the complications of announcement, transfer, and contract signing procedures may be objective causes for the distance from the target.
- 50% of the railroad/highway intersection designs were completed.
- Most of the targets remained merely ink on paper, including those related to upgrading the communication and sign systems, improving Iraq's geographical position as a link between east and west, equipping the railways with modern trains and new passenger and cargo cars, and electrifying the railway.

Ports

- Iraq possesses four commercial ports (Umm Qasr, Khor Al-Zubair, Abu Falous, and Al-Maqal). There are 46 docks, out of which 43 were working in 2011. Total capacity available was 15.9 million/ton in 2011.
- Iraq possesses two ports for exporting oil, Basrah Port and Al-Ameeq Port. Basrah Port's load increased from 33.2 million/tons in 2010 to 34.1 million/ton in 2011, while Al-Ameeq Port's load increased from 0.7 million/ton in 2010 to 1.7 million/ton in 2011.
- Depth of navigation channels and dock facades were improved, varying from 5.6-12 meters.
- Transition is being made to a stage of building advanced ports to keep pace with developments occurring in world ports like the construction of Al-Faw Port, aside from building several docks at Umm Qasr and Khor Al-Zubair ports.
- There was noticeable growth in the role of the private sector in carrying out, operating, and providing port services. Joint operation contracts may be entered into with the private sector for ports docks and areas.

Passenger and Cargo Goods Transportation

- The target of providing 300 passenger busses during 2010 and 2011 was reached, for 134% of the planned target, while 709 busses were imported to support national transportation and 86 busses to support international transportation during 2010, along with providing 246 busses in 2011.

- The rate of growth in the number of passengers and travelers increased in 2011 compared to 2010 by 3.4%.
- Contracting with the private sector took place with the objectives of participating in the joint operation of passenger busses within the city of Baghdad with regular lines and with company follow-up and oversight.

Overland Shipping of Goods

- An actual capacity of 747.5 thousand tons were transported during 2010, that is, a rate of 71% of the 1050 thousand tons planned. In 2011 the actual amount reached 319% where actual capacity transported reached 2342.5 thousand tons and the planned capacity was 732.9 thousand tons.
- An increase was achieved in the number of goods transported in 2011, reaching 248% compared to 2010.
- Revenues realized in 2010 were IQD 39.1 billion, which is 112% of the planned amount of IQD 35 billion. In 2011, actual returns reached IQD 59.1 billion, which is 141% of the planned amount of IQD 41.7 billion.

Maritime Transport

- A multi-purpose vessel was purchased with a capacity of 15-20 thousand tons.
- Contracts for joint operations and requalification of maritime cadres were signed.

Telecommunications

- There was a relative increase of 1.6% in the number of electronic switches for 2010 and 2011 compared to previous years.
- There was an increase of 13.7% in overall phone lines for 2010 and 2011, which is the biggest increase achieved for these two years.

Five – Service Sector: Faltering Steps

a. Housing: Increasing Deficit

- There was a modest success not exceeding 13% of the total housing units planned for 2010 and 2011. This is due to the poor efficiency of public and private sector contracting companies.
- The number of borrowers from the housing fund decreased from 3175 in 2009 to 2829 in 2010 and to 2148 in 2011, due to local expectations that loan interest rates will be lowered.
- Loans were redistributed geographically based on the level of housing deprivation, where the Maysan governorate, the most deprived governorate in meeting housing needs, recorded the highest housing lending rate of 13.5% in 2011.

b. Culture, Tourism, and Monuments

- The number of hotels and tourism accommodations decreased from 662 in 2009 to 590 in 2010, for a negative change of -10%. This is due to a lack of services generally and tourism services especially, aside from the security conditions that led to the disruption of nature, archaeological, and medical tourism.
- The private sector achieved progress in tourism activity, where the number of hotels increased by 2.4% from 2009 and 2010. The private sector share of total hotels, apartments, and tourism accommodations was 98%, whereas the public sector share did not exceed 2% in 2010.
- The number of tourism companies increased from around 201 to 460 in 2011 for an increase of 129%. Around 50% of these are concentrated in the Baghdad Governorate.
- Three tourism and hospitality institutes were opened in Najaf, Karbala, and Basrah to train and qualify professionals in the tourism field.
- There was a steady and high increase in tourism to Iraq, where the number of religious tourists reached around 1.5 million in 2011.
- Surveys are still being conducted on around 1000 archaeological sites throughout all the governorates.
- Around 116,000 archaeological pieces smuggled abroad were returned, and 12,000 coins and clay tablets were received from local residents.
- More than 2000 found pieces were repaired.
- Work continued on tens of projects in the area of protecting, restoring, salvage excavation, and maintenance of archaeological sites.
- 29 buildings throughout Iraq were declared historical sites.

1-1-7 Human and Social Development

One – Education: Quantitative Improvement, Qualitative Stability

The main education trajectories in the 2010-2014 National Development Plan were based on the integration of human capital as a course for development. This program aims to strengthen and improve the abilities of Iraqis' throughout their entire education, from the early childhood stage to higher education, in addition to other ways of building knowledge. The most important of the plans' trajectories include: equal enrollment in a comprehensive educational system, focusing on furnishing and realizing equivalent educational opportunities by supporting expanded building of schools, full absorption of all school-age pupils, girls' education, wiping out illiteracy, and adult education. They also include raising the level of educational outputs by modernizing the educational system and ensuring its quality by relying on school reform, teacher qualification and support through professional and academic skills

development, improving education methods and student activities, employing technology to improve the educational process, developing and improving the quality of professional education, aside from nurturing gifted and high achieving individuals. It also focused on reducing the variation in enrollment rates between rural and urban areas and among the governorates, providing just distribution of higher education opportunities of all kinds to meet community demand in all areas, aside from boosting the efficiency of institutional systems, through institutional qualification and support and developing administrations, capabilities, and academic research in addition to encouraging community participation in building, administering, and financing higher educational institutions.

However, real data reflects the fact that the educational system in Iraq continues to suffer from structural and curricular weaknesses in most of its courses, despite graduating hundreds of thousands in the sciences and humanities fields. These educational programs continue to be exposed to many problems and often lack the essential goal of producing influential and effective educated individuals. At various stages of study, students are subjected to an educational system that relies on traditional methods based on curriculums founded on dictation and listening. The efforts of the private sector and civil society organizations in this field are still modest and coordination between the different entities participating in those programs are weak in light of the great deficit in the number of educational facilities, which are of poor quality, and the number of teachers, many of whom lack educational and academic competence.

The plan realized the following achievements:

a. Educational Opportunities

Enrollment in the educational system was witness to fluctuations during 2008/2009 and 2010/2011 according to level:

- At the pre-school level, a relative improvement from 63 children per 1000 to 80 children per thousand, for an increase of 27%.
- There was noticeable improvement in primary school enrollment, reaching around 92%. Net enrollment at the middle-school level reached 40%, and net enrollment at the preparatory level reached around 21%.
- Enrollment at teacher training institutes did not improve and remained fixed at 1%.
- University enrollment increased from 8.3% to 12.3%, for an increase of 4%.

b. Educational Needs

Student/School Indicator

- The indicator shows an increase at the pre-school level where it reached 217 students per school, achieving an increase over the overall average of 130 students per school.
- There was no observable change in the student/school indicator at the university level.
- The teacher training institute saw a decrease leading toward improvement from 366 to 282.
- The number of Iraqi universities for the mentioned period increased by 8 universities, and the number of government colleges increased from 201 to 238.
- The number of technical education colleges increased from 9 to 13, and the number of institutes remained the same at 27.

Student/Teacher Indicator

- Pre-school increased from 20 to 26 students per teacher.
- The ratio remained relatively fixed and consistent with the plan target for all educational levels prior to university level.
- The teacher/professor ratio at the university level increased from 11 to 12.

Dropout Rates

- The dropout rate at the primary school level decreased from 2.9% for the 2009-2010 school year to 2.5% for the 2010-2011 school year.
- The dropout rate at the secondary school level decreased from 3.7% to 3.2% for the same period.
- The dropout rate at the university level decreased from 1.9% to 1.5%.

Community Education

- Private sector contribution to providing educational services increased. The number of community schools increased in 2009-2010 and 2010-2011 from 286 to 558 schools. Of these, preschools increased from 125 to 223, primary schools from 87 to 156, and secondary schools from 74 to 176. The number of students enrolled in these schools increased from 4,999 to 63,070.
- The number of community colleges increased from 19 to 23 for the same period.
- The number of students accepted at community colleges increased from 13,973 students in 2009-2010 to 20,631 students in 2010-2011, for an absolute increase of 6658 students and an increase of 47.6% for 2009-2011.

Two – Health: Incomplete Services

Despite the successive crises Iraq has gone through and their effect on overall conditions, health conditions witnessed a relative improvement in the health indicator during the past few years. The 2010-2014 National Development Plan's health strategy focused on building a health care system that can provide comprehensive coverage for health services for all citizens. It focused on improving, monitoring, and financing health care infrastructure to ensure effective provision of services to citizens with continued expansion in building primary health care units in all governorates, aside from improving public hospitals, clinics, and health care departments to ensure that needs are met in urban and rural areas. This is aside from boosting opportunities for building medical and nursing abilities in all areas, the effort to introduce preventative care and early detection in all aspects of the health system, and enabling people to actively participate in improving health, health care, and disease prevention.

Perhaps the most significant indications of improvement:

- A great improvement in life expectancy at birth, increasing from 58.2 in 2006 to 69 in 2012.
- A decrease in mortality rates for children under the age of 5, from 41 deaths per thousand live births in 2006 to 38 deaths per thousand live births in 2011.
- A decrease in infant mortality from 35 per thousand live births in 2006 to 33 deaths per thousand live births in 2011 for Iraq overall, and 30 deaths per 100 live births in the Kurdistan region.
- Health and medical human resources for 2009-2011 witnessed a simple increase in the number of doctors, dentists, pharmacists, and health professionals for each 10,000 residents, as shown in Table 1-6.

Table 1-6

Indicator	2009	2010	2011
Doctor/Population	0.72	0.74	0.75
Dentist/Population	0.16	0.17	0.18
Pharmacist/Population	0.19	0.20	0.20
Health Professional/Population	1.5	1.6	1.7
Nursing Corps/Doctor	1.4	1.4	1.5

With the exception of the clear improvement in bed occupancy in hospitals and specialized centers, bed occupancy rates per 1000 inhabitants and child-friendly hospitals did not show any noticeable improvement, as shown in Table 1-7.

Table 1-7

Indicator	2009	2010	2011
Bed/1000 inhabitants	1.14	1.15	1.17
Bed occupancy rate, %	51.6	51.4	60.1
Number of child-friendly hospitals	36	37	37

- The rate of tuberculosis outbreaks for each 100,000 inhabitants decreased from 78 to 65, realizing a noticeable improvement in this indicator.
- The number of medical and community clinics increased from 298 in 2009 to 353 in 2010 and then to ___ in 2011.
- Programs to introduce a basic health services package at primary health centers were approved to ensure that the actual needs of the population are met in accordance with the best geographical distribution, and health centers in uninhabited areas and remote health complexes were established.

Three – Women: Faltering Growth

Despite the many achievements in narrowing the gender gap, especially in the fields of education, health, work, and political participation, efforts are still faltering and the gap remains wide. There remain many legal texts and legislation that have not yet been subjected to review or that contain loopholes that have not been closed.

Development indicators related to gender reflect that:

- ▶ § Women's economic activity decreased from 14.2% in 2003 to 13% in 2011.
- ▶ Women's representation in parliament decreased to 25% after having reached 27.3% in 2007.
- ▶ Illiteracy rates remain high among the Iraqi population at around a fifth of the population and are higher among women.
- ▶ The gender gap at the level of primary education was narrowed (0.93) but it expands at the middle and secondary levels to reach 0.34 and 0.38 respectively.
- ▶ The average age of first marriage declined among women from 23.5 in 2009 to 22.4 in 2011.
- ▶ Women's representation in the government declined from six ministers in 2004 to one minister in the current parliament.
- ▶ Female breadwinners decreased from 11.5% in 2006 to 7.7% in 2011.
- ▶ Divorce rates in Iraq doubled from 28,690 in 2004 to 59,515 in 2011.
- ▶ The gap between men's and women's participation in the work force decreased in the cities compared to rural areas. The gap between men and women reached 60.6 in cities compared to 57.7 in rural areas in 2003. The rate increased to 57% in urban areas against 51% in rural areas in 2011.

Four – Youth: Institutional Development and a Challenge of Values

The challenges facing youth remained, in part, representative of the result of decades of poor economic management and poor investment in human and material resource-

es, whose negative effects were enhanced by the effects of consecutive wars and crises. Although economic and political circumstances have changed, and given the palpable achievements for youth, this segment continued to face enormous challenges hindering opportunities for its sustainability and progress:

- Despite the relative improvement in reading and writing proficiency rates among youth, illiteracy rates are still high. Illiteracy rates among the 20-29 age group reached 16.3% for all youth, and 21.2% for women compared to 11.7% for men.
- The level of youth economic activity is on the rise in rural areas compared to urban areas, with 37% for rural areas against 27% for urban areas.
- The difference in economic activity rates for men and women remained large for the 15-29 age group, with 63.4% for men and 12% for women.
- Economic activity rates for young women are on the rise in rural areas at 14% compared to 6% in urban areas.
- Despite the decrease in youth unemployment during 2008-2011, the rates for the 15-29 age group reached around 18.2%, which is higher than the overall unemployment rate in Iraq of 11.1%, with the rate for men being 15.5% and for women 33.3%.
- The rate of unemployed individuals holding advanced degrees (institute and above) increased compared to other groups having less education, reaching 24% and 13% respectively.
- There was a decline in the value systems among youth like the culture of volunteerism, participation, and responsibility, which are being replaced by indifference, loss of confidence, self-centeredness, and the desire to immigrate, which have led to a kind of social disintegration and a rift between youth and the society they live in.

Five – Community Development

In the area of community development, the 2010-2014 National Development Plan aimed to lend special protection to vulnerable groups with limited income to improve their living conditions, support opportunities for community stability, strengthen the institution of the family, and give due consideration to the balance between the rights and duties of development partners from state and public institutions, the private sector, and civil society. The indicators reflect improvement in the following community development fields:

a. Social Security Network

- The Social Security Network had very high coverage, encompassing vulnerable groups (the disabled, widows and widowers, the elderly...). The fluctuation in the rates of those covered from 2009-2010 is due to changing inclusion

controls in the network, and the disqualification of the cases not covered under the controls.

b. The Disabled

- The percentage of disabled individuals benefitting from centers for the mentally disabled in 2010 and 2011 increased by 2.4% and 5.1% respectively.
- The levels of utilization of the absorptive capacity of centers for the mentally disabled increased during 2009, 2010, and 2011 by 75%, 76.8% and 80.7% respectively.
- Numbers of individuals receiving services from centers for the physically disabled increased from 2009 and 2010 by 8.3%.
- Levels of utilization of the absorptive capacity increased, with the percentage of those receiving services increasing in 2009 and 2010 by 44.5% and 48.2%.

Six – Poverty Reduction Strategies: Serious Programs to Achieve Social Justice

The National Strategy for Poverty Reduction approved in 2009 aimed to reduce poverty rates at the national level from 23% to 16% during the 2010-2014 period. The strategy went into actual effect in 2011 through the implementation of the National Development Plan programs that covered many of the poor areas in all governorates, and coverage rates increased in 2012 by allocating around IQD 500 billion of that year's investment budget, distributed to projects having priority within the poverty strategy. This centered on:

- Supporting the small loan fund to assist the poor
- Building low-cost housing compounds
- Eliminating clay schools
- Improving primary health care services

Seven – Third Millennium Development Goals: National Adaptation and Targeted Achievement

Iraq succeeded in settling the goals through their integration in the national strategy as the strategy to reduce poverty and the 2010-2014 National Development plan. The latter was distinct from the previous plans given its interest in distributing the fruits of development equitably and justly across all of Iraq according to the levels of deprivation, need, and population sizes in the field of services and infrastructure, and according to their capacities and relative character in the production sectors.

The progress achieved in the implementation of the millennium development goals in 2011 compared with 2007 reflects clearly the nature of economic, political, and

social changes, positive or negative. This qualifies the results of its follow-up to be the main [index] relied on in evaluating the economic performance efficiency of the goals of the aggregate and sectoral plans, the human development fields, and the main standards in guiding and designing the goals and their priorities for the coming 2013-2017 National Development Plan. The results, set out in Figure 1-6, can be summarized as follows:

Figure 1-6

Variables	Ninewa	Kirkuk	Diyala	Al Anbar	Baghdad	Babil	Karbala	Wasit	Salah ad Din	Najaf	Al-Qadisiyah	Muthanna	Dhi Qar	Maysan	Basrah	Dohuk	Sulaymaniyah	Erbil	Iraq (current rate)
نسبة السكان الذين يقل دخلهم عن دولارين ونصف	26.0	4.2	10.3	12.5	2.8	10.9	11.4	17.1	6.9	8.1	19.2	29.2	37.8	16.4	16.1	4.9	0.3	2.3	11.5
معدل جودة الفقر (انتشار الفقر) * مائة	6.5	1.0	1.7	2.3	1.0	2.7	2.2	4.2	1.5	1.5	4.9	5.7	9.4	3.4	3.3	1.4	1.0	1.0	2.6
حصة الفقر ضمن من الاستهلاك الوطني	7.4	9.1	8.9	8.0	8.3	7.3	7.3	7.7	8.0	7.7	6.7	8.9	8.8	7.8	6.8	7.6	7.7	7.4	8.0
معدل انتشار حالات الأطفال ناقصي الوزن دون السادسة من العمر	6.3	3.7	7.3	13.4	11.2	5.1	7.2	9.4	9.2	10.4	7.1	8.7	8.7	7.6	9.9	5.9	4.1	9.7	8.5
نسبة السكان الذين لا يحصلون على الحد الأدنى من الطاقة الغذائية	7.0	3.0	6.0	5.0	5.0	3.0	3.0	11.0	2.0	3.0	3.0	12.0	17.0	7.0	21.0	5.0	0.0	2.0	6.4
صافي نسبة الإحقاق بالتعليم الابتدائي	88.0	93.1	92.2	89.4	89.3	88.2	89.7	84.5	87.3	89.9	86.6	85.4	88.3	72.2	91.5	94.0	97.8	92.7	89.1
صافي نسبة الإحقاق بالتعليم الثانوي	41.2	56.2	45.8	45.3	50.7	44.7	43.3	37.1	43.4	39.3	43.5	33.5	42.2	31.4	43.6	65.7	79.0	69.0	48.6
نسبة عدد الفتيات اللاتي يتخطون بالصف الأول ويتلقون نصف الأجر في المرحلة الابتدائية	94.4	92.0	93.4	97.4	96.8	94.8	96.2	96.2	95.3	93.1	98.0	97.4	94.0	98.4	94.5	95.1	96.8	95.0	95.5
معدل الإلمام بالقرأة والكتابة لدى الأشخاص بين (15 - 24 سنة)	80.1	90.5	92.7	67.9	92.4	86.2	85.4	73.6	82.4	77.9	73.8	74.5	76.3	72.0	84.5	83.3	94.4	87.2	85.5
نسبة الإحقاق بالبات إلى البين في مرحلة التطوير الابتدائي	0.90	0.97	0.96	0.94	0.98	0.95	0.94	0.84	0.91	0.95	0.92	0.85	0.89	0.78	0.95	0.98	0.99	0.98	0.94
نسبة الإحقاق بالبات إلى البين في مرحلة التطوير الثانوي	0.70	0.83	0.95	0.65	0.93	0.79	0.92	0.80	0.74	0.88	0.73	0.64	0.81	0.60	0.96	0.90	1.04	0.96	0.85
نسبة الإناث إلى الذكور الذين يلمون بالقرأة والكتابة بعمر (15 - 24 سنة)	87	92	94	91	97	93	93	100	88	96	86	79	83	77	94	88	91	96	91
حصة النساء من الوظائف مدفوعة الأجر في القطاع الزراعي	7.8	12.6	12.1	11.9	18.9	14.5	11.8	15.5	11.8	13.9	17.5	10.9	11.7	13.5	12.5	15.8	19.8	18.6	14.7
نسبة المقاعد التي تشغلها النساء في البرلمانات الوطنية	25.0	15.4	16.7	21.4	32.5	27.3	26.7	33.3	9.1	22.2	25.0	40.0	30.8	33.3	35.3	37.5	33.3	16.7	27.0
معدل وفيات الأطفال دون الخامسة لكل 1000 ولادة حية	45.9	50.9	45.8	37.9	30.5	47.6	35.0	29.5	42.3	37.1	43.8	30.0	39.4	28.9	33.9	36.6	25.2	33.9	37.2
معدل وفيات الأطفال الرضيع لكل 1000 ولادة حية	39.7	44.1	42.5	31.9	25.0	40.3	28.5	26.2	35.4	32.9	36.2	26.1	29.9	26.2	31.8	33.3	23.9	27.2	31.9
نسبة الأطفال البالغين من العمر سنة واحدة الممتصين عدد الحصبة	72.1	92.9	71.5	66.2	75.8	79.9	84.8	60.8	57.8	77.2	77.0	84.7	53.4	91.9	75.6	91.3	83.2	81.1	75.4
نسبة الولادات التي تجري بإشراف موفقي الصحة من ذوي الاختصاص	82.6	66.6	91.0	83.3	92.2	83.4	99.9	85.5	84.9	96.2	93.7	89.1	93.8	94.2	94.0	90.2	95.1	91.8	90.9
نسبة الولادات في المراكز الصحية	72.0	66.1	69.1	83.1	71.7	82.6	81.2	75.0	75.5	82.9	86.8	83.2	73.3	76.6	83.9	92.0	89.3	75.5	76.6
معدل انتشار وسائل منع الحمل	43.0	46.4	49.9	51.5	51.9	54.4	50.9	49.5	47.5	58.6	49.6	44.1	49.8	47.0	54.4	54.8	49.6	66.7	52.5
نسبة الرابطة الصحية أثناء الحمل (قبل الولادة)	71.1	74.8	79.6	70.3	78.5	76.9	86.3	74.6	63.3	86.4	80.9	84.4	80.6	70.7	82.2	84.6	88.7	72.0	77.7
الحصول على الرعاية الصحية قبل الولادة (زيارة واحدة على الأقل أو أربع زيارات على الأكثر)	79.8	86.5	86.6	96.2	93.8	95.7	97.6	70.1	87.5	92.8	93.2	98.3	90.2	80.0	92.9	90.9	96.9	83.1	89.1
الحاجة غير الملباة في مجال تغذية المرأة	8.0	8.2	6.0	6.5	8.2	4.9	9.1	6.6	9.8	5.8	7.8	10.4	9.6	9.2	9.5	10.7	8.5	6.3	8.0
نسبة النساء اللاتي سمن أو يعانين من مرض الإيدز	96.5	93.1	91.2	92.0	87.1	55.1	91.6	96.6	91.4	98.0	94.0	96.8	96.6	97.1	94.8	91.6	86.9	88.8	91.5
نسبة السكان الذين يمتلكون الجيوب بانضداد على مصدر محسن للماء في الريف أو الحضر	70.6	99.2	97.5	97.2	1.2	6.9	36.9	27.3	62.7	22.5	82.7	80.2	56.1	72.5	80.4	82.6	78.3	93.9	85.6
نسبة سكان الحضر الذين يمتلكون الإضاءة بصرف صحي محسن	95.1	93.0	93.0	93.0	96.5	78.8	90.9	91.9	96.0	92.5	45.3	91.8	86.8	91.3	93.5	97.3	96.9	98.7	93.8
نسبة الأسر المعيشية التي يمتلكها الحصول على حجرة آمنة	78.1	70.4	79.3	76.8	81.5	79.1	88.8	91.2	67.6	80.3	83.1	80.8	76.9	86.1	70.9	80.2	79.3	75.8	81.7
عدد خطوط الهاتف لكل 100 شخص	4.0	2.5	3.0	4.3	7.3	4.0	3.8	3.0	5.9	3.6	7.6	4.6	4.6	5.6	4.6	N	N	N	5.1
عدد خطوط الهاتف الخليوي لكل 100 شخص	97.0	93.8	91.8	80.3	95.4	92.3	95.7	97.9	96.3	93.5	89.3	86.2	95.2	97.9	95.8	N	N	N	94.3
نسبة الأسر التي تملك حاسب شخصي	16.2	13.9	9.0	16.3	12.9	11.2	16.3	10.3	15.5	17.3	13.7	7.5	4.5	10.2	8.9	16.6	37.1	28.0	17.2
نسبة الأسر التي تستخدم المكاتب	96.2	96.0	98.3	96.0	98.9	96.4	99.0	96.0	95.0	97.7	95.3	97.3	97.3	96.9	99.3	95.5	91.0	85.0	96.1
القيمة المعيارية للمتغيرات	-15.9	-1.3	-3.2	-6.7	14.2	-1.1	6.0	-9.0	-10.3	7.0	-5.8	-7.4	-13.5	-6.9	5.2	12.6	26.2	9.8	2.3

Source: This matrix was prepared by Dr. Mehdi Mohsin Al-Allaq, Head of the Central Statistical Organization (CSO), as part of a report on the progress made in achieving Millennium Development Goals in Iraq.

Goal I: Eliminating Extreme Poverty and Hunger

- The percentage of the population whose daily income is less than two and a half dollars decreased from 13.9% in 2009 to 11.5% in 2011.
- Some governorates are not expected to reach the target for 2015 due to the rise in the percentage of the population who spend less than two and a half dollars a day in 2011, including Muthanna at 29.4%, Dhi Qar at 37.8% and Basrah at 16.1%.

- The poverty gap decreased from 5% in 2007 to 2.6% in 2011, and there continues to be fluctuations in attainment of this goal among the governorates.
- The per capita GDP growth rate increased from 0.8% for 1997-2007 to 2.1% for 1997-2011.
- Youth unemployment rates in the 15-24 age group decreased from 30% in 2008 to 22.8% in 2011, with unemployment rates of young women being higher than that for young men.
- The rate of underweight children under the age of 5 decreased from 15.9% in 2000 to 8.4% in 2011; however, the southern governorates as compared to the rest of the governorates continued to suffer from an increase in the percentage of underweight children under the age of 5.
- Food deprivation for the southern governorates rose compared to the other governorates.

Goal II: Spreading Primary Education

- Iraq made progress in net enrollment rates in primary education, where it increased from 76.3% in 2000 to 85.8% in 2006 and to 92% in 2011. There continued to be fluctuation in rates of meeting the goal between males and females, between rural and urban areas, and among the governorates.

Goal III: Improving Gender Equality and Empowering Women

- Female to male enrollment rates at the level of primary education increased from 85% in 2000 to 88% in 2006 and to 94% in 2011. The rate also increased at the secondary level from 66% in 2000 to 75% in 2007 and to 85% in 2011.
- The rate of women working for wages in the agricultural sector increased throughout Iraq in 2011 to 14.7% compared to 12.1% in 2008, with great variation among the governorates. Erbil governorate came in at first place with 19.8% while Ninewa was last with 7.8%.
- It is not expected that gender equality in Iraq will be achieved due to cultural and social factors. Achieving the goal requires longer periods of time.

Goal IV: Lowering the Child Mortality Rate

- Mortality rates for children under five greatly decreased, down from 101 children under five per 1000 in 1999 to 41 in 2006 then to 38 in 2011, thereby meeting the target.
- Infant mortality rates decreased from 50 for each 1000 live births in 1990 to 35 deaths for each 1000 live births in 2006 and to around 33 deaths per 1000 live births in 2011.

Goal V: Improving Maternal Health

- The rate of births under the supervision of a specialist between 2000 and 2011 witnessed an observable increase from 72% to around 91% respectively. The percentage of births under the supervision of a qualified health specialist in rural areas also increased greatly, from 60% in 2000 to 78% in 2006 and to 85% in 2011.
- The demand for birth control increased in most governorates during 2000-2011, rising from 43.5% in 2000 to 49.8% in 2006 and to 52.5% in 2011.
- The rate of teenage births is one of the recently improved indicators for monitoring early births among teenage girls between ages 15-19. Results of the 2011 cluster survey showed that the rate of teenage births reaches 82 for every 1000 women between the ages of 15-19.
- In the field of medical care for pregnant women, the number of mothers who are vaccinated for tetanus reached 63%. These rates vary according to the mother's educational level, where 82% of the mothers have obtained a high academic degree, compared to 49% who are uneducated. No changes to these percentages were seen among the governorates for 2006-2011.
- The rate of unmet needs in the field of family planning decreased between 2006 and 2011, from 10.8% in 2006 to 8% in 2011.

Goal VI: Fighting HIV/AIDS and other diseases

- The number of AIDS cases in 2010 reached 12 cases only, 10 of which were men and 2 women, most of them in Baghdad. This number decreased to 11 in 2011, of which 7 were men and 4 were women.
- The number of cases is very low due to health awareness and conservative social upbringing, and doesn't exceed 10-11 cases annually, thereby achieving the goal.

Goal VII: Guaranteeing the survival of the environment

- Despite the improvement in the percentage of the population that can regularly obtain a source of improved water, there are still variations among the governorates in per capita rates according to the main source of improved water. Rural and remote areas continued to complain of a lack of services tasking them with having to fetch drinking water, a laborious task, the burden of which largely falls upon women.
- The number of housing units linked to the public improved water system increased from 81.3% in 2007 to 84.5% in 2012, while the percentage of the population who regularly has access to a source of improved water rose from 83.3% in 2000, decreased a little in 2006 to 79.2%, then went up again to 88.8% in 2011.
- The percentage of the population that is able to benefit from an improved sanitation system increased from 92.5% in 2000 to 93.8% in 2011.

Goal VIII: Establishing a Global Partnership for Development

- In carrying out their activities in Iraq, development partners relied on the 2007 National Development Strategy and the ICI to promote the welfare of the Iraqi people in four areas: boosting economic growth, revitalizing the private sector, improving the quality of life, and strengthening security and good governance.
- In the area of debt reduction, the Paris Club nations reduced their official loans of USD 114 billion in 2003 by 80% of the nominal value of the debt balances.
- Despite Iraq's delay in obtaining modern communication and information technologies, great achievements were made over 2004-2012.
- The percentage of families with a land line reached 5.1% compared to 94.3% of families with mobile phones.
- The percentages of families that own personal computers rose from 5% in 2004 to 17.2% in 2011. At the same time, the percentage of families that use satellites increased from 40% to 96.1% in the same period.

1-1-8 Spatial Development: A way to achieve justice

The development plan for treating the imbalance in Iraq's development aimed to limit the economic, social, and urban dimensions of spatial variations, whether among the governorates or between the rural and urban environment. The plan also aimed to treat the deformation of Iraq's urban structure, seen in the hegemony of the city of Baghdad over this structure at the national level and the hegemony of the governorate centers over the rest of the urban structure within the governorate.

The diversity of natural resources, the topography, agricultural land, and the presence of the Tigris and Euphrates Rivers, besides the considerable hydrocarbon wealth and the existence of main and secondary development centers in all of Iraq's governorates, all provide the suitable basis for beginning to correct the imbalances in the spatial development structure. This can be done through redistributing investments geographically to be more balanced and integrated, and as suits the economic, social, and environmental traits and characteristics of each governorate or portion thereof.

Realizing these changes at the spatial structural level require a long time as well as a data base of surveys and statistics. As this is not available in most of the fields, it is more difficult to precisely define plan achievements. However, there are many indications of having achieved just and equitable distribution of the fruits of development, as follows:

- The creation of programs for regional development based on distributing a certain percentage of the investment budget, reaching around 20% in 2012, to all governorates on the basis of governorate population sizes. This contributed greatly to reducing developmental gaps especially in the area of service

provision among the governorates and within the components of the governorate itself.

- There is an improvement in the level of deprivation of the governorates that saw the fewest fruits of development in previous decades, as a result of investments allocated to them as suits their relative characteristics and needs.
- There is a relative improvement in the urban system toward the development of mid- and small-sized cities (Tal-Afar, Fallujah, and Al-Samawah), with the continuing hegemony of Baghdad on the urban structure.
- Construction has begun on three industrial cities.
- Importance is starting to be given to integrated rural development, through allocation of lands for constructing modern rural towns targeting the development of promising areas of the Iraqi countryside through allocating them to agricultural engineers and graduates of agricultural vocational high schools.
- Boosting decentralization in development management in the governorates and giving local governments the powers necessary to create their plans and define their developmental priorities and follow-up on the implementation of their programs.

1-1-9 Environmental Sustainability: Modernizing Development Methods

The 2010-2014 development plan was launched to make sustainable development a set principle in the content and the priorities of its strategic targets, development activities, and chosen projects, all striving to incorporate the environmental dimension with the economic and social dimension in development activities. It has thus succeeded in making environmental considerations and standards an inseparable part of the decision making process in development on the macro- and micro-levels, thus achieving noticeable progress in the level of efficiency of implementing the strategic targets announced in the plan. This level of progress has not completely reached the level of national and international aspirations.

a. In the area of environmental control and monitoring

- Air quality was monitored and assessed; relying on 10 fixed monitoring stations distributed throughout Iraq's governorates in 2010.
- Water quality was monitored and assessed, relying on 148 stations distributed along the rivers in 2011.
- The marshlands and diversity of species was monitored and assessed, polluted areas were identified, and chemicals and mine activities were monitored.

b. In the area of utilizing cleaner environmental technologies

- Dust precipitators were renovated and rebuilt at 14 cement factories
- Amounts of lead (IV) acetate added to gasoline were reduced to a lead content of 0.15 g/l in 2010.
- Sulfate content in crude oil and gas oil production was reduced to 50 ppm as a first stage in 2010.
- Renewable energy alternatives like solar and wind power were relied on in irrigation, industrial, and household technologies, even if only limitedly.

c. In the area of combating desertification

- Advancing desertification was dealt with through the stabilization of sand dunes that cover an area of 4 million dunams; 500 thousand dunams were treated in 2011.
- 57 desert oases were constructed to take advantage of the resources of the western desert in contributing to ensuring food security.
- Plant cover was developed in desert areas through implementing 16 nature monitoring stations from 2006-2011.
- The number of nature preserves increased to 13, covering all of Iraq's governorates in 2011.

d. In the area of marshland rejuvenation

- 2710 square km of marshland were replenished in 2011, for a rate of 48% of the total area scheduled for replenishment.
- Hydrologic monitoring stations were set up to control the marshland water inlets and outlets.
- Marshland canals and tributaries were dug, cleaned, and repaired.

e. In the area of waste collection and recycling

- The amount of waste collected reached 48 thousand tons/day in 2011.
- Waste collection services covered 91.3% in urban areas and 7.5% in rural areas in 2011.
- The number of waste collection sites reached 32 formal sites and 357 informal sites in 2011.

f. In the area of international cooperation

In 2009-2011, Iraq signed on to more than 11 international agreements on the environment, and has officially announced its accession to 7 of these. The instruments are being studied for accession to the remaining treaties during the coming stage.

g. In the area of environmental awareness

Iraq strived to introduce the environment and sustainable development into school curriculums at the different levels during 2010-2011. Booklets and posters on the environment were prepared as well as television programs and documentary films on environmental work.

1-2 National Development Plan General Framework 2013-2017

The economic, social and environmental challenges that the 2013-2017 National Development Plan is up against are not very different from those faced by the 2010-2014 National Development Plan. Despite the significant achievements made during the initial years of the previous plan, it still fell short of its targets in many fields.

The 2013-2017 Plan represents a new stage in the development planning pathway and constitutes the first chapter of a strategic approach to economic and social progress. The constitution, the government's 2011-2013 operating program, the national strategies and the Millennium Development Goals all form a reference framework for this approach, which comprises a long-range vision for the future. This vision aims to build up a diversified and prosperous economy with industry, energy, agriculture and tourism as the main drivers and pillars of development, where the public and the private sector along with civil society are partners in development, and where centralized and decentralized roles complement each other in managing development. Likewise, the orientations in the Federal budget will correspond with the plan's goals as part of comprehensive and balanced policies to realize the following goals: achieving fiscal and monetary stability; developing the primary and secondary spatial poles in order to close the gap between urban areas and the countryside as well as between governorates; guaranteeing equal opportunities on the basis of gender so as to boost economic participation rates; fostering knowledge and skills to keep pace with the demands of the knowledge economy and the job market; guaranteeing integrated health care for both the sick and the healthy; raising the level of quality social care to cover the needs of vulnerable groups in order to enhance social development opportunities; and achieving environmental sustainability and thereby laying the groundwork for the green economy. These all represent possible future orientations that will fulfill the Iraqi people's aspirations and they are capable of building a bridge between a tumultuous reality and the desired developmental path.

The 2013-2017 development plan will continue the development pathway of the previous plan, updating it to take into account all the new local and international variables, such as the relative improvement in the security situation, fluctuation of the price of oil in global markets, and the positive uptick in oil production rates in Iraq due

to the impact of oil licensing rounds. These factors impact the effectiveness of development and the direction it takes in such a way as to boost human development indicators. This requires programs and policies to be adopted with future targets that take into account the present trends and prepare an appropriate environment to move into the future so that Iraq becomes an advanced country with sustainable development. Iraq must strive to meet the needs of the current generation and enhance their quality of life. It also must not bargain away the needs of future generations, but respect them by adopting an equitable approach as an alternative to an approach based around satisfying needs, in order to obtain a society that enjoys stability, inclusion and achievement.

1-2-1 Plan Assumptions and Basic Principles

- The 2013-2017 Plan rests on nine basic assumptions that constitute the systematic foundation for drafting the plan.
- Balanced development supported by the gravitational force of chosen sectoral and spatial growth poles constitutes the development approach used to frame the horizons of the vision for the future, and represents a step toward changing the nature of Iraq's economy from a rentier state to a production economy in the long term.
- Establishing an empowering environment that promotes structural preparation factors for the hinges of the economy and society through transparent, good governance. This helps lay the foundations for the take-off readiness phase over the course of the plan, so that the year 2017 will mean that Iraq really enters the take-off phase toward sustainable development.
- Development of the economy's competitiveness is a necessary condition to expedite integration into the regional and global economy and lay the groundwork for a market economy in the least costly way.
- The public and private sectors and civil society are active partners in achieving sustainable development. The public sector is a strategic partner with the private sector over the course of the plan.
- The true compass approach, which will indicate the priorities for sustainable human development in economic, social and environmental rights to improve quality of life for the average Iraqi.
- Growth that generates jobs linked to investment in order to deal with unemployment and poverty in order to achieve the principle of sustainable justice.
- Continue to emphasize the empowerment approach as the basis for human capacity building, so as to lay the groundwork for a knowledge economy with an enhanced role for women and youth in development.

- Take into account the demographic growth effect, especially the age brackets of working age, as an opportunity for saving, investment and sustainable development.
- The development yield is boosted by continuous improvement in the security landscape and political stability.

1-2-2 Philosophical Framework

One

The proposed development model: The philosophy of the plan's proposed development model springs from the assumption that: "Balanced growth requires imbalanced elements in the vertical structure of production. Unbalanced growth also involves the existence of elements in a balance imposed on them by the nature of interwoven relationships between economic sectors."

On this basis, balanced development is driven by the gravitational force of chosen sectoral growth poles (industry, energy, agriculture and tourism) which impacts the formation of primary and secondary spatial growth poles according to the potential and relative advantages of the governorate. Thus the energy sector – specifically, the oil sector – will be a development pole funded along with the growth of other poles over the course of the plan due to its gravitational pull, mobilization and reach, which generate impact benefits (such as front connections and back connections) that cause structural changes that promote growth in other economic, service and human sectors, and the resultant spatial development course corrections, boosting of environmentally sustainable development and laying the groundwork for the take-off readiness phase.

To achieve the development model above, the development roles between the public and the private sector must be reformulated so that public investment generates market incentives and hence promotes private sector investment and influences trends in effective aggregate demand. Private investment meanwhile must respond to break the restraints of supply scarcity and improve flexibility by taking active and productive investment decisions that allow expansion of private establishments that are effectively in tune with the desired economic growth.

Two

The philosophy of economic management: Formulating and distributing roles between the public and private sector is still linked to the preeminence of the state and its control over economic surpluses from oil resources. This reality helps formulate a relationship pattern whose trends and pathways have changed over time. However, in any case, those approaches were not development oriented, but rather solidified

the public sector's control and the private sectors exclusion or sidelining from sources of wealth accumulation and their various potentials to achieve growth – which were monopolized by the state. Therefore, the plan strives to reconstruct the private sector's development role so that it complements the public sector, whose role will remain a strategic one throughout the duration of the plan. To this end, the plan seeks to create an empowering and collaborative environment that attracts capital and expertise and includes them in the system of development interactions. This will support private sector activity through various methods of investment management that increase the chances of transformation into a market economy based on competency and competition.

1-2-3 Supporting Principles of the Development Model Philosophy

One: Diversity

In order to designate the features of Iraq's economy over the duration of the plan, diversity in the non-oil production structure will be a governing principle behind the mobilization of economic resources for the plan.

Two: Strength in Decentralization

Decentralization in Iraq draws its strength from the constitution, which requires directly-elected governing institutions accountable to citizens. This is an application of the principles of good governance, and arises from the principles of decentralization – thereby recognizing the legal personality of local administrative units and acknowledging that they have particular interests. Legitimizing this helps build an administrative regime that allows for these interests to be administered, regulated and managed locally as long as this does not conflict with national goals and principles.

Three: Green Investment

So long as the green economy requires improvements in human prosperity and social equality, reduces environmental risks and ecological resource scarcity and promotes biodiversity, the plan will continue to integrate environmental data in the development interaction system. Investment in the environment will be how we lay the groundwork for the green economy. This will be achieved by putting in place environment-friendly projects and implementing policies that limit consumption of energy that produces ozone-depleting gases; limit desertification and air, water and soil pollution; revive the marshes; preserve biodiversity; and expand green spaces. The plan also believes it is necessary to reform policies, change legislative regulations, impose environmental taxes, and adopt the environmental footprint method for imported goods and services.

Four: Empowerment and Equal Opportunity

Empowerment is the sustainable human development approach that builds capacities for the sake of participation, while equal opportunity on the basis of gender is the chief means to reduce multidimensional poverty and achieve sustainable justice.

Five: Decent Work

Developing the work force, improving management of the labor market and creating a suitable legislative and investment climate all help to generate opportunities for decent work, especially for women and youth. This helps provide secure, protected work and better quality of life.

1-2-4 Challenges

Despite the development achievements realized over the past years, the plan believes that the political and security challenges are ongoing, as well as the economic, social and environmental challenges. This explains the low implementation efficiency for the previous plan's goals and indicates the potential of reaching the current plan's goals. The most significant challenges can be identified as follows:

One: Economic Challenges

- The rentier nature of the Iraqi economy: Crude oil extraction activity continues to represent the largest share of GDP at 43% in 2011 and forming 97% of federal budget revenues and 92% of the Iraqi exports sector. This distorts the relationship between oil revenue growth and the fluctuation of aggregate variables in the economy, thereby weakening the level of long-term economic cohesion and the future of development.
- Economic exposure: Iraq's economy continues to be exposed to the outside world due to the low contribution made to GDP by non-oil commodity activity at 16.5%, with distribution activity accounting for 10.6% and services accounting for 29.8%. The total contribution made by all non-oil activities thus comes to 57%. These figures explain why the production apparatus continues to be characterized by low efficiency, inflexibility and unresponsiveness to increasing demand for goods in the domestic market. This is indicated by the rise in the level of imports due to the demand for commodities in the market compared to domestic content.
- The private sector has not held a strategic role in overall economic development activities, despite the strategic approach that calls for this role to be strengthened and promoted, as its contribution to fixed capital formation in 2010 does not exceed 6.4% of total fixed capital formation. This means that it has been unable to lay the groundwork for a cohesive market economy that generates long-term growth.

- The banking system plays a limited role despite structural reform efforts to improve efficiency and support financial solvency, as the percentage cash credit granted to GDP is only 5.9%. It is possible that the imbalance between bank protection requirements (hedges) and economic activation requirements (encouraging banks to move towards providing credit to finance development) is an objective cause behind these modest numbers.
- Public spending is imbalanced in favor of operating expenses, forming 68.3% of public expenditures in 2012, to the detriment of spending on investment, which accounted for 31.7% that same year. Furthermore, workers' compensation and retirement pensions still made up 50% of total operating expenses in 2012 and constituted 34.3% of total public spending for that same year. This is higher than the percentage for spending on investment.
- Iraq's labor market is traditional, which is nothing but a reflection of the political, economic and social circumstances that Iraq is passing through. This means that it is a market that is not keeping pace with international developments and responding to the increased quantitative supply of Iraqi labor, as evidenced by high rates of unemployment among young graduates for the year 2011, reaching 24.2% for the 15-29 age bracket. This is due to the absence of an active employment policy and the fragility of the private sector's role.
- Despite efforts to develop an institutional framework for an anti-corruption plan, poor transparency in financial activity, widespread social and administrative values that incubate, protect and tolerate corruption, the weak role played by the banking system and its inability to adhere to sound implementation tools and anti-money laundering requirements, and failure to punish corrupt individuals – all these factors limit the process of development and attracting foreign investment.
- The informal economy enjoys wide scope in the economic sphere due to a number of factors – internal and otherwise – that cause distortions in the trajectory of aggregate and sectoral policies and their fluctuating variables. This causes high rates of underemployment, distortions in the job market configuration and a decline in the level of economic stability and sustainable development rates.

Three: Social Challenges

- The 2011 Global Human Development Report index ranks Iraq among the last ten countries in the medium human development category (132nd place overall). This ranking reflects the state of human development in Iraq in terms of health, education, environment, the gender gap and multi-dimensional poverty.
- The transformation to a market economy entails a heavy social cost amid ineffective social policies of a protective nature, such as social safety nets and welfare, which have kept up a high level of deprivation and a large poverty gap.

- Long-term crises have left structural impacts on Iraqi society, with the size of vulnerable classes growing within society. This places a burden on transformational expenses in the federal budget inconsistent with the principle of development sustainability.
- Illiteracy, which affects around one-fifth of the population, still represents the biggest obstacle in the educational system. This is in addition to low net matriculation rates in middle school and preparatory school (40% and 21% respectively).
- The severe shortage of school buildings represents the most urgent challenge, as the shortage of more than 7,000 schools leads to schools doubling and tripling up and causes high rates of overcrowding in the classrooms.
- The high level of stress placed on public health institutions, which are operating at their highest capacity these days due to the severe deficit in absorption capacity compared to morbidity rates and the population sizes they serve.
- The general rate of women's participation in economic activity remains low at 13% of the total economically active population, and women continue to have low participation in legislative, judicial and executive branches of government.
- There is a poor correspondence between higher education outputs and the labor market, which causes education outputs to be wasted.

The shortage of housing units continues to worsen in a manner that fails to keep up with population growth rates and rising income levels. The shortage of housing units is in the range of 2 million units, which causes psychological pressures and has a negative effect on quality of life.

There continues to be a lack of complete coverage for households using improved water sources (82% in 2011), in addition to unstable water supply and water network contamination. This means that Iraq is having difficulty in achieving the Millennium Development Goals to provide 91% of families with improved water supplies. The urban-rural gap likewise persists in household access to water from the public network. The problem runs even deeper in the field of sanitation services, whether on the national level or according to the urban-rural environment. Whereas the coverage ratio of the sanitation network rises to 86% of the population in Baghdad, it falls to 32% in the governorates, with a complete absence of sanitation networks in rural areas.

Three: Environmental Challenges

- The three elements of Iraq's environment (water, air and soil) continue to suffer from high rates of environmental pollution despite relative improvement over the past years. This has had a noticeable impact on sustainable human development indicators in Iraq.

- The lack of a national development strategy has helped disrupt episodes of integration and coordination between plans and programs to protect and improve the environment, whether in terms of preparation or execution, and thrown Iraq off the path to a green economy.
- Iraq has begun to feel the onset of climate change, including the greenhouse effect, low precipitation levels, and rising annual rates in temperatures, humidity and dust and sand storms. This exposes Iraq to negative impact in the absence of an early warning system against natural phenomena and environmental situation monitoring standards.
- Water quantity is diminishing and quality is deteriorating, with high levels of contamination by untreated water from agricultural and industrial waste, domestic sewage and oil spills. The water quota Iraq obtain from rivers shared with neighboring countries is also affected. This means that Iraq is facing the challenge of a shortfall in water resources and an inability to meet future development requirements.
- The desertification phenomenon is worsening as affected areas expand due to climate change, intensive exploitation of resources and failure to apply management methods, in addition to other negative environmental influences. This requires the reclamation of 7.9 dunams at a cost of 2 million dinars per dunam.
- Passive and underdeveloped waste management, lack of ways to recycle and reuse waste to turn it into energy or fertilizer. A near total lack of a role for the private sector in offering this service, although the percentage of the population covered by trash collection services was 65% in 2010, of which the Iraqi countryside constituted only 7.5%
- Landmine areas continue to remain untreated, and the impact this has on human security, land exploitation and development projects in these areas.
- Spatial disparities between Iraq's governorates remain high, particularly in terms of the rural and urban environment, as the deprivation level in urban areas reached 17% in 2012, while it was at 58% in rural areas. This underscores the continued spatial development duality in Iraq and the inherited underdevelopment of the rural environment.
- The private sector is absent from the scene in terms of participation in environmental activities, despite repeated declarations that it is one of the main players in laying the groundwork for sustainable development in Iraq.

1-2-5 Vision

"A safe, stable country where citizens enjoy civil, economic, social and environmental rights, aspire to build a diverse and competitive national economy, possess the keys to advancement in all scientific, cultural and intellectual fields; where everyone participates in a federal, decentralized, socially-integrated system that provides fair opportunities for development, in which the private sector and civil society are active

partners and environmental sustainability represents an approach toward achieving a green economy.”

1-2-6 Plan Goals

Harmonizing and coordinating the orientations, pathways and visions of the National Development Plan provides an important benchmark for evaluating its achievements in terms of whether it sticks to and deviates from development pathways consistent with the visions for the future. There is no doubt that focusing on a long-term development vision will mobilize, coordinate and direct the efforts of development partners to achieve their aspirations for a better future and brighter tomorrow that upholds the principles of justice and rule of law. Perhaps the most significant of these goals are as follows:

One: Economic Goals

- Make the developmental management of oil sector revenues responsive to sustainable development criteria so as to guarantee the rights of current and future generations.
- Diversify the economic base by boosting the contribution percentage of select growth poles in the sectors of industry, energy, agricultural and tourism toward GDP in order to hit the target annual GDP growth rate of 13.31% including oil and 7.5% excluding oil.
- Work on laying the foundations of economic partnership between the public and the private sector so that the former contributes 79% of the plan's total investments, i.e. 329 trillion dinars, while the private sector contributes 21% of the plan's total investments, i.e. 88 trillion dinars. This provides for a gradual transformation to a market economy based on competency and competition.
- Work on achieving a stable overall economic structure and sustainable development to ensure an equitable distribution among the governorates weighted according to population and deprivation indicators and to provide more developments role to the governorates and local administration.
- Through its aggregate and sectoral goals, the plan aims to promote coordination and harmonization between the two branches of economic policy (financial and monetary) to attain sustainable growth, economic stability that keeps inflation in check, and equitable distribution of the fruits of development among the classes of society.
- Increase the productivity of economic activities and worker productivity to boost the competitiveness and diversity of the economy and so that the private sector has an active role in the fields of investment and generating protected work opportunities.

Two: Social Goals

- Enhance opportunities to integrate the plan's pathways and procedural steps of the poverty-reductions strategy to reach poverty strategy yields that aim to reduce the percentage of the population below the poverty line to 13% and to reduce the poverty gap.
- Create decent work opportunities within an active framework based on implementing the provisions of the national employment policy and passing the new labor law to raise employment levels and reduce unemployment to 6% by 2017.
- Boost the knowledge and skills base by granting opportunities to achieve an equal educational environment that supports expansion by building schools to meet half the outstanding need; take an interest in preschool, girls education, literacy, adult education, raising the net matriculation level in primary, middle and preparatory schools to 95%, 45% and 30% respectively.
- Improve the health services infrastructure in terms of type, capability and coverage to enable it to cover national programs that preserve people's health; offer high-quality services and reduce infant mortality rates to 18 per 1000 births and under-5 mortality rates to 24 per 1000, in addition to raising the life expectancy rate to over 70.
- Women and youth are targeted in the plan in order to build their capacities in terms of knowledge, skills and health in order to boost their level of participation in the development interactions structure.
- Prepare an empowering environment that leads to tangible progress in quality of life for vulnerable groups, integrate them into society and the work force, broaden the base of participation and ensure that they have access to services and social benefits.
- Provide new housing units meeting half the outstanding need (one million housing units) and rehabilitate the obsolete housing stock.

Three: Environmental Goals

- Protect and improve elements of the environment, such as water, air and soil.
- Practice sustainable exploitation of natural resources to protect the rights of current and future generations.
- Use the most environmentally clean technologies in production and service activities.
- Treat the causes of environmental pollution arising from human activities, production and services, including sewage, solid and liquid waste, waste from factories and hospitals, etc.
- Reduce desertification by expanding land reclamation, establishing desert oases, and increasing green spaces and belts around cities as a means toward attaining a green economy.

- Preserve biodiversity by developing natural grasslands, adopting developed methods of environmental management and threatened ecosystem maintenance to guarantee biosecurity.
- Promote the spirit of citizenship and environmental awareness.
- Strengthen environmental management and environmental tracking and monitoring.

1-2-7 Plan Values

Growth, change, reform, sustainability, empowerment, justice, rights.



2-1 Population...the Renewable Iraqi Resource

The International Conference on Population and Development held in Cairo in 1994 underlined the correlation between the population and development and highlighted the importance of meeting the increasing needs of the population as a guaranteed right, thus, human beings become both ends in themselves and means of development. Moreover, the quality of the population rather than its quantity became the cornerstone of the goals set in population policies. These goals are based on sustainable human development and require the expansion of the population's choices in terms of education, health, income, labor and clean environment. These choices represent basic capacities emanating from human development such as enjoying a long life, gaining knowledge, having sufficient resources to live a decent life and enjoying other capacities such as social and political participation. In this context, the National Human Development Report in Iraq issued in 2008, called for building these types of capacities and stressed that people are a dynamic variant that affects and is influenced by the system of developmental reactions, thus, the population should be necessarily integrated in national development plans.

2-1-1 Situation Analysis: Population Policy.... New Orientations

Iraq has witnessed during the last three decades many demographic changes due to wars and political developments however, these changes, in addition to the level of political and executive interest in this issues, reveal that population affairs and their integration in development were highly neglected. The government was not tangibly or seriously concerned in these matters nor did it prioritize them, thus the state refrained from setting a national population policy aiming at changing the factors influencing demographic growth and responding to the relevant challenges that impede sustainable development. Not so long ago, Iraq was still addressing demographic issues separately from economic and social development plans and away from the mechanisms involved in legislative and political decision-making. This approach has deepened the gap between improving the quality of human life and reducing poverty on one hand and achieving economic growth and material production on the other.

The National Development Plan 2010-2014 highlighted the importance of integrating demographic data into developmental activities, therefore, it would be possible to assess the population's effects on development based on demographic indications and to measure the effects of devel-

opment on the population based on its qualitative indicators. Consequently, the previous plan called for the adoption of a national population policy with clear orientations and deliberate specificities. This policy should be based on demographic growth rates that meet the requirements of sustainable development and the labor market needs and aim at preserving the rights of all Iraqi generations in order to guarantee an equal distribution of financial resources in the federal budgets and regional development programs. This would strengthen the principles of decentralization and guarantee a sustainable expenditure. However, the years 2009-2011 did not witness a real implementation of this goal, even if the National Committee for Population policies did prioritize this target, due to the recurrent postponement of the population's general census where the relevant activities were limited to listing and enumeration. Therefore the country missed the opportunity to incorporate demographic data into developmental activities, widened the gap between demographic issues and development efforts and misled the developmental goals. However, the National Committee for Population Policies is expected to adopt central goals including drafting, monitoring and implementing the national population policy. The committee shall also mainstream the policy and create a relevant supporting environment in order to monitor and track the demographic indicators. This would, to a certain extent, allow the integration of demographic data into developmental activities until the establishment of the Supreme Council of Population Policies in the upcoming years.

Despite this striking reality, the new orientations of the Iraqi Population Policy adopted in the National Development Plan of the year 2010-2014, aimed at underlining the importance of national demographic connotations specially in terms of increasing the birth and fertility rates by maintaining a demographic growth rate that is consistent with the demographic specificities of the Iraqi society and the economic, social and cultural goals of the country.

Moreover, the previous plan sought to include the developmental orientations pertaining to the workforce in its population policies that aimed at increasing the percentage of the economically active population and at raising the workforce-to-population ratio and the proportion of women's participation in the economic activity provided that this increase would not negatively affect the fertility rate (reproduction rate). In order to maintain the intended reproductive capacity, the previous plan prioritized investments directed at maternal and childcare projects in the private and public social services sectors mainly kindergartens, primary education, nurseries and maternity hospitals. In order to achieve the desired positive effect of demographic indicators on sustainable development in Iraq, the plan disregarded the inverse relationship between education and the reproductive capacity by giving preference to married people in some areas like recruitment, giving them facilities to help them find an adequate residence and providing them with health and food supplies for their children.

Consequently the 2013-2017 Development Plan had to continue with the implementation of a targeted population policy that responds to the economic and social growth while taking in account or even favoring humanitarian priorities over economic ones in accordance with “the approach of justice” that the plan adopted and in line with the principles of sustainable human development. This should also be achieved in consistence with a balanced vision that embraces the principles and goals of the International Labor Program that was adopted by the International Conference on Population and Development. The Conference affirmed that wide choices would be given to satisfy the individual’s and households’ needs by focusing on reducing fertility rates, enlarging the base of comprehensive reproductive health services, improving their quality and guaranteeing equal access to said services rather than focusing on implementing a family planning program in a narrow sense.

This orientation set by the 2013-2017 Development Plan is based on a series of principles which the Iraqi population policy calls to adopt and that might achieve a quantum leap in understanding the correlation between demography and development in terms of sustainable development and in determining the priorities of funding, investment, international collaboration and partnership. The Plan seeks to adopt these principles in a bid to create the necessary environment that attract official and popular support for that policy. The adopted principles are the following:

- Revealing the correlation between demography and development in the system of developmental reactions in order to lay the foundations of sustainable development.
- Guaranteeing that the human rights platform is embodied in all the aspects of population policies based on the idea that human beings are both ends in themselves and means of sustainable development.
- Improving the quality of life while controlling the patterns of production and consumption and by preserving the wellbeing environment for future generations.
- Guaranteeing gender equality and empowering and encouraging women to achieve their potential through education and providing job opportunities to contribute to development.
- Incorporating demographic factors and dynamics in development strategy and developmental planning.
- Underlining the importance of international collaboration and partnership between the public and private sector and the non-governmental organizations in implementing the population and development program while stressing on the importance of making the international collaboration and partnership consistent with national priorities in terms of demography and development.

2-1-2 The Iraqi Demographic Map

First: Population Size and Growth Rates

The 2010-2014 Development Plan did not expect a decrease in the population growth rates in the medium term. Thus, population growth rates remained high and settled at around 3%. This explains the increase in the population size that was revealed by the results of the listing and enumeration process for the year 2009 where population grew from 31.6 million to 33.3 million in 2011 and to 34.2 million in 2012 registering an increase of 8.2% compared with 2009. According to population projections, the country's population would reach 35.1 million in 2013 and 38.9 million in 2017.

The rise in total fertility rates from 4 births per women in 2009 to 4.6 in 2011 clearly explains the continuous increase in the population size and growth rates which are exerting pressure on the country's resources and environment. The total fertility rate is expected to remain high at 4 births per women during the four years of the Plan.

These demographic facts indicate the continuous increase in population size in Iraq and go in line with the United Nations expectations in this regard. Iraq's population is expected to reach 48.9 million people in 2025 and might even double to reach 80 million during the fifty upcoming years in the event that population growth maintained the same pace. Moreover, the country reveals social values and traditions that push further towards this direction, therefore Iraq would not enjoy population stability and achieve the third phase of demographic change unless it adopts population policies aiming at decreasing the population size and supported by a social awareness that is conscious of the demographic repercussions on the environment and on development.

Second- Population by age

The demographic balance of the population between age categories for the years 2009-2012 was affected by the decline in infant mortality rates and the increase in life expectancy at birth. The former indicator decreased from 35 deaths per thousand live births in 2009 to 32.5 deaths per on thousand live births in 2011 and to 32 deaths in 2012. The infant mortality rate is expected to drop to 31.7 deaths per thousand live births in 2013 and to 30.2 in 2017. On the other hand, the life expectancy rate at birth increased from 65 years in 2009 and to 69 years in 2011. According to population projections, life expectancy at birth is expected to climb to 69.2 years in 2013 and to 69.7 years in 2013 which would have clear repercussions on the population's age composition and on the country's population pyramid that is characterized by its youth and energy.

Despite the increase in the total population on an absolute basis in the age category (less than 15 years) from 12.95 million people in 2009 to 13.4 million people in 2011 and to 13.6 million people in 2012, the percentage of this age category from the total population has decreased from 41% in 2009 to 40.2% in 2011 and to 39.9% in 2012. This percentage is expected to decline to 39.5% in 2013 and to 38.1% in 2017 but this decrease does not mean that this age category is no longer the consumer in the economy and the category that exerts the most pressure on the country's federal resources and budget since it represents one third of the Iraqi population. In the same context, statistics showed the effect of this demographic trend on the age category 64-15 that reached 17.8 million people in 2009 and increased to account for 19 million people in 2011 and 19.6 million in 2012m representing thus 56.1% of the population in 2009, 56.9% in 2011 and 57.2 in 2012 and 2013. This percentage would climb again to score 58.6% in 2017.

These increases contributed to the decline in the age dependency rates from 78.2 people per 100 person in 2009 to 75.8 people in 2011 and 74.7 people in 2012. These figures are expected to decrease to 73.7 people in 2013 and 70.8 people in 2017.

The growth in the working-age population means that the driving force in the economy (workforce) became stronger due to the positive relationship between the population size and the workforce supply and reveals the importance of adapting political policies in order to strengthen job-rich growth and improve the efficiency of the labor market. The latter would therefore become more organized and balanced to harmonize workforce supply with workforce demand. It is possible to benefit from the economic opportunities offered by the increase in the working-age population, the latest demographic developments and the demographic dividend achieved by the country where the age category between 15-64 years represents more than the half of the population. This age categories would reach its peak in while the dependant population (children and elders) would be at its minimum size. The balance between age categories would not last more than one generation after which it would be disturbed. Therefore, it is necessary to take this developmental opportunity where the opportunities for saving and investing are pretty high and that would stimulate a rise in the supply related to the improvement of the households' quality of life and not their size. Thus, growth would register high rates that might reach 15%.

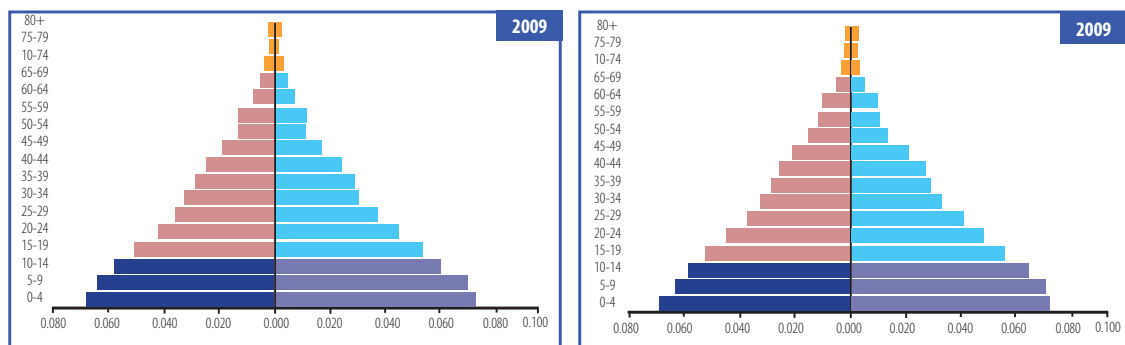
Concerning the young population, internationally defined as that in the age group 15-24, it represented 20% in 2009 and rose to 20.2% in 2011 and to 20.3% in 2012 while it is expected to settle at this level until the year 2017.

It is worth mentioning that the third National Report on Human Development that is expected to be released in 2013 affirms that the percentage of the age group 15-29 representing the youth in the population composition would increase according to

population data. In fact, it scored 27.7% in 2009 and increased to 27.9% in 2011 and to 28.1% in 2012. It is expected to climb to 28.2% in 2013 and to 28.5% in 2017. According to population projections, this increase during the years of the Plan would require the adoption of economic and social policies that would support young people and respond to their aspirations by providing job opportunities in order to increase their participation in economic activity.

As for the age group of 65 years old and older, the demographic record shows that its percentage represented 2.8% of the population size in 2009 and 2.9% in the years 2011 and 2012. According to population projections, these figures would not witness any change until the year 2013, however it will start rising to reach 3.3% of the total population in 2017. The stability in the percentage of this age group is due to weak health policies, especially preventative policies and their intransigent executive and institutional mechanisms, which cast a shadow over life expectancy rates. These facts reveal the necessity of giving special attention to the elderly age group in order to extend their longevity and improve their health and social situation by expanding the coverage of the mentioned policies by the means of a governmental health support and social security program.

Graph (2-1): The Distribution of the Iraqi Population Based on the Age Composition for the



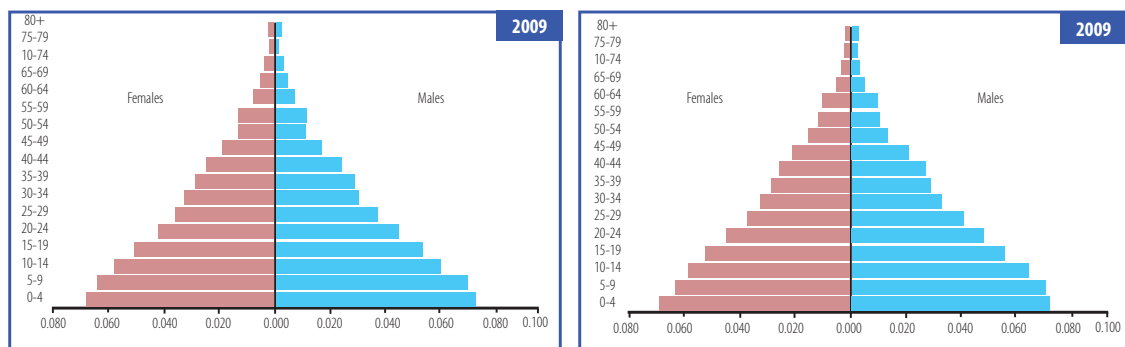
Third- Population by Sex

Statistics reveal a demographic balance between the percentages of males and females in the population. Population estimates for the year 2009 showed that the percentage of males reached 51% of the total population and the projections affirm that the male percentage will decline to 50.9% in the years 2011, 2012 and 2013 and to 50.8% in the year 2017. On the other hand, the percentage of females reached 49% in 2009 while population projections affirmed that the percentage of females will increase to reach 49.1% in the years 2011, 2012 and 2013 and will continue growing until scoring 49.2% in 2017.

These statistical data indicate that the gender ratio in Iraq reached 104 males for every 100 females, according to the population projections for the year 2009 and is expected to decline to 103 in 2017.

Concerning the three age groups, the ratio for the age group of 15 years and less is 105 males for 100 female. In the second age group of 15-65, it scores 103 males for every 100 females. As for the third age group of 65 years and above, the ratio reaches 89 males for every 100 females, according to the 2017 population projections. In light of these facts, the National Development Plan 2013-2017 should adopt gender-responsive policies both at the macro and sectoral levels, thus guaranteeing the integration of the gender concept in all aspects of the economic system. Consequently, gender would have an active effect on the path towards sustainable development.

Graph (2-2): The distribution of the Iraqi Population by Sex for the Years 2009-2012



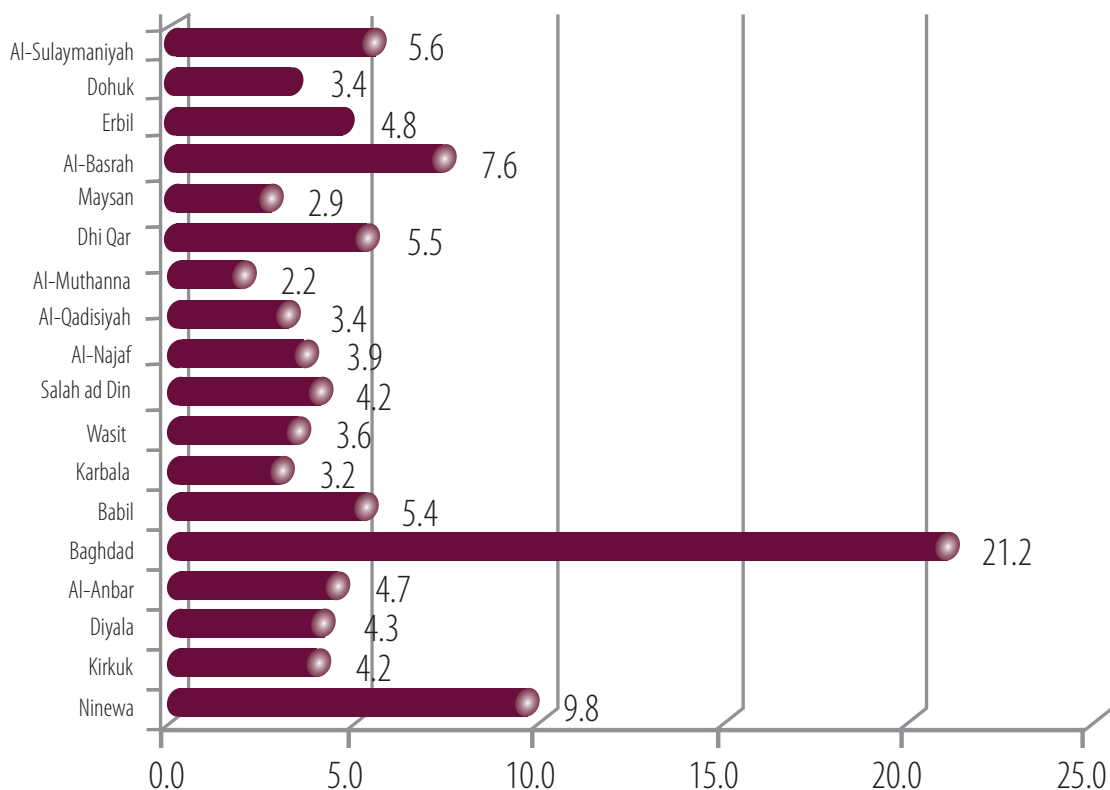
Forth : Spatial and Environmental Distribution of the Population

Just like other Arab and developing states, Iraq's population is distributed disproportionately in terms of geography and the country suffers from the presence of a single demographic center located in the capital Baghdad. This demographic center is dominating the urban system and causing negative environmental, economic and social impacts. The population of the governorate of Baghdad represented 21.2% of the population in 2012 according to population projections while the capital's surface only represents 1% of the country's space. Approximately one fifth of the Iraqi population lives in three governorates: Baghdad, Al-Basrah and Ninewa. On the other hand, there are three Iraqi governorates that cover half of the country's surface but only host 11% of the population including Al Anbar which surface is the third of that of Iraq and which population accounts for only 4.7%, Al Muthanna that covers 12% of the surface but only represents 2.2% of the total population and An Najaf with 6.6% of the country's surface but only 3.9% of its population according to 2012 data.

In parallel to the population's disproportionate geographical distribution, Iraq also faces disparities in the environmental distribution of its population where the percentage of the urban population increases to reach around 69% of the total population according to the findings of the listing and enumeration process of 2009. Population projections suggest that this percentage would reach 69.4% in 2013 and 70.3% in 2017.

These facts result from internal displacements and changes in the movement patterns of the population that vary depending on the lack of security, forced displacement and disparities in the levels of social and economic advancement among regions, in addition to the lack of specialized policies that deal with rural development. Therefore the 2013-2017 National Development Plan should call for the adoption of a national strategy for geographic and rural development that would decrease the economic, social and services disparities among governorates and between urban and rural regions.

Graph (2-3): Population Distribution According to the Findings of the Listing and Enumeration Process in 2009



2-1-3 Challenges

- The continuous increase in demographic growth rates and its dissociation from real developmental levels has aggravated prevailing consumption patterns in the economy, society and the irrational investment of resources.

- Iraq is on the verge of entering the phase of demographic dividend and the percentage of the working-age population is increasing which requires promising comprehensive policies that aim at creating job opportunities in line with this increase, transforming it from an economic burden to a point of strength in the country's economy.
- The persistent migration to a limited number of main cities and the prevalence of these cities on the national demographic system in addition to the continuous displacement from rural to urban cities has created economic, social and environmental tensions and caused a lack of services in the hosting community. On the other hand, the regions of origin, especially rural areas, lost their productive human resources which would restrict their developmental role if the adequate solutions are not implemented.
- It is difficult to predict the demographic situation because the general population census was not conducted and because general censuses are usually separated by long periods of time which makes it harder to link the demographic situation to the desired developmental policies.

2-1-4 The Vision

"A coherent population policy that complements the economy's developmental orientations and makes quantitative and qualitative changes in the lives of the people in order to achieve sustainable development and fulfill justice and equal opportunity according to a right-based approach".

2-1-5 The Goals

First Goal: Integrating population data in developmental plans and programs

The means of achievement:

- Linking both the operational and investment public expenditures in the federal budget to population data
- Conducting population studies and projections in addition to economic and social studies and projections in order to estimate the different future needs in terms of education, workforce size, demand on commodities and services and other needs.
- Raising awareness of economic decision-makers concerning the role of the population as a variant that affects development.

Second Goal: Making a progressive impact on the population growth rate

The means of achievement:

- Adopting a national population policy to face population challenges through direct and indirect state interference in order to achieve the desired changes in terms of the composition and distribution of demographic growth factors.
- Adopting a national family planning program by encouraging women of child-bearing age to use family planning methods in order to bring the fertility rate down or close to the replacement rate.
- Increasing the number of multidimensional awareness programs in order to make a behavioral change that would help prevent early or late childbearing and stimulate the demand on a smaller number of children according to the family's reproductive ambitions.
- Expanding social and family planning services as strong tools to fight poverty while prioritizing poor regions and removing the obstacles that prevent the achievement of said expansion.
- Identifying a governmental institution that deals with women's health and that would determine and promote women's health priorities and conduct health researches to unify, adopt and disseminated health indicators among governmental actors and international and non-governmental organizations.

Third Goal: Increasing the life expectancy rate at birth to more than 70 years in 2017

Means of achievement:

- Decreasing infant and under five children mortality rates
- Adopting effective health programs and an advanced health system
- Adopting social programs that respond to the needs of the elderly age group in terms of health and social assurance.
- Expanding the coverage of the governmental support program in the fields of health and social security for elderly people in order to prolong their longevity and improve their health and social situation.
- Increasing the numbers of retirement homes while strengthening the governmental support to said institutions.

Fourth Goal: benefiting from the demographic dividend

Means of achievement:

- Adopting a youth capacity building and empowerment program to help them contribute to development and policy making.
- Adapting economic policies to increase job-rich growth and benefit from the advantages of the demographic window.
- Drafting a plan to develop diverse technical education and vocational trainings in the framework of programs that are based on the labor markets needs.

- Creating an environment that would attract private sector investments and guarantee sustainable development and job opportunities for young people.
- Providing soft bank credits to support youth and help them acquire personal skills and set up small businesses.

Fifth Goal: Organizing the population's movement in development

Means of achievement:

- Orienting geographical development policies towards less developed regions in order to reduce the economic and social disparities between these regions and other more advanced areas and laying the foundations of a balanced geographical development.
- Adopting a comprehensive strategy for rural development that would attract investments since rural areas are considered as the pockets of poverty within the country.
- Activating the mechanisms that allow the shift to administrative and financial decentralization in order to increase service provision from local financial resources.
- Redistributing the workforce on the geographical areas and among sectors to achieve the developmental and geographical balance among the population and especially between urban and rural areas.
- Laying the foundations of human security as the essence of the right to development by creating an adequate environment for balance that would create job opportunities and reduce the external movement of the population.

2-2 The Workforce.... Productive hands, creative minds

2-2-1 Situation Analysis

The increase in the economic participation rate of the working-age population reflects the level of the economy's efficiency in generating decent work opportunities. The 2010-2014 Development Plan aimed at attaining the adequate level of economic participation based on the following:

- ▶ Guaranteeing compatibility between workforce supply and demand.
- ▶ Building the knowledge and the skills of the workforce.
- ▶ Increasing the absorptive capacity of investment in the economic sectors that depend on work.
- ▶ Supporting the private sector in providing work opportunities to graduates.

These foundations have been strengthened by a set of goals that constitutes the general framework of the policies, programs and activities undertaken during the years 2010-2011 in the following areas:

- Poverty reduction linked to the social security net program and small grants program that aims at generating income, in addition to the unemployment allowance program and social rehabilitation program that seeks to create income generating job opportunities, empowering the poor, building their capacities and rehabilitating them in a bid to increase their productivity.
- Increasing the level of employment in order to achieve the essential goals set in the 2010 National Employment Policy by improving the labor market management and programs and creating the adequate legislative, investment and commercial environment, in addition to increasing the opportunities for recruiting the unemployed and the labor market's new comers, mainly youth and women. Moreover, the Plan seeks to lay the foundations of decent work and disseminating its culture in all labor sectors while insisting on the need of increasing and expanding the opportunities and activating social dialogue in order to increase employability and respect the values and standards of work.

It is also important to create a decent work environment by setting a series of goals that are consistent with the 2012-2017 National Environmental Policy as one of the objective conditions to achieve sustainable development. This will be done through the management, planning and execution of a occupational health and safety at work program and restricting dangerous and harmful professions in order to create a safe working environment. Moreover, there is a need to spread the culture of occupational safety and adherence to relevant international standards in the workplace.

Developing human resources by conducting vocational trainings allows the unemployed to acquire the skills that are needed in the labor market according to global professional standards. It is also necessary to improve the performance of all workers and building their skills in strategic planning. Furthermore, there is a need to fight discrimination at work and improve the workers' life and public relations skills at work in order to expand their options.

The crisis emanating from the clash between the inherited problems and the present difficulties resulted in many challenges and aggravated existing problems that have clearly hindered the efficiency of policies and programs and reduced the possibility of achieving the goals set by these policies and programs. Furthermore, the situation became even more complicated and replicated the problems in the institutional and infrastructure dimensions where there has been an increase in the labor market imbalance and where the outcomes of the education system became inconsistent with labor market needs. Moreover, enrollment in education decreased and school dropout rates rose while the scope of poverty became even larger. Women and youth living

in rural areas were the first to be hit by the consequences of these crises with the decline in labor force demand and the increase in the numbers of unemployed people. Due to the lack of monitoring, unemployment among graduates became a common phenomenon in addition to underemployment and child labor. Male participation in economic activities was still dominating in light of the traditional customs prevailing in the labor market. It was also difficult to implement the provisions of the National Employment Policy and institutions were not acting actively to control the relationship between all production actors. Lax executive procedures were implemented and there was a continuous delay in adopting the new labor and social security laws.

However, this grim picture of the labor work situation in Iraq is not entirely devoid of positive aspects represented in the achievements that were accomplished in the years 2010-2011. The most important achievement is the adoption of the decent work concept in Iraq, thus, it was necessary to implement the decent work program that aims at increasing decency and stability in society by accomplishing determined strategic goals aiming at abolishing forced labor, fighting child labor, guaranteeing gender equality in employment and at the workplace, guaranteeing social protection and strengthening social dialogue. In the year 2011, serious efforts were exerted to create a regulating, legislative and technical environment that supports labor market ingredients and to adopt an efficient work plan guaranteeing a protected and safe full employment that depends on the efficiency of the investment program implemented in the country.

The private and mixed sector is playing a limited role that is declining due to the unfavorable conditions of the working environment and the decrease in wage levels in said sector. Therefore, the informal sector grew larger; this sector always refrains from implementing regulatory and evolutionary plans and from subscribing its workers to health and social security schemes while efforts are focused on consecrating the concept of security for all and on expanding the social security floor according to international standards.

Based on these facts, the 2013-2017 Development Plan is supposed to fulfill a multidimensional societal responsibility that requires the adoption of strategic visions and realistic goals based on the conditions that prevail on the correlation between growth and employment. This would create decent jobs- rich growth that would increase productivity levels in a way that is consistent with the wages and skills set by the macro economy approach and its sectoral and social policies that are based on the principles of participation and empowerment of all production actors as a means to strengthen the right-based approach. Moreover, this would push sustainable development farther and would reflect the statement of the National Employment Policy that was adopted in 2010 by setting a pragmatic approach based on the Plan's goals and means of achievement in order to respond to all the problems and trans-

forming the Iraqi labor market into a clear reflection of the advancement, uniformity and harmony among all the branches and goals of the economic policy; the ultimate strategic goal being “providing decent work opportunities as a right” to all Iraqis.

First: The Economically Active Population

The economically active population represents the workforce that is available in the economy and that goes within the age group of 15-64 years old. The increase in the economic participation of this population indicates the advancement towards a job-rich growth. Economic participation in Iraq declined from 46.25% in 2008 to 42.4% in 2011 due to security instability, unclear orientations of the economic policy, the decline in investment expenses and their weak execution, in addition to the poor condition of the economy's infrastructure and the services provided to citizens, weak sectoral networks and inconsiderate employment. This situation led to the increase of male participation in the economic activity where it reached 72% in 2011 compared with female participation that scored 28% in the same year. In order to bridge the gap in the composition of the economically active population from a gender-based perspective, the 2013-2017 Development Plan should adopt an approach based on the economic empowerment of in order to adapt macro and private financial and monetary policies and guarantee their contribution to the system of developmental reactions, thus fulfilling the principle of equal opportunity while the ratio of economic participation between sexes is becoming close to 101 males for every 100 females.

Second: Employment and the Labor market

Employment in Iraq depends on the nature of the implemented macro policies and the orientations of the federal budget in terms of public expenditure distribution between occupational and investment expenses and on the nature of the economic management that caused a clear expansion in the public sector. The latter bore the brunt of increasing employment rates. Thus special decisions were taken to expand the appointment of employees in specific sectors such as security, defense, interior affairs, education and health; therefore, the public sector became the principal generator of job opportunities. Iraq lacks a clear employment policy that is based on scientific grounds and accurate data and indicators pertaining to the labor force, their education level, skills, number of workers and available opportunities. Thus, the situation of employment and labor market is actually the reflection of the political, economic and social reality that has been prevailing in Iraq during the last decades and until this date. This reality led to the emergence of challenges that have cast their shadow over the labor market and work environment. The National Employment Policy that was adopted in 2010 aimed at identifying strategic visions as shown by the demographic changes. The policy chose mechanisms that would absorb population growth and its effects on unemployment rates, thus the employment policy's orientations and the

goals of the National Development Plan aim at the same goal that would respond to demographic changes, optimize the achievements in terms of unemployment rates that declined from 15% in 2008 to 11% in 2011 and improve the distribution of full-time wage earners between the public and private sectors in order to increase their proportion in the public sector to 96.1% while their proportion did not exceed 48.4% in the private sector. The situation seems adverse for partial time workers whose percentage in the private sector increased to 33.3% while it only registered 3.3% in the public sector in the year 2011. Data reveal the increase of part time workers in the private sector to 15.9% compared with 3.3% in the public sector. The public sector became thus a source of comfort, stability and security where protected labor reached 97.1% in 2011. In fact, the increase of female fulltime workers in the public sector reached 19.2%; therefore, the private sector became an insecure resort for women and men employment in light of the lack of a social security umbrella. Accordingly, the percentage of females working in unprotected jobs in the private sector reached 92.2% in 2011 versus 97.9% of women working in protected jobs in the governmental sector. This reality reflects the need to draft social security laws that would cover all workers in the private sector. The private sector would consequently attract labor force and create an attractive business environment which would lay safe and sustainable foundations for the shift towards a market economy at the lowest cost.

Third: Unemployment

Unemployment is a major concern for the State, the causes and consequences of the disturbing problems in Iraqi economy are overlapping which is aggravating poverty and widening the category of marginalized people living in social exclusion and marginalization. Therefore, the resulting unsafe and instable environment was reflected on the situation of the economy, investments and production. Despite the improvements in employment levels during the last few years and the decrease of unemployment rates from 28% in 2003 to 15% in 2008 and 11% in 2011, these figures remain high due to several reasons including the decline in investment expenses and the decrease in the efficiency of their implementation, as well as the drop in investment rates in the private sector due to the absence of an adequate business environment.

The problem of unemployment is not only limited to the increase in unemployment rates but is also embedded in its orientations and types as follows:

- The increase in the underemployment rate with an apparent rate of 38.6% and unapparent rate of 61.4% in 2011.
- The increase in the employment rate in urban regions by 12% compared with 10% in rural areas in 2011. The growing number of non-paid workers in rural areas explains the low rate registered in these areas in comparison with urban regions.

- The high increase in unemployment rates among youth (15-29) years old that reached 15.5% for males and 33.3% for females in 2011.
- The increase in the unemployment rate in comparison with the rise in education levels registered 12.7% for the level of Faqel preparatory school compared with 24.2% for the level in Faala Institute.

2-2-2 The Challenges

- The role of the public sector that became a strategic incubator of the workforce in the economy and that strives to cope with the market's mechanisms.
- Disguised unemployment and underemployment characterizes workers in the Iraqi labor force. The arbitrary employment decisions and the status-quo laws are likely the reasons behind the persistence of these phenomena in the workforce.
- The non-legislation of the privatization law and the procrastination in restructuring public institutions deprived the private sector of the possibility of becoming a sustainable-jobs creator and suspended social security legislations for an indefinite period.
- The new labor law was not adopted nor activated which has frozen all the items and possible interventions of the National Employment Policy which cast a shadow over employment and the labor market.
- A lack of consistency between the education system's outputs and the labor market needs has aggravated unemployment among graduates.
- The complicated mechanisms of loans and their conditional nature reduced the efficiency of income generating small business programs and increased the youth underemployment rate.
- The expansion of the informal private sector led to the emergence of arbitrary work and abolished the concept of decent work and the relevant adequate environment.

2-2-3 The Vision

"A productive and protected workforce"

2-2-4 The Goals

First Goal: decreasing the unemployment rate to %6 in 2017

Means of achievement:

- Increasing the investment expenses in the GDP to build a job generating economy for the public and private sector.

- Increasing the executing efficiency of programs dealing with the implementation of the investment projects set by the annual investment plans and the regional development program within the agreed timeframe.
- Focusing on economic activities that could guarantee intensive employment.
- Creating an investment environment that would attract capital to the private sector.
- Granting soft loans to unemployed craftsmen and skilled people.

Second Goal: increasing the participation rate in the economic activity to %50 in 2017

Means of achievement:

- To legislate a social security law to strengthen the role of the formal private sector in the generation of job opportunities.
- Creating a suitable environment to shift workers from the informal to the formal sector.
- Implementing specialized programs for women knowledge and skills building in order to increase their participation in the economic activity.
- Adapting the rehabilitation and vocational training program to the labor market reality.

Third Goal: developing the activities of labor market institutions

Means of achievement:

- Linking the educational systems and curricula to the labor market's actual needs.
- Developing the labor market information and data system.
- Activating employment centers that are considered as the main source for providing, analyzing and disseminating labor information.
- Coordinating with the scientific and research centers that conduct labor market studies in order to determine the existing problems and find pertinent solutions.

Forth Goal: increasing labor productivity

Means of achievement:

- Upgrading modern work systems and methods.
- Adopting a flexible wage policy that responds to the economic and social developments.
- Consecrating the values and conditions of decent work among workers.
- Adopting sustainable worker's rehabilitation and development programs.

- Developing vocational training centers and increasing their numbers according to the qualitative needs in the labor market.

Fifth Goal: creating a decent work environment

Means of achievement:

- Promoting work ethics among actors in the labor system and adopting an Iraqi standard that is consistent with international requirements in this field.
- Guaranteeing the occupational health and safety requirements in the workplace.
- Restricting dangerous and harmful occupations and applying risk standards thereon.
- Spreading the culture of occupational safety and its ruling international standards in the different workplaces.
- Modernizing and developing laws related to occupational health and safety.

The executive power is willing to implement a series of projects in the years 2013-2017 in order to make a quantum leap in response to unemployment and support vulnerable groups. These projects include:

A. The e-government project that was launched in 2012 under which the center of the Ministry of Labor is now linked by an electronic network to its different departments and sections in Baghdad and the governorates. The smart card program shall be completed to guarantee that all poor people are fully targeted and all alien beneficiaries are removed.

B. Adopting developed programs that include qualitative activities related to decent work and the implementation of the occupational classification in addition to modern basic and popular training programs by introducing advanced portfolios of vocational training standards and by linking vocational rehabilitation programs in rehabilitation centers to the labor market's needs in order to integrate released people in the aftercare program.

1. Laws and Reforms

During the period 2013-2017, the executive power will adopt a series of suggested bills that aim at activating the mechanisms of the employment policy and achieving their goals as follow:

- A. The bill on training unemployed in the workplace in order to increase their skills in occupations that are not available in training centers and finding job opportunities for them in the private sector.
- B. The bill on trainees' remuneration under which the monthly wage of a trainee should not go below 150 thousand Dinars.

- C.** The new labor law bill that was drafted based on a national vision that is consistent with developments in the labor and training fields and is in accordance with international commitments and conventions.
- D.** Drafting instructions for article 23 of Labor Law No 71 dated 1987 related to organizing work permits for foreign workers.

2. Administrative reforms scheduled for the five upcoming years:

- A.** Activating the process of institutional and job performance correction.
- B.** Using the job description guide in appointing and promoting employees.
- C.** Applying the job performance correction system.
- D.** Applying the electronic archive system.
- E.** Modernizing administrative and financial work procedures.

Economic Development ... Overall Framework

3-1 Macroeconomic Analysis

Based on the Plan's general framework and the data, assumptions and goals put forward, macro and sectoral resource estimates have been estimated for the Plan's time frame to determine the scale of macro investments, their sectoral distributions and the public and private sector's roles in realizing them, in addition to GDP and sectoral performance estimates in the light of the targeted economic growth rate.

3.1.1 Economic Growth

The growth orientations adopted by the Plan have coalesced around the idea of reconciling economic, social and environmental considerations, noting that economic growth is a necessary but not a sufficient condition to achieve justice, equal opportunities and environmental sustainability. All of these things require other measures to be adopted that impact, accompany or complement growth, such as expanding job market absorption capacity to guarantee high levels of employment. This is linked with improved livelihood and quality of life for the population -- especially for classes with limited income and impoverished households -- as it focuses on human and social development services and protecting the environment.

Thus the goal that the Plan is pursuing is not limited to boosting economic growth rates, but rather is also bound by social and environmental considerations. This goal is not out of reach in light of the steady improvement in the economic climate, the significant projected rise in crude oil production and exports, the commitment to continue to execute economic programs and existing and targeted development programs – in addition to the possibility of an enlarged role for development partners in achieving the Five Year Plan's goals. The plan aims to:

- Raise the GDP growth rate over the duration of the plan by an annual average of 13.31% at fixed 2012 prices.
- Develop non-oil economic activities (commodities + distribution + services) at an annual growth rate of 7.5%.
- Develop crude oil activity at an average growth rate of 18.7%.
- Keep inflation rates in single digits.
- Give a strong investment impetus to selected sectoral growth poles (industry, energy, agriculture, tourism) to raise their share of GDP generation to more than 60% of GDP in constant prices.



- Expand job opportunity generators to ensure an acceptable level of employment and help bring down the employment rate to 6% by the end of 2017.
- Reduce poverty rates to 16% of the total population in 2017.

3.1.2 Plan's Projected Revenue

General state revenues are projected to reach 812.263 trillion dinars over the duration of the Plan, of which oil revenues will constitute 95%, while non-oil revenues will constitute 5%, as detailed in the following sections:

First: Oil Revenue Estimates

Financial revenues from crude oil production and exports occupy first place in the hierarchy of general state revenues for the 2009-2012 period. Oil revenues represented 88.5% of total revenues in 2009, increasing to 97.1% in 2012, and oil revenues are projected to remain in the lead and impact the Iraqi economy over the duration of the 2013-2017 Plan, amid continued improvement in oil sector production capacity as well as implementation of contracts signed with foreign companies to increase production and export quantities. The average annual increase in oil production is projected to reach 17.9%, with the average annual increase in exports hitting 26.2% over the 2013-2017 period, as shown in Table 3-1.

Table 3-1: Estimates for Oil Production and Oil Available for Export for 2013-2017 Period (thousand barrels/day)

Year	Oil Production	Export
2013	3705	2900
2014	4485	3500
2015	4635	3750
2016	6435	5000
2017	9485	6000

In light of these projections and the assumption that the price of a barrel of oil for export will be \$85 USD, the total value of oil exports will reach 659.281 billion over the duration of the Plan, as in Table 3-2, meaning in the range of 768.721 trillion dinars, as indicated in Table 3-3.

Table 3-2: Projected Export Volume and Value of Oil Exported 2013-2017

Year	Expected Oil Exports 1000 Barrels/day	Value of exported Oil Million Dollars	Price Dollar/Barrel
2013	2900	89972.50	85
2014	3600	111690,0	85
2015	3750	116343.75	85

Year	Expected Oil Exports 1000 Barrels/day	Value of exported Oil Million Dollars	Price Dollar/Barrel
2016	5000	155125	85
2017	6000	186150	85
Total		659281.25	
*Oil Ministry Assumptions			
Dinar/Dollar Exchange Rate = 1166Dinar/Dollar for the entire period. According to the Assumptions of the Central Bank			

Table 3-3: Oil Revenue Estimates for the 2013-2017 Period

Year	Value of exported oil according to the assumptions of the Oil Ministry /Billions of Dollars
2013	104907.935
2014	130230,5
2015	135656.812
2016	180875.750
2017	217050.900
Total	768721.937

Second: Non-Oil Revenue Estimates

The Plan does not expect any significant increase in the value of non-oil exports; in fact, whatever is achieved will disappear in the face of optimistic projections for the volume of oil revenues. As shown by its share of total revenue, non-oil revenues will increase from 7.398 trillion dinars in 2013 to 9.786 trillion dinars in 2017, for an increase of no more than 32% during the 2013-2017 period. However, its share of total revenues will drop from 6.5% in 2013 to 4.3% in 2017, for an average of 5.3% of total revenue over the 2013-2017 period, as shown in Table 3-4.

The modest increase in the value of non-oil revenues can be attributed to:

- The projected 10% annual increase in tax revenues over their previous level.
- The projected 10% increase in treasury share of non-oil company profits, as the rate for the 2013-2017 period.

Thus, non-oil revenues – as indicated in Table 3-4 – will rise from 112.306 trillion dinars in 2013 to 226.837 trillion dinars in 2017, according to the Plan's total revenue projections of 812.263 trillion dinars over the duration of the Plan.

Table 3-4: Project Financial Revenue for the 2013-2017 Period (billion/dinars)

Year	Non-Oil Revenues (1)	Oil Revenues (2)	Total Revenues(3)	1: 3%	2: 3%
2013	7398.3	104907.935	112306.235	6.5	93.5
2014	9079.1	130230,5	139310,4	6.6	93.4
2015	8274.703	135656.812	143931.515	5.7	94.3
2016	9002.7	180875.750	189878.45	4.7	95.3
2017	9786.5	217050.900	226837.4	4.3	95.7
Total	43541.303	768721.937	812263.24	5.3	94.6

3.1.3 Required Investment Volume

To achieve the economic, social and environmental aspects of the Plan's macro and sectoral goals, 417 trillion dinars are required, according to the general and particular assumptions and contributions in the following sections. This is on the basis of a 4: 1 capital coefficient, i.e. producing one additional unit of production requires four units of capital.

First: State Investment Volume

State investment volume is in the range of 329 trillion dinars – which is equivalent to 282 billion dollars and represents 79% of the Plan's total required investments -- and is covered by revenues accrued to the State. These are expenditures on projects to be implemented – which numbered 5861 at the end of 2012 – and new projects scheduled to be added within the Plan's two first years. (Table 3-5)

Table 3-5: State Investment Volume for 2013-2017 Period

السنة	الإيرادات الكلي المتوقع	% نسبة الاستثمار	تخصيصات الاستثمار الحكومي
2013	112306.2	37	41553.3
2014	139310.4	38	52938.0
2015	143931.5	40	57572.0
2016	189878.5	40	75951.4
2017	226837.4	40	90735.0
Total	812263.0	39	318750.3

Second: Non-State Investment Volume

The Plan supposes that the private sector will contribute 88 trillion dinars – equivalent to 75 billion USD – which represents 21% of projected expenditures over the various fields and investments set by the plan.

Third: Sectoral Distribution of Investments

According to the Plan, investment is centered around the principle of strengthened investment priorities for the idea of sectoral and spatial growth poles over the duration of the Plan all the way to the future goal of balanced sectoral growth. Based on this principle, investments have been distributed sectorally to ensure that the Plan's goals are met and that its development model philosophy takes into account the time frame of the relative importance of sectoral investments, giving priority to spending on ongoing projects and achieving additions to fixed capital formation.

First priority was given to the industry sector at 38.2%, as this sector is the main generator of financial resources and the primary influence on the capital accumulation rate by developing transformational industry activity. It is also the largest stakeholder in the agricultural sector and reduces the exposure of Iraq's economy to the global economy. Second priority was given to the building and service sector, including human and social development, pivotal structures and tourism at 28.6%, as human development is the basis for generating an empowering environment for material development. In third place came the agricultural sector, as a development pole that helps boost food security, job opportunity generation, and makes an effective contribution to developing the countryside and reducing poverty. Accordingly, its share rose from 9.5% in the previous plan to 13.4% in the current Plan, in order to provide financial resources for land reclamation projects according to the indicators found in the Plan.

The above-mentioned sectoral priorities do not cancel out the goal of balanced distribution of investment by sector, as none of the activities received less than 9.5% of total projected investments, as shown in Table 3-6.

Table (3-6): % Investment Share by Sector

Economic Activity	Percentage
Agricultural Sector	13.4
Industrial Sector	38.2
Communication and Transportation Sector	9.5
Building and Services Sector	28.6
Education Sector	10.3
Total	100

Fourth: Spatial Investment Distribution

It is one of this Plan's priorities to achieve justice and fairness in distribution of its benefits across all of Iraq's regions and to reduce the spatial development disparity between the governorates on one hand and between urban and rural areas on the other.

The Plan has confirmed that the role of local governments in developing their governorates will continue to be promoted, with 14% of its total investments allocated to regional development programs that focus on local services and activities. These are at the disposal of local governments and are distributed by population volume on the national level and by population volume of each governorate's administrative units. Over the duration of the Plan, the programs' allocations are projected to rise based on the expansion of the governorates' executive capacities. The Plan also calls for planning of non-sovereign investments to correspond to the relative size of the population of the Kurdistan region as a share of the total population of Iraq. The Plan also calls for investments in the industry, agriculture, energy and pivotal structures sectors to be spread over various governorates according to the capacities and comparative advantage of each governorate with regards to the activity, so as to achieve balance between the principles of economic efficiency and social justice in distributing the benefits of development.

3.1.4 GDP Estimates and Sectoral Distribution

First: Projected GDP Growth Rate

The Plan has estimated the total GDP growth rate in fixed 2012 prices at 13.31%. On this basis, total GDP including oil will rise from 264.950 trillion dinars in 2013 to 445.383 trillion dinars in 2017 for an estimated rate of 68%.

The Plan expects non-oil GDP to rise from 131.953 trillion dinars in 2013 to 181.361 trillion dinars in 2017 for an increase of 37.4%. This increase translates into economic activity growth (excluding oil) at an annual rate of 7.5%, whereas oil extraction activity will grow at a rate of 18.7%, as indicated in Table 3-7.

Table (3-7): GDP with and without Oil in 2012 Fixed Prices for the Years 2013-2017
(Billion Dinars)

T	Economic Activities	2012 Base Year	Overall annual growth rate	2013	2014	2015	2016	2017
Base Year	Agriculture, forestry and fisheries	2013	2014	2015	2016	2017	12194.92	13249.8
2	Mining and quarrying							
1-2	Crude Oil	112044	18.7	132996	157867	187388	222429	264023
2-2	Other Types of Mining	1034.1	6.71	1075.085	1117.695	1223.03	1293.387	1430.83
3	Manufacturing	4418.6	3.68	4514.645	4612.778	4850.152	5003.174	5293.704
4	Electricity and Water	3320.3	7.97	3476.607	3640.272	4048.489	4325.12	4871.838
5	Building and Construction	13783.1	8.92	14509.3	15273.75	17193.24	18508.8	21129.3
6	Transport, communications and storage	15678.2	8.78	16491.28	17346.53	19491.87	20959.1	23880.39
7	Wholesale and retail trade, hotels and similar activities	19781.9	8.22	20742.37	21749.47	24265.82	25975.9	29363.35
8	Money, insurance and real estate services							
1-8	Banks and Insurance	3777	8.65	3970.0	4172.814	4681.156	5028.307	5718.678
2-8	Ownership of dwellings	17879.5	6.92	18610.31	19370.99	21254.26	22515.23	24983.32
9	Social and personal development services							
1-9	Social development services	33008.2	7.18	34408.07	35867.32	39486.73	41917.4	46686.42
2-9	Personal services	3550	6.01	3676	3806.517	4127.509	4340.182	4752.942
	Total activities without oil	Total activities without oil	7.5	131953.99	137777.07	152270.896	162061.52	181360.572
	Total activities	238427.2	13.31	264950	295644.07	339658.896	384490.52	445383.572

If total GDP growth is analyzed in current prices, the Plan projects an increase from 269.461 trillion dinars in 2013 to 468.104 trillion dinars in 2017 (including oil), meaning an increase of 73.7%. Meanwhile, GDP generated by non-oil economic activities will rise from 136.465 trillion dinars in 2013 to 204.081 trillion dinars in 2017 for an increase of 49%. These increases translate into a non-oil economic activity growth rate of 10% annually, whereas crude oil will grow at an annual rate of 18.7%, as indicated in Table 3-8

Table (3-8): GDP by the 2012 Current Prices for the Years 2013-2017 (Billion Dinars)

T	Economic Activities	2012 Best year	Overall annual growth rate	2013	2014	2015	2016	2017
	Agriculture, forestry and fisheries	2013	2014	2015	2016	2017	13649	14697
2	Mining and quarrying							
	Total activities without oil	126383.2	10.05	136465	147366	168397	185368	204081
	Total Activities	238427.2		269461	305233	355785	407797	468104

T	Economic Activities	2012 Best year	Overall annual growth rate	2013	2014	2015	2016	2017
1-2	Crude Oil	112044	18.7	132996	157867	187388	222429	264023
2-2	Other Types of Mining	1034.1	8.94	1107.7	1186.5	1337	1456.5	1586.7
3	Manufacturing	4418.6	5.85	4624.4	4839.7	5240.3	5546.9	5871.4
4	Electricity and Water	3320.3	8.4	3542.3	3779.2	4229.3	4584.5	4969.6
5	Building and Construction	13783.1	12.2	15122	16590	19468	21843	24508
6	Transport, communications and storage	15678.2	10.95	17045	18530	21413	23758	26359
7	Wholesale and retail trade, hotels and similar activities	19781.9	10.94	21505	23377	27010	29965	33244
8	Money, insurance and real estate services							
1-8	Banks and Insurance	3777	11.5	4122.8	4500.2	5235.7	5837.8	6509.1
2-8	House ownership	17879.5	10.24	19337	20913	23954	26407	29111
9	Social and personal development services							
1-9	Social development services	33008.2	9.44	35489	38155	43266	47351	51821
2-9	Personal services	3550	8.77	3797.8	4063	4568.3	4969	5404.7
Total activities without oil		126383.2	10.05	136465	147366	168397	185368	204081
Total Activities		238427.2		269461	305233	355785	407797	468104

Two: Sectoral Distribution of GDP

In keeping with the goals of the Plan and the development model philosophy, the future orientation toward generating sectoral GDP growth means that the Plan will strive to give a greater role to (non-oil) commodity activity and services linked to distribution activities with the aim of consolidating the real economy by diversifying the national production structure and stimulating domestic content for commodity supply. This is in order to reduce the Iraqi economy's high level of exposure to the outside world, which the Plan considers to be among the biggest economic challenges that it faces, and is evidenced by the high imported content of the commodity supply in Iraqi markets.

To achieve this, the Plan expects the contribution of non-oil commodity activity to rise in constant prices from 34.055 trillion dinars in 2013 to 45.976 trillion dinars in 2017, for an increase of 35%. Despite relative increases in outputs, it will maintain the same relative importance in absolute rankings.

The crude oil extraction sector will clearly realize a high share of GDP, although non-oil commodity activities will maintain their levels of GDP generation in the range of

25.4% compared to 42% for service activities and 32.5% for distributional activities. This may be attributed to the increased contribution of the oil sector, which will have an impact on generating higher growth rates in service and distribution activities than in non-oil commodities, in addition to causing structural changes in favor of commodity activities, but which need a longer time frame than the Plan itself.

If the GDP structure including oil is analyzed, oil will contribute 56.4% in 2017 compared to 43.6% for other activities. This maintains the GDP distribution structure at current levels as a result of the large projected increase in oil and gas activity over the duration of the Plan.

Table (3-9): Contribution of Non-Oil Economic Activities to GDP Generation for the Years 2013-2017 in Fixed Prices

Activities	Activities Contribution 2013	Activities Contribution 2017	Percentage of the Total %	Percentage of the Total % 2017
Commodities other than oil	34055.1	45975.5	25.8	25.4
Distribution activities	41203.7	58962.4	31.2	32.5
Services	56694.4	76422.7	42.3	42.1
Total activities other than oil	131953.2	181360.6	100.0	100

3-2 Policies and Reforms Favoring Development

Coordination between the branches of economic policy is necessary to ensure the strategic efficiency of the development adopted in the Plan and to achieve its targets. The lesson is not that each policy should be appropriate for its goals and means on its own, but that these policies need to be coordinated, harmonious and forged in a single crucible so as to make them more able to translate the Plan's goals into a practical reality. Based on the foregoing, the two most important policies that influence and are influenced by development will be analyzed: these are financial and monetary policy, in addition to economic reforms.

3.2.1 Financial Policy

First: Situation Analysis

One of the most prominent features of the Federal budget is that the general budget cycle continues to be linked to the economic cycle and follows its direction. This linkage, which is explained by the effects caused by the foreign supply shock of the inter-

national energy market on the general budget is a natural result of the Iraqi economy's reliance on oil revenues as an essential source of financing for its budget – going from 93% in 2009 to 97.4% in 2012 – in addition to its fixed adoption of a single possible reserve price in budget revenue estimates. This leads to rigidity in the sense that there is no high-impact change mechanism in general budget revenue flow and expenses. Iraq's economy grows when it receives injections of oil revenue – as a result of foreign supply shock – and contracts when spending outflows exceed the level of the oil injections into the economy. This fact has left an impact on the contours of the financial policies implemented in Iraq, which have revolved around giving relative priority to operational expenses at the expense of investment expenditures, which represented 82.6% in 2009 and continually dropped until they reached 68.3% in 2012. These high rates are explained by consumer welfare indicators, free riding, salary and wage expense indicators, and transformational expense indicators in the budget, as appear in the government support and social welfare items – which represents a total of 50% of the budget's operational spending and around 40% of aggregate public spending.

Sticking to this financial policy orientation for the 2009-2011 period meant that the Iraqi economy continued to be exposed to aggregate demand pressure, which operated forcefully through expense budget multipliers and its impact began to exceed the limits of the expansion in the financial policies themselves. An inflationary gap was thereby generated, which monetary policy worked to close with great consistency using all severe instruments. Inflation thereby fell from 7.1% in 2009 to 3.1% in 2010 only to spike again to 5% in 2012, and it is projected to rise to 7.5% in 2013. In this way, the inflationary effects of the general budget have become characteristic, as long as rent expenditures subject to the tax increases – if approved – the general budget will be able to achieve economic balance through what is known as balanced budget multipliers.

The state has adopted the principle of medium-term Federal budget strategies since 2011 and supplied them for three years. The goals that arise there from help reduce the budget deficit, increase the share of expenditures dedicated to the investment budget, increase non-oil revenues and increase the governorates' share of investment spending. With the goal of increasing financial policy instruments, the Ministry of Finance has striven to adopt to programs: a program to improve the work environment of the Ministry of Finance and a program to encourage investment in the private sector.

The first program aims to increase revenue by redesigning revenue sector infrastructure (customs and taxes), developing the sector and boosting worker performance efficiency. This is in addition to restructuring and developing the banking sector by studying and modernizing these banks' systems incorporating modern scientific methods. The program also includes the essential goal of modernizing budget prepa-

ration methods and staff and monitoring it in detail, along with efforts to reorganize the financial relationship between various government departments by putting in place modern linkage and e-transfer systems, as used in advanced countries.

Regarding the second program, which seeks to encourage investment in the private sector, it involves a serious attempt to structure banking sector performance to serve local and foreign private investors by incorporating foreign transfer methods and dealing with global banks. This is especially now that Iraq has come out from under the guardianship of the Article Seven. Likewise, strategic investment projects will be announced for the industry, agriculture and service sectors, so that they may become fertile ground to attract private sector investment. Moreover, financial policy for the coming phase will reconsider factors that influence such investments, particularly taxes and customs, in order to support a business climate conducive to private investment activity.

Second: Challenges

- Continuing imbalance in the structure of public spending in favor of operational expenses at the expense of investment expenses, generating an increase in aggregate effective demand levels in the economy. This is matched by rigidity in the production apparatus and inability to respond to that increase with a fresh rise in general price levels. This was avoided by increasing imports, thereby distorting the domestic supply component and increased the economy's exposure to the outside world.
- It also indicates important developments on the Federal general budget by adopting the principle of "resource from the source," which was adopted in the 2010/2011 budget, and which consists of allocating public expenses according to the petrodollar law. The 2010/2011 budget also adopted a national poverty line to determine the class covered by the social security network according to which transformational expenses are allocated in the budget.
- Oil revenues continue to hold preeminence as a main source of financing for Federal budgets. This makes budget estimates uncertain, along with the possibility of achieving the budget's goals.
- The share of non-oil revenues in total public revenues remains low due to continued application of tax exemptions, not levying new taxes, diverse channels for tax evasion. This is in addition to the failure to adopt new measures to seek new types of fees and fines that could improve non-oil revenue yield, and failure to activate Customs Tariff Law No. 22 of 2010 despite the fact that it was passed. There is also no program to collect taxes on foreign oil companies and secondary contractors working with them under Law No. 19.
- Low efficiency in implementing public expenses in the Federal budget, especially investment spending. This makes the annual deficit in the Federal budget obvious and squanders true spending opportunities.

- Financial decentralization was one of the most complicated challenges to preparing the budget during the 2009-2012 period, since the Financial Administration Law and the Governorates Law lack clear financial management and decentralization mechanisms. Disagreement persists over the concept and application of the federal system and decentralization. Thus, amid these restrictions it has become a major challenge to implement the items related to decentralization in the 2009-2012 budgets, which generates more administrative, financial and regulatory problems.
- The conventional approach (itemized budget) continues to be used in preparing Iraq's general budget. This distances it from the strategic planning vision.
- The problem of cumulative loans – which amount to 27 trillion dinar – remains, some of which go back for decades, while the rest are uncovered expenses that were not allocated resources in the budget.

Third: Vision

A financial policy responsive to development needs.

Four: Goals

First Goal: Eliminating the Budget Deficit

Means to Achieve Goal

- Commit to financial discipline on public spending
- Apply the principle of ceilings for public expenditures while incarnating the principle of top-down budget.
- Increase budget resources other than oil.
- Examine the reserve oil price, including a true estimate of Iraq's oil revenues.

Second Goal: Limit Imbalances in Public Expenditure

Means to Achieve Goal:

- Increase the rate of investment expenditures out of the overall spending to 40%-45% by 2017.
- Limit the growth of operational expenditures in order to keep it at a normal level on the basis of 2% per year for inflation and 3% for population growth.

Third Goal: Increase Non-Oil Revenues and Diversify their Sources

Means to Achieve Goal:

- Expand the basis for taxation and diversify its sources while seeking to impose local taxes according to each governorate, to reinforce financial decentralization and to reduce dependency on central budgets.

- Develop the efficiency of the taxation apparatus by developing the capacities of its staff and seeking to increase the collection of taxes.
- Reduce the scope of tax exemptions.
- Gradually increase subsidies for the prices of primary services and increase the efficiency of collecting the State's tax claims.
- Collect taxes, fees and fines from mobile phone companies and oil companies.
- Enforce the Customs Tariffs law and determine a date for its enforcement.

Fourth Goal: Reform Financial Administration

Means to Achieve Goal:

- Shift from line-item budgeting to program budgeting and provide the necessary requirements.
- Develop the accounting and auditing system.
- Gradually shift towards financial decentralization and reinforce the capabilities of governorates in this field.
- Develop the capabilities of workers in financial administration.

3.2.2 Monetary Policy

First: Situation Analysis

The Central Bank of Iraq is seeking to increase the effectiveness of monetary policy in order for it to support economic stability, development goals and its investment interests. It seeks to do so while providing coordination and harmony with the economic policy in general and the financial policy in particular through a number of policies and reform measures that can be summarized as follows:

- Continue to face inflation rates to support the sustainable stability opportunities and stability that would lead to economic growth. The rate of inflation fell to 2.9% in 2010 but went back up to 6.5% in 2011. It is expected to reach 7.5% in 2013, which is an acceptable rate amid the adoption of a policy to expand public expenditures.
- Encourage credits at public and private banks by maintaining the interest rate, which was 6% in 2010-2011. This would aim to stimulate the private sector and reinforce its financial capacities in executing development plans. It would also reinforce its place as an active partner in development.
- Encourage real investment and reinforce development opportunities through loans given by the Central Bank to banks and through a secondary market that would provide the liquidity needed to help deepen financial brokerage and increase the credit capacity that supports real development activities. In addition, guarantee the best use of financial and human resources available, as the

Central Bank has issued a decision to increase bank capital to reach 250 billion Dinars in three years as of 2010. This growth is considered positive, supportive of financial stability and a reinforcement of the banking apparatus in the face of dangers.

- Maintain the stability of the local currency by continuing to take measures that fix the local exchange rate against foreign currencies. It should reach 1166 Dinars to the US Dollar by the end of 2017, without taking into consideration the counter effect of the monetary supply growth, which is affected by the expansive financial policy, as seen in the size of public expenditures -- estimated in the 2013 budget to be more than 38 trillion Dinars.
- Building strong reserves of foreign currency has led to building foundations to maintain internal and external economic stability. It has also provided an appropriate environment to launch investments. The size of reserve assets has increased from 44.4 billion USD in 2009 to 48.8 billion USD in 2010, an increase of 9.9%. The rate of foreign exchange reserve to oil GDP increased from 36% in 2010 to 39.4% in 2009. The increase in the overall foreign exchange reserve led to a new increase in the capacities of the Iraqi economy to cover imports that reached 13.1 months in 2010, a very positive indicator according to applied international standards.
- Stimulate banks to have an interest in the market and seek to increase the role of private banks in granting credit.
- Activate the financial and development role of the Iraqi stock market by increasing the capital of public companies in the market, except banks, from 5 billion Dinars for financial funding companies to 15 billion Dinars. This also requires increasing the capital of exchange companies to 150 million Dinars; that of financial investment companies to 50 million Dinars; and that of small to medium loans companies to 1-2 billion Dinars.
- Expand the credit market in order to stimulate funding activities, especially when taking into consideration that the rate of deposits at State banks represents 85% of all deposits for 2010 with 14.5% of deposits at private banks. The total of local deposits made in the banking apparatus was only 7.4% of the GDP.

Second: Challenges

- Reduced level of coordination between financial policy and monetary policy, which limits the effectiveness of the monetary policy in impacting financial and monetary movements.
- Continued growth of monetary supply as a result of continued adoption of an expansive expenditures policy. This increases inflation pressure despite the monetary measures in place to limit the level of cash liquidity. The monetary supply increased in the general sense by 32.6% from 2009 to 2010, thus exceeding the increase in GDP, which was 23.4%.

- High impact of regional tensions on the US Dollar as a result of what is known as a “speculative attack.” This could shake the foundations of the foreign exchange rate stability, inflation rates and the flow of currency trade application, leading to many opportunities for the smuggling of foreign currency, corruption and money laundering.
- The Central Bank’s strict policy concerning the control of inflation rates has reinforced monetary stability without contributing to the same degree in measures to maintain the development of the Iraqi economy.
- The continued implementation of the open import policy could lead to a decrease in the local currency exchange rate (Dinar) and an increase of inflation pressures on the economy.
- Limited role of specialized banks in funding development investments of the private sector, which contradicts the direction of the economic policy that was set in the plan. The latter calls for the private sector to be given an important role in development activities. The absence of governmental support for these banks increases their lack of capacity and the marginality of their activities,
- Weak impact of reducing the interest rate in credit given by local banks due to their cautious nature. This definitely affects private sector investments and the role of this sector in the development process.
- Low interest rates for savings and high rates for bank credits granted.
- Achieve balance between reserve banking requirements (hedges) and the requirements to stimulate the economy (encourage banks to look towards the market to fund development).

Third: Vision

Monetary policy that contributes toward reaching sustainable economic stability and growth

Fourth: Goals

First Goal: Credit Activities that Stimulate Development

Means to Achieve Goal

- Expand the granting of credit to the private sector through the national banking sector.
- Generate banking initiatives that aim to grant loans to small and medium projects.
- Encourage banks to look towards the market in a way that supports the tendencies of the monetary policy to provide credits and bank financing.
- Adopt a strategy to supervise the banking apparatus in order to guarantee compliance with the best international standards and practices.

- Coordination and harmony between the monetary policy and the financial policy to guarantee stability and development.
- Increase the capital of specialized banks in order to increase development.

Second Goal: Keep Inflation Rates within Single Digits

Means to Achieve Goal

- Lower the growth rate of monetary supply at the expense of checkable deposits.
- Interest rate that encourages savings.
- Influence the elasticity of the production apparatus through tools from both monetary policy and the financial policy.
- Execute open market operations.

Third Goal: Maintain the Stability of the Local Exchange Rate

Means to Achieve Goal

- Adapt public expenditure according to growth requirements.
- Allow local and governmental banks to sell the dollar at a fixed rate determined by the Central Bank.
- Continue the foreign exchange trade according to the needs of the development market.

Fourth Goal: Strengthen and Reinforce the Foreign Exchange Reserve

Means to Achieve Goal

- Diversify the methods of managing foreign exchange reserves according to the standards for insurance, elasticity and profit and in a way that protects the reserves.
- Reinforce cooperation with central banks and renowned international institutions in order to diversify the countries, currencies, tools and dues.
- Organize public trades in order to avoid the smuggling of foreign currency, corruption and money laundering.

Fifth Goal: Lower Bank Density

Means to Achieve Goal

- Increase the number of governmental banks and private banks and expand their distribution horizontally and vertically.
- Encourage the opening of branches for Arab and foreign banks.
- Improve the services of the banking sector.

Sixth Goal: Combat Money Laundering

Means to Achieve Goal

- Prepare developed programs for the exchange of information in order to reach the highest levels of coordination with authorities specialized in combatting money laundering inside Iraq.
- Complete compliance from banks with the money laundering law No. 93/2004
- Comply with international standards issued by the FTAE.
- Coordination between the money laundering bureau at the bank, the Commission of Integrity, the Ministry of Justice, the Ministry of the Interior and judicial authorities as required when working on administrative corruption cases.
- Coordinate with similar units in Arab and neighboring countries regarding the exchange of information on issues related to combating money laundering and the funding of terrorism.

Seventh Goal: Localize Information Technology in the Work Mechanisms of the Central Bank

- Organize the process of selecting a new banking system that fulfills the needs of the Central Bank in accordance with present and future developments.
- Seriously work towards linking the branches of the Central Bank to the information center through the IIBN network.
- Establish a system to link banks for the purpose of executing retail payments such as ATMs, mobile transfers and credit and debit cards.
- Seriously work towards developing and updating software for the Iraqi payment system including all its elements.

3.2.3 Economic Reforms

After 2003, Iraq has witnessed a change in its political and economic systems with reform reaching four axes:

First axis/ Political reform, which includes shifting from a centralized comprehensive governance system to a democratic system with political freedom and peaceful transition of power through elections.

Second axis/ Economic reform, which includes shifting from a planned centralized economy to a market economy with economic freedom, openness and integration with the world.

Third axis/ Security reform, which includes a war against terrorism in order to make the new democratic experiment succeed.

Fourth axis/ Administrative reform which includes shifting towards decentralization in administration and giving broad authorities to regions and governorates independent of regions in terms of development management and financial management of increasing allocations.

Focus will now be on economic reforms because they are directly related to development. The following economic reforms were adopted:

The Cabinet agreed in September 2010 to adopt a roadmap to reform and restructure State owned companies. This roadmap aims at restructuring companies through stages and transforming them to competitive economic entities and at increasing the performance of these companies. This would help to increase and diversify economic activities, provide sustainable growth and relieve the State budget of the burdens of the benefits that it grants these companies to pay the salaries of its employees, which numbered 600,000 in 2010.

Establishing a roadmap for tax reforms would require a study of the reality and structure of the taxation system as well as a diagnosis of flaws and derailment from the standards prevailing in the State's economics, as the State is going through a transitional phase.

A review of taxation legislation; determining amendment requirements; determining the general principles to follow when planning the taxation policy and drafting a taxation system that is adapted to economic change – i.e., that is just, neutral and flexible; and adopting standards to set more realistic and flexible taxation rates.

Reforms for setting tax charges in a way that activates the private sector, attracts foreign investors and improves the business environment.

Launching a comprehensive strategy for financial and monetary reform in February 2009 with a focus on reforming and modernizing the banking system. The strategy also targeted updating the organization of State-owned banks and redistributing their roles and tasks. The strategy led to stability in the exchange rate of the Iraqi Dinar against foreign currencies and to a decrease in the yearly increase of inflation rates to single digits after two decades of deterioration. The strategy also led to a growth in the foreign exchange reserves of the Central Bank from 4 billion USD in 2004 to 60 billion USD at the end of 2011.

A draft law for small and medium businesses was drafted. The draft law supports all types of industrial, commercial, tourism, medical and other companies in terms of financing, tax exemption, marketing, and cross-border trade with foreign companies. This law and the companies it includes play an important role in diversifying the Iraqi economy; reinforcing the role of the private sector in it; and providing for a large amount of unemployed work force that will enter the market in the future.

- The preparation of a draft law for partnership between the private sector and the public sector. This draft law falls within the program to develop the private sector and reinforce its role in the sustainable development process in Iraq. It especially targets partnerships in executing infrastructure projects and projects for the operation and maintenance of public services.
- The establishment of a national policy to manage lands that will be used as rural and urban lands equally and efficiently. This will help achieve sustainable development, limit poverty and provide food within the market economy. It will also improve the land management system to make it more transparent and accountable and will protect productive agricultural land from urbanization.
- The launching of an agricultural initiative by the 2007 Cabinet as a national campaign to develop the agricultural sector by providing funding for farms and producers of livestock. This aims at developing agricultural production and livestock production; at reinforcing the contributions of the agricultural sector in the GDP; and developing water resources in addition to using them as best as possible.

3.3 Private Sector

The private sector did not play the role it needed to play before 2003 and it didn't have a real chance to reach the level that would allow it to play a prominent role in increasing economic development rates. For 40 years, the private sector has witnessed strong fluctuations and instabilities in terms of the policies applied under unpromising legislation. These have made the private sector more like a contractor for the public sector and an investor in quick profit activities with a short period for recovering the capital. These activities were mostly at the level of individuals or small businesses in terms of organization, productivity and marketing. It followed the principle of extensive work/low capital and was essentially dependent on government subsidies, which made the private sector unable to compete with imported goods and kept it at the margins of the country's economic performance.

This reality did not change much after 2003 because of the economic and political conditions and changes; the significant deterioration of the security situation; and the absence of the rule of law. This decreased the contribution of this sector in generating GDP, accumulating fixed capital, and generating job opportunities. Furthermore, most projects and economic activities of this sector stopped because of the technical and economic challenges as well as the severe competition of foreign goods and opening the Iraqi market to various regional and international importing institutions. The Iraqi market was therefore inundated with cheap foreign foods that do not meet Iraqi or international standards. Private sector activities were impacted despite the efforts of the State's economic policies to reinforce the role of this sector in the Iraqi economy; support economic openness to the world; and make economic reforms in

the aim of diversifying the structure of the Iraqi economy in the light of economic and political changes that hit the Iraqi market after 2003.

Despite the efforts exerted by the private sector to keep up with the economic developments and the requirements to develop its technological, production and competitive abilities, legislations, laws, policies and reforms that regulate economic affairs and business undermined its activities and encouraged investors and their capital to go outside the country. In order to limit the impact of the changes being witnessed, the 2010-2014 Development Plan has called for an interactive participative private sector to be built that reinforces sustainable development and provides an investment environment that attracts private investment. However, this call was limited by the absence of a motivating business environment that attracts the private sector to be an essential partner in the development process. This led to a continued growth of the public sector combined with an increase in the cost of maintaining the public sector. Meanwhile, the private sector is alienated and its capital has missed the chance to reach the goals of the previous national development plans: diversity in the production structure, increase in productivity, increase in job opportunities, reducing poverty. This reality requires setting conditions that should be met in order for the private sector to operate effectively and efficiently. This is what the 2013-2017 Development Plan will declare.

3.3.1 Situation Analysis

Statistics for economic indicators within the private sector confirm that the contributions of the private sector to GDP did not exceed 34.6% in 2010. However, this rate changes with the level of economic activity. In 2010, it reached 100% in agriculture, ownership of residential units and personal services, while it did not go past 39.7% for manufacturing activities. Perhaps the increase in 2010 of large industrial institutions to 420, medium institutions to 55 and small ones to 11126 is what justifies the mentioned rate. This increase was certainly accompanied by an increase in the number of workers in the private sector to 61516 in 2010 and an increase in the sector's ability to provide work opportunities in a regulated economy or an unregulated economy. The proof is that the rate of workers in the private sector formed 59% of the total number of workers in the manufacturing industry.

The period of 2009-2011 did not witness any great improvement in the development role of the private sector despite the strategic approaches that demanded the strengthening and reinforcement of this role through the 2010-2014 National Development Plan. Elements of controlling the path of the economy were fixed and they consisted in State-owned projects. Furthermore, there was a delay in preparing and implementing a roadmap to restructure the mentioned elements and transform them into joint-stock companies in order to find new methods for investment and reviving

economic sectors. The immobility of these elements and this delay were among the most prominent reasons why the private sector was weakened as an effective partner in development and why the objectives of the previous development plan were frozen; the institutional pattern of a centralized economy was set in stone; all confidence in the appropriateness of the business environment was lost; and methods to modernize economic management through implementing the BOT, BOO and BOOT formulas confirmed in the previous plan were absent. Furthermore, the government lacked the effective institutional ability to restructure State-owned companies, which led to a delay in including private companies in the restructuring process despite the fact that main ministries running State-owned companies drafted strategies confirming the need to shift towards manufacturing in order to attract private investment and support participation in production in accordance with the provisions of Law 22/1997, Law 13/2006 and Law 2/2010. The efforts put in so far remain very humble. They remain in their primary stages and are waiting for special legislation to find vital arrangements, without which the national foreign private sectors might continue to refuse to participate economically. It should be noted that the Ministry of Industry and Minerals has set a methodological framework for gradually transforming State-owned companies to joint-stock companies able to depend on themselves. It has also put in place a program to rehabilitate other companies as will be clarified in the section relating to the manufacturing industry in this Plan. The private sector has been activated in some fields during the past few years, especially its strong entrance into the higher education field where it started contributing 12% of university students and 15% of the overall production of education and health. The private sector was also active in tourism, especially tourist accommodations in religious destinations. It also contributed with a rate of more than 90% to transportation, especially within cities.

The 2013-2017 Development Plan aims at reinforcing the role of the private sector within the frame of a restructuring strategy for State-owned companies, mainly in manufacturing. This would seek to raise the contributions of the private sector to the GDP and the accumulation of fixed capital. This would be done in a way that achieves the required role in development; developing competitive abilities; and supporting the country's shift to a knowledge economy and decentralization at the level of regions and governorates all the while benefiting from the principle of comparative advantages for each of them and guaranteeing the effectiveness of spatial development in the Iraqi economy. What supports such a transformation is the presence of financial and human foundations.

3.3.2 Potential

- The State's shift in general towards establishing the foundations and principles of a market economy and leaving behind centralized economic policies.

- Availability of energy resources in relatively low prices compared with other countries.
- Availability of raw material, whether agricultural, mineral or industrial. This increases relative economic traits that attract local and foreign investors.
- Availability of historic, religious and natural tourist destinations.
- Capacity of the domestic market seen through the increase in the level of effective demand in the economy.
- Presence of a class of Iraqi businessmen who are pioneers in investments in manufacturing, agriculture, tourism, education, health and construction.
- Stability of the exchange rate for the Iraqi Dinar and presence of stimuli for investors. These consist in tax exemptions and the subsidization of services and essential infrastructure.
- A move towards issuing a law for partnership between the private and public sectors and the opportunity to use this legislation to encourage national and foreign investments in Iraq in accordance with the various formulas of this partnership.

3.3.3 Challenges

- Weak legal and legislative frameworks that reinforce a market economy and organize the work mechanism for the private sector.
- Fragility of the security situation, which has created a deterring environment for private investors.
- Limited role of the banking sector in addition to its old and complex mechanisms and collateral conditions. This has limited the access of the private sector to bank credits necessary to fund its projects.
- Old and deteriorated infrastructure for the economy, including the financial and electrical infrastructure. This has limited the success of the private sector in playing its consultancy role.
- The absence of a social partnership culture (businessmen) in the governmental decision-making process. This partnership is needed to establish the foundations of a market economy.
- Absence of an environment that empowers business (despite the existing national investment environment). This consists in complex governmental procedures; not implementing the one-window principle; not allocating collected amounts for the purpose of investment; and the presence of difficulties in the face of an investor seeking to obtain the requirements needed for a projects- this is mainly in practice.
- The Iraqi stock market has not kept up with developments in managing exchanges, mainly in the technology field.

- Delaying and stalling the implementation and privatization of reform programs owned by the state

3.3.4 Vision

“An effective, competitive and competent partner”

3.3.5 Goals

First Goal: Increase the Contributions of the Private Sector to the GDP

Means to Achieve Goal

- Create an appropriate business environment for the private sector through:
 - ▶ Freeing up interest rates and exchange rates while reducing prerequisites for the flow of capital
 - ▶ Establish incubators for technological businesses and expand their adoption
 - ▶ Establish comprehensive and developed industrial and service complexes
 - ▶ Revitalize specialized banks so that they can be incubators of financial activities for the private sector
 - ▶ Adopt differential interest prices in order to increase credits given by private banks to private sector investors
 - ▶ Enforce the Consumer Protection Law, the law on competition protection and anti-monopoly, the national product protection law, the customs tariff law and the labor law.
 - ▶ Expedite passage of the economic reform law, the mineral investment law, the industrial cities and regions law, the private and public sectors partnership law, the small and medium size institutions law, and the patent protection law.
 - ▶ Revive commercial and specialized banks.
 - ▶ Adopt economic policies that stimulate the private sector.
- Reinforce the contributions of the private sector as a partner in economic decisions.
- Transform the unregulated private sector to a regulated private sector and provide the conditions and requirements needed for the success of this transformation.
- Expedite a decision on the subject of privatizing and rehabilitating public State owned companies.

Second Goal: Effective and Sustainable Partnership between the Private Sector and the Public Sector

Means to Achieve Goal

- Put in place a legislative and legal framework to regulate partnership between the private and the public sectors.
- Adopt new formulas for partnership between the private and the public sectors in executing development projects, especially infrastructure projects that require large funding.
- Build and develop technical, administrative and legal work forces qualified to negotiate the execution of projects in accordance with the principle of partnership between the private and the public sectors.
- Simplify the procedures and mechanisms of executing projects in accordance with the partnership formula.
- Establish a commercial court to look into disputes related to the execution of projects.
- The sector is an essential partner in making economic decisions for the State.

Third Goal: A Private Sector that Generates Job Opportunities

Means to Achieve Goal

- Direct the investments of the private sector towards new production opportunities that generate jobs, such as the agricultural, industrial and service sectors.
- Include workers in the private sector in all laws for retirement, social security, work safety and health.
- Encourage small and medium size businesses through loans with easy interest.
- Adopt protection procedures to limit the negative social impact of restructuring State owned companies. These procedures can be classified in two categories:
 - ▶ Integrated Social Protection: provide monetary retirement benefits as a replacement for salaries. The benefits are in the form of compensation payments of social security networks.
 - ▶ Interactive Social Protection: facilitate the rehiring of workers during active labor market programs. This includes vocational training and training to manage special projects.

4-1 Agriculture and Water Resources

4-1-1 Agriculture

Situation Analysis

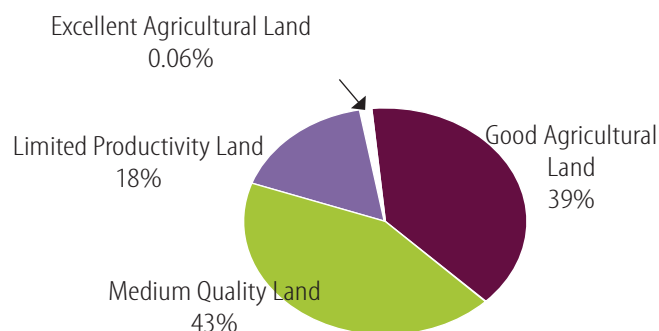
One: Sector Contribution to GDP

From 1990-2011, the GDP for the agricultural sector achieved a combined annual growth rate of 1.6%. This rate is relatively low if compared to the GDP growth rate at constant prices for the same period of 3.6%. In 2010, there was a 17.2% increase in the GDP at constant prices over 2009, reflecting real growth in the contribution of the agricultural sector to the GDP, which rose from 7.3% in 2009 to 8.1% in 2010 (despite the droughts in Iraq during 2008-2009) and 7.6% in 2011. This indicates relative success in the agricultural sector as a result of the relative improvement in infrastructure, technology and knowledge of cultivation and irrigation methods, as well as the results of the agricultural initiative.

Two: Land Resources

The agricultural sector is distinguished by abundant means of production, including vast land whether receiving natural rainfall or irrigated, good quantities of water resources, and human and other material capabilities. The total area of arable irrigated and rain-fed land is 44.46 million dunams and forms 26.2% of the total area of Iraq. Rain-fed arable land accounts for 49.8% of total arable land. Total land area available for irrigation is 22.86 million dunams and the land area with an available share of water is 13.240 million dunams.

Figure 4-1: Types of Agricultural Land in Iraq:



Agriculture contributed a limited share to meeting the needs of local production and this contribution diminished with time where natural factors, climatic fluctuations, and especially heavy rains, the availability of sur-

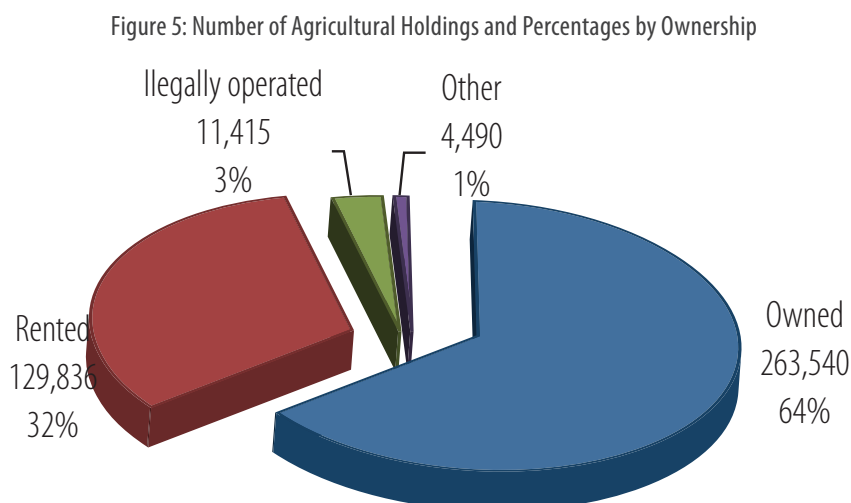
face water, and soil quality affected agricultural production. There have been many droughts in recent periods, causing fluctuations and decreases in production in rain-fed areas. Animal resources were directly affected by this, although the responses of farmers and cultivators to these challenges are still simple, for example, the utilization of supplemental irrigation methods that rely on ground water.

In the alluvial plain, the rise in the groundwater level and increase in the percentage of soil salinity as a result of erroneous agricultural practices and neglect of irrigation infrastructure negatively impacted agricultural areas and thus quantitative agricultural production. The average agricultural land utilized from 1997 to 2007 reached around 10 million dunams, of which the irrigated area cultivated with winter and summer crops made up 8.34 million dunams with 1.23 million dunams for permaculture and green areas.

Three: Agricultural Holdings

Iraq's agricultural sector has diverse kinds and types of holdings and areas have declined due to the repeated division that results from inheritance laws and the ensuing fragmentation of extensive areas of agricultural land into very small uneconomical holdings, creating a big challenge to agricultural production development, aside from the diversity of types of holdings governed by different legislation and laws complicating land management in Iraq. Figure 4-2 shows the types of holdings.

Figure 4-2: Number of Agricultural Holdings and Percentages by Ownership:



Source: Central Organization for Statistics, 2001 Agricultural Census

Four: Sector Workforce

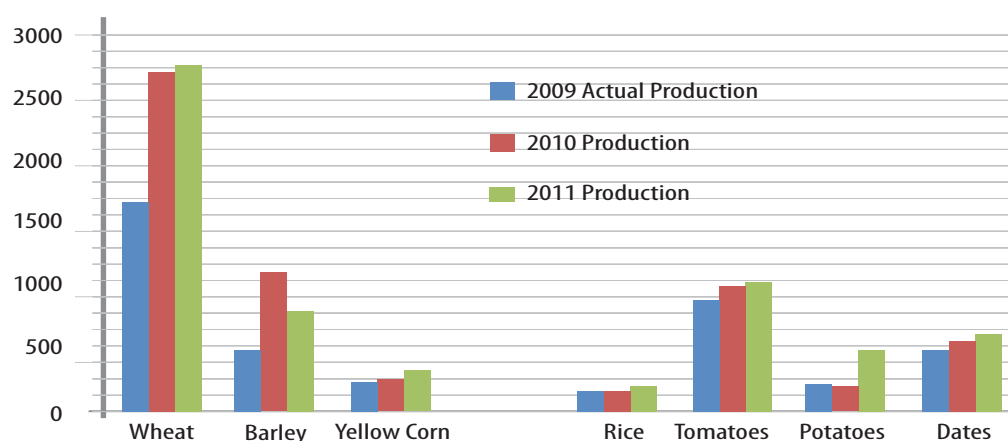
The rural population makes up around 30% of Iraq's population and agricultural workers are estimated to make up 20% of the workforce. The agricultural sector is considered the main generator of job opportunities in both the Iraqi private sector and in

rural areas. Work in the agricultural sector is characterized by its seasonal nature and its dependence on the family work model, which is reflected in the work productivity of the countryside.

Five: Plant Production

Strategic crops (wheat, barley, rice, and yellow corn) contribute to meeting a varying percentage of local consumption need. Wheat production (excluding the Kurdistan region) reached 2,749 and 2,809 thousand tons in 2010 and 2011, covering 60% and 67% of the need, respectively.¹ There was an increase in per dunam wheat production as a result of the expansion of the area treated with spray irrigation, increasing 161% and 165% for 2010 and 2011 compared to the base year of 2009. The average per dunam harvest reached 429 kg for the 2011 winter season with a decrease of 13.4% from 2010 with 495 kg. The average per dunam wheat harvest on irrigated land reached 525 kg, reflecting the value and importance of supplemental irrigation. With regard to the barley crop, which is of utmost importance to animal resources, production fell 28% as a result of the decrease in both area and harvest despite the availability of great capacities for expansion in the production of this crop. Similarly, the rice crop witnessed a great decrease in production reaching 89% in 2010 compared to 2009 as a result of water legislation and reduced cultivated area. Production increased again in 2011; nevertheless the percentage of need met did not exceed 15%.

Figure 4-3: Development of Plant Production, 2009-2011 (thousands of tons)



Vegetable crops are second in relative importance in plant production due to the ability of these products to respond quickly to production increases through utilization of productive strains and new technologies that can be applied across small areas (greenhouses and spray and drip irrigation). Tomato crop production, for exam-

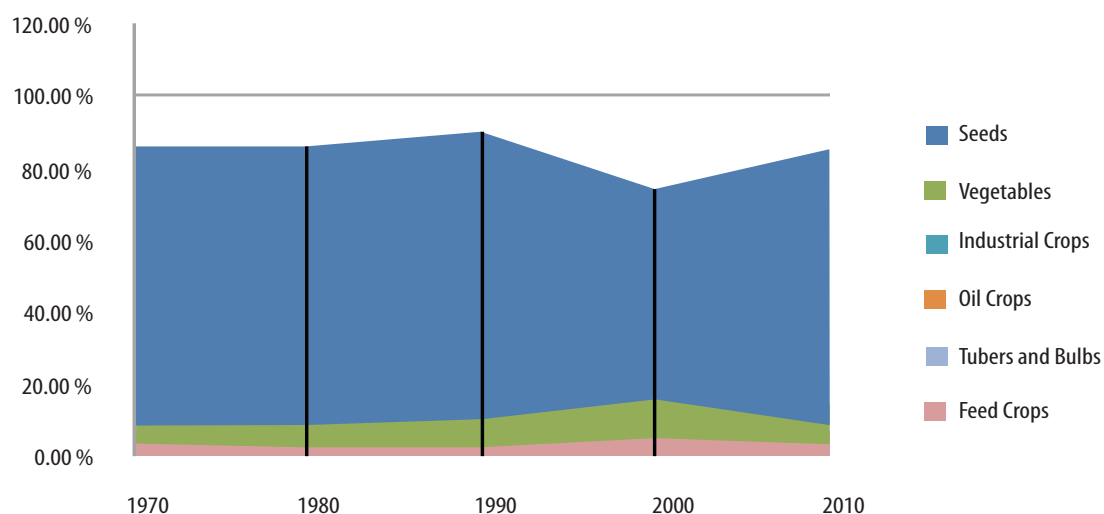
¹ Coverage is calculated based on per capita need pursuant to the standards of the Food Institute, noting that the volume available for consumption is greater, and found in the ration card imports augmenting the private sector, aside from local production.

ple, achieved increasing growth by about 13% over the base year but covered 40% of the need. This percentage can be increased quickly due to the spread of protected agriculture. For potatoes, local need is still covered only to a limited extent, while date production surpassed the need by 190% for 2011. Nevertheless, date production including palm groves and post-harvest operations requires great care and attention.

Six: Crop Composition

Strategic grain crops (wheat and barley) take up 75% to 85% of cultivated areas in the winter season in rain-fed and irrigated land and are affected by the extent of the availability of rain and water. Summer crops on the other hand, including vegetables, account for around 23% of cultivated land. Agricultural management processes, from land preparation, mechanization, irrigation methods, and the use of fertilizers and pesticides, besides seed type all contributed to the decline in per dunam harvest compared to regional and international levels.

Figure 4-4: Crop Composition Development of Cultivated Areas



Industrial crops, that enter as primary resources for Iraqi industries such as cotton, tobacco, sunflowers, medicinal plants, beets, and sugar cane, all witnessed a great reduction in agricultural area as a result of the paralysis of Iraq's industrial wheel of production.

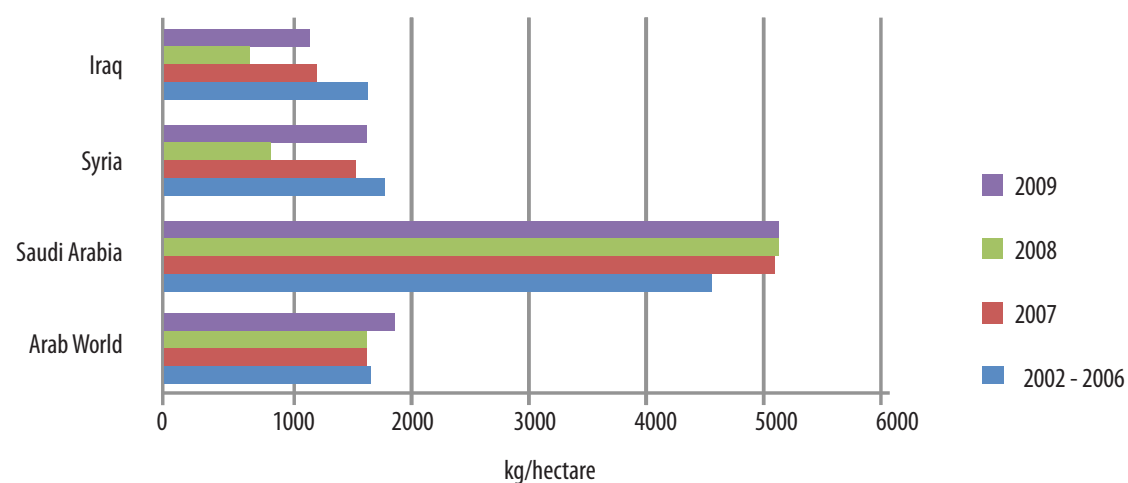
Natural pastures, which are of utmost importance to animal resources, account for around 9% of the total area of Iraq. Aside from their limited area, natural pastures suffer from deterioration in their grazing capacity as a result of the utilization of marginal lands and the effects of the wars on the natural plant cover, aside from successive droughts.

Lands covered by natural forests form only 4% of the total area and most of the plants there consist of oak trees and a small percentage of poplar, willow, and pine trees. Most of these lands fall in the Kurdistan region, which lacks trees with qualities favorable for use in industrial purposes.

Seven: Productivity

Productivity is still relatively low whether with regard to the individual working in the agricultural sector or to the productivity of the land, tree, or animal unit. This is due to various factors, the most important of which is the weak use of agricultural machinery and fertilizers, improved seeds, and ways of fighting agricultural pests during the production process, aside from weak skills among cultivators and the inability of most of them to utilize modern technology in the cultivation process. The diagram below shows the presence of a wide gap in grain productivity per land unit between Iraq and the neighboring countries.

Figure 4-5: Harvest Comparison between Iraq and the Neighboring Countries



Source: Annual of Arab Agricultural Statistics, Vol. 30, Arab Organization for Agricultural Development (AOAD)

Eight: Livestock Production

Animal resources make up around 40-45% of agricultural sector activity. Iraq has many types of animals, although the most numerous and most important ones for meeting the population's food needs include sheep, goats, cows, and buffalo. The results of the national survey of animal resources for 2008 indicate that the total number of cows was estimated to be 2.552 million head, for an increase of 107% from 2001, while the number of buffalo was estimated to be 286 thousand head, for an increase of 142%. The number of sheep was estimated to be 7.722 million head, for an increase of 29%. The number of goats reached 2.474 million head, for an increase of 100%.

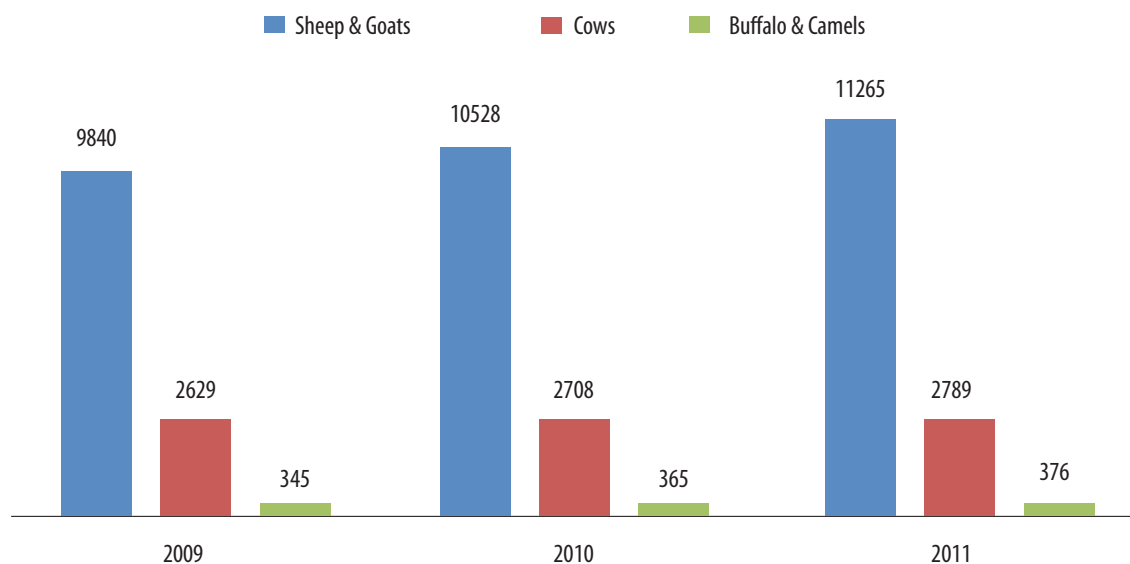
Cow milk production reached 3.6 kg daily per animal across Iraq, while buffalo milk production reached a daily rate of 4.5 kg per animal across Iraq. This is a low productivity level, accounting for less than 40% of their counterparts in neighboring countries.

Animal resources were affected by the country's conditions, and were afflicted by obstacles and problems including those related to nutrition, reproduction, and illness, aside from the small number of pastures and weak veterinary services. All of these factors lead to the loss of a number of animals and affected the entire herd.

The existence of a base herd reflects capacities for doubling it, especially in the governorates in which the basic necessities are available such as pastures, factories, feed storage, and experienced breeders, as well as development facilities to repair and develop animal resource projects, aside from providing feed resources.

The rate of the increases achieved in farm animal numbers for 2010 and 2011 was within the planned target at around 7% for sheep and goats and modest for both cows and buffalo at around 3%. Milk, meat, and fish production increased 3% each during the same period.

Figure 4-6: Improvement in Animal Resource Numbers, 2009-2011 (thousands of head)



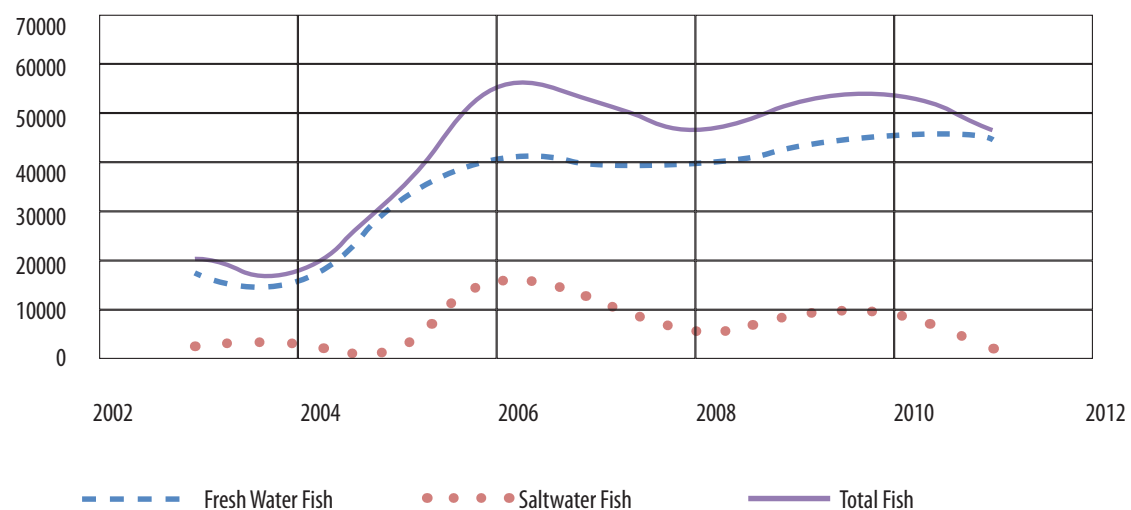
With regard to poultry, there was a great increase in production exceeding that planned and reaching 51%. Table egg production reached 1100 million eggs in 2011 with a 21% increase over the rate in 2010. The failure to complete poultry infrastructure projects, especially Al-Usul project in Abu Ghraib and Al-Ajdad project in Samarra, greatly affected the lack of growth expansion in this important sector.

Nine: Fish

Fish is of great importance to the national food basket, especially in central and southern Iraq. There are a number of projects that were approved by the investment budgets for prior years and which are still funded by the investment budget such as a project to acclimate and raise Iraqi fish in ponds, incubators, and water research stations in as-Suwayrah, Maysan, Ninewa, and Al-Anbar.

These stations and incubators work to raise fingerlings in ponds and release them in the Euphrates and Tigris rivers and other bodies of water, to preserve the environmental balance of Iraqi fish. Reports by the Food and Agriculture Organization (FAO) indicate a decline in the total production capacity for fresh water fish in previous years and a gradual rise, starting in 2005, as shown in the diagram below. Recent years have witnessed settlement of carp fish which have started to be raised in large quantities in fish culture ponds and floating cages having a high economic return.

Figure 4-7: Fish Production (tons), 2002-2011



Water area is estimated to be around 4 million dunams including rivers, lakes, marshlands, and regional waters. This is considered to be a wide space having economic influence if utilized efficiently and scientifically and representing a hidden capacity for growth and development of fish activity, increasing its contribution to agricultural production.

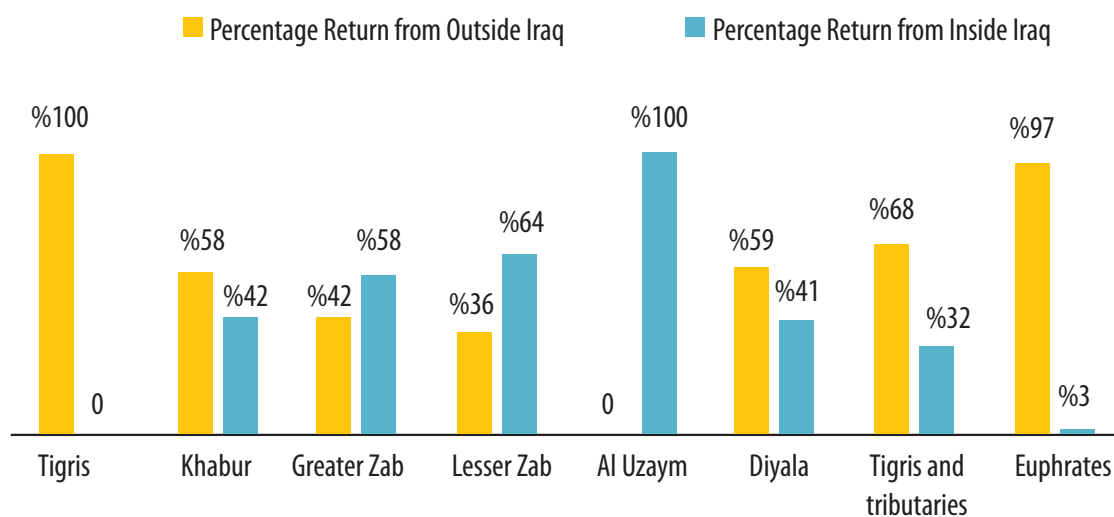
4-1-2 Water Resources and Land Reclamation

Situation Analysis

One: Water Resources

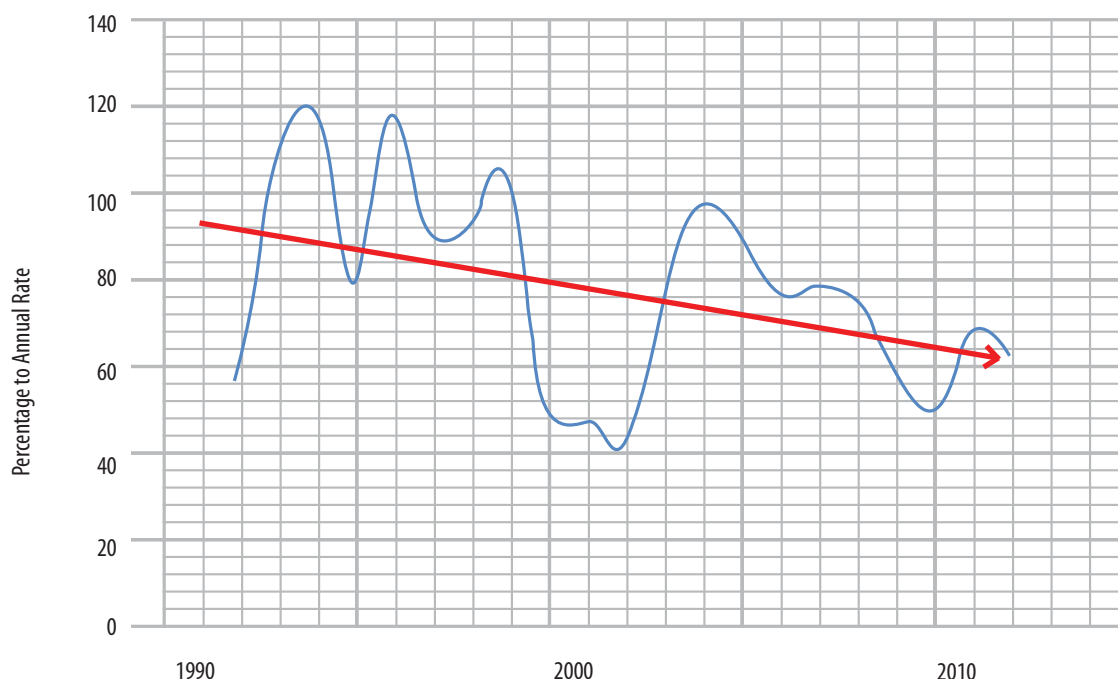
Iraq lies in a dry to semi-dry zone where annual rainfall does not exceed 200 ml. Approximately half the area of Iraq is a desert or semi-desert region where rainfall does not exceed 50 ml per year. Most of the remaining portion of Iraq lies within regions where rainfall ranges from 150-450 ml per year, excluding some limited mountainous areas in northeastern Iraq where rainfall reaches around 1000 ml per year. Most water returns come from beyond the regional borders through the Tigris River and its tributaries and the Euphrates River.

Figure 4-8: Percentage of Water Returns from Inside and Outside Iraq



Based on the above, Iraq's water resources are tied to a great degree to the quantity of rain and snow that falls in the main river basins (Tigris and its tributaries, the Euphrates) as well as by the operating policy of the dams and reserves existing at the source of the shared rivers in Turkey, Syria, and Iran. There is no international treaty on the division of water between Iraq and these countries, causing Iraq's available water resources to fluctuate from one year to the other, as shown in the following diagram.

Figure 4-9: Annual Returns for the Tigris River, tributaries, and the Euphrates River Proportionate to the Annual Rate, 1990-2011



Quality deteriorates as a result of storage and due to polluted water dumped into them from various industrial, agricultural, and human services activities.

The deficiency in water returns has direct effects on securing agricultural needs and the ensuing shrinking of farm land, the decrease in land productivity, and population migration from rural to urban areas. Every billion cubic meter deficiency of returns will lead to the loss of 62,500 hectares (a quarter million dunams) of arable lands.

Iraq will witness more deficiencies in water resources and a decline in quality after the upstream countries complete their irrigation projects which aim to cultivate more than 2.4 million hectares irrigated by the Euphrates basin and around one million hectares irrigated by the Tigris basin. This will lead to a deficit in returns from the Tigris and Euphrates rivers of more than 43% in 2015 of the overall rate of return of 77 billion cubic meters annually, of which 50 billion cubic meters is from the Tigris river and its tributaries, and 27 billion cubic meters is from the Euphrates River, with a decline in the quality of water entering Iraqi lands.

Table 4-1 shows the anticipated quantity and quality of Tigris and Euphrates river water in the future, in light of the current available plans for irrigation projects in neighboring countries.

Table 4-1:

Name of River		Iraq-Syria border	
		Pre-Development	Post-development Projection
Euphrates River	Incoming water rate (billion m ³)	27.40	8.45
	Water quality (ppm)	457	(1250-1350)
		Iraq-Turkey Border	
		Pre-development	Post-Development
b. Tigris River	Incoming water rate (billion m ³)	19.43	9.16*
	Water quality (ppm)	250	375
c. Khabur		2.1	2.1
d. Greater Zab		14.23	14.00
e. Lesser Zab		7.07	7.00
f. Adhaim		0.70	0.70
g. Diyala		5.86	4.00

* The amount remaining for Iraq is 7.66 billion cubic meters on subtracting Syria's share of 1.5 billion cubic meters to 2014.

As a result of the great decrease in Iraq's internal water returns, it has become necessary to complete the update of the water budget with comprehensive planning for water and land resources until 2035, in order for there to be a foundation for elaborating policies for best management and investment of water and land resources. This is aside from diplomatic action abroad, which is required in order to reach a just division of water including reducing damage resulting from water scarcity and working intensively with up- and downstream countries to secure the water rights acquired by Iraq within (strategic) conventions and treaties adopted as part of a package of shared interests with these countries.

Water from the Tigris and Euphrates Rivers and ground water is used for various agricultural, industrial, and human objectives. Current water needs for agricultural purposes are 50.83 billion cubic meters, of which drinking water needs and municipal and industrial uses are estimated to be 5.25 billion cubic meters. Marshland sustainability requirements of 11 billion cubic meters add to this amount in the event that 5,500 km² are restored. The quantity of evaporate and surface water is estimated to be around 8.4 billion cubic meters. Thus, annual water needs for various purposes will be around 69 billion cubic meters.

Two: Dams Implemented

The large and medium dams and reservoirs are considered the main supports for investment in water resources. The goal is to avert risks of floods in the main rivers and to store flood water wealth carried by the river during the winter-spring seasons and regulate their release for the purposes of irrigation, power generation, and other uses including industrial and human. Annual river returns vary from one year to another, aside from the type of water consumption by the different sectors. It is thus at

its strongest during the summer season which highlights the extreme importance of dam and reservoir activity on the main rivers in accordance with the needs of the beneficiary sectors. The small dams on the river valleys and subsidiary tributaries, and especially the western desert region, the eastern region and the Kurdistan region, work to best utilize surface water resources that cannot be regulated within the large system of dams. The number of existing dams and reservoirs along with their indicators follow:

Table 4-2: Large Dams and Existing Reservoirs

Name of Dam	River	Usual storage (million m ³)	Hydroelectric Station Installed Capacity (mega- watts)	Completion Date
Mosul Dam	Tigris	11.11	750 main dam 60 regulatory dam 200 pump storage	1986
Dukan Dam	Lesser Zab	6.8	400	1959
Darbandikhan Dam	Diyala	3.00	240	1961
Hemrin Dam	Diyala	2.45	50	1981
Haditha Dam	Euphrates	8.28	660	1986
Duhok Dam	Duhok River	0.047	—	1988
Adhaim Dam	Adhaim River	1.5	27 (station implementa- tion has not yet begun)	1999
Tharthar Reservoir	Tigris	85.39*		
Habbaniyah Reservoir	Euphrates	3.31		

*Overall storage, of which 35.81 billion cubic meters is dead storage. Reservoir operation is also conducted according to set programs due to their relation to achieving a certain type of salinity in the Tigris and Euphrates, aside from averting the risks of flooding.

Small dams offer water storage to meet national drinking water and livestock needs, which help with population resettlement in desert areas. This storage may also be used in agriculture, even if only to a limited extent. These dams work to utilize river valley water and prevent waste, especially when these river valleys empty into lakes that are not utilized and form a source of ground water coverage, considered one of the important sources of water resources.

Small dams were implemented in the western desert, the eastern region, and the Kurdistan region on river valleys with a total storage capacity of 119,204 million cubic meters. Work is ongoing on the implementation of other dams in the governorates of Maysan, Al Anbar, Kirkuk, Diyala, and Wasit that will add a storage capacity of 116 million cubic meters.

Three: Groundwater

Groundwater of quality is available in five different physiographic sectors, reflecting different storage conditions and groundwater activity. These include:

Mountain zone
 Highlands
 al-Jazeera (Upper Mesopotamia)
 Desert zone
 Alluvial plains (Lower Mesopotamia)

The amount of renewable storage and useable groundwater storage, according to the studies and hydrological investigations conducted, and excluding the alluvial plains as they do not represent a promising area for groundwater exploitation, is shown in Table 4-3.

Table 4-3: Renewable storage and Usable Groundwater Storage

Name of Zone	Area (km2)	Renewable Storage (billion m3 / year)	Fixed Storage Portion for Use (billion m3 / year)	Usable Storage (billion m3 / year)
Highlands and Mountain	42,962	2.633	1.087	3.720
Al-Jazeera (Upper Mesopotamia)	22,125	0.453	0.392	0.845
Desert	168,000	0.930	1.590	2.520
Total		4.02	3.069	7.09

Four: Land Reclamation

The total area of (fully and partially) reclaimed land as of 2011 is about 4.390 million dunams. For the purpose of increasing the agricultural area and increasing per dunam harvest of the various main crops, land reclamation of as yet unreclaimed lands is required and the reclamation of partially-reclaimed lands must be completed. It is also important that modern irrigation methods be used to meet the challenges of water shortage due to the implementation of large agricultural projects, dam construction, and water acquisition from the two rivers by up- and downstream countries. It thus becomes necessary over the long term to reclaim a total area of 8.113 million dunams, distributed as follows:

- ▶ Supplemental irrigation projects on an area of 0.8 million dunams.
- ▶ Developing and improving existing irrigation projects (integrated reclamation) on the Tigris and Euphrates basins with a total area of 7.317 million dunams.

4-1-3 Challenges

One: Agricultural Activity Challenges

Despite the historical heritage of agricultural activity in Iraq, the agricultural sector, as clearly diagnosed by the situation analysis, has suffered and continues to suffer from

great problems and challenges, the most prominent of which can be summarized in the following:

- A large deficit in the country's food security drawn from local production, especially the main crops and products and a weak competitive ability for plant and livestock production across the external and internal zones. Local production activity coverage of wheat needs reached 67%, rice 15%, and vegetables 40% in 2011.
- Limited amount of agricultural land actually utilized, which does not exceed 25% of the total cultivatable land.
- Fragmentation of ownership and small agricultural holdings to the degree that utilizing them is uneconomic, which also results in leaving broad areas unexploited by agricultural production, including small plots and green areas that have started to deteriorate, whether intentionally or not.
- Increased desertification and spread of sand dunes and land erosion.
- A large decline in land unit productivity and farm animal productivity.
- Weak skills and human resource abilities in the agricultural sector and the failure of Iraq's cultivators to keep pace with technological developments and adopt improved new strains.
- Limited investment in the agricultural sector especially in land reclamation and water storage and the aversion of private investors, Iraqi and foreign, from entering into this activity despite the improvement in the country's investment environment and the availability of the basic components of agricultural production including the main components of agro-industrial integration.

Iraq's rural areas have lagged behind economically, culturally, socially, and structurally and unemployment rates have increased, especially for seasonal employment, and there has been a large decline in the level of services provided. Poverty is concentrated in these areas and accounts for around 40% of Iraq's total poor.

Two: Water Resources Challenges

- Limited water resources for cultivation and the limited storage capacity currently available compared to what is required, aside from the failure to reach any agreement guaranteeing a just share of water means there will be a sharp shortage of water resources with the decline of water quality of the Tigris and Euphrates rivers.
- Limited water resources available for water storage, especially as this activity is restricted to the public sector.
- Random and irrational water use in the three main sectors of agriculture, industry, and urban services and weak internal coordination among the gover-

norates, aside from the weak participation of water consumers in management and the lack of awareness and water guidance.

- Limited use of modern irrigation technologies such as spray and drip irrigation and closed irrigation systems as one of the effective means of limiting water waste and raising field irrigation efficiency.
- Water pollution as a result of the disposal of wastes, untreated wastewater, and drain water into the rivers; the salinity rate of the Shatt al-Arab reaches more than 10,000 ppm at times, aside from pollution of waterways of shared rivers coming from neighboring countries.
- Some of the dams central to securing water needs and all sectors, including Dukan Dam and Darbandikhan Dam, are not operating.
- Climate changes and their effects on the region, including Iraq, and the accompanying temperature increase and lack of rainfall.

4-1-4 Vision

"Agriculture seeks to fill the national food basket and contribute to diversifying the economic foundation of the Iraqi economy and guaranteeing sustainable water rights."

4-1-5 Goals

One: Strategic Goals

- Increase the agricultural sector contribution to the GDP.
- Increase plant and animal agricultural production coverage for Iraq's food basket (food security).
- Secure Iraq's need for water resources.

Two: Quantitative Goals

a. In the field of food production, the plan's first priority in plant production is to focus on the production of winter wheat and summer potatoes and to develop date and fruit production, and as a second priority, to produce rice, tomatoes, onions, white and yellow corn, feed legumes and clovers.

Table 4-4: Quantitative Indicators for Plant Production

Wheat Production Plan, 2013-2017 Area: 1000 dunams Production: 1000 tons Harvest: kg/dunam							
Details		Start Year 2011	2013	2014	2015	2016	Target Year 2017
Spray irrigated wheat	Area	825	1575	1950	2325	2700	3075
	Harvest	750	917	1000	1000	1000	1000
	Production	619	1443	1950	2325	2700	3075

Wheat Production Plan, 2013-2017							
Area: 1000 dunams Production: 1000 tons Harvest: kg/dunam							
Details		Start Year 2011	2013	2014	2015	2016	Target Year 2017
Irrigated wheat	Area	3553	3298	3214	3130	3046	2962
	Harvest	473	573	619	668	719	773
	Production	1682	1890	1990	2090	2190	2290
Rain-fed Wheat	Area	2164	1914	1789	1664	1539	1414
	Harvest	235	235	325	235	235	235
	Production	508	450	420	391	362	332
Wheat totals	Area	6543	6787	6953	7119	7303	7451
	Harvest	429	558	627	675	719	765
	Production	2809	3784	4360	4806	5252	5697

Rice Production Plan, 2013-2017							
Area: 1000 dunams Production: 1000 tons Harvest: kg/dunam							
		Start Year 2011	2013	2014	2015	2016	Target Year 2017
Rice	Area	220	220	220	220	220	220
	Harvest	788	800	1000	1065	1130	1195
	Production	173	176	220	234	249	263

Barley Production Plan, 2013-2017							
Area: 1000 dunams Production: 1000 tons Harvest: kg/dunam							
Details		Start Year 2011	2013	2014	2015	2016	Target Year 2017
Irrigated Barley	Area	1433	1678	1784	1889	1995	2100
	Harvest	320	350	368	383	397	410
	Production	459	587	656	724	793	861
Rain-fed Barley	Area	2218	2245	2259	2273	2286	2300
	Harvest	163	163	163	163	163	163
	Production	361	366	368	370	373	375
Barley totals	Area	3651	3923	4043	4162	4281	4400
	Harvest	225	243	253	263	272	281
	Production	820	953	1024	1094	1166	1236

Yellow Corn Production Plan, 2013-2017							
Area: 1000 dunams Production: 1000 tons Harvest: kg/dunam							
		Start Year 2011	2013	2014	2015	2016	Target Year 2017
Spray Irrigated Yellow Corn	Area	100	485	600	715	831	946
	Harvest	610	1150	1250	1350	1450	1550
	Production	61	558	750	965	1205	1466
Irrigated Yellow Corn	Area	390	300	250	200	150	100
	Harvest	582	785	850	915	980	1045
	Production	227	236	213	183	147	105
Yellow corn totals	Area	490	785	850	915	981	1046
	Harvest	587	1011	1133	1255	1378	1502
	Production	288	794	963	1148	1352	1571

Tomato Production Plan, 2013-2017							
Area: 1000 dunams Production: 1000 tons Harvest: kg/dunam							
Tomatoes Tomato har- vest growth of 16% annually by cultivation of hybrid types and ideal fertiliz- ation		Start Year 2009	2013	2014	2015	2016	Target Year 2017
	Area	218.424	390	400	410	420	430
	Harvest	4182.2	4500	5000	5800	6728	7804
	Production	913.493	1638	2000	2378	2826	3356

Potato Production Plan, 2013-2017							
Area: 1000 dunams Production: 1000 tons Harvest: kg/dunam							
		Start Year 2009	2013	2014	2015	2016	Target Year 2017
Potato Production Plan	Area	----	150	180	210	240	270
	Harvest	----	4620	5500	6380	7400	8584
	Production	----	693	990	1340	1776	2318
Fall Potato Production Plan	Area	----	80	80	80	80	80
	Harvest	----	4550	5000	5450	5940	6475
	Production	----	364	400	436	475	518
Total Pota- toes	Area	----	230	260	290	320	350
	Harvest	----	4596	5346	6124	7034	8103
	Production	----	1057	1390	1776	2251	2836

Onion Production Plan, 2013-2017							
Area: 1000 dunams Production: 1000 tons Harvest: kg/dunam							
		Start Year 2009	2013	2014	2015	2016	Target Year 2017
Onions	Area	790.96	77	80	83	86	89
	Harvest	3897	2735	3000	3000	3000	3000
	Production	308.239	211	240	249	258	267

Date Production Plan, 2013-2017							
Area: 1000 dunams Production: 1000 tons Harvest: kg/dunam							
		Start Year 2009	2013	2014	2015	2016	Target Year 2017
Dates	Area	----	508	556	604	652	700
	Harvest	59.5	68	70	75	74	76
	Production	507.002	679	770	857	952	1050
	Number of Palm Trees (1000)	----	13,690	15,000	16,310	17,620	18,930

a. In the field of livestock production

The goal of the plan is to increase sheep, goat, cow, and buffalo numbers and increase fields of poultry and fish as a first priority, and to increase camel numbers as a second

priority and achieve large production and productivity increases for animal products (red and white meat, milk, and table eggs) as shown in Tables 4-5 and 4-6.

Table 4-5: Development of Farm Animal Numbers During Plan Years 2013-2017

No.	Animal and Percentage Growth	Start Year 2008	Number of Animals (1000 head)				
			2013	2014	2015	2016	2017
1	Sheep and Goat 7%	9197	13,084	14,000	14,980	16,029	17,151
2	Cows 7%	2552	2959	3048	3139	3233	3330
3	Buffalo 5%	286	365	383	402	422	443
4	Camels 4%	58	70	73	76	79	82
5	Chicken meat 15%	340,000	68,384	78,641	90,437	104,002	119,602
6	Hens for meat production 50%	44	333	500	750	1125	1687
7	Chicken eggs 15%	2000	4023	4626	5320	6118	7107
8	Hens for egg production 40%	2.5	9.3	13	18	25	35

Table 4-6: Animal Products

Total Red Meat, 1000 tons	2013 Anticipated Production	2017 Anticipated Production
Sheep & Goat	104	137
Cows	101	113
Buffalo & Camels	26	30
Total	231	280
Coverage Percentage	22%	32%

Total White Meat, 1000 tons	2013 Anticipated Production	2017 Anticipated Production
Chicken	90	130
Fish	39	43
Total	129	173
Coverage Percentage	30%	41%

Total Milk, 1000 tons	2013 Anticipated Production	2017 Anticipated Production
Sheep & Goat	302	349
Cows	931	1047
Buffalo & Camels	73	81
Total	1306	1522
Coverage Percentage	51%	59%

4-1-6 Means to Achieve Goals

One: Increase Agricultural Land and Boost Production and Productivity

By completing implementation of main channels such as the eastern Euphrates, western Euphrates, east Tigris, and east al-Gharraf drains which is infrastructure for land reclamation that will service 5.07 million dunams.

Two: Integrated Land Reclamation

Reaching the annual rate of 500 thousand dunams², and observing a just distribution of reclaimed land across the governorates meeting the targeted area of 2.5 million dunams by the end of the plan, which includes supplemental irrigation projects of 0.8 million dunams. The overall cost for reclaiming this area is around IQD 6.250 trillion using surface irrigation calculated on the basis of the per dunam cost of reclaimed land at around IQD 2.5 million and IQD 12.5 trillion using modern irrigation methods on the basis of IQD 5 million per dunam.

Three: Fighting Desertification and Sand Dune Spread

- a. Stabilizing sand dunes using the following methods:
 - ▶ Clay coverage: annual growth of around 10 thousand dunams at minimum.
 - ▶ Soil cover work: annual growth of around 80 km in length at minimum.
 - ▶ Annual production and forestation reaching 1.750 million seedlings at minimum.
 - ▶ Collecting 30 tons of annual seeds at minimum.
 - ▶ Digging 30 km of canal length as an annual minimum.
 - ▶ Completion of seven desert oases during the plan period with an area varying from 200-800 dunams per oasis.
- b. Developing plant coverage in desert areas and cultivating drought-tolerant plants.
- c. Establishing farms for collecting pastoral seeds to be replanted in other areas to restore plant cover.
- d. Implementing 78 stations for pastures and nature preserves reaching 1000 dunams by 2015.
- e. Developing plant cover, pastoral resources, and exploiting rain water by constructing small dams as part of the al-Hammad basin project.³

² The Ministry of Water Resources confirms adopting an annual rate of integrated land restoration of 1.5-1.75 million dunams during the plan period, which is considered a target difficult to reach based on current land reclamation indicators that don't exceed 85 thousand dunams annually.

³ A basin shared by Iraq, Saudi Arabia, Jordan, and Syria covering an area of 32,500 km² (13 million dunams). The basin region is a dry zone (85 ml/year) inhabited by transient shepherds most of whom are Bedouin and live by raising cattle that graze on the pastoral plants in this region.

Four: Optimal Exploitation of Water Resources

Increasing volume of water storage

Continued implementation of large dams like Bakhma Dam and the Mundwa, Taq Taq, and Khazar-Comel dams in light of the results of the strategic study of water and land resources, besides commencing treatment of the foundations of Mosul Dam ongoing during the five-year plan period of 2013-2017 and continuing thereafter, leading to an increase in the volume of water storage by about 22 billion cubic meters over the long term.

Developing water resources by expanding water yield

Building small dams on river valleys and especially in the Ninewa, Salah ad Din, Al Anbar, Muthanna, Najaf, and Diyala governorates, that will secure approximate water storage varying from 150-200 million cubic meters.

Using modern irrigation technology

This includes spray irrigation of three million dunams, drip irrigation, closed pipe irrigation, closed channels, and lining channels as one of the effective ways to limit waste and increase field irrigation efficiency. The current length of irrigation canals is around 47,000 km. The length of canals being lined or implemented as closed canals is about 14,700 km and as such accounts for 31%.

Non-traditional uses of water

- Use of salt water for agricultural purposes: in Iraq, there are experiments to utilize salt water for agricultural purposes. These are centered in the al-Zubair and Safwan regions in the Basrah governorate and highland areas in the Najaf desert, Karbala, and the Jazeera regions in the Salah ad Din governorate. Experiments were conducted on the use of salt water from the main drain and mixing it with fresh water.
- Reuse of treated sanitation water for agricultural purposes, watering gardens and possible industrial uses.

Reviving and developing the Iraqi marshlands

By securing the construction of various facilities and the need of the Basrah, Dhi Qar, and Maysan governorates for things like barrages, bridges, ports, boats, cleaning rivers, and ways of controlling and maintaining the dams surrounding the marshlands with the aim of sustaining and expanding the replenished areas in accordance with the water position, where an area of between 10-12 billion cubic meters must be sustained. For this, the cultural, social, ecological, and environmental heritage of the marshlands must be protected and the regional and international importance of the

Iraqi marshlands acknowledged, aside from being included in the Ramsar Convention on wetlands protection.

Investing in renewable groundwater

Investing strategically for various purposes including agricultural ones and ensuring drinking water security especially in remote areas far from surface water through digging wells needed annually, using renewable storage, and supporting irrigation projects (like supplemental irrigation), especially the Kirkuk, Northern Jazeera, and Ishaqi irrigation project, with continued study of promising regions for possible digging in accordance with the indicators.

Water unit productivity reliance

Following the model of the area unit to measure the harvest and prepare surveys and studies in this regard.

Guidance of the relevant research bodies

By conducting research, studies, and field experiments to raise field irrigation efficiency, by using modern irrigation methods such as spray and drip irrigation and closed pipe irrigation for the purpose of guiding water consumption, and conducting experiments to develop and use non-traditional water sources such as drain water, as well as establishing water use associations to engage those who benefit from water resource management.

Conducting periodic maintenance

Of irrigation and drainage networks having a length of 126 thousand km and for pumping stations numbered at more than 200 stations, securing the amounts necessary from the federal budget.

Developing human resources

And the workforce through boosting Iraq's negotiation skills around the subject of Iraq's water rights.

- Developing human abilities in the fields of design, execution, follow-up, management, and operation of water resource projects.
- Absorption of the unskilled workforce and alleviating unemployment in society.
- Raising the cultural level of the rural population generally and rural women especially, as they form a large portion of the agricultural workforce.

Five: Supporting Development in Iraq's Countryside through:

- Strengthening economic foundations in the countryside
- Regulating agricultural land ownership and the various types of holdings.
- Insuring acceptable levels of infrastructure and services: rural housing, roads, electricity, and providing power and equipping villages for development with services (educational, health, recreation, drinking water, postal services, and the like).
- Making essential changes to the educational system and providing agricultural guidance to train minds capable of absorbing and utilizing technological changes.
- Empower and integrate rural women and give them their due role and rights in work, education, and decision making.
- Encourage cooperative work and the formation of specialized associations.

Six: Sustaining National Development Programs and Projects through the following programs:

Developing wheat yields in Iraq that aim to achieve self-sufficiency by increasing per dunam harvest at a rate of one ton per dunam by using a number of modern technologies.

- A project to fight agricultural pests as well as an agricultural waste program to prepare organic fertilizers and mushroom cultivation.
- Al-Usul poultry project.
- A modern irrigation technology project aiming to spread spray irrigation methods across three million dunams, starting with 375 thousand dunams annually.
- Establishing green area laboratories, seedling nurseries, and cultivating and producing productive palm strains using local tissue culture.
- Potato development project.
- Al-Usul poultry project in Samarra.
- Genetically improving buffalo stallions and establishing four main centers for Iraqi buffalo development with the goal of improving the genetic traits of Iraqi buffalo.
- A project to acclimate and protect Iraqi fish.
- Developing rice cultivation and the cultivation of new high-productivity strains, and establishing a system for eliminating production-affecting weeds that appear after crop growth.
- Introducing feed legumes into the agricultural cycle following wheat and cultivation to improve soil fertility.

- Developing grain cultivation in rain-fed areas to introduce strains characterized by good drought resistance, using best methods for agricultural operations, designing special agricultural courses, and benefitting from promising strains that suit rain-fed regions such as durum wheat.
- Develop cotton cultivation.
- Develop tomato cultivation and production.
- Develop white and yellow corn cultivation: spread spring and fall cultivation cycles and increase harvest rates. The project aims to improve and spread the cultivation of white corn because it is a crop that can tolerate salinity and introduction into the cultivation cycle with wheat.
- Repairing poultry projects: which aimed to resume operation of poultry projects and utilize 70-75% of the poultry fodder components from local production to produce poultry and table eggs and to provide work opportunities in the rural sector.

Seven: Foreign and Domestic Private Sector Support for Agricultural Sector Investment through:

- Encouraging and supporting the local and foreign private sector investment in integrated plant and livestock production projects and establishing agro-industrial complexes on sound economic and technical foundations as well as in the field of refrigerator and freezer storage facilities.
- Encouraging the establishment of agricultural companies contributing through growing and developing the financial market, and even through international cooperation in these companies by purchase of a portion of their shares at the establishment stage and giving them up after these companies become stable.
- Growing and developing the financial markets and adopting development policies encouraging the private sector to restore anticipated projects and establish new projects.
- Continued support of agricultural inputs and outputs and protecting them from imported products, especially during the plan period, to enable the private sector to establish itself and achieve the conditions under which it can compete with imported products.
- Supporting and encouraging investment in promising western desert regions to produce feed and raise animals and encouraging investment for other agricultural purposes.

Eight: Adopting Policies and Programs for Agricultural Guidance and Awareness

Through training programs, investment in visual, audio, and printed media, and investment in modern technologies for agricultural guidance and education.

Nine: Comparative Advantage

Investing in the relative and specialized advantage of agricultural regions instead of being oriented toward diversifying and cultivating marginal land with various crops and that lead to reduced harvest rates for crops grown in unfavorable environments.

Ten: Interest in Post-Harvest Operations

Providing integrated complexes in the field of agricultural marketing in terms of regulation, classification, packing, packaging, transportation, and storage; providing marketing data for transparency of all those participating in the agricultural market; modern slaughterhouses; specialized refrigerator and freezer storage for storing the various agricultural necessities and products; refrigerator, freezer, and carrier means of transportation; workshops for repairing and maintaining agricultural machinery and equipment as well as renting such, besides financial services, insurance of products against natural disasters and of returns against fire and theft, and other similar services.

Eleven: Biological and Environmental Diversity

Through preserving biological diversity, studying rare species of living organisms, and controlling invasive species that attack the environment like tilapia fish, water hyacinths, and zebra mussels, as well as benefitting from the experiences of countries that have been successful in protecting the biological diversity of all countries.

Twelve: Legal Reform and the Required Legislative Environment through:

Putting in place legislation to limit agricultural land holdings to two main types:

- ▶ individual or group ownership
- ▶ lands owned by the state
- Taking an interest in the subject of shared ownership and the problems of removing joint ownership of agricultural land to limit the fragmentation of agricultural lands and green areas.
- Amending the Law on Agricultural Reform No. 117 of 1970, Article 4, and Paragraphs 3 and 4 allowing cultivators to benefit from ownership of land distributed to them including the right to assign it to a third party more capable and connected to the agricultural sector.
- Enforcement of Law No. 35 of 1983, amended, on large land areas only.
- Reviewing transfer of land ownership to holding occupants from its actual investors.

- Putting in place special legislation on water management in partnership with governmental entities and beneficiaries (water use associations).
- Completion of legal legislation on the conversion to modern field irrigation.
- Completion of legal legislation on internal water policy and regulation including just distribution among the governorates.
- Completion of the amendment to the law on irrigation and drain network maintenance No. 13 of 1995 (fourth amendment).
- Formation of the National Water Council.
- Update the Law on Irrigation Project Implementation No. 138 of 1971.
- Amend Irrigation Law No. 6 of 1962.
- Law legislation on agricultural credit and insurance.
- Activation of certain laws on the encroachment of cities on agricultural lands.

4-2 Industry and Energy

The industrial sector is regarded as one of the main economic sectors in strengthening the material foundations of any economy as a result of the high added value generated by its activities and the activity's direct and indirect ties to other activities. Historically, most advanced countries have built the foundations of their progress on the industrial sector. In Iraq, the importance of this sector grows at the level of the overall economic indicators as the main generator of the resources that the state's federal budget depends on, exceeding 90%. This sector, which includes oil, gas, electricity, and conversion industries, also contributes about half of the GDP according to GDP calculations for 2011 at constant prices.

Sector activity contribution to the GDP fluctuates, where the crude oil production sector contributes around 43%, while the conversion industry contribution doesn't exceed 2.7% and electricity 1.5%. These are very low contributions compared to rates in the 1970s and 1980s, where conversion industries alone surpassed 10% of the GDP. The following table shows the contribution of the industrial sector to the GDP at constant prices for 2010-2011 and indicates an increase in crude oil activity contribution by 1.5% in 2011 compared to 2010, with an annual growth rate of 12.7%. This is against a fixed rate of electricity activity contribution at 15%, with an annual growth rate of 8.8%, and a decrease in the conversion industries contribution from 2.9% in 2010 to 2.7% in 2011.

Table 4-7: Industrial Sector Contribution to the GDP at Fixed Prices, 2010-2012

Activity	2010	Relative Importance	2011	Relative Importance	2010-2011 Growth Rate	2009-2011 Growth Rate
Extraction industry	24,266.3	41.7	27,330.2	43.2	12.6	6.6
Crude Oil	24,099.6	42.4	27,160.6	42.9	12.7	6.7
Other types of mining	166.7	0.3	169.6	0.3	1.7	3.7
Electricity	874.3	1.5	951.8	1.5	8.8	5.8
Conversion Industry	1687.5	2.9	1727.1	2.7	2.3	4.3
Industrial Sector Total	26,828.1	46.1	30,009.1	47.4	11.9	6.5
GDP by activity	58,215.2		63,249.2			

As a result of the importance of the industrial sector, especially oil, gas, and electricity activity in the comprehensive development of Iraq, the 2010-2014 National Development Plan gave priority to these two activities. It did this by calling for allocations of 15% of total plan investments to oil and 10% to electricity, as oil activity is the main generator of the GDP and the primary funder of the federal budget while electrical activity is the main engine for the remaining activities, on the one hand, and for securing the population's welfare, on the other.

Executive investment programs for the 2010-2014 plan indicate that the industrial sector in general and oil and electricity activity in particular have obtained higher investment rates than those stipulated in the investment plan above. According to the plan, industrial sector allocations were given first priority in total investment allocations for 2010-2012. These allocations were 32.4% in 2010, distributed across electricity at 16.6%, oil at 12.1%, and conversion industries at 3.6%, and rose in 2011 to 36.3%, distributed across electricity at 13.7%, oil and gas at 18.8%, and the conversion industry at 3.6%. A large increase was registered in 2012 where total allocations for this year reached 42.9%, with electricity at 12.8%, oil and gas at 23.2% and conversion industries at 3.5%.

The continued increase of the oil and gas activity share is due to Iraq's obligations to settle its dues with the companies that won licensing rounds. The value of these licenses are certain to increase, reaching around USD 85 billion during the 2013-2017 plan years, resulting in the continued necessity of giving advanced priority to investment policy for these activities for the coming five years.

4-2-1 Oil and Gas

One: Situation Analysis

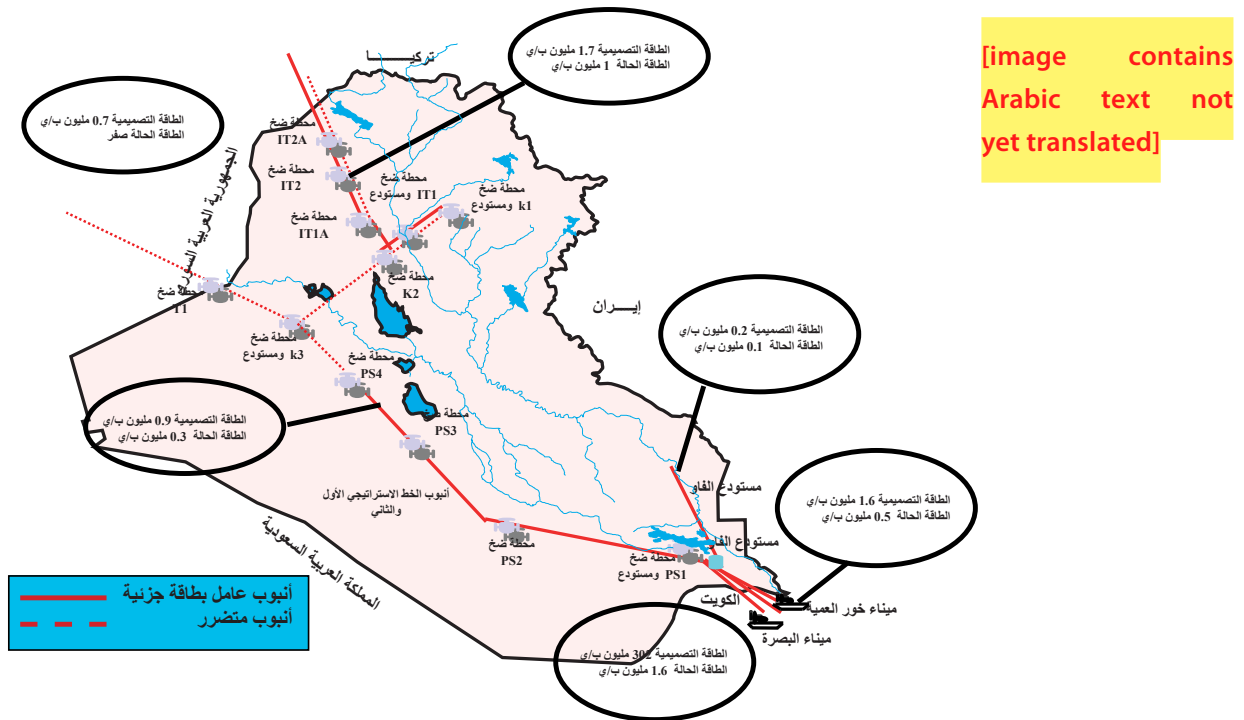
The growing role of oil activity in Iraq's overall economic performance since its discovery in the first quarter of the last century and the strengthening of this role during the 1950s (the Amar Council phase) where 100% of oil revenues were allocated to Iraq building programs, decreased to 70% then to 50% as a result of improved returns due to profit splitting between Iraq and the oil companies, and then the nationalization of oil in 1972.

Crude oil production and export reached its peak in 1979 with a daily production of 3.5 million barrels, and daily exports of 3.2 million barrels after production was at 1.5 million barrels a day and export at 1.4 million barrels a day in 1970. Due to successive wars and the international blockade imposed on Iraq, production and export operations deteriorated at very great levels. Production and export picked up and increased after 2003 as a result of the state's renewed interest in and prioritization of this sector as the main engine of the national economy. After daily crude oil production rates were at 2 million barrels a day and export was 1.535 million barrels a day in 1995, production increased in 2008 to 2.285 million barrels a day and export to 1.849 million barrels a day for an improvement of 14.5% for production and 20.5% for export. As a result of the importance placed by the 2010-2014 National Development Plan on oil activity, crude oil production increased to 3.2 million barrels a day in 2012 and the export rate rose to 2.6 million barrels a day for the same year, accompanied by development of infrastructure and especially the capacities of export channels.

Export of Iraqi oil currently takes place through three main channels:

- The Turkish line, with a current capacity of around 0.4 million barrels per day and a design capacity of 1.6 million barrels per day.
- Khor Al Amaya Port, with a capacity of 0.5 million barrels per day and a design capacity of 1.6 million barrels per day, and three platforms, only two of which are working currently at a design capacity of 1.2 million barrels per day and an actual capacity of 400,000 barrels per day.
- Basrah Port, with a capacity of 1.6 million barrels per day, a design capacity of 3.2 million barrels per day, and four platforms, all of which are functioning with a design capacity of 1.2 barrels per day and an actual capacity of 400,000 barrels per day.

Figure 4-10: Crude Oil Export System, Current and Design Capacities



Available storage capacities reach 10.987 million barrels, which are suitable capacities compared with production and export rates currently available. However, they will not be sufficient in the future due to rising targeted export capacities, which are projected to reach 30.057 million barrels in 2017, to keep pace with export capacities, as shown in Table 4-8.

Table 4-8: Export Storage Capacity, Current and Planned, 2017

		3	3		3	3
PS1	9	82	738	10	82	820
	4	66	264	16	66	1056
1	8	33	264	10	33	330
	10	22	220	10	22	220
2	4	58	233	16	58	928
	5	5	25	5	5	25
	0	58	0	24	58	1392
	40		1744	127		4771
			10,987			30,057

The importance of oil is not limited to its role in Iraq's development, but goes beyond that to the role it can play at the level of the world oil market by virtue of Iraq's current oil reserves and the possibility of boosting these in the future as well as its status as the biggest oil country capable of responding to the improved demand for energy. It is projected that in the coming decade Iraq will be the second exporter of crude oil internationally after Saudi Arabia. This could have great effects on Iraq's roles in determining production quantities and world market prices as well as using this advantage to realize Iraq's national interests.

Iraq suffers from a decline in the quantity of crude oil refined locally, which reached 150 million barrels in 2004 and decreased in 2007 to around 130 million barrels, that is, a rate of decrease of 19.4%, which resulted in a decrease in actual capacities over design capacities by 32% for 2007. This led to a large deficit in meeting increasing local consumption needs for gasoline, white oil, and liquid gas as well as to resorting to importing oil derivatives from neighboring countries and the high costs borne by the federal budget as a result, especially with the continued subsidization of oil derivatives including imported ones.

In 2012, quantities of refined crude oil reached 600 thousand barrels per day. The plan's target for 2017 is 950 thousand barrels per day and thus the plan aims to effect a very large growth in the production of oil products including gasoline, gas oil, kerosene, black oil, to be achieved by repairing existing units and operating the new units as shown in table 4-9.

Table 4-9: Development of Oil Product Production, 2013-2017

Year	2012	2013	2014	2015	2016	2017
Refined Oil (1000 barrels/ day)	600	800	830	830	830	950
Liquid Gas (ton/day)	880	1220	1600	1600	2100	2600
Gasoline (m³/ day)	14,415	19,000	19,600	19,600	28,350	36,150
Kerosene (m³/ day)	12,020	15,650	16,150	16,150	19,150	19,550
Gas Oil (m³/ day)	20,777	24,870	25,650	25,650	31,150	32,100
Black Oil (m³/ day)	40,490	53,900	55,900	55,900	59,900	40,000

In the field of distillation and refining, the plan does not aim just to effect a large change in oil products but also to improve the quality of products and their production according to international environmental requirements, especially improving the quality of gasoline and working to produce unleaded gasoline by the introduction of isomer units.

The main obstacle to distillation and refining activity in Iraq is the foreign investor's aversion to entering into these activities because of the great investments they require and the investment risks involved, which requires national efforts be made.

With regard to gas activity in Iraq, the requisite importance has historically not been given to this activity and great quantities of gas were wasted in fires without economic benefit and which resulted in environmental pollution. Iraq has significant capabilities in the gas field. In 2011, fixed reserves were around 126.7 trillion cubic feet. Prospective undiscovered reserves are very large and estimated to be around 332 trillion cubic feet, with around 164 trillion cubic feet of free gas and the remaining 168 trillion cubic feet of associated gas (dissolved in Iraq's oil reserves).

Iraq's fixed reserves can be categorized as follows:

- 70% associated gas
- 20% free gas
- 10% dome gas

The portion of associated gas concentrated in the southern oil fields is 83% and 17% is in the northern and north eastern fields. The one dome gas that was discovered in the southern fields is in the Majnoon field while 94% of the dome gas reserves lie in five northern fields: Majnoon, Jambur, Ajeel, Bai Hassan, Khabbaz, and Kirkuk. It is only produced in the Jambur and Ajeel fields.

Because the majority of Iraq's gas is associated gas, production in Iraq is affected mainly by oil production. Free gas is found in Iraq's gas fields (Chemchemal, Khor Mor, Mansouriya, Jariabika, Khashem al-Ahmar, Assas, Siba).

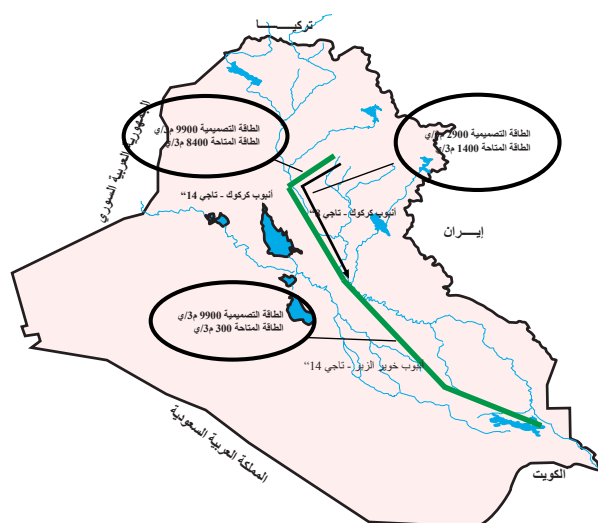
The policies applied in the oil sector achieved an increase in gas production from 1395 MMcf per day in 2009 to 1574 MMcf per day in 2011, for an increase of 13%. However this is 14% lower than the projected amount due to a decrease of resulting gas associated with oil extraction and the age of gas oil separation plants. At this rate of increase, the oil sector will not be able to meet the electricity sector's need for the gas fuel it requires to operate the gas stations. Gas production is planned to reach 5500 MMcf per day in 2017.

It is notable that 800 MMcf per day were burned in the atmosphere in 2011, that is, approximately 50% of the gas produced, causing great economic loss and environmental pollution.

Iraq does not only currently suffer from a decline in investment levels of natural gas and associated gas. The infrastructure connected to this activity is also vulnerable, for example the exposure of transit pipelines to sabotage, the age of pumping stations, and the limitations of the gas disposal system, both liquid and dry. The following figure shows that total energy available to the liquid gas disposal network is about 10,100 cubic meters per day, and that the design capacity of this system does not exceed 22,700 cubic meters per day.

Figure 4-11: Liquid Gas Disposal System

[image contains Arabic text not yet translated]

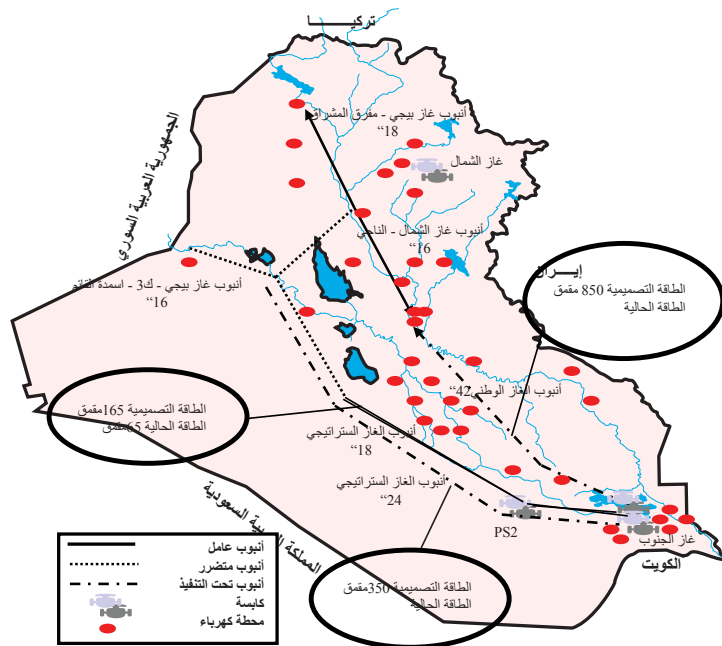


The problem goes deeper for the dry gas system, as shown in the following figure, where current system capacity does not exceed 65 MMcf and the design capacity is 165 MMcf, while anticipated consumption for electricity stations and industrial facilities in the dry gas pipeline network system is 5522 MMcf. Of this, 4500 MMcf is for

generating electricity, with 15,750 megawatts and 500 MMcf each for the Ministry of Oil and the Ministry of Industry to operate their facilities. This requires additional new capacities in order to meet the needs in accordance with the new economic system.

Figure 4-12: Dry Gas Disposal System, Current and Underway

[image contains Arabic text not yet translated]



Two: Prospects

- Existence of enormous fixed crude oil reserves estimated at around 143 billion barrels currently placing Iraq in third place.
- Existence of large gas reserves established to be 126.7 trillion cubic feet in 2011, placing Iraq in tenth place internationally.
- Existence of a competitive advantage for crude oil, shown in a decrease in extraction cost compared to other oil-producing countries.
- Existence of a large unmet need for oil products locally.
- Existence of cumulative experience in oil operations, extending more than 80 years.
- Existence of principal infrastructure and development prospects, especially in the area of ports specialized in transporting crude oil.
- Availability of investments to expand excavation, well drilling, and securing the principal infrastructure through the priority given by the state to crude oil and gas facilities.
- The desire of large international companies to invest in the oil sector, as proven by licensing rounds to date.

Three: Challenges

- Age of the technology used in oil facilities, especially for associated gas extraction and separation.
- A lack of skilled specialized and experienced workers due to the migration of many of the individuals with oil industry skills and experience.
- Age and inefficiency of pipelines, especially the strategic line.
- Inability of old refineries to meet environmental requirements and the continued high rate of gas flares which negatively impact the environment.
- Continued subsidization of oil products, affecting the performance efficiency of refinery and distillation activity.
- Weak foreign investment response to investing in the refinery and distillation sector.
- Land ownership problems between land holders and those possessing rights of disposal.
- The need for certain laws and legislation to be reviewed with an eye toward facilitating procedures and transactions for investors.
- Failure to establish an oil and gas law.

Four: Vision

“An advanced position for Iraq in the field of oil production and export, support for oil and gas reserves for sake of the longevity of Iraq’s vital role globally, and protecting the rights of future generations.”

Five: Goals

- Increase crude oil production from 3.2 million barrels per day in 2012 to 9.5 million barrels per day in 2017.
- Boost crude oil exports from the level of 2.6 million barrels per day in 2012 to 6 million barrels per day in 2017. The table below shows the quantities of oil planned for export.

Year	2012	2013	2014	2015	2016	2017
Crude Oil Export Rate	2600	2900	3500	3750	5000	6000

1000 barrels per day

- Gradually increase crude oil storage capacity in export warehouses from 10.987 million barrels to 30.357 million barrels in 2017.
- Raise associated gas production from 1574 ton per day in 2012 to 2600 ton per day in 2017.

- Increase current refinery capacity of 600 thousand barrels per day in 2012 to 950 thousand barrels per day in 2017.
- Boost storage capacity for oil products to secure storage equivalent to 40-days consumption each for gasoline, gas oil, and liquid gas and 100-days consumption for white oil.
- Reduce the quantity of gas burned to 100 MMcf per day in 2017 instead of the 800 MMcf per day in 2011.
- Protect the environment from pollution and treat environmental problems resulting from the oil and gas activity of existing facilities, remove mines and unbroken projectiles in oil regions and the roads leading to them.

Six: Means to Achieve Goals

- Developing current and discovered oil fields and proposing a section of these fields for foreign investment in order to reach plan targets. Ten fields may be proposed for investment by foreign companies during first, second, and third licensing rounds for service contracts.
- Developing pipelines and current export platforms, opening new floating barge platforms.
- Adopting an oil and gas law and issuing legislation for the energy sector facilitating plan implementation.
- Amending the private investment and crude oil refining law to attract international companies to invest in refineries.
- Building new refineries in the governorates that have the capacities and a relative advantage, securing production of 950 thousand barrels per day by 2017.
- Increasing storage capacity of the export warehouses through expanding current capacities and adding new storage capacity to meet the target of securing a storage capacity of 30 million barrels per day in 2017.
- Enforcing the contract signed by Shell and Mitsubishi to establish a gas company jointly with South Gas Company with the aim of utilizing gas flares and reducing the quantity of flares to within planned limits of 100 MMcf per day.
- Complying with international standards in the field of Health, Security, and Environment (HSE) through internationally certified systems including using environmentally friendly technologies.
- Setting regulations and the priorities necessary to guide oil product consumption.
- Establishing hidden support projects (water injection) for oil fields as one of the priorities along with finding alternatives to river water.

- Improving existing ports and building new ports meeting all environmental and health requirements with a sustainable capacity sufficient to absorb planned export quantities.
- Drilling and reclaiming developmental wells and establishing the production facilities and the supporting projects required.
- Continued application of the suitable modern technologies in all different oil and gas activities including environmentally cleaner technologies.
- Giving the private sector an important role, especially in managing and operating oil facilities or subsidiaries, especially in the activities of oil project companies, oil product distribution, and construction and maintenance works.
- Qualitative control over the oil exported and consumed locally, relying on international specifications (ISOs).
- Increasing environmental awareness, building a database on the effects of oil pollutants, construction and maintenance of an integrated system for environmental monitoring, and treating all environmental effects that have not yet been managed.
- Developing and building national capacities.
- Facilitating land allocation procedures to establish oil facilities and gas and oil pipelines.
- There are studies to increase export capacity by extending a new line with a capacity of 1.25 million barrels per day through Syria to transport conventional oil and increase capacity of the Turkish line to one million barrels per day and to extend another line through Syria with a capacity of 1.5 million barrels per day to transport heavy crude oil from the Najma and al-Qayara fields.

Table 4-10: Export capacities after restoring current systems to their design capacity and completion of new projects

System	Capacity, million/day
Iraq-Turkey Line	1.6
Basrah Port	3.2
Al-Anaya Port	0.5
Export capacity project and the Japanese loan	3.2
Conventional oil transport system through Syria	1.25
Conventional oil transport through Turkey	1.0
Heavy oil transport system through Syria	1.5
Total	12.25

4-2-2 Electricity

One: Situation Analysis

As the main engine of the economy and its various activities, and as an indicator of the social welfare of communities in the modern age, energy was one of the most important sectors to be targeted and destroyed during the decades of wars and crises. Activity did not submit to terrorist elements and sabotage after 2003 when it was one of the main targets. Each time the state tried to repair this basic infrastructure, a subsequent crisis came along to again destroy the sector, resulting in a large deficit in energy generation and meeting the increasing demand from different economic activities and the country's large population increases, to the extent that daily provision of electricity for several years did not exceed 4-6 hours a day.

The 2010-2014 National Development Plan placed a very high priority on electricity activity and called for allocating 10% of total plan investments to generating, transporting, and distributing electricity. At the end of the plan period, this should lead to filling the gap between supply and demand, providing all consumer categories with sustainable power, and promoting Iraqi per capita consumption of electrical power from around 1800 kWh in 2009 to 3700 kWh in 2014.

During the first three stages of plan implementation above, actual investment allocations exceeded those planned, where actual investment allocations for electricity activity reached 16.5%, 17.2%, and 12.8% of total allocations in these annual budgets for 2010, 2011, and 2012 respectively, with total investments of IQD 15,382 billion.

The development of electrical power production did not correspond to the support and priority given to it by the National Development Plan and related annual investment programs. Production capacities increased from 4529 megawatts in 2008 to around 6150 megawatts in 2012, which is below the level of need at about 14,000 megawatts. The per capita consumption rate increased from 1100 kWh to 1800 kWh. This is due to a number of factors including failure to enforce supply contracts with the American company G.E. and the German company Siemens.

With regard to new projects underway, for most projects the implementation delay was due to technical or contractual reasons. With regard to existing projects, there was a clear decline in the utilization of productive capacities for a number of reasons including the lack or failure of fuels or oil derivatives to reach most of the electrical power generating projects, the qualitative decline in the fuels that reached the power stations, the difficulty in obtaining the alternative tools necessary for sustaining old generator stations, and the lack of skilled capabilities for generating, transporting, and distributing power, which is reflected in the electrical system's performance efficiency.

The production of 6150 megawatts realized in 2012 was achieved through various types of gas, steam, water, and diesel stations, where around 62% of power was generated by the gas stations followed by the steam stations at 28%, hydroelectric at around 8%, and diesels at 1.7%, as shown in table 4-11.

Table 4-11: Distribution of Energy Production by Generation Method, 2012

Station Type	Number of Stations	Production (mega-watts)	Percentage
Gas	26	3802	62.25%
Steam	8	1730	28.3%
Diesel	6	103	1.68%
Hydroelectric	10	473	1.68%
Total	50	6148	100%

To meet a portion of the energy production shortage, around 1200 megawatts are imported from Iran, and starting on July 1, 2012, electrical power was imported from Syria after completion of the link at a rate of 100-150 megawatts for a short period. Currently there are procedures underway to import power from Turkey, and there are also contracts for purchasing electrical power from barges. There are currently four barges in the Basrah governorate whose total production reaches around 300 megawatts and serve the Basrah governorate.

To meet the current limited production capacity as compared to the need, there are 17,750 megawatts under implementation through a collection of steam, gas, and diesel generator stations slated for completion in stages during 2013-2015.

Keeping pace with international developments in the field of renewable energy, 50 megawatts will be added during 2013 and 350 megawatts by 2015.

Current energy production is transferred through a 400 kV and 132 kV energy transmission network. There are 27 400 kV stations with line lengths of 4700 km and 220 132 kV stations with line lengths of 12,200 km and 463 cables. There are 20 400 kV stations under construction and 89 132 kV stations. To meet the increases in energy production up to 2015, there are 300 33/11 kV substations underway with transmission lines and cables and the repair of residential area networks that suffer from a decline in quality and the visual pollution resulting from them.

Two: Prospects

Provision of sufficient funding through governmental investment budgets and the state giving this activity advanced priority.

- Possibility of the private sector entering and contributing to power generation and distribution activities in the event that the state chooses this option.

- Great prospects for utilizing power generated from renewable sources, especially solar.
- Provision of the technical, administrative, and financial frameworks designed in this activity despite work force losses after 2003.
- Existence of specialized training centers and institutes to secure the activity's need for specialized work teams.
- Incentives and privileges that the activity secures for its affiliates compared to other state institutions.

Three: Challenges

- Age of generator units and transportation and distribution networks, most of which were built in the 1970s and 1980s.
- Lack of flexibility in delivery of fuel to energy production units for use in stations scattered throughout the country and the lack of early planning for the construction of fuel pipelines, which led to these problems and which are reflected in the performance efficiency of energy generating facilities.
- River water shortage led to a decrease in river level and the stoppage of power generation activity by the water stations for significant periods of the year.
- The security situation is unstable which leads to an increased overall cost of the production projects to set up security protection for the sites of foreign companies and security reserves.
- Difficulty meeting environmental requirements especially by old projects and stations.
- Subsidized tariffs create irresponsible power consumption.
- The negative effects resulting from electromagnetic fields and rays from high-voltage electrical power transmission lines and distribution networks in cities and towns.
- Obstacles facing investors include:
 - ▶ Difficulty allocating suitable lands close to power stations, substations, and fuel lines, etc.
 - ▶ Difficulty of investors obtaining the approval of the Ministry of Oil to be provided with the appropriate fuels.
 - ▶ Difficulty faced by the Ministry of Electricity in facilitating purchase agreement procedures to purchase power from investors.
 - ▶ The country's lack of an efficient banking agency.

Four: Vision

Meeting the country's actual need for electrical power with sustainable methods and economic efficiency.

Five: Goals

- Increasing the electrical system's production capacity to cover the full increasing demand for power by reaching 25 thousand megawatts. This will exceed the anticipated demand for 2017 by approximately 5 thousand megawatts, as shown in table 4-12.

Table 4-12: Anticipated Electricity Demand, 2012-2017

Anticipated Demand	2012	2013	2014	2015	2016	2017
Megawatts	14,020	15,183	16,298	17,494	18,628	19,823

- Increasing the Iraqi per capita share of electrical power from the current rate of around 1800 kWh to 3700 kWh in 2017.
- Improving the performance efficiency of the electrical system and keeping it from deteriorating.
- Improving service quality for consumers of all categories (home, commercial, industrial, agricultural, and governmental).
- Guiding power consumption for various uses.
- Improving environmental performance for electrical activity.

Six: Means to Achieve Goals

Completing work on gas and steam station production units under implementation.

Repairing existing stations until production rates reach those in which supply exceeds demand and then putting in place a plan to take some of the stations out of service in the event that such stations are proven to be uneconomical.

Converting simple cycle gas stations to combined cycle stations where additional capacities of around 4000 megawatts are anticipated, using this technology and using the same quantity of fuel used over the first stage in 2013 and the second stage in 2016, with a capacity of 2000 megawatts each. Table 4-13 shows the plan stages of the transformation of these stations.

Table 4-13: Transformation of Single Cycle Gas Stations to Combined Cycle

First stage

Station	Simple Cycle MW	Added Capacity (combined cycle) MW	Expected Completion Date
Rumaila	1460	700	End of 2013
Al Diwaniyah	500	200	End of 2013
Al Anbar	1000	500	End of 2012
Mansouriya	740	300	2014
Amarah	500	250	2013
Kirkuk	292	125	2013
		2075	Anticipated for 2015

Second stage

Station	Simple Cycle MW	Added Capacity (combined cycle) MW	Expected Completion Date
Sadr	338	150	2013
Al Khairat	1250	600	2014
Nasiriyah	500	250	2014
Al Najeebeia	500	250	2014
Samawah	500	250	2014
Shat al-Basrah	1250	600	2014
		2100	Anticipated for 2016

- To absorb the added generator capacities up to 2017 the plan confirms giving priority to developing and repairing transportation and distribution networks through:
 - ▶ Adding 27 new 400/132 kV transformer stations and 110 new 132/33 kV stations.
 - ▶ Adding 400 kV of lines and cables at a length of 2500 km and 132 kV at a length of 4000 km.
 - ▶ Building 33/11 kV transformer substations in the distribution networks and repairing and improving the networks (numbered at around 400 stations and lines and cables of about 2500 km).
 - ▶ Converting wire networks to cables, especially in city centers and new residential neighborhoods.
 - ▶ Expanding distribution networks to guarantee that electrical power reaches investment projects and residential complexes in all governorates.
- Approving a comprehensive maintenance and repair policy including repairing energy transmission lines to reduce loss.
- In order to improve the environmental performance of electrical activity, it is necessary to:

- ▶ Use fuels with good specifications (gas) to raise performance efficiency of generator stations, extend their economic lifespans, and limit their negative effects on the environment in accordance with the capabilities of the Ministry of Oil to secure gas for such.
- ▶ Using environmentally cleaner technologies in power generation, transmission, and distribution.
- ▶ Expanding investment in renewable energy, especially solar, in the event that it proves to be economically feasible.
- In order to guide consumption it is necessary to:
 - ▶ Review electricity tariffs and tie them to consumption and the development of collection methods.
 - ▶ Adopting sustainable programs to raise community awareness of the benefits of rationing energy at the family and country level.
 - ▶ Adopting educational programs in schools at the various levels on the importance and value of controlling energy consumption.
 - ▶ Continuously remove illegal violations of the national network.
- Enabling the private sector to actively participate in improving electricity activity performance whether through direct investment in building generator stations or in managing the distribution sector and assigning distribution operations to the private sector.
- Effecting administrative reforms through:
 - ▶ Preparation of a comprehensive guide to standard work procedures for electrical sector configurations by using comprehensive quality management pursuant to international specification standards (ISO 9001).
 - ▶ Strengthening work in decentralized areas such as project management and general contracting to improve services, guarantee work quality, institutional development, and financial management, and to utilize technology in overseeing sector projects by using the IDMS system.
 - ▶ Implementing electronic government projects as an entryway for administrative reform and as part of Iraqi government directives.
- Strengthening coordination between the Ministry of Electricity and universities and research institutes to develop work force cadres in the electricity sector and conduct research and studies supporting this sector.

4-2-3 Conversion and Extraction Industries (Excluding Oil)

One: Situation Analysis

Conversion industries played an important role in the Iraqi economy at certain stages of development, by virtue of its capabilities and the material and human requirements available as well as the country's wealth of natural resources for various industries, especially the chemical, petrochemical, building material industries, and the textile and nutrition industries. The importance of conversion industries to the Iraqi economy is reflected in its contribution to the GDP which reached 13.9% in 1988 and did not fall below the 6% that it reached in 1979 even though that was a year of peak production and export of crude oil. This reflects the great prospects of the conversion industry resuming its role in and importance to the Iraqi economy. It was one of the activities that was the most affected by the blockade imposed on Iraq, the unstable security conditions after 2003, the destruction sustained by large industrial projects in the country in the 2003 war, the suspension of production of most private sector projects, and the private industrial investor's direction of investment abroad, all of which resulted in a decrease in this sector's contributions to the GDP to 3.8% in 1990, 1.5% in 2001, and 2.9% in 2009.

Although the 2010-2014 National Development Plan regarded conversion industries as one of the activities targeted in order to diversify the national economy by focusing on the role of the local and foreign private sector, repairing the state's industrial facilities, and inviting it to allocate 5% of total estimated investments to the plan, actual allocations for 2010, 2011, and 2012 were at much lower levels. Actual conversion industry allocations for government investment for the three years were 3.52%, and the implementation rate of the latter was low at 23.3% of actual allocations. If the public sector achieved some result in industrial investment, the private sector, which was reliant on it to realize the largest portion within this activity, did not invest more than IQD 155 million during 2010 and 2011 in very small projects numbered at 244.

The modest investment situation for conversion industry activity was reflected in the performance level of this activity, as the following indicators show:

- The conversion industry value of the GDP increased from IQD 26,387 million in 2009 to IQD 30,115 million in 2011, that is, by an increase of more than 12%.
- Conversion industry contribution to the GDP declined despite achieving an increase in the production value for this activity from 2.9% in 2009 to 2.7% in 2011 due to the large increases achieved in crude oil production and export activity.
- Continued securing of work opportunities for around 186 thousand affiliates, which is much higher than the actual need for conversion industries facilities,

which is reflected in the efficiency of the performance of these companies and their bearing of unjustified expense affecting their economic performance.

- Decline in the local industry coverage of the needs of the Iraqi market, which varies from 10-40%.
- Increase in the rate making up local manufacturing for the textile and engineering industries by 100% and products by 40-100% and its decline in the chemical industries by 27% for fertilizers and 20% for phosphates.
- Continued decline in the private sector contribution to the overall GDP, which reached around 40%. This is a result of the continued aversion of the private sector to resume operation of closed projects or to build new projects.
- The 2010-2014 five-year plan also aimed to repair 56 public factories, securing development of their existing production lines or adding new production lines. The result on preparation of the document of this plan was 100% completion of repair work on eight factories, 90% completion on seven factories, and 30% completion on thirty-six factories, which is a lower rate than planned for the end of 2011.

Two: Prospects

- Iraq enjoys very high industrial prospects, represented by:
- Availability of various natural resources in most of Iraq's governorates and at commercial quantities, such as raw phosphates, silica, sulfur, and building materials aside from raw carbohydrates and the existence of all different types of industries.
- Local market capacity for many industrial products, especially building industry products for construction and building as well as fertilizers for agricultural purposes, and competitive potential in foreign markets for some industries, especially nitrogen and phosphate fertilizers and cement.
- Existence of a strong industrial heritage going back to the last century and the resulting expertise and the activity's contribution of around 14% of the GDP at the end of the 1980s.
- Existence of a practiced private industrial sector that played an active role in industrial development during the last decades where its contribution reached around 50% of the total added value of the conversion industry activity at the end of the 1970s.
- Availability of a skilled work force and the prospect of increasing available human capacities through a large expansion of professional, technical, and academic education.
- Existence of available opportunities for foreign investment and investing in this activity, especially in the areas where there is a competitive advantage, aside from the existence of opportunities to establish companies through joint

financing to guarantee ideal use of the natural resources available in Iraq and boost geologic surveys and mineral investigations.

Three: Challenges

- The low priority given to the conversion industries in the 2010-2014 five year plan and limited government investment in this activity, leaving it to the private sector and foreign investment, neither of which responded to the plan trajectories.
- Age of production lines and the need to repair existing companies and add new production lines.
- Local products' difficulty competing with imports that flood the market with low-priced low-quality products. This requires:
 - ▶ Activating a customs tariff law
 - ▶ Activating a law to protect local products
 - ▶ Activating a consumer protection law
- Failure to take into consideration the relative advantage and requirements of establishing industries on the ground, due to lack of clear technical standards used to measure the degree of specialization and diversity of manufacturers for every governorate, such as the site worker standard or the industrial structure analysis standard.
- Age of the banking system and lack of mechanism flexibility and the means of securing the necessary funding for investors.
- Weakness of the role of the agencies administering and overseeing the quality of local products, which contributes to raising their level of competitiveness with imported commodities.
- Inflation in the number of workers in the activity after 2003, due to employees returning to work, which requires fundamental remedies to eliminate this phenomena and enable public industrial facilities to operate on sound profit and loss economic foundations and reducing government subsidies that exhaust the annual federal budget.
- Shortage of electric power and voltage fluctuation which negatively affects productive efficiency.
- Limited natural gas provided to certain facilities that rely on it as a primary production resource.
- The failure of the Ministry of Industry and Minerals to establish a law to activate the Ministry's role to adapt the market economy system and move from comprehensive central administration of sector activities to assuming the roles of empowerment, direction, and policy drafting.

- Limited use of environmentally friendly technology and the lack of integrated systems to oversee and measure air pollutants.
- The industrial sector's continued use of low-efficiency burning systems in brick factories which use black oil.

Four: Vision

Iraqi industry effectively contributing to diversification of the national economy in a competitive work environment and building global companies.

Five: Goals

- Increase the conversion and extraction industry non-oil contribution to the GDP.
- Increase the various industries' level of coverage, especially those having an advantage for local market need, such as the refinery industry, the food industry, the fertilizer industry, the building materials industry, etc.
- Raise the level of local manufacturing for the industries that possess the basic components for such.
- Strengthen the role of the Iraqi private sector in contributing to industrial production, generating new work opportunities, and building companies with the public sector.
- Improve the environmental situation of conversion industry and extraction industry activity without oil.
- Create an attractive environment for foreign investment in the conversion and extraction industries without oil.

Six: Means to Achieve Goals

- Continued restructuring of public companies to strengthen the principle of the transformation to a market economy where it is hoped that up to fifteen companies will be built by the end of 2012 and partnership in twenty-five companies is planned by the end of 2017.
- Expanding repair of nine companies with the participation of the private sector, securing the country's need for iron, cement, and brick products, and expanding exports in the fertilizer and petrochemical industry.
- Dissolving public companies that do not prove to be economically feasible and disposing of their assets in accordance with the laws in effect.
- Securing private and foreign investment zones and spreading them out across the various governorates in accordance with phase priorities according to each governorate's relative prospects and advantages.

- Building companies with international companies in industries having a competitive advantage in the country, securing the use and localization of advanced technologies.
- Improve and modernize the banking system to keep pace with global developments in the field of lending and financing private sector projects, including small income-generating businesses and transparent and simplified mechanisms.
- Developing and improving research and industrial technology centers in coordination with the Ministry of Science and Technology as well as research centers, universities, and academic institutions.
- Activate geological survey and mineral investigation activities with the objective of precisely identifying the mineral resources available in commercial quantities with the aim of utilizing them and adding them to the GDP resources.
- Dealing with the problem of surplus workers at industrial facilities which negatively affects the performance efficiency of these facilities and contributes to their decline in productivity, while ensuring social protection for groups that cannot be trained for alternative jobs.
- Continuing current efforts to treat the environmental effects of industrial activities through:
 - ▶ Completing treatment units in industrial projects that were not included to date, whether units for treating factory waste water or units for treating gasses and dust.
 - ▶ Establishing industrial projects only once environmental preservation is guaranteed, and making a successful environmental impact study a main condition for the establishment of new industrial projects whether local or foreign, public sector or private.
 - ▶ Using environmentally cleaner technologies in repairing existing projects or new projects.
 - ▶ Developing systems to control and monitor environmental quality and building databases comprising all sectors.
- Building the abilities of industrial work teams and keeping pace with modern developments.
- Sustainably securing the electrical power, fuel, and gas needs for operating factories in the public and private sectors.
- Continued legal and administrative reform of conversion industry activity including establishing the new law on the Ministry of Industry and Minerals and activating and establishing laws on customs tariffs, consumer protection, and competitiveness and protection of Iraqi products, a modern investment law, a commercial transactions law, an urban and industrial compounds law, a privatization law, and others.

4-3 Transportation and Communication Sector

The transportation and communication sector is an important sector in any economy. The significance of this sector is embodied in the direct and daily effect of its activities on citizens' lives. This sector is also distinguished by its strongly interconnected relationship with the other economic sectors and its direct effect on their growth, development, and the country's economic integration. It is not possible for the other economic sectors to develop and grow without a suitable and efficient infrastructure and services in the transportation and communication sector, as each way of using of the land requires a road and transportation network suitable for that use.

The infrastructure of the transportation and communication sector extends across long distances and comprises more than one area and governorate. It thus requires large investments for the purpose of construction and maintenance. This sector is also distinguished by an ample private sector contribution (Iraqi and foreign) and investment in the implementation and operation of many of its activities.

4-3-1 Transportation

The transportation sector consists of road and bridge activities, passenger transport, goods transport, railroad transportation, ports, and maritime and civil aviation transportation. The plan will cover each of these activities in terms of the situation, visions, targets and ways of achieving these targets. In general, the transportation sector aims to build an integrated, efficient, and safe transportation network and to guarantee balanced use of its various systems in a way that harmonizes with the spatial distribution of the population and economic activities, and strengthening Iraq's geographical location in this area. This vision can be achieved through:

- Increasing sector contribution to the GDP.
- Increasing the efficiency and absorptive capacity of the current transportation network.
- Integrating the various transportation network systems.
- Increasing efficiency and improving performance of institutions and facilities in the transportation sector as well as their public companies and raising their efficiency in the fields of management and operation.
- Improving and activating the transportation of goods by rail and protecting the road system from damage.
- Reducing accidents on the transportation network.
- Reducing trip time and providing shortened routes far from urban centers.
- Contributing to boosting Iraq's economic independence.
- Reducing transportation cost

- Boosting Iraq's geographical location in transportation and transit trade.
- Strengthening the private sector's role in the various transportation activities, especially operations and service provision.

One – Road and Bridge Activity

Situation Analysis

This activity falls within the remit of the General Authority for Roads and Bridges in the Ministry of Construction and Housing, which is responsible for implementation and maintenance of bridges over rivers and of roads outside the cities.

The total length of the external road network (outside the borders of Baghdad's municipalities and mayoralty) is around 48,941 km, as follows:

- Expressways = 1084 km
- Arterial roads = 11,254 km
- Rural roads = 10,357 km
- Border roads = 11,000 km
- Secondary roads = 15,246 km

With regard to bridges, there are 1260 concrete and iron bridges and 52 floating bridges spread throughout all of the country's governorates. However, this network does not meet the country's need, especially for rural roads which are one of the pillars necessary for rural community development. According to international standards, for each 100 inhabitants per km² of population density, 1 km/km² of roads are required. Road density in Iraq is around 0.19 km/km² and is required to reach 0.75 km/km², that is, the road network should be around 240,000 km, given that the population density in Iraq according to 2011 estimates is 79.5 inhabitants per km². If we exclude the unpopulated desert areas, the need for new roads is about 20,000 km, according to the standard mentioned.

Before 2003, Iraq's external road network was of relatively good quality in terms of efficiency and absorptive capacity but during the events of 2003 and afterwards it was exposed to great deterioration. Most of its sections were destroyed and damaged as a result of military operations and sabotage and little and scarce emergency and periodic maintenance work. That led to a decrease in the level of road network efficiency to very low levels and a decrease in absorptive capacity. Aside from this, most of the traffic signs and the directional and warning signs on the international roads and expressways were damaged or lost, and hence repairing the current road network is one of the plan priorities in the area of road and bridge activity.

Means to Achieve Goal

- Complete the remaining parts of the highways that were previously built, and finish linking these roads to the urban centers that have not yet been linked.
- Build highways, particularly Highway 2, to link urban centers, and finish linking Iraq with other neighboring countries that have not yet been linked by highways.
- Continue construction of secondary corridors for single arterial and main highways, especially those that have reached maximum carrying capacity.
- Expand construction of transverse roads between governorates, which greatly reduce transit time.
- Expand construction of ring roads, which help reduce traffic jams within cities and limit traffic penetration in urban centers.
- Continue implementation of the remaining stages of plans to replace floating bridges with fixed bridges.
- Continue to eliminate railroad crossings.
- Furnish external roads with indication signs, guide signs and warning signs.
- Protect the land road network from excessive loads by building vehicle weigh stations to save the road network from the impact of vehicle weights and axial loads that exceed the allowed limits.
- Continue programs to build rural roads, intensify these programs to cover the large percentage possible of rural villages and agricultural projects, in order to link agricultural production sites to markets.
- Guide investment in keeping with the importance of road and bridge activity and its social and economic role.
- Develop rail freight transportation in order to reduce road freight transportation.
- Pass new legislation or amend existing legislation to impose fees at certain rates for the use of main and arterial roads and bridges, in order to provide adequate amounts for periodic and sustainable maintenance of roads and bridges.
- Improve the performance of quality control activity on roads and bridges during execution of road and bridge projects by providing the necessary laboratories sufficient to conduct laboratory tests of road and bridge works, control vehicle loads and axial weights for existing road and bridge projects by setting up scales to control freight and axial loads of freight vehicles.
- Make use of modern, developed technology with economic benefit in rehabilitating and maintaining road works, and provide means for them to succeed.

Second Goal: Strengthen and Support the Role of the Private Sector

The domestic private sector and foreign investment can play a role in implementing infrastructure and highway hubs provided that free roads and bridges are provided for the routes of these same hubs. The private sector can also effectively help in the field of service provision.

Means to Achieve Goal:

- Strengthen the role of the private sector in the field of service provision, such as constructing integrated rest stops (in accordance with regulations and designs determined in agreement with the General Authority for Roads and Bridges). It is also necessary to boost the role of the State as organizer and overseer of design, implementation, operation and service provision at all stage.
- The quantitative targets for this activity are indicated in the table below.

Table 4-14:

Year Details	2012	2013	2014	2015	2016	2017	Total
Highways/km	-	116	40	282	248	600	1286
Arterial roads/km	75	93	146	291	161	175	941
Main roads/km	485	807	775	541	788	1108	4504
Secondary roads/km	115	246	104	273	225	185	1148
Concrete bridges/no.	8	25	20	16	11	13	93
Overpasses/no.	-	8	6	7	4	4	29
Steel bridges/no.	-	-	-	-	-	2	2

Two – Transportation of Passengers and Freight by Truck

Situation Analysis

The General Company for Passenger Transport was founded in 1938 under the name Passenger Transport Agency. It handled passenger transport only within Baghdad and worked under the central financing system. It became the State Company for Passenger Transportation by virtue of Companies Act No. 22/1997 to conduct operations as a company that works under the system of self-financing based on its authorized activity, as stipulated by Company By-law No. 10/2000. The company's aim is to provide bus transportation for people within Baghdad, between governorates and between Iraq and neighboring countries, in addition to offering internal transportation services. Finally, the State Company for Passenger Transportation was merged with the State Company for Delegates Transportation under the name of the State Company for Travelers and Delegates Transportation. This was by virtue of Cabinet Decree No. 338/2008.

The State Company for Passenger Transportation possessed large bus fleets and a number of employees suitable for the operation of this fleet. As a result of the military operations and looting and plundering that accompanied the entry of foreign forces into Iraq, the company suffered great damage to its assets.

State passenger transportation activity declined in 2003 and the period that followed and was very limited, both on the level of inter-city and intra-city transportation. It did not exist in the organized form that was previously in place.

After 2008, state passenger transportation gradually began to recover its organized activity by operating bus between cities and within Baghdad, where the number of buses belonging to the State Company for Travelers and Delegates Transportation reached 945 working buses as of September 2012, compared to the 1633 buses the company operated in 2002. There are currently 30 operating lines within Baghdad, 3 lines for transporting students (and it is hoped to increase this number within the coming period to 5 or 6 lines), 4 lines between governorates and 14 lines between Baghdad and the governorates. As a result of the destruction that befell the passenger transportation fleet and chaotic management, the number of passengers carried fell from 130 million in 2002 to around 5.2 million in 2012.

After 2003, the private sector almost totally monopolized inter and intra-city transportation activity. Successive price increases in oil derivatives, including gasoline and gas oil caused the private sector to raise transportation prices within and outside cities. These prices have become a burden on citizens, particularly students, those with limited income, and the poor.

The number of employees in the State Company for Travelers and Delegates Transportation reached a total of 4254 by September 2012, more than half of whom are redundant. This has an effect on the efficiency of the company's performance.

With the improvement in the security situation, demand for intra and inter-city passenger transportation has started to rise. Owing to the limited railway activity at the present time, bus transportation has picked up the slack as the currently available solution.

Work on implementing public transportation projects within cities, such as subways, trams or suspension trains, particularly in Baghdad, is urgently needed in order to provide rapid and safe public transportation service, relieve congestion within cities and reduce pollution.

Despite hikes, the prices charged by the State Company for Travelers and Delegates Transportation are still much lower than private sector prices. The buses owned by the company are recent models, air-conditioned and safe, and they offer some services during the trip. Therefore, citizens have started to prefer them over private sector buses.

B—Challenges

- Limited financial allocations for the activity.
- Continued instability in the security situation in some cities and governorates, continued security roadblocks and checkpoints on main and secondary streets.
- The public transportation fleet is limited to buses within cities and between cities.
- The bloated administrative and operational apparatus of public transportation activity and the resulting low level of performance.
- The existence of an unregulated private sector that uses vehicles without the necessary specifications and that pollute urban environments.

C—Potential

- Growing demand for bus transportation within and outside cities.
- Reasonable prices and outstanding services compared to the private sector.
- Building public transportation projects within cities, such as subways and suspension trains.
- Launching special transportation rates by offering subsidies for the elderly, students, children and those with special needs.

D—Vision

To provide intra and inter-city public transportation that is fast, sustainable, environmentally friendly and that fulfills the aspirations of the targeted classes.

E—Goals

First Goal: Develop and Support Public Transportation

Means to Achieve the Goal:

Modernize the comprehensive transportation plan in Iraq.

Operate 130 lines in Baghdad with two shifts and provide nearly 1500 buses to operate these lines Table 4-15 indicates the quantity goals for passenger transportation activity in terms of number of buses to be provided over the duration of the plan for the purpose of inter and intra-city public transportation.

Execute the first stage of the suspension train project in Baghdad.

Prepare studies and designs for the Baghdad metro project and work to begin implementation during the last years of the plan, and seriously reflect on scheduling implementation of the Baghdad metro project as a long-term solution to the problems

of passenger transportation, reducing traffic congestion in Baghdad and improving the city's environment.

Modernize the intra and inter-city passenger transportation fleet with new model, comfortable buses that meet environmental standards and fulfill the aspirations of the targeted classes.

Work according to the principle of special fares for students, youth and those with special needs covered by social care programs.

Second Goal: Support the Role of the Private Sector

Means to Achieve the Goal:

- Encourage the private sector to found joint-stock companies dedicated to inter and intra-city transportation on a competitive basis with the private sector.
- Support the private sector and reorganize it in the field of passenger transportation and providing pivotal structures to conduct its activity, particularly passenger transportation garages with high specifications.
- Continue to support the private sector in providing comfortable means of transportation by subsidizing the replacement of old cars with new ones.
- Gradually shift toward entrusting passenger transportation activity to the private sector.
- Limit the operational lifespan of taxis and perform annual tests on their durability and environmental safety.

Table 4-15: Number of current buses and buses needed, and the projected number of passengers and travelers for the 2013-2017 period.

Year	Internal Transportation		Inter-city Transportation (travelers/international/ tourism)		No. of Passengers (thousands)	No. of Travel- ers (thou- sands)
	Single-deck- er buses	Double-deck- er buses	Buses	GMC		
2010	10	60	86	-		
2011	--	-	116	130		
2012	-	100	-	-		
2013	-	100	-	-		
2014	-	-	100	-		1620
2015	-	100	-	-	8424	
2016	100	-	-	-	1560	
2017	-	50	50	-	4212	810

Three: Ground Transportation of Freight by Truck

A—Situation Analysis

Iraq had a large fleet for transporting freight by truck under the Ministries of Transportation and Trade. This fleet suffered looting and destruction and only modest numbers remained compared to the need. On the other hand, there continued to be a large number of workers at 4670, which had a negative impact on performance efficiency.

The direction this activity will take according to the plan is to shift it entirely to the private sector after rehabilitating it for the high flexibility that the private sector enjoys in managing this sort of activity, or achieving partnerships with the public sector, with the following requirements:

- Strengthen the role of the state as overseer of transporting freight by truck.
- Develop railway transportation in order to protect the ground transportation network, not expose it to more damage and realize the large economic savings from transporting freight by train.

B—Challenges

- Bloated management and operations with regards to company personnel.
- Low number of trucks compared to the demand for internal and external transportation.
- Competition from railway transportation, if rehabilitated.

C—Potential

- Growing demand for transportation of freight by truck, owing to the small role played railways.
- Achieving a partnership between the public and the private sector in this activity.

D-- Vision

Competitive transportation system run by the private sector.

E—Goals

Goal: Privatizing freight transportation activity

Means to Achieve the Goal:

- Set a mechanism and a time frame for the privatization process.
- Encourage the establishment of joint or private companies for transporting freight.

- Develop infrastructure for the activity and grant it state support.

Table 4-16: Quantitative Targets for the Activity

Year	2013	2014	2015	2016	2017
Planned Carriage (thousand tons)	3000	3500	4000	4500	5000
Manifest	1469000	1500000	1440000	1400000	1000000

Four: Railways

Situation Analysis

Railway transportation – both of passengers and freight -- is an important and vital form of transportation activity within the transportation sector, as railway transportation stands out by its capacity for long-distance transportation at a relatively reasonable cost compared to other means, particularly as regards transporting freight.

Iraq is a pioneering country in the region in the field of railway transportation due to the large network it has, which covers wide swathes of the country. Moreover, the first train was put into operation in Iraq in June 1914.

The railway network was heavily relied upon for transporting travelers and freight when first established, but after the road network was developed in Iraq, a large share of ground transportation shifted from the railways to road transportation, particularly as concerns the transportation of freight. Thus there is strong need for an effective rail network, as it will spare the road network and particularly the highways from damage by heavy truck traffic. In 2011, the length of Iraqi railways reached a total of 2627 km, of which 2158 km are main lines and 469 km are secondary lines. The number of working trains reached 85 out of base of 414 trains, 35 transfer trains out of a base of 131, 48 passenger cars out of 307 and 2490 trucks for carrying freight out of a base of 9315. Meanwhile, the number of travelers in 2011 reached a total of 271299 and the volume of freight transported reached 703,000 tons. Table 4-16 shows total Iraqi railway activity for the period 1979-2011 and notes that despite the increase in length of rail lines over the above period, rail activity went into a major decline, from millions of travelers and tons of freight annually to hundreds of thousands by 2007. Then 2011 appeared to show an increase. This is shown in the following table:

Year	Line length (km)	Number of Travelers (thousand travelers)	Quantity of Freight transported (thousand tons)	Revenue Realized (million dinars)	
				Travelers	Freight
1979	1645	3351	6943	2286	20609
1988	2389	3865	6109	8124	18990
2002	2272	1248	5227	1131	22687
2004	2272	63	439	57	4977
2007	2272	4	165	15	1049
2008	2295	107	257	740	4318
2011	2627	271	703	1974	9766

Large parts of the current rail network in Iraq are obsolete and suffer from outdated design and malfunctioning signal and communication systems, and some lines are in bad condition. These factors cause operating speeds to drop to low levels and exposes passengers and freight to danger. Thus these lines have been rehabilitated to boost performance, increase operating speeds and improve their specifications. Work is also underway to convert single-track lines to double-track lines in order to increase capacity and provide a higher level of safety.

Work has also taken place on a new communication system for control between stations and trains by using wireless devices to link stations and trains. This system replaces the old wire system with a global positioning system (GPS) to track train movement and know their locations.

Most working rail lines operate on the standard system, and the lines currently operating are Baghdad—Samarra and Mosul Rabia and Baghdad—Falluja. It is hoped that the other remaining parts of the above lines will come into operation gradually as they are rehabilitated and along with the improvement in the security situation.

Work is ongoing to double the Baghdad—Basrah, Baghdad--Mosul, Hammam al-Alil—Sabouniya, Sabouniya—Rabia lines, as well as to modernize and rehabilitate lines currently in place in order to boost the efficiency of these lines, increase operating speeds and improve their specifications.

A—Challenges

- Road transportation competes with rail transport in the areas of both travelers and freight, especially now that highways and arterial roads have been developed in Iraq.
- The rail network in Iraq is incomplete and important hubs are not covered by this very essential infrastructure.
- Large parts of the current network and cars are incomplete, and signal and communication system are inoperative.

- Operating speeds are much lower than needed to compete for traveler and freight transportation.
- Rail activity requires massive investments to build lines, provide them with signals and communications, and supply trains, passenger cars and freight cars.
- The Projects Department of the Iraqi Railways Company has limited capabilities incommensurate with the responsibilities that have been placed on the company to implement current and future projects.

C—Potential

Rail transport possesses significant opportunities for development and modernization, as Iraq's surface area, its regional geographical position and its long experience in the field of rail transportation and constructing infrastructure in most regions of Iraq qualifies it to expand the rail network. Most of Iraq's imports and exports in the future are passing through the ports of south Iraq and the ports of neighboring countries, and the transit trade – which could be revived in Iraq – passes through these portals. Seeing as transportation of freight over long distances and in large quantities is more efficient and economical using this means of transportation, thus rail transportation activity could be developed to a large degree, as there are distinct opportunities to develop and modernize it and use the best technology in this field. Moreover, the global transportation network between East and West (East Asia and Europe) will not be complete unless it passes over Iraqi territory. This will require Iraq to develop its transportation network infrastructure, especially its rail network, as it is suitable and low cost for long distances, whether Iraq wants its ports to be the station that receives these freight or the ports of neighboring and nearby countries are the receiving ports.

The quantity of transit freight projected to be transported through Iraqi ports to Turkey, Syria and Europe has been estimated in the range of 35 million tons annually as a typical case and 60 million tons in a best-case scenario. The feasibility study for the Al-Faw Grand Port showed that this quantity of transit freight requires a double-track rail line to be built to transport them. A quality rail network is also needed in Syria and Turkey, and the necessary measures must be taken for political understandings and free trade measures in Iraq and the countries that the freight will pass through.

Expansion of the rail transportation network will help alleviate the pressure of freight transportation on highway and intercity arterial roads, and thereby will limit the damage inflicted on these roads by the large loads that pass over them in many cases, and which exceed the fixed axial loads.

D—Vision: A competitive rail transportation system that is integrated with the

road transportation system.

E—Goals

First Goal: Modernize and develop the rail transportation system and boost its operating capacity.

Means to Achieve Goal:

- Increase rail transportation capacity for travelers and freight according to the quantitative indicators in Table 4-18.
- Complete the conversion of single-track lines to double-track lines.
- Implement new nodes with high specifications.
- Eliminate all rail crossings.
- Equip the rail network with modern trains and new cars and trucks for transporting travelers and freight so as to meet the needs of the population and the national economy, and rehabilitate the current stock.
- Modernize communication and signal system in the current rail network and the network that will be implemented in coming years. This includes the communication system with satellite dishes that is currently being implemented that pinpoints the location of the dishes at any time for the purpose of preventing accidents and train crashes.
- Allocate the necessary investments to develop and modernize rail transportation activity and build new projects
- Reconstitute the General Authority for Implementing Railway Projects to relieve it of responsibility for implementing projects and shifting them to companies specialized in this field, or rehabilitate the State Company for Implementing Transportation Projects (currently in existence) to be specialized in implementing railways works only.
- Develop engineering and technical cadres in the railways in implementing and constructing railway projects using national capabilities, and providing the specialized requirements and railway construction equipment so as to create high-quality national cadres specialized in this field.
- Develop and modernize the Railway Institute and improve its work methods.

Second Goal: Reduce Travel Time and Guarantee Safety

Means to Achieve Goal:

- Increase passenger train speed to 140 km/hr in the first stage and 250 km/hr in the second stage.
- Convert railway system to electric.
- Eliminate all rail crossings.

Third Goal: Strengthen Iraq's Geographical Position as Link between East and West

Means to Achieve Goal

- Strengthen the rail link with neighboring countries to serve national interests.

Fourth Goal: Strengthen the Role of the Private Sector and Foreign Investment

Means to Achieve Goal

- Propose strategic rail projects for domestic and foreign private investment according to the BOT system, payment on credit after approval, or any other investment formula that satisfies the national interest.
- Strengthen the role of the private sector in operation and management processes and offer railway activity services.
- Build partnerships to implement, manage and operate joint rail lines with neighboring countries as a means of building a "dry canal" for transit trade and passenger transportation between East Asia and Europe.
- Authorize the private sector to open rail transportation agencies to draw transportation requests toward this means.

Table 4-18: Quantitative Goals for Rail Activity under the 2013-2017 Plan

Year	Length Increase of Railway Hub Lines (km)		Length Increase of Main and Secondary Rail Line Networks and Station Lines (km)		Increase in Passenger Transportation Activity (million passengers)		Increase in Freight Transportation Capacity (million tons)	
	Annual	Cumulative Total	Annual	Cumulative Total	Annual	Cumulative Total	Annual	Cumulative Total
2011	-	1906	400	3515	1	2.5	1	6
2012	800	2706	2087	5602	4.2	6.7	38	44
2013	140	2846	1165	6767	23	29.7	58	102
2014	2157	5003	6233	13000	35	64.7	233	335
2015	400	2331	1400	4884	4.2	6.7	38	44
2016	1000	3331	2400	7284	23	29.7	58	102
2017	1500	4831	3375	10659	35	64.7	233	335

Fifth: Ports

A—Situation

Basrah is Iraq's sole sea opening on the outside world, and thus this location represents an important geostrategic center for Iraq, its interaction with the outside world and its economic performance in terms of providing a significant share of its

imported needs. It also provides an essential outlet for exporting crude oil and the rest of Iraq's products, however few they may be at the moment.

Therefore, port activity and sea transportation have been significant throughout successive eras of Iraq's history -- particularly the 1970s -- and this location has become a center of economic activity linked to import/export.

Port activity is completely financed and managed by the State through the General Company for Ports of Iraq. Iraq currently possesses four commercial ports and two working oil export platforms. The number of commercial port terminals is currently at 46 with capacity for 16.650 million tons annually. Table 4-19 shows Iraq's commercial ports, the number of terminals in each port and the currently permitted depths in the terminal facades.

Table 4-19: Iraqi Commercial Ports and Number of Terminals in Each Port

Port Name	Capacity (million tons annually)	Number of Terminals	Permitted Depth of Terminal Faces
Umm Qasr	7.5	22	7.5-12
Khor al-Zubair	6.4	12	4-8
Abu Flous	0.5	3	6
Al-Maqal	2.250	9	8-9
Total	16.650	46	

The quantity of cargo handled in Iraqi commercial ports in 2011 hit a total of 12.8 million tons. As the available capacity of the working port terminals is within the range of 16.650 tons annually, there is currently untapped capacity. It is necessary to look at Iraq's quantities of imports and exports out of the total ports of Iraq and neighboring and nearby countries to get the total figures. If these figures are larger than 12.8 tons annually, the usage of these untapped capacities should be examined, as the cause in this case may be that ships are refraining from anchoring in Iraqi ports and are anchoring in the ports of neighboring countries. Hence it is necessary to study means to attract these ships to Iraqi ports or study ways to boost the efficiency and performance of the ports by furnishing and equipping the port terminals with the necessary handling equipment and means of transportation within the port, and linking them with the national transportation network at a reasonable cost.

Despite the massive scale of port activity in Iraq, financial surpluses did not exceed 69 million dinars in 2011 and in the best case did not surpass 82 million dinars in 2005. This is due to undeveloped management and operation processes, obsolete equipment and the fact that there are 10,000 employees, more than one-third of whom are redundant.

B—Challenges

- Iraqi ports face stiff competition from the ports of neighboring countries in the region.
- depths of navigation corridors and terminals faces are currently limited, ranging from 7.5-12 m, which limits ability to receive giant ships.
- The management and operation system at Iraq's ports are underdeveloped; modern, electronic management and operation systems are not used and Iraq's ports do not keep pace with the latest developments in this field.
- There are many shipwrecks in the navigational corridors, which affects in particular the entry and exits of ships to Iraqi ports.
- Deficit of naval units, specialized port equipment, cargo-handling equipment and obsolescence of the current stock.
- Weak government investment in port activity compared to need, as total investment in this activity during the 2007-2011 period has not surpassed 460 million dinars, only 40% of which has been disbursed. Furthermore, the private sector is reluctant to invest in infrastructure for this activity.
- Personnel working in this sector have weak qualifications, there is a mismatch between technical and administrative cadres and a large surplus workforce. As a whole, this has a negative impact on the efficiency and performance of the program.

C—Potential

- The large shortfall between design capacity of the current terminals – in the range on 15 million tons annually – and Iraq's projected import/export demand in the future, which has been estimated at 53 million tons in 2018.
- The existence of a sea front in Iraq's regional waters that would allow a port to be built that receives massive ships with cargos reaching 120,000 tons, and converting Iraq's ports from secondary to primary ports, thus strengthening Iraq's geographical position as a link between East and West and boosting the transit trade. This is along with the continued need to develop the rail network toward serving this goal.

D—Vision

Primary and secondary ports that effectively meets Iraq's import/export needs, that are capable of competing with the ports of neighboring and nearby countries and represent a starting point for Iraq to become a dry canal linking Asia, Europe, Turkey and Syria.

E—Goals:

First Goal: Boosting Current Port Capacity and Navigational Corridors

Means to Achieve Goal:

- Allocate the necessary amounts to develop, expand and modernize current ports or put them up for investment, according to the quantitative indicators in Table 4-20.

Table 4-20: Current Design Capacity of Iraq's Port Terminals and 2017 Targets

Port Name	2012		Projected Terminals to be Added over 2013-2017 Plan Duration	2017	
	No. of Terminals	Capacity (million tons/year)		No. of Terminals	Capacity (million tons/year)
Umm Qasr	22	7.5	19	41	14
Khor al-Zubair	12	6.4	13	25	10.650
Abu Flous	3	0.5	-	3	0.750
Al-Maqal	9	2.250	5	14	3.6
Total	46	16.650	37	83	29

- Contract with a global consulting company specialized in offering consultations, suggestions and solutions in order to boost the efficiency and performance of the General Company for Ports of Iraq, including its role as regulator and overseer of private sector performance, so that it is able to compete with other countries in neighboring and nearby countries.
- Deepen, excavate and equip navigational channels into the ports and set up television and electronic control systems for ship traffic.
- Remove all shipwrecks from the navigational corridors of Khor Abdullah, Khor al-Zubair, Shatt al-Arab and Shatt al-Basrah, as indicated in Table 4-21.

Table 4-21: 2012-2017 Quantitative Targets for Port Activity in Removing Shipwrecks

Year	2012	2013	2014	2015	2016	2017	Total
Umm Qasr	1						
Khor al-Zubair	2						
Khor Abdullah Canal	1						
Shatt al-Arab							
Total	6	3	3	3	4	4	23

- Modernize ports in terms of housing, water and general services for importers and exporters working in the ports.

Second Goal: Use the Ports' Currently Untapped Capacity

Means to Achieve Goal:

- Modernize and improve the fleet of naval units that currently provide naval services to the ports, including diggers, dragging ships, signal ships, and guide ships, passenger boats, tow boats and work boats.
- Implement modern, electronic systems in port activity management and operation.
- Prepare marine service equipment for oil ports (Basrah and al-Amiq), and the liquid gas port in Khor al-Zubair.
- Modernize the terminals' ground handling equipment to achieve the ability to handle cargo of the required limits.

Third Goal: Build Primary Ports that Compete with the Ports of Neighboring Countries

Means to Achieve Goal:

- Build Al-Faw Grand Port according to the quantitative targets in Table 4-22.

Table 4-22: Quantitative Targets for Building Al-Faw Grand Port

Year		2018	2038
Container Terminals	No. of Terminals	10-11	22
	Tons/year	30000000	70000000
General Cargo Terminals	No. of Terminals	6-7	22
	Tons/year	10000000	40000000

Fourth Goal: Strengthen the Role of the Private Sector in Implementing, Operating and Providing Port Activity Services

Means to Achieve Goal:

- Build and operate infrastructure, and provide services.
- Operate container terminals.
- Implement development projects and expand through investment and through appropriate means, including:
 - ▶ Build the Al-Faw Grand Port
 - ▶ Build 13 multi-purpose terminals in Umm Qasr port with a design capacity of 3,750,000 tons/year.
 - ▶ Build 4 container terminals in Umm Qasr port with a design capacity of 2,000,000 tons/year.
 - ▶ Build 13 multi-purpose terminals in Khor al-Zubair port with a design capacity of 4,250,000 tons/year.
 - ▶ Use the Al-Muamer Terminal at Al-Faw with a capacity of 100,000 tons/ year.
 - ▶ Manage, operate and develop the al-Maqal and Abou Flus ports.

- ▶ Service provision activities, such as departure and anchoring, and service provision for ships within the port.
- ▶ Operate port terminals, especially container terminals.

Fifth Goal: Boost Efficiency of Port Workers

Means to Achieve Goal

- Prepare a comprehensive plan to develop and train port personnel, build up new qualified personnel and activate the training institute in the ports.
- Reexamine redundant workers and employees.
- Reexamine wages and prices for services offered by Iraqi ports consistent with guaranteeing competitiveness with neighboring ports.

Sixth: Maritime Transportation

A—Situation Analysis

Iraq currently possesses 3 ships, and it is hoped that other ships will be added by buying ready ships or manufacturing new ones. Maritime transportation activity is both an important and profitable activity. At this stage, the aim in supporting it is to build up the nucleus of an Iraqi maritime fleet. As soon as this nucleus is formed, fleet expansion will be self-funding through the profits realized by the ships of the nucleus of this fleet.

Work is currently ongoing to conclude joint transportation agreements with global maritime transportation companies to transport Iraq's imports and exports, provide job opportunities and train Iraqi cadres.

In the field of river transportation, activity has almost come to a halt due to the security situation, water scarcity, lack of pumps in the rivers and the need for dredging, in addition to river current obstructions such as the remains of bridges damaged in previous wars or because temporary, floating or service bridges were built. The revitalization of this activity will involve eliminating the above causes.

The number of employees in the General Company for Maritime Transport, which is responsible for managing and operating this activity is at 2420. Although the General Company for Maritime Transport's work has halted along with the work of its personnel, there are still many employees, including redundant ones, who were hired after 2003, and they represent a burden on the company's budget.

B—Challenges

- The need for major investment, initially just to form the nucleus of a new Iraqi maritime fleet that includes container transportation ships, cargo ships and ships for various loads and transportation.
- Build ships according to demand takes time and requires the appropriate allocations to be made.

C—Potential

- The company possesses technical personnel with accumulated expertise.
- River terminals exist with various capacities, ranging from 330,00 tons to 500,000 tons in Baghdad, Kut, Amarah, Basrah, and 14 river sluices of varying capacities.

D—Vision

Boost the role of the flag carrier in securing Iraq's trade

E—Goals

First Goal: Boost the Capability of the Flag Carrier to Secure Iraq's Import/Export Operations

Means to Achieve Goal

- Secure the necessary investments to increase the number of commercial ships for transporting cargo and passengers, as indicated in Table 4-23.

Table 4-23: Quantitative Targets for Maritime Transportation over Duration of 2013-2017 Plan

Supplies	Capacity	Required No.	Distribution of Ships by Year				
			2013	2014	2015	2016	2017
Bulk Carrier	50,000 tons	8	3	1	2	2	-
Building Multi-Purpose Ships	15 to 20,000 tons	2	1	-	1	-	-
Container Ships	1000-2000 containers	2	-	1	-	1	-
Buying Passenger Transport Ships	15 to 20,000 tons	2	-	1	-	1	-
Buying RORO ships	5 to 8,000 tons	3	-	1	1	1	-
Total		19	7	4	4	4	-

Second Goal: Supporting the Role of the Private Sector in Maritime Activity

Means to Achieve Goal

- Involve the domestic and foreign private sector in joint operation processes in maritime transportation activity.

Seventh—Civil Aviation

Civil aviation activity consists of the General Establishment of Civil Aviation and Iraqi Airways. The activity of the General Establishment of Civil Aviation covers airports all over Iraq, while the activity of Iraqi Airlines covers air transportation on planes belonging to this company.

A—Situation Analysis

The General Establishment of Civil Aviation is concerned with civil aviation affairs in general in Iraq, civil air traffic management, and both domestic and international commercial air transportation. Iraq currently has six international airports (Baghdad, Mosul, Basrah, Erbil, Sulaymaniyah and Najaf) and work is currently underway to rehabilitate and modernize the airports of Baghdad, Mosul and Basrah.

- **Baghdad International Airport:** Baghdad International Airport is currently composed of three buildings (Samarra, Babil, Ninewa), each with capacity for 2.5 million travelers annually and each building contains 6 air bridges for plans to dock. The airport contains two runways for takeoff and landing, the first 4 km long and 60 meters wide and the second 3.3 km long and 45 meters wide with two tracks for taxiing, the first 4 km long and 45 meters wide and the second 3.3 km long and 30 meters wide, and a tarmac. The airport also buildings for air traffic control, communications, firefighting, switch board, warehouses and parking garages. The airport is provided with all equipment to guarantee air traffic safety and offer services to travelers.
- **Basrah International Airport:** The airport consists of one building, with capacity for 2 million travelers annually and containing 5 air bridges for plans to dock. The airport has one runway 4 km long and 60 meters wide, with a taxi way 4 km long and 45 meters wide and a tarmac. The airport also contains buildings for air traffic control and communications. The airport is provided with all equipment to guarantee air traffic safety and offer services to travelers.
- **Mosul Airport** consists of one building with capacity for 500,00 travelers annually and a runway 2.8 km long and 45 meters wide and a tarmac big enough for 3 airplanes. It also contains buildings for air traffic control and communications. The airport is provided with all equipment to guarantee air traffic safety and offer services to travelers.
- **Sulaymaniyah International Airport** is a CAT I airport consisting of two sides – the air side and the ground side. The air side consists of a runway 3.5 km long and 45 meters wide with a parallel taxi way 3.5 km long and 30 meters wide, in addition to other secondary taxi ways and an airplane parking lot that hold 3 airplanes. The ground side of the airport contains a one-storey building for travelers with an approximate capacity of 350,000 travelers annually and a fuel warehouse.

- Erbil International Airport is a CAT international airport consisting of two sides – an air side and a ground side. The air side contains a runway 2.8 km long and 30 meters wide with an airplane parking lot that holds five airplanes, with secondary taxi ways. The ground side of the airport contains a small one-storey building for travelers with an approximate capacity of 150,000 travelers per year, a fuel warehouse and buildings for fire trucks and ground equipment, as well as the electricity building.
- Najaf International Airport consists of traveler building with capacity for 3 million travelers per year, a parking lot for airplanes that holds 4 airplanes, and its runway is 3 km long and 45 meters wide.
- Founded in 1988, Iraqi Airways is the flag carrier for air transportation. Air transportation, which was established on 29 January 1946, was administratively linked to Iraq Republic Railways.
- Despite the relative improvement witnessed by civil aviation activity in recent years, it still needs more development to provide comfortable international and domestic air transportation, regulate takeoff times and reduce ticket prices. Table 4-24 and 4-25 show the state of Iraqi Airways for 2010 and 2011.

Table 4-24: Number of Travelers, and Incoming and Outgoing Freight in 2010 and 2011

Value	2010			2011		
	Planned	Actual	Percent Realized	Planned	Actual	Percent Realized
International Transportation (travelers)	367680	361606	99%	514752	445912	86%
Domestic Transportation (Travelers)	79037	52648	66%	102748	43381	42%
Incoming Freight (tons)	39513	8272	21%	55318	7916	14%
Outgoing Freight (tons)	252	128	51%	353	400	113%

Table 4-25: Inbound and Outbound Flights, and Number of Inbound and Outbound Travelers in 2011 and 2012

T	Index	2011			As of 31 May 2012		
		Planned	Actual	Percent Realized	Planned	Actual	Percent Realized
1	Inbound Flight Traffic	12310	11589	94%	5373	6477	118%
2	Outbound Flight Traffic	12310	11625	94%	5491	6477	118%
3	Inbound Travelers	899629	855423	95%	366530	521040	142%
4	Outbound Travelers	900783	862372	96%	372449	509653	137%

A—Challenges

- Slow implementation of current airport rehabilitation works.

- The company does not possess a complete air fleet, has a limited number of planes owned and leased and these planes are antiquated.
- Swollen numbers of non-specialist personnel, which has an impact on the company's performance and financial results.
- Some of Iraqi Airlines management and operation methods do not meet international standards.

C—Potential

- Growing demand for air transportation.
- Iraq's geographic position as a link between East and West.
- Growing elements for religious tourism.

D—Vision

Comfortable, safe and competitive national aviation

E—Goals

First Goal: Strengthen the Flag Carrier's Role in Air Transportation

Means to Achieve Goal

- Rehabilitate currently existing airports.
- Build new airports in high-demand regions and regions that attract tourism, particularly religious tourism, such as Middle Euphrates Airport.
- Rebuild the Iraqi air fleet with modern airplanes.
- Rehabilitate and develop current personnel and assist the company with new, young personnel.
- Develop and modernize the Civil Aviation Institute.
- Guarantee safety and security on the flag carrier.
- Adhere to international conditions and requirements for safety and security standards and regulate take-off and landing times.

The three tables below indicate the Plan's targets regarding growth of the Iraqi air fleet, airplane traffic, numbers of travelers and quantities of inbound and outbound freight:

Table 4-26: Target quantities for civil aviation activity over the duration of the plan, 2012-2017

Year	No. of Planes		No. of Travelers	
	Landing	Departing	Inbound	Outbound
2012	13906	13906	992301	1008847
2013	16223	16223	1129170	1155431
2014	18540	18540	1266039	1302015
2015	20857	20857	1402908	1448599

Year	No. of Planes		No. of Travelers	
	Landing	Departing	Inbound	Outbound
2016	23174	23174	1539777	1595183
2017	25491	25491	1676646	1741767

Table 4-27: Number of planes projected to be added to the Iraqi air fleet over the duration of the Plan

Type of Plane	2013	2014	2015	2016	2017	Total
Long-range Airplanes	3	2	2	5	3	15
Medium-range Airplanes	5	4	3	5	2	19
Cargo planes	-	-	2	2	2	6
Total	8	6	7	12	7	40

Table 4-28: Planned International and Domestic Transportation for Iraqi Airlines over the Plan's five years

T	Year	2012	2013	2014	2015	2016	2017
1	International Transportation (travelers)	500940	1083252	1516552	1971517	2464397	2710836
2	Domestic Transportation (travelers)	48036	173643	225735	293455	366819	403500
3	Inbound Cargo (tons)	47436	108423	151792	346085	795997	1034796
4	Outbound Cargo (tons)	924	692	969	1259	1574	1732

Second Goal: Strengthen the Role of the Private Sector

Means to Achieve Goal

- Study the possibility of transferring new airports or expanding existing airports on the basis of partnership between the public and private sector, whether as build-transfer, build-operate-transfer or build-operate-maintain-transfer.
- Open the field for the private sector to manage and operate service facilities in airport on an investment basis.

4-3-2 Communications Sector

The communications sector comprises communications, mail, internet and information technology.

One: Communications

A—Situation Analysis

Due to the important role played by communications in the civilian and military fields, this sector's infrastructure has received devastating blows over the course of Iraq's successive wars, which has left it almost completely destroyed. Since 2003, the deteriorating security situation and acts of terrorism and vandalism halted maintenance and rehabilitation work on the infrastructure in turbulent and unsafe areas, particularly on the landline network.

On the other hand, the formation of the Communications and Media Commission, divesting the Ministry of Communications of most of its powers and responsibilities and entrusting them to the Communications and Media Commission has delayed implementation of a clear communications policy in Iraq during the 2003-2011 period. The confusion in this field has been obvious with regards to the quality of projects proposed and the constant shifting of priorities.

Iraq had 285 electronic telephone exchanges in 2002, distributed throughout all governorates. The number of phone lines was at around 1.183 million and telephone density per 100 people was in the range of 4% for Iraq as a whole. By 2011, the number of telephone exchanges was at 331, the number of phone lines was 1.956 million and telephone density per 100 people was 8.6% for Iraq as a whole, reaching 10% in Baghdad governorate, as indicated in Table 4-29.

Table 4-29: Communications Sector Main Indicators, 2002-2017

Indicators Year	Number of Telephone Exchanges	Total Phones (thousands)
2002	285	1183
2003	279	1128
2008	296	1525
2009	310	1650
2010	315	1720
2011	331	1956
2012	345	2191
2017	360	3366

With regards to internet activity – which is a very recent service in Iraq – the number of service centers open reached a total of 19 in 2001, 55 in 2003 and 26 in 2006. The number of private sector service centers opened was at 30 in 2003, 15 in 2005 and 5 in 2006.

As pertains to the current state of the cell phone network, despite the fact that this technology did not penetrate Iraq until 2003, the number of actual lines has risen significantly, reaching 2536.6 lines in 2011, with network coverage percentages ranging from 40% to 95%. The main causes behind this are perhaps the low price of a SIM card, the breakdown of landline services and the desire on the part of Iraqis to acquire and use a cell phone as an emblem of sophistication and to benefit from its advantages.

Cell phone service offerings are still not at the required level. Most efforts must be made to prove them efficiently, both to government departments and to citizens, to take advantage of Iraq's geographical position and strengthen its role as a link between East and West, North and South. Work is ongoing to link Iraq to neighboring countries through a network of hubs and fiber optic cables, which in turn will strengthen the role played by network services globally.

The communications sector has become at once one of the most important and profitable sectors and its activities can boost state revenues significantly. The field is also wide open for the private sector to help build and operate many projects in this sector through partnership contracts or total investment, while the State maintains the right to oversee and regulate it.

The general framework employed by the communications strategy in Iraq in the coming period is drawn from the two phases of the World Summit on the Information Society, the Arab General Strategy for Information and Communications 2007-2012, the Regional Plan of Action for Building the Information Society in ESCWA countries, and the Millennium Development Goals.

The Second National Indicators Report to Monitor Millennium Development Goals issued by the Central Organization for Statistics in August 2012 stated that the indicators adopted are as follows:

- ▶ Number of fixed phone lines and cell phones per 100 people.
- ▶ Number of personal computers used per 100 people.

Table 4-30 shows the indicators adopted and their values for the base years and the target values for 2017. We can observe that telephone density in 2011 has risen to 6.8% compared to 5.6% in 1990, whereas very rapid development has been achieved in the use of mobile phones, household personal computer ownership and satellite use.

Table 4-30: Indicators Adopted and Base Year and Target Year Values for 2012-2017

Indicator	Base No.	Base Year	Current No.	Year	2017 Target
No. of Fixed Lines per 100 people	5.6%	1990	6.8%	2011	25%
Percentage of Households that Own Personal Computer	3.6%	2004	18.1%	2008	20%
Percentage of Households that Use Satellite	32%	2004	88.3%	2007	100%

B—Challenges

- Collapse of communications network infrastructure and obsolete equipment.
- Low implementation rates for allocations for this activity.
- Difficulty of performing maintenance work on the landline network in turbulent areas.
- Lack of law pertaining to communications and using and reserving frequency bands.

C—Potential

There are financial allocations sufficient for the needs of projects executed annually.

There are technical personnel with expertise that can be developed.

Iraq's special geographical position.

D—Vision

High-quality communication services at a global level.

E—Goals

First Goal: Implementing e-Government Services

Means to Achieve Goal

- Expand computer penetration
- Expand internet penetration
- Promote broadband service at reasonable prices.
- Improve and expand international link gateways and communication bands.
- Second Goal: Reduce Urban-Rural Disparities in Cell Phone Service Provision

Means to Achieve Goal

- Require phone companies to cover all areas and strengthen their networks, with this stipulated in contracts concluded with investing companies.
- Reduce communication and internet usage costs in order to make it available to all social classes.

Third Goal: Improve Quality of Communication and Internet Services

Means to Achieve Goal

- Consolidate and modernize current networks in keeping with recent developments and technologies.

- Make best use of frequencies and control international cell call routing and internet service through access gateways.
- Support the Communications and Media Commission and boost its executive capabilities.
- Convey advanced expertise through strategic partnerships with global companies in the field of service provision.
- Ratify intellectual property rights agreements and prevent illegal duplication of software and technical and intellectual product.
- Simplify procedures to grant service provision licenses.

The Plan aims to achieve the indicators in Table 4-31.

Table 4-31: Indicators on Information Technology and Communications Infrastructure and Access

Indicator	Current	2017 Target
No. of Fixed Phone Lines per 100 People	6.8%	25%
No. of Cell Phone Subscribers per 100 People	76.3%	100%
No. of Computers per 100 People	1.5%	5%
No. of Internet Subscribers per 100 People	14%	20%
No. of Broadband Internet Subscribers per 100 People	6.3%	10%
Percentage of Households that Have a Computer	18.1%	20%
Percent of Households that Have Internet Access at Home	4%	10%
Percent of Households Covered by Cell Phone Service (Coverage over Most Areas)		100%
Internet Access Fee (20 hours per month) in USD as Percent of Annual Personal Income	8%	4%
Cell Phone Rates (100 minutes per month) in USD as Percent of Annual Personal Income	5%	3%

Fifth Goal: Strengthen the Role of the Private Sector in the Communications Field

Means to Achieve Goal

- Continue to provide an environment that attracts private sector investment in the cellular, landline, wireless and internet service fields.

Two – Mail

A—Situation Analysis

Despite progress in postal activity in Iraq and quality services provided in past decades when telephone services were limited and modern means of communications such as cell phones and internet did not exist, mail service in Iraq is currently in a poor condition and is almost nonexistent and unreliable. Table 4-32 shows the main indicators of this activity for the 2002-2017 period.

Table 4-32: Main Indicators of Postal Activity for the 2002-2017 period

Indicators Year	Post Offices	Post Boxes
2002	314	44218
2003	-	-
2008	355	53627
2009	376	57273
2010	379	58612
2011	379	58486
2012	384	58490
2017	388	58510

B—Challenges

- Mail development projects are not included in communications sector priorities.
- Slow adoption of modern, developed means of communication in postal operations.
- Weak potential for the activity and use of traditional work methods.
- Users do not trust the level of service provision.

C—Potential

- Long legacy of mail service in Iraq that may be built upon.
- Some pivotal structures exist, which need development and modernization.

D—Vision

Rapid, reliable national and international postal activity

E—Goals

First Goal: Improve Quality of Mail Services

- Separate postal activity from communications and establish an independent entity.

- Put in place a postal activity strategy that is responsive to recent developments in means of communication.
- Modern the postal activity infrastructure in Iraq.
- Increase the percent of mail delivered door-to-door at homes and institutions.
- Use competitive commercial bases in offering mail services.

Second Goal: Integrate Postal activity with Other Services

- Expand postal activity by involvement in applications offered by e-government, such as ATM machines, tracking issuance of official documents and collecting general service fees.

Third Goal: Strengthen the Role of the Private Sector in Postal Activity

- Involve private sector as an essential partner in offering some mail services in the medium term and entrust it with total responsibility in the long term.

4-3-3 Storage Sector

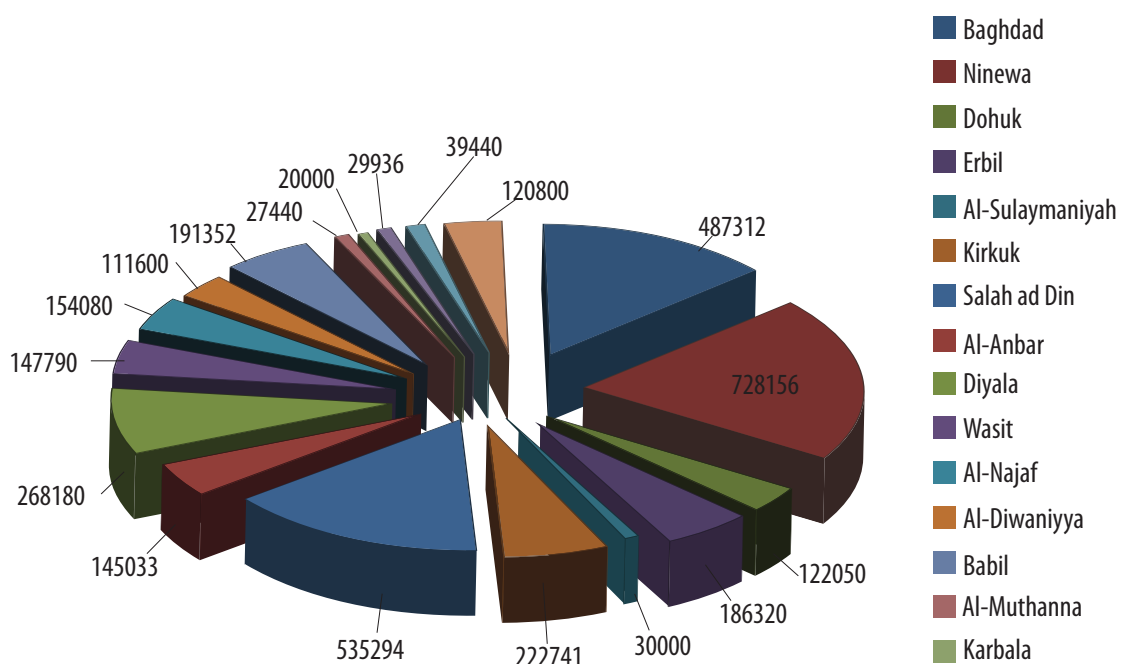
A—Situation Analysis

Table 4-33: Storage Capacity of the Iraqi Grain Company's Silos and Warehouses up to 2011

Governorate	Storage Capacity of the Iraqi Grain Company's Silos and Warehouses (wheat and barley)			Total Current Storage Capacity/tons	Total Storage Capacity of Rice Silos
	Bins	Bunkers	Terraces		
Baghdad	315500	171812	0	487312	52795
Ninewa	315758	333508	78890	728156	41581
Duhok	103400	17250	1400	122050	864
Erbil	96000	90320	0	186320	6827
Sulaymaniyah	0	0	30000	30000	2362
Kirkuk	20000	62741	140000	222741	7994
Salah ad Din	245600	289694	0	535294	23727
Anbar	10000	135033	0	145033	9047
Diyala	124300	143880	0	268180	26020
Wasit	44110	95680	8000	147790	16780
Najaf	63000	91080	0	154080	78574
Diwanya	15000	96600	0	111600	84366
Total	1614468	1684766	268290	3567524	469769

Governorate	Storage Capacity of the Iraqi Grain Company's Silos and Warehouses (wheat and barley)			Total Current Storage Capacity/tons	Total Storage Capacity of Rice Silos
	Bins	Bunkers	Terraces		
Babel	93000	98352	0	191352	24990
Al-Mousana	8000	19440	0	27440	10829
Karbala	10000	0	10000	20000	6951
Day-Kar	20000	9936	0	29936	7105
Maysan	10000	29440	0	39440	34910
El-Basra	120800	0	0	120800	34047
Total	1614468	1684766	268290	3567524	469769

Table 4-13: MISSING TRANSLATION



These storage capacities – in all forms – in the above table are below the levels of what is produced domestically and imported. Therefore, there is a need to add new storage capacity to provide for the people's ordinary needs as well as a strategic reserve of the main grains, and to replace obsolete silos.

A—Challenges

- Shortage of storage capacity and failure to meet strategic reserve requirements.

- Some silos are outdated and need rehabilitation.
- Silo management and operation methods are underdeveloped.

C—Potential

- There is national expertise and large infrastructure that can help Iraq surmount difficult conditions.
- Great opportunity because of appropriate storage conditions.

D—Vision

Provide strategic, safe and sustainable storage capacity

E—Goals

First Goal: Secure a Strategic Reserve of Wheat and Rice Sufficient for At Least Six Months.

Means to Achieve Goal

Add new storage capacity by building silos in various governorates of Iraq and rehabilitating existing silos in the governorates that suffer from a shortage of storage capacity, as indicated in the two tables below:

Table 4-34: Proposed Additional Storage Capacity over the Plan's Duration (2012-2017) by Governorate

Governorate	Current Silo Grain Storage Capacity	Governorate's 6-Month Grain Needs (wheat, barley) (tons)	Proposed Silo Storage Capacity (tons)
Wasit	42000	95000	60000
Anbar	10000	120000	120000
Karbala	10000	83000	80000
Najaf	60000	104000	60000
Babylon	93000	143000	60000
Muthanna	10000	60000	60000
Dhi Qar	20000	152000	120000
Basra	125000	207000	120000
Maysan	10000	83000	80000
Diwaniyah	15000	92000	80000
Kirkuk	20000	106000	100000
Saladin	10000	106000	100000
Total	425000	1351000	1040000

Table 4-35: Proposed Storage Capacity by Plan Year 2012-2017

	2012	2013	2014	2015	2016	2017
Karbala	-	30000	-	-	-	50000
Dhi Qar	30000	-	-	-	-	90000
Wasit	-	-	60000	-	-	-
Diwanayah	-	-	80000	-	-	-
Maysan	-	-	80000	-	-	-
Basra	-	-	-	120000	-	-
Najaf	-	-	-	60000	-	-
Kirkuk	-	-	-	60000	-	40000
Anbar	-	60000	-	-	60000	-
Babylon	-	-	-	-	60000	-
Muthanna	-	-	-	-	60000	-
Saladin	-	30000	-	-	-	70000
Total	30000	120000	220000	240000	180000	250000

4-4 Culture, Tourism and Antiquities

The culture, tourism and antiquities sector represents an important mainstay of the economic and social development process in both advanced and developing countries alike, as it constitutes a main source of national revenue and provides job opportunities. Tourism also has plays a major role in developing citizens' culture and social potential and perceptions. On this basis, countries have striven to put in place strategic plans to make of use of their cultural assets and tourism potential according to the visions and goals they wish to achieve. Due to the large tourism potential that Iraq has, including religious, historical and recreational tourism – this Plan sees the tourism sector as an important development pole in diversifying Iraq's economic base.

4-4-1 Culture

Iraq has a rich legacy of culture and art that it has developed throughout the various civilizations that have lived on its land. Writing first appeared in Mesopotamia, and the successive governing powers as well as the various historical eras have left their cultural mark on the country. Furthermore, Iraq's cultural diversity is due to the fact that many ethnicities and religions have lived in the country since ancient history. All this has made Iraq constantly seek to assert itself artistically and culturally in this world where civilizations -- their cultures, arts and heritage -- collide. Iraq is striving to develop and sustain its cultural and civilizational achievements as well as maintain its place in world history, especially after the instability and successive wars it has witnessed and that have delayed its cultural development.

Based on the above, it is important to invest in construction, and expand and maintain cultural facilities in order to support cultural activities through the management of such facilities. It is also important to market the services and cultural and artistic outputs of these facilities in the aim of reinforcing the role of the cultural sector in the fields of development and national product.

A-- Situation Analysis

Cultural activities have not been the State's priority due to decades of wars and crises. In fact, this sector has suffered the most from brain drain, the overuse of infrastructure and weak investment.

Despite the fact that the 2010-2014 National Development Plan confirmed the need to develop this sector, the resources dedicated to it were limited and mainly consisted of the Baghdad Capital of Arab Culture 2013 project. The cultural scene remained undeveloped, the proof being:

- The number of cultural centers did not exceed 24 in 2011 located in various Iraqi governorates
- The number of children's cultural centers did not exceed eight centers in 2011 with four centers expected to open at the end of 2012
- The number of cultural centers outside Iraq did not exceed five centers spread across the USA, the UK, Sweden, Lebanon and Iran
- The number of cultural visitors has diminished to below 41 tourists in 2011 due to the security situation
- The private sector has played a limited role in cultural activities, especially after 2003
- Theatrical activities and fine arts activities are limited in general even in dedicated theatres and galleries

B-- Challenges

- The absence of cultural strategies and cultural national policies
- Limited investment in the cultural sector, whether public or private
- Brain drain of literary men/women, authors, poets and artists due to the security situation
- Weak infrastructure available for cultural activities and location of this infrastructure mainly in the capital

C-- Vision

"A national Iraqi culture that preserves the cultural heritage and is open to world cultures"

First Goal: Developing and Enabling National Cultural Activities

Means to Achieve Goal

- Put in place a national cultural strategy
- Develop and diversify cultural facilities
- Invest in and develop intellectual and artistic innovation
- Reform administrative and legislative systems in a way that allows the cultural sector to play a distinct developmental and cultural role
- Establish and develop cultural institutes and training centers
- Establish firm bases for the education of children in a way that preserves traditions while introducing the values of a modern society
- Sign international agreements that benefit Iraqi culture
- Support civil society's cultural activities in accordance with the directions and goals of the State
- Build a cultural city and a cultural palace in each governorate in Iraq
- Build a cultural center in every district of every governorate
- Open cultural centers in partnership with other countries to establish permanent intellectual and cultural communication
- Support cultural tourism and develop small industries related to culture such as cottage industries

Second Goal: Protecting National Cultural Heritage

Means to Achieve Goal

- Continue efforts to return Iraqi items of cultural and civilizational heritage that were taken out of the country in 2003, such as paintings and artistic works of pioneer Iraqi artists
- Revitalize and rehabilitate cultural sites that were destroyed or vandalized
- Establish permanent monitoring systems to control ongoing violations of cultural sites

Third Goal: Strengthen the Role of the Private Sector in Investing in Cultural Activities

Means to Achieve Goal

- The State must encourage the private sector to launch projects in the fields of cinema, theater, book publishing, fine arts and sponsoring artists
- Develop bank loans specific to funding cultural development projects

- Hold cultural conferences, festivals, national and international book fairs concerned with art, literature and knowledge. This would guarantee sustained donations from the private sector.

Fourth Goal: Support the Virtual Electronic Library

- Hold audiovisual activities about Iraqi art and culture on servers and upload them on the internet
- Expand the opportunities to interact with Arab countries and the world and to benefit from preserved knowledge

4-4-2 Tourism and Antiquities

Iraq has many varied tourist destinations that, if invested in efficiently, could qualify it to be an international tourist destination. Iraq has a cultural and religious legacy that dates back thousands of years with the world's oldest civilizations having passed through it. This qualifies it as a cultural, historical and archeological tourist destination. Iraq also benefits from a religious legacy for various religions, in terms of mausoleums and shrines. Various cities in Iraq hold religious sites for various religions, making Iraq an excellent destination for religious tourism. The country also has natural resources such as mountains, valleys, hills, plains, caves, deserts and still water surfaces (natural or artificial lakes, marshes, rivers, mineral water sources, springs) that would allow it to attract ecotourism.

The contribution of tourism to social, cultural, economic and civilizational development in various parts of Iraq could become a reality through investments made in this sector and the launching of tourism projects, as well as maintaining and expanding existing projects. Work is ongoing to complete the tourism and archeology survey in Iraq, which is an important step to implement the activity. There is also a need for administrative and legislative reform, including restructuring efforts, to comply with the new law of the Ministry of Tourism and Antiquities which was ratified by Parliament in 2012 and solved the conflict of interest that existed between local governments and central ministries. The law also established the regulations for opening and managing tourist facilities, as well as the ways these facilities are categorized and the way they conduct business and hold activities.

The tourism and antiquities sector in Iraq has suffered from neglect, especially after 2003 when chaos spread across the economic, social, cultural and tourist sectors and many antiquities were subjected to robbery, looting and destruction. The tourism and antiquities sector reached a dire point that necessitated redoubled efforts and capabilities in order to reconsider the plans and policies regarding the reconstruction and rehabilitation of this important sector. The aim was for the sector to be able to play its promised role of developing and diversifying the economy because Iraq has

all the touristic elements that, if invested in, would make the country top tourism lists and would lead to tourism revenues that constitute a large share of the GDP.

First- Situation Analysis

Tourism

The state of tourism facilities has stagnated at a low level. First class and luxury hotels are limited, as are the number of rooms in them. The number of working hotels in Iraq has reached 766, with only 11 categorized as luxury hotels and 55 as first class hotels. The rest were divided into second, third and fourth class. Baghdad registered 182 hotels while Karbala and Najaf registered 279 and 229 respectively. Basra, despite its noticeable international contributions in the economic, commercial and oil sectors only registered 29 hotels.

What distinguishes the tourism sector from others is that its facilities and pivotal structures belong to the private sector or to joint-stock companies with the exception of eight hotels and six resorts that belong to the public sector. Furthermore, tourism companies have shown great growth in the past two decades with a number that reached 460 companies in 2001, 60% of which are located in Baghdad and are all owned by the private sector. This reflects a possibility for the tourism sector to attract private sector investments.

Tourism activities suffer from a great shortage in qualified and specialized human resources due to the lack of tourism and hospitality institutes. There are currently three tourism and hospitality institutes in Najaf, Karbala and Basra but they lack staff, which in turn highlights the need to train a workforce specialized in tourism.

Statistics have shown a modest growth in tourism and a gradual resurgence of tourism has started. The number of tourists visiting religious sites reached 1.5 million in 2011, which in turn led to an increase in revenues that reached 21.7 Dinars in 2010 and 16.6 million Dinars in 2011.

Antiquities

Iraq has a world cultural heritage. Archeological studies and surveys have found 12,000 archeological sites in Iraq dating back more than 6,000 years with various successive historical periods: Sumerian, Babylonian, Assyrian, Akkadian and Islamic. These have contributed cultural wealth on a global level starting with the invention of writing, the wheel and legislation as well as the establishment of the first human settlements, all of which later spread to the entire world.

Nonetheless, this legacy has been neglected, robbed, violated and vandalized despite the existence of regulatory laws that forbid the selling and ownership of antiquities.

The 2010-2014 Development Plan has sought to pay attention to this sector. The result was as follows:

- Surveying archeological sites in Iraqi governorates, with ongoing surveys for more than 1,000 sites
- Implementing the Emergency Protection for Iraqi Cultural Antiquities Act of 2004, which prohibits the selling and ownership of Iraqi antiquities
- Implementing the Intellectual Property Protection Law concerning all material related to antiquities
- Retrieving a large number of antiquities, estimated at 116,000 artifacts from 2003 until April 2012 with the collaboration of other countries, in addition to the return of artifacts through citizens living in various governorates
- More than 12,000 small archeological items were handed over by citizens and the government in 2010 only, with the items varying between minted coins, clay tablets and gold, silver or copper items. The number of such small items that were restored or fixed reached more than 2,000 items in the same year.
- Continuing work on 10 projects concerned with the protection and rehabilitation of archeological sites, as well as rescue excavations of such sites
- Declaring 49 structures in various parts of Iraq to be heritage sites
- Restoring the Khan Shelan to a museum dedicated to the Iraqi revolt against the British

Second- Challenges

A-- Tourism

- Lack of stability in terms of security and continued violence in some governorates
- Limited financial resources available for the organization and development of existing projects, and a delay in new projects
- Lack of secondary services due to weak investment and public spending in the tourism sector. Infrastructure (airports, roads, rapid means of transportation, hotels and entertainment facilities especially in tourist destination areas such as archeological sites, religious sites and summer destinations) is suffering from a decline in its services. In addition, banking services have fallen behind international standards and the procedures for entry into the country as well as medical exams are complicated.
- Complicated procedures for land ownership in order to establish tourism projects
- Decline in the level of services provided at border crossings

- Decline in tourism awareness in the country and the absence of means to promote and market tourism
- Drain of trained tourism staff and lack of vocational training centers to train replacement staff

B-- Antiquities

- Disappearance of archeological sites and small archeological findings; vandalism of cultural heritage; lack of awareness regarding the importance of preserving such heritage; and the expansion of the antiquities trade.
- Absence of specialists in preserving antiques and poor preservation of antiques (paintings, houses)
- Weak protection procedures for archeological sites and continuous violations of these sites, in addition to a rise in groundwater levels from nearby irrigation and wastewater projects
- Lack of sufficient excavation expeditions to preserve and maintain archeological sites, in addition to a lack of specialized engineering, technical and archeological staff
- Few monetary compensations to the owners of cultural heritage sites
- Frequent violations of unexcavated archeological sites and other archeological sites, as well as the spread of haphazard digs and vandalism of such sites
- Disqualification of several sites by UNESCO

Third- Vision

A durable cultural legacy that attracts tourism

Fourth- Goals

First Goal: Tourism as a Development Pole to General Revenue and Job Opportunities

Means to Achieve Goal

- Put in place a national tourism strategy
- Develop infrastructure for tourism activities
- Develop secondary services for tourism activities
- Reinforce means of promoting and marketing tourism
- Raise social awareness about the importance of tourism
- Develop cottage industries related to tourism activities
- Develop legislations and administrative systems to regulate tourism activities
- Issue a special law for investment in the tourism sector

Second Goal: Preserve Cultural Heritage and Revive Cultural and Historical Heritage

Means to Achieve Goal

- Protect excavated and non-excavated archeological sites
- Equip, develop and establish museums
- Maintain archeological and traditional sites and buildings as well as restore them and preserve their distinct architecture
- Increase financial allocations in the federal budget in accordance with the importance of heritage preservation means
- Seize land owned by citizens inside important archeological sites and dedicate monetary amounts for compensation according to the cultural heritage
- Coordinate with the Ministries of Defense, Interior and National Security to maintain archeological sites
- Build the capabilities of specialized staff in museums and prepare them to play a role in development
- Build a database that will help enable tourism activities, and well as activities related to heritage and antiquities.

Third Goal: Strengthen the Role of the Private Sector in Investing in Tourism

- Provide an environment that will empower and incite the private sector to get engaged in tourism
- The State must prepare the basic supportive structures needed for tourism cities and centers
- Encourage the private sector to build hotels and tourism centers, either through individuals or joint-stock companies
- Expand the granting of bank loans to fund tourism projects

4-5 Housing

A-- Situation Analysis

Housing is a human right and an essential human need that should be made available in rural areas as well as cities within a healthy and adequate environment with services and facilities. In addition to being a human right, housing plays an important role from a strictly economic view. It helps fixed capital formation and generates income and job opportunities through activities that use the labor force intensively, either directly or through links or partnerships with other activities such as the construction industry, electrical works, sanitary installations, contracting, etc.

This is why many countries, especially countries with a financial surplus, try to stimulate the economic cycle by investing in this sector as a productive sector -- not just as a social instrument to fulfill daily needs. The National Housing Policy issued in November 2010 and the 2010-2014 National Development Plan have clearly diagnosed the extent of the housing problem in Iraq and its escalation over the past four decades until it has turned into a terrible crisis. This was due to the expansion of the gap between a high demand on housing that goes unsatisfied by the available supply and is limited by the number of obstacles, which mainly consist of the severe lack of residential land in the city, as well as the severe lack of funding and the degradation of the housing stock. The latter was put in place decades ago but lacks the necessary investments to maintain and reorganize it. Furthermore, the legislative and legal structures to activate the role of the private sector in housing investments are not yet complete. The plan has also set out an ambitious goal to build 1 million housing units during the five years of the plan, which would lead to a reduction in the shortage of housing units and a reduction in population density and construction work to an acceptable limit. It would also reduce the differences in population saturation between the various governorates on one hand and between rural areas and urban areas on the other hand. This would be achieved through a comprehensive system of means and methods that involve activating the roles of the public and private sectors as well as defining these roles. They also consist in developing and modernizing the housing stock system, developing urban land management systems, reinforcing the role of local governments in managing residential lands, providing infrastructure, managing and maintaining existing houses, manufacturing construction material, managing informal housing and seeking administrative and legislative reform in the housing sector.

The empowering role the plan has given the public sector as well as confirming the role played by the private sector and foreign investment in housing production did not lead to any tangible results during the past three years neither in housing production nor in providing residential land or fixing the problem of informal areas and expansion of the construction materials industry. This is highlighted in the housing situation paragraph below.

There are no accurate and recent statistics about the situation of the housing sector in Iraq. All that is available at present are the results of a census of the houses and buildings in 2009. It provides the number of inhabitants and the number of households and the overall housing stock as it is distributed over the governorates. The results of this census show that the number of citizens reached about 31.664 million and the number of households reached 4.696 million. The number of housing units reached 4.810 million and the net deficit in housing units reached 759,000 housing units. There was a big difference in this rate between the governorates, with 1% in Muthanna, 22% in Nineveh and 24% in Baghdad as shown in Table 4-36.

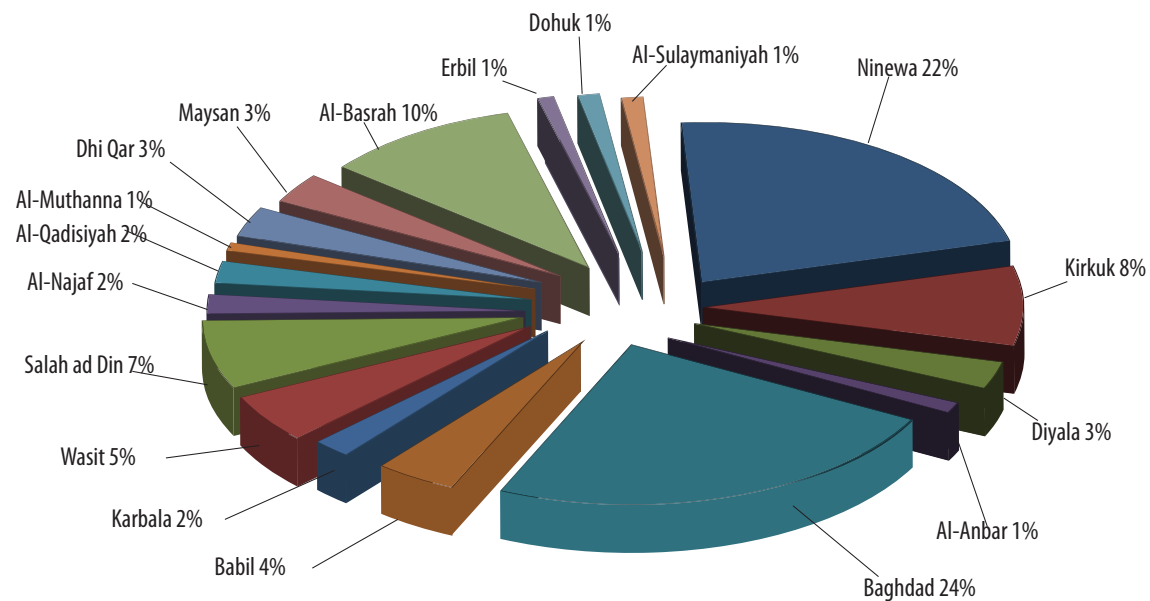
Table 4-36: The number of residents, households, overall housing stock and shortage of housing units according to the 2009 population census.

Governorate	No. of Residents	No. of households	Overall Housing Stock	Derelict Houses	Marginal Housing units and Other Buildings	Households with Several Residents and Buildings	Clay Housing Units in the Cities	Current Deficit in Housing Units	Rate of Deficit in Housing Units %
Nineveh	3106948	425861	438885	24677	18333	25719	100070	168799	22
Kirkuk	1325853	234697	221171	12763	5399	38456	7591	64209	8
Diyala	1371035	202171	214024	7578	3324	9030	4908	24840	3
Anbar	1483359	178283	194096	3446	3459	3196	914	11015	1
Baghdad	6702538	1037189	1064175	77392	18598	71595	17060	184645	24
Babylon	1729666	245682	252025	8903	4008	11704	2018	26633	4
Karbala	1013254	149408	157990	3125	3515	6590	4037	17267	2
Wasit	1150079	152777	157905	4303	1858	7468	26502	40131	5
Saladin	1337786	180542	204309	4737	4099	8087	36744	53667	7
Najaf	1221228	177132	183549	3938	3031	9188	1487	17644	2
Qadisiyyah	1077614	140848	146733	5585	1268	5036	3411	15300	2
Muthanna	683126	84603	86038	4495	1271	1638	499	7903	1
Dhi Qar	1744398	214554	220910	6214	5159	4209	3027	18609	3
Maysan	922890	122847	125808	7946	3914	8383	3501	23744	3
Basra	2405434	338232	327185	18382	7822	33335	16151	75690	10
Arbil	1532081	293353	302457		2792			2792	5,0
Duhok	1072324	152127	147578		2340			2340	0,5
Sulaymaniya	1784853	365959	365717		3894			3894	0,5
Total	31664466	4696265	4810555	193484	94084	243634	227920	759122	100%

The number of residents exceeds the number of households by 114 housing units according to the 2009 census. However, this in no way means that there is an excess in the supply of housing units, but rather indicates housing units that were abandoned after their owners emigrated outside the country or to another area due to the security situation that prevailed before the census was conducted. Furthermore, saying that the shortage of housing units is 759,000 housing units according to the census is far from reality and only represents the net deficit, not reality. The latter should include derelict rural housing units; structures made from clay or other unstable material; and urban housing units that are no longer adequate for habitation, meaning units below the acceptable average of habitation. The situation also includes the need to eliminate overcrowding within a housing unit and within a room and to pro-

vide housing units according to the population growth rate, which is very high and reached 3% each year.

Figure 4-14: Housing Unit Shortage Rate in Baghdad, the Governorates and the Kurdistan Region



The results of the Knowledge Network Survey conducted by the Central Organization for Statistics in 2011 confirm the mentioned issues. The survey showed that 9% of houses were built from non-durable material such as clay, wood or tin. About 73% of these houses were located in rural areas, especially in Maysan, Wasit, Nineveh and Kirkuk. In addition, 12% of Iraqi households suffer from overcrowding. The latter consists of more than two persons occupying one room. This rate is as high as 17% in rural areas, particularly in Maysan, Dhi Qar, Najaf, Qadisiyyah, Kirkuk, Nineveh and 10% of households in Baghdad.

As for the households per housing unit overcrowding indicator, the results of the Knowledge Network Survey indicated a rate of 1.25 households per housing unit. This means that there is a substantial rate of households that do not have an independent housing unit.

Housing data in Iraq is inaccurate due to the fact that housing censuses are not conducted during the set deadlines and specialized housing surveys, such as the comprehensive housing survey conducted by the Polish company Poll Service in the 20th century, are not conducted. What confirms this is that the estimate of the housing stock in Iraq was 2.8 million housing units in 2009 before the population census. The results of the 2012 census mentioned above showed that there were 4.8 million housing units, an increase in 2 million units. The difference cannot come from the production of such a large number of additional units during the past years but it is caused

by the inaccurate estimates and their assumptions. Those who have followed the production of housing units from 2010 to 2012 notice that the number of units built by the public sector does not exceed 4,000 and the construction permits granted to build new housing units are 75,000 permits approximately. Assuming all granted permits are executed completely, the housing production for the mentioned three years would not exceed 80,000 units, which is the equivalent of only 8% of what was planned within the 2010-2014 Development Plan. This rate barely fulfills the needs of population growth for the mentioned time period.

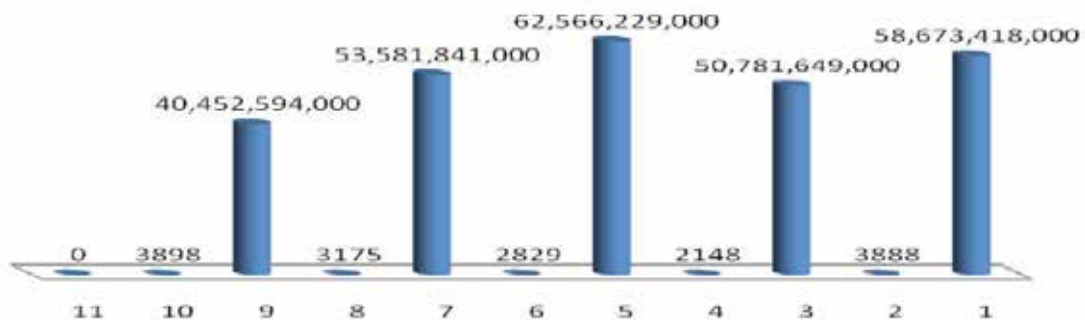
Based on the above, the Plan will rest on the following facts:

6. A continued shortage in housing units of about 2 million units, with 50% of this deficit centered in Baghdad and Nineveh
7. A continued increase in the occupation rate for each housing unit and each room
8. A continued difference in fulfilling the need for housing units between the various governorates on one hand, and rural and urban areas on the other hand

B-- Challenges

- The severe shortage in land suitable for the construction of housing units in urban areas, especially in large cities, in addition to primitive management systems for urban land and the complex procedures for allocating land for housing purposes, especially to companies and investors
- The lack of clear systems to allocate land for housing projects outside the main plans for cities and boroughs. In addition, these systems do not adhere to sound planning standards
- Limited capital available to fund housing projects from the federal budget and the focusing of State efforts on empowering individuals and companies, without direct and extensive intervention in housing production as of now
- Limited funding abilities of specialized and commercial banks to fund housing projects in addition to the complex procedures and conditions imposed by these banks. For example, loans granted by the housing fund between 2008 and 2012 did not exceed 16,000 distributed as follows:

Figure 4-15: Loans Granted by the Housing Fund 2008-2012



- Low abilities of Iraqi investors and developers and low number of qualified investors and developers
- Degradation of the housing environment in the centers of cities and old neighborhoods with high real estate values and the absence of serious plans and procedures to protect these areas, re-develop them or renew them
- Increase in the number of households unable to secure an adequate residential location and the absence of programs and procedures to turn these households into potential consumers of housing units in the housing market
- A large number of households targeted for free housing, which would require financial resources that the State cannot provide during the period of the Plan
- Limited supply of construction materials produced locally, and the fact that some imported materials do not meet Iraqi standards compared with the expected demands -- in the event that ambitious housing projects are executed
- The social preference of Iraqi households to live in individual housing units rather than vertical housing, although State policies are tending towards the latter in order to deal with the shortage of available land suitable for housing and preserve agricultural land, especially that surrounding large cities
- The lack of executive capacities and equipment as well as weak capacities in managing the execution of projects, from feasibility studies and preparing accurate tables of quantities and designs all the way to the contract phase and following-up on the implementation of the contract
- Lack of awareness of the importance of the material used in the production of housing units and the quality of housing units, which has an impact on the cost of maintaining and preserving housing units as well as their longevity
- Housing activities do not attract investments on a competitive basis and in a way similar to real investments
- The problem of dividing housing units that was witnessed during the past years is growing and is violating regulations and instructions. This leads to legal problems and puts pressure on services and infrastructure in residential areas and urban districts, especially in Baghdad.

C-- Vision

Adequate housing and housing environment for the largest percent of households and individuals, in addition to expanding the choices of Iraqis in terms of housing quality and location

D-- Goals

First Goal: Provide 1 million housing units throughout the duration of the plan and reduce the level of overcrowding and public works

Second Goal: Reduce the spatial disparity in the shortage in housing units between governorates and raise the level of housing satiation in rural areas

Third Goal: Stop the expansion of informal housing in order to limit this problem as part of the solution for the problem of poverty in Iraq, which is concentrated in these areas and in rural areas

Fourth Goal: Increase housing production efficiency and reduce its cost. Pay attention to quality standards in terms of building ecologically friendly housing units through conservation of energy

Fifth Goal: Allow owners of current housing units to improve their existing houses and expand them

E-- Means to Achieve Goal

There is no single recipe to stop the deterioration of the housing situation in Iraq. In order for the solutions to be efficient and effective, all the available means and capacities must be invested -- governmental or private, local or foreign -- in relation to housing production, funding, residential land or the related infrastructure. This is why the Plan calls for all possible methods and procedures to be activated in order to achieve tangible success in solving the problem, especially since the country has made significant progress in preparing for the development of this sector. This includes signing an agreement with an international company to execute a housing project of 100,000 housing units from 2013 to 2017 in addition to affordable housing projects in the governorates of Diyala, Saladin, Anbar, Wasit and Diwaniya. The latter consist of 200 housing units per housing complex. There are other projects to build housing units for the poor and they fall within the poverty-alleviating strategies in the governorates. These projects consist of 200 housing units in each governorate, noting that the latter provides the needed land. The State has also ratified the building of some residential complexes by private sector investors with 65 residential complexes in 13 governorates, the equivalent of 102,226 housing units.

The following are sets of measures that should be implemented in order to seriously and effectively confront the housing problem:

In terms of housing production and reducing the level of crowding, the Plan calls to:

- Provide the needed investments from the federal budget with no less than 2 trillion Dinars a year allocated for effective housing programs that will confront the shortage in housing units, provide affordable housing for low income individuals and provide houses for the poor who live below the poverty line.
- Maintain policies that empower medium-income individuals in obtaining residential land and loans with easy conditions in order to build their own housing units. This method was successful in the 70s and 80s and formed an important part of the present housing stock.
- Encourage the establishment of private companies and national joint-stock companies in the fields of housing production and housing equipment. This would include turning some public companies into joint-stock companies.
- Encourage serious investment companies and incentivize them to enter the Iraqi housing market to execute massive housing projects with international standards of design, architecture and urbanism similar to the Bismaya Housing Project or any other investment model the Iraqi authorities consider appropriate.
- Give local governments an essential role in the housing market, whether as producers of housing units or as managers of urban land and the provision of housing infrastructure, especially in terms of small and medium housing projects that fall within the supervisory and executive abilities of local governments. Furthermore, local governments must be particularly and directly responsible for the continued maintenance and preservation of housing units, especially those rented from the local governments and that often suffer from maintenance problems due to neglect from both parties of the lease.

In terms of the management of urban land, the plan calls for:

- Expediting execution of the project to reform the management of urban land. The project is being executed by a committee of advisers at the United Nations Human Settlements Program. The results of the project would form a roadmap for the management of urban land in Iraq starting with the establishment of a detailed database of urban lands, their current use, their revenues, their value, their method of registration, the transfer of ownership, disposition, etc.
- Shift from a centralized system of urban land management to a decentralized system
- Carefully shift to a vertical housing approach as a means to relieve pressure on residential lands, especially in large cities

- Review the initial and non-updated plans of cities and boroughs. These plans need to be updated and enough spaces should be allocated for current and future housing needs (up to 30 years) in each city or borough. The use of urban land inside cities should also be reviewed in order to limit unnecessary industrial use and limit spaces that were once used for storage and agriculture. These spaces would be used for other urban purposes such as housing, leisure, trade and the expansion of green spaces
- Complete structural plans in governorates. The most important aim of these plans is to determine the uses of provincial land (outside the main plans for cities and boroughs). Amongst these uses are housing and adequate spaces for the expansion of large cities in these areas so that these spaces would become affiliated cities or new independent cities. This would be done in accordance with regulations and with the requirements of establishing new cities or affiliated cities all the while avoiding the arbitrary mechanisms currently in place for allocating housing lands outside cities, especially Baghdad.
- Invest in the opportunity to build large residential complexes as a means to rectify the structural flaw in the Iraqi urbanism system. This flaw is reflected in the phenomenon of large cities that dominate the urban structure, whether on a national level -- such as in the way that Baghdad and principal cities of most governorates dominate the urban structure of these governorates
- Adopt new executive regulations with new models in order to encourage housing production, such as selling large spaces of land from the public sector to companies in the private sector or joint-stock companies

In terms of the funding available for housing, the plan calls for:

- Increase the capital of the Real Estate Bank and the Housing Fund to reach a level that would allow them to fund family housing programs and contribute in the funding provided by investors and developers in the housing sector. The funding would be provided with easy conditions, especially for green housing projects and projects that conserve energy
- Activate the role of commercial banks in providing funding for housing with transparent mechanisms and flexible procedures. This funding would correspond to international developments and contexts. Also, funding activities of these banks would include the maintenance and restoration of existing housing units in addition to building new units
- Establish a bank or private fund for rural housing with very easy conditions and provide free land for such housing. This is due to the fact that most of the housing stock in Iraqi rural areas is below acceptable housing standards and is built using non-durable construction material. Iraqi rural areas hold about 40% of the country's poor, a fact that calls for exceptional support
- Encourage private funds such as the retirement fund and the social security fund, as well as insurance and reinsurance companies, to invest their savings

in housing as partners in joint-stock companies or as developers in the field of housing. Encourage these entities as well to focus on projects that target the middle class and limited-income households

- Develop an organizational structure for the funding of housing in a way that guarantees sufficient opportunities for investors to access assets in the event a debtor fails to pay his/her loans. This would require new comprehensive legislation that covers mortgaging, ownership and resale of guarantees.

In terms of developing sectors related to housing production, especially construction material and contracting, the plan calls for:

- Expand and increase production abilities in terms of construction material, especially cement, bricks, concrete blocks, ceramics, plaster and iron in order to support housing production and create job opportunities that generate a sustainable income for a large portion of residents
- Improve the quality of nationally-produced construction material and make them comply with quality standards
- Monitor the quality of imported material, especially cement and iron, and prohibit the entry of low-quality material that competes in price with domestically-produced material
- Expand the opening of laboratories specialized in testing construction material and licensing them in accordance with International and Iraqi standards and regulations
- Develop the contracting sector and regulate it by making sure companies and contractors are categorized according to experience, qualifications and quality work in the execution of existing contracts and tasks.

In terms of informal housing, the plan calls for:

Iraq has witnessed the expansion of informal housing after 2003 as a result of the security situation and the migration of many families from their areas to other areas. This requires the establishment of a governmental program to limit this problem and find medium and long-term solutions for it. These solutions may include:

- Rehabilitate areas where violations have taken place, develop these areas and provide them with the necessary services if there is a possibility to achieve this in accordance with acceptable planning and design standards
- Provide housing complexes with acceptable planning and design standards and move violators into these complexes while imposing easy conditions
- Rehouse people in the same location in the event that the necessary legal and planning conditions are met. This can be done through rebuilding parts of arbitrary complexes, developing them or restoring them in several stages. Residents would move back to these complexes in later stages of the development.

In terms of informal housing, the plan calls for:

- Preserve the urban and architectural heritage when executing future housing projects or during the restoration and development of old neighborhoods or religious and traditional city centers. Take into consideration the social privacy of the Iraqi family when designing housing units, the space around them and neighborhoods.

4-6 Water and Sanitation

Development plans have continued to stress the importance of water and sanitation and the direct link the two have with human health and sustainable environment. During the 70s and 80s, the country witnessed a development in the delivery of these services, especially water services, which reached 95% of urban residents and 75% of rural areas. Despite these facts, decades of war, economic embargo and deterioration of the security situation have caused a great decline in these two services. The delivery of drinking water decreased to 48%, with a clear decrease in both quality and quantity. The case was worse for sanitation services, which were almost nonfunctional even in Baghdad, which had a modern sanitation system in accordance with the standards of the 1980s.

The 2010-2014 National Development Plan has acknowledged the importance of these two services and has prioritized them. The plan seeks to provide full delivery of drinking water and treatment of wastewater in Baghdad. It also seeks to reduce the number of residents who are covered under drinking water projects to 10% in urban areas other than Baghdad and to 26% in rural areas, in addition to increasing the rate of residents in governorates linked to sanitation networks outside Baghdad.

Analysis of the current situation of water and sanitation services will be at the level of Baghdad and other Iraqi governorates, including districts and areas outside the boundaries of Baghdad, each on its own.

4-6-1 Drinking water

Drinking water is considered a basic requirement for health and a human right. Therefore access to water is very important, especially for women and children and in rural areas, where these groups bear the responsibility of carrying water over long distances.

This sector has not witnessed any significant development since 1990 and the rate of households using drinking water sources did not exceed 89% in 2011, with an unstable delivery of water.

The results of the 2011 Multiple Indicator Cluster Survey indicated that about 60% of residents had water delivered to their house/vicinity of the house through a piping system. It also showed a great difference in access to drinking water sources between urban and rural governorates. Drinking water is available to about 89% of residents, of whom 97% live in urban areas and 76% live in rural areas. Also, 65% of households use public water networks as their main source of drinking water and the public network provides 25% of users with less than two hours of water a day. On a national level, the possibility of households in rural areas to have access to water through the public network is limited. Only 47% of households in rural areas use this network, in comparison with 67% in urban areas. The salinity of the water seems to be one of the main reasons a significant percentage of households in governorates such as Basra and Maysan do not use public water networks.

First – Water Services in the Governorates

A-- Situation Analysis

Water is produced by 261 projects and more than 3,250 water reservoirs in various degrees to provide for 14 governorates in addition to the districts and areas belonging to the governorate of Baghdad. The number of residents included in this service is over 22 million with 17.8 million actually being served.

The amount of water produced every day is 7.9 million m³ while the daily need is 9 million m³ approximately. The shortage in the amount of water currently produced is 1 million m³ and the percentage of residents with water service was 89% in 2011.

The productivity of water projects and reservoirs show a difference in water shortage between governorates. Shortage rates are low in Saladin and Najaf at 4% and in Basra and Karbala at 6%, while they are high in Baghdad at 46% and in Dhi Qar at 30%, as shown in Table 4-37.

B-- Potential

- The existence of 261 active projects and 3250 reservoirs producing drinking water for 82% of residents
- The existence of water networks that guarantee the access of citizens to drinking water
- The existence of central laboratories in governorates in addition to a national laboratory in Baghdad for the inspection of produced water and to guarantee that it meets standards
- The existence of water tanks that deliver water to citizens in remote villages
- The existence of 30 ongoing water projects for the production of drinking water

- The existence of accumulated experience in the water sector
- The existence of new capabilities to provide the water resources needed for drinking water projects
- The existence of capabilities to provide fuel to operate drinking water projects

C-- Challenges

- Old, lengthy networks that need to be replaced
- Up to 40% of water produced in networks and pipes is wasted. This uses up a significant amount of the water produced by active projects
- Old water projects in some districts and areas that need to be either rehabilitated or replaced with new ones
- Some contracting companies are slow in executing new projects and possess weak capacities
- Continued decline in the water flow of rivers, which leads to a decline in water levels and water quantities in projects and plants
- Lack of annual allocations for the execution of water projects, whether in the investment budget for new projects; the operation budget for existing projects in order to provide fuel and sterilization material for maintenance and sustainability; or money allocated by the regional development plan for governorates in order to establish and replace water networks as well as build and prepare water containers
- Insufficient fuel to operate engines at projects
- Absence of legislation and regulation to keep trespassers from violating the networks and its lines
- Lack of staffing positions to operate water projects
- Not enforcing the revenue collection law. Collected revenues only represent 9% of the operation budget for this industry
- Low tariffs for water sold. The tariff doesn't increase with the amount of water consumed
- Lack of accurate measurement systems to precisely determine water consumption
- The existence of unregulated and unofficial water subscriptions that use water arbitrarily and without payment in exchange
- The need for engineers to receive training in order to keep up to date with modern technologies
- Complete absence of the role of the private sector in this industry.

Table 4-37: Number of Water Projects and Tanks, Number of Residents and Shortage Rate per Governorate for 2011

T	Governorate	No. of Projects	Quantity of Produced Water m3	No. of Operational Water Plants	Quantity of Produced Water m3	Total of Produced Water	No. of Residents in Governorate	Total Water Need	Shortage in Production m3
1	Nineveh	41	727591	75	97997	825588	2994979	883379	7 %
2	Kirkuk	16	393876	215	265936	659812	934698	752396	18 %
3	Baghdad	10	226080	137	252067	478147	2097473	705803	46 %
4	Diyala	25	237043	147	219366	456409	1662386	570511	25 %
5	Saladin	20	336200	177	282410	618610	1351150	551769	4 %
6	Babylon	18	245920	264	391741	637661	1765065	758978	12 %
7	Najaf	13	248960	118	233270	482230	1155087	501007	4 %
8	Karbala	7	242620	124	215283	457903	961638	509668	6 %
9	Wasit	21	185500	202	247350	432850	1131790	531941	13 %
10	Anbar	21	372418	155	177003	549421	1600188	624073	5 %
11	Maysan	13	68600	230	383222	451822	867265	501522	11 %
12	Muthanna	7	116110	62	115738	231848	65229	298647	14 %
13	Qadisiyyah	15	198773	175	188531	387304	1046264	564983	22 %
14	Dhi Qar	18	109140	141	270182	379322	1718957	383952	30 %
15	Basra	15	237000	214	652960	889960	1992029	852876	6 %
Total		Total	3945831	2436	3993056	7938887	21937198	8991505	18 %
Treatment Units		Treatment Units		86	43120				
Solar Power Units		Solar Power Units		728	14300				
Overall Total		Overall Total		3250	4050476				

D-- Vision

“Guaranteeing all people access to potable water”

E-- Goals

First Goal: Increasing Water Coverage and Reducing Waste

- Increase the rate of people provided with the service in governorates (except Baghdad) from 82% in 2011 to 98% in 2017
- Reduce shortage of produced water from 40% to 25% in 2017

Means to Achieve Goal

- Expedite completion of projects being executed – currently 30 projects -- and commit to a schedule to complete them.
- Establish new projects -- 83 projects -- to produce 269,000 m3/hour in areas without water services or increase the capacity of existing projects and use their planned capacities

The two means mentioned above would increase water production from 4 million m³/hour to 14.5 million m³/hour

- Invite international well-renowned companies to execute water projects and avoid reaching out to contractors and incompetent contracting companies

Second Goal

Reduce the difference in the level of services provided between governorates on one hand and between rural and urban areas on the other hand. This can mean a reduction in the number of residents without access to safe drinking water to 2% in urban areas and to 15% in rural areas.

Means to Achieve Goal

- Give priority to the rehabilitation of existing water projects or establish new projects in governorates that suffer from a higher shortage in drinking water services as shown in Table 4-38.

Table 4-37: Proposed Number of Water Projects to be Established in Governorates between 2013-2017

T	Governorate	Number of new projects
1	Nineveh	7
2	Saladin	4
3	Anbar	18
4	Wasit	7
5	Najaf	5
6	Babylon	1
7	Karbala	1
8	Qadisiyyah	4
9	Dhi Qar	1
10	Maysan	7
11	Basra	3
12	Baghdad	4
13	Kirkuk	9
14	Diyala	11
15	Muthanna	1
Total		83

- Establish water desalinization projects in governorates that suffer from high levels of salinity, especially southern governorates
- Intensify programs that provide drinking water to villages and rural areas.

Third Goal: Providing High Quality Water at a Rate of 350 liters per Capita a Day

Means to Achieve Goal

- Complete ongoing projects and launch proposed new projects throughout the duration of the plan

- Reduce waste in networks through the establishment of transportation and distribution networks and replacing those that are no longer usable

Fourth Goal: Promoting the Private Sector's Contribution to Water Services

Means to Achieve Goal

Launch projects to produce water through the build-operate-transfer method.

- Provide consultation services in preparing technical and economic feasibility studies as well as reports on environmental impact, help with planning and follow-up on the execution of projects
- Maintain water networks
- Quality control of the water production process inputs and outputs as well as quality control for water reaching the final consumer
- Revenue collection

Fifth Goal: Rationalizing water use

Means to Achieve Goal

- Raise the consumer awareness about rationalization, especially for human use
- Provide water consumption meters for all housing units
- Reduce subsidies for drinking water services and base tariffs on consumption

Second: Water Services in Baghdad

A-- Situation Analysis

The plans to provide water to the city of Baghdad are based on a criterion put in place in 1982. It determines water production based on average daily consumption, which is 450 liters per day.

Water production in the city of Baghdad reached 2.74 million m³ in 2011 through 11 projects distributed in various areas of Baghdad as well as a number of reservoirs serving areas far from treatment projects.

An important achievement was realized in 2010 and 2011 when the shortage in water supply for the city of Baghdad was reduced from 1.2 million m³/day to 760,000 m³/day as a result of renovating and equipping 41% of the network. Water waste was reduced in networks and this was reflected in the access of all households in the city to distilled water services and an increase in the individual share from 8.3% in 2010 to 16.6% in 2011.

B-- Potential and Challenges

- The capabilities and challenges faced by providing drinking water to the city of Baghdad are very similar to those faced in other governorates.

C-- Vision

Guaranteeing all people access to drinking water

D—Goals

First Goal

- Increase the quantity of drinking water produced from 2.740 million m³/day in 2011 to 5.644 million m³/day in 2017
- Increase the individual share from 255 liters/day in 2011 to 400 liters/day in 2017
- Improve the quality of water provided to people
- Get the private sector involved in providing drinking water, similar to what was mentioned for water services in the governorates.

Means to Achieve Goal

- Complete ongoing water projects and launch new projects with international qualifications
- Build ground water tanks with high capacities
- Update water networks in residential areas to reduce waste and guarantee high-quality water to consumers
- Build distilled water networks in new residential areas
- Build water piping systems and update the existing ones as shown in the following table

Table 4-40: The Five-Year Water Plan for Baghdad 2013-2017 (Baghdad Secretariat)

T	Project Name	Estimated Total Cost	Annual Allocations (million Dinars)						Location of Project	Type of Project
			2012	2013	2014	2015	2016	2017		
1	Updating distilled water networks in residential areas (equip and build)	118000	18919	8000	15000	15000	15000	13697	Baghdad	Ongoing
2	Build distilled water networks for new neighborhoods (equip and build)	40000	11321	5000	5000	5000	6198		Baghdad	Ongoing
3	Prepare water treatment projects	300000	10565	20000	50000	50000	50000	53965	Baghdad	Ongoing
4	Build piping systems for the transportation of distilled water	100000	8065	5000	20000	20000	20000	17465	Baghdad	Ongoing
5	Build piping systems for the transportation of raw water	80000	7385	5000	15000	15000	15000	21549	Baghdad	Ongoing
6	Put in place Ductile and plastic pipes with accessories	100000	18071	10000	20000	20000	17777		Baghdad	Ongoing
7	Build ground tanks (R3, R9)	115000	27881	20000	36324				Baghdad	Ongoing
8	Resafa water project (build a treatment center with all affiliated activities such as civil, mechanical and electric)	1448495	200011	110000	155037				Baghdad	Ongoing
9	Studies and planning	12000	2566	2000	576				Baghdad	Ongoing
10	Remove obstacles facing the Resafa water project	10000	1493	24	2000	2000	1059		Baghdad	Ongoing
11	Build power station for the Resafa water project	26426	6779	1000	2127				Baghdad	Ongoing
12	Resafa water project (phase 2)	869097	0	0	173000	500000	190000	6097	Baghdad	New
13	Prepare studies and plans for the second phase of the Resafa water project and water tanks	15000	0	1000	5000	4000	3000	2000	Baghdad	New
14	Build ground water tanks (R1, R2, R8) in Adhamiya, Shaab and Zaafaraniya	165000	0	5000	80000	60000	20000	_____	Baghdad	New
15	Build ground water tanks (k3, k5) in Karkh and Kadhimiya	50000	0	2000	25000	20000	3000	_____	Baghdad	New
16	Expand the Dora water project to reach 225 liters/day	60000	_____	_____	12000	20000	20000	8000	Baghdad	New
17	Build ground water tanks (R4, R6)	82000	_____	_____	_____	_____	17000	65000	Baghdad	New
18	Build ground water tanks (k1, k4)	65000	_____	_____	_____	13000	35000	17000	Baghdad	New
19	Appropriations of the Resafa water project	55000	_____	1000	10000	15000	15000	11750	Baghdad	Ongoing
Total		4787115		19524	626064	759000	428034	216523		

Proposed Water Projects for the City of Baghdad 2013-2017

- Control water networks through a control system and a complete modern database
- Raise people's awareness on the importance of water and of rationalizing consumption
- Gradually increase support for the provision of drinking water and link this provision to the household consumption rate
- Improve laboratories and develop them, and improve sample taking
- Install meters in residential and non-residential buildings and follow-up on collection
- Develop the abilities of technical, administrative and finance staff working in the field
- Guarantee the safety of water taken from rivers and the absence of pollution in the water in order to obtain a standard quality product

4-6-2 Sanitation

Results of the Cluster Survey conducted by the Central Organization for Statistics in 2011 indicate that around 96% of residents in Iraq use improved sanitation means: 99% in urban areas and 90% in rural areas. However, this percentage decreases when considering a sanitation system linked to a sewage pumping network. In the latter case 4% of residents use these systems in rural areas and 33% in urban areas. The 2011 Knowledge Network Survey showed dissatisfaction with the still prevailing sanitation services in Iraq, with 59% of households describing these facilities as bad or very bad. This percentage increases in rural areas and reaches 85%, especially in central and southern Iraq. About 1/3 of Iraqi households have access to public sanitation services and 66% of these households are based in urban areas, mainly Sulaymaniya and Baghdad. On the national level, more than half of the 53% of households categorized as having a high per capita spending rate have access to the public network compared to 9% of households categorized as having a low per capita spending rate. Households with no access to the public network tend to use septic tanks, 40% of households, and covered sewage holes, 25% of households. This means that 65% of households use an unsafe sanitation method.

It should be noted that 83% of wastewater is not subjected to sufficient treatment, which leads to very dangerous environmental problems that puts the health of citizens at risk and form an obstacle to achieving sustainable development.

First- Sanitation in Governorates

A-- Situation Analysis

Approximately 26% of residents in governorates other than Baghdad and the Kurdistan region had access to sanitation in 2009 and this rate was only 7% until 2003. The lack of attention paid to this section has contributed to pollution and now poses a real threat to the health of citizens. Most wastewater is thrown in rivers and water streams from which water could be used for drinking by some residents in villages and rural areas not linked to drinking water networks. The 2010-2014 National Development Plan stresses the importance of sanitation projects and calls on the establishment of 48 new sanitation projects in all governorates. A significant number of these projects is being executed and others have reached the final execution stages. This has contributed to increasing the coverage rate to 32% and will lead to an improvement of sanitation services and the coverage rate in governorates with these services during the coming two years. The following table clarifies the reality of the sanitation situation in the governorates and their coverage rates, the latter varying largely between the governorates. The plan therefore calls for great attention to be paid to fairness in distributing these projects between the governorates to guarantee a decrease in the discrepancy between the projects provided.

Table 4-40: Wastewater Sewage System Projects for Governorates, 2012

T	Governorate	Planned Capacity m3	No. of People Served	% of People Served	No. of wastewater stations	No. of Pumps	Length of Networks Km	No. of manholes for wastewater networks
1	Nineveh	17820	86713	7	7	19	1045	3488
2	Kirkuk	3500	9000	26	2	5	15	870
3	Saladin	59000	195200	69	20	62	483,3	526
4	Diyala	21600	22610	85	1	5	7334	0
5	Anbar	7000	35500	56	6	12	25	3750
6	Baghdad	3000	12000	5	6	10	8	150
7	Babylon	12000	55000	27	13	22	128	6682
8	Karbala	41000	235000	25	4	14	224	4000
9	Najaf	42000	180000	41	7	17	36537	1740
10	Diwaniyah	12000	156000	208	19	31	2434	3351
11	Wasit	0	0	0	1	2	180	0
12	Muthanna	37000	148000	5476	46	5	16277	1620
13	Dhi Qar	18000	126000	3303	14	11	180973	4785
14	Maysan	36000	209000	91	31	68	10497	4800
15	Basra	118100	1000000	389	65	98	965	1632
Total		326100	2536023	3242	242	381	4162939	57610

B-- Potential

- Dedication of large investments for sanitation in annual investment programs
- Growth in the executive capabilities of local contractors in this field and the accumulated experience of national staff working in this field
- The desire of foreign companies to execute sanitation projects.

C-- Challenges

- A remaining large shortage in providing services to residents
- Old sanitation networks and weak pipes. This has affected performance and caused flooding and other impacts on water networks
- Violation of rainfall water networks and the diverting wastewater to these networks
- Vertical expansion of cities and boroughs, which requires the expansion of networks
- Slow execution of projects and delayed execution periods, which has affected the achievement of the goals set in this field
- Lack of experience for national consultation companies, which has led to the fact that most studies and plans for projects made after 2003 lack precision. These studies or plans have needed to be changed, leading to a delay in execution and rise in the planned cost
- Dangerous environmental pollution caused by the dumping of untreated sewage water in the sources of water resources. This mainly concerns the fact that wastewater has been mixed with drinking water networks close to drinking water sources
- The refusal of skilled and unskilled work forces to work in sanitation due to social considerations
- Lack in operational requirements such as specialized machines, equipment, pipes, fuel, etc. This affects the efficient use and sustainability of existing projects
- Problems in allocating lands for these projects and the long timeframe needed for such allocations.

D-- Vision

Sustainable sanitation that responds to the targets of the Millennium Developmental Goals



The spatial dimension of development is a very important component to fulfill comprehensive and sustainable national development. Spatial planning achieves a balance between the standard of economic efficiency and that of social justice in distributing investments and the outcomes of development in general across the country. It is a method that focuses on the comparative advantage when distributing economic activities among the regions and governorates, increasing thus the revenues resulting from the exploitation of available resources. Therefore, it is the most appropriate method to address equality and justice when distributing the outcomes of development and when striving to reduce spatial disparities in terms of economic, social and constructional development across different regions. When applied properly, spatial planning is based on an urbanized system that operates according to a pyramid structure and that carries positive economic, social and environmental implications.

In addition to that, the spatial dimension of development promotes the active participation of administrations and local communities in drafting and monitoring local development programs. This means that spatial development is a concept that guarantees the most environmental sustainability because it is capable of actively embracing the three dimensions of sustainable development: economic, social and environmental.

In order to increase the role of space, comprehensive and sustainable development should be achieved by taking advantage of the developmental possibilities and opportunities across the country. This would enhance the chances of spatial specialization and coherence in line with the diversified natural, human and economic spatial structure in Iraq. Therefore, it would be possible to adopt various developmental policies and patterns in the Iraqi governorates.

5-1 Situation Analysis

Over the past four decades, spatial development policies have aimed at reducing disparities in development between the different governorates and between urban and rural areas. They sought to build a more balanced urban structure based on “economic efficiency and social justice”. Economic efficiency is achieved by adopting developmental projects that are consistent with the space’s comparative advantage and social justice is guaranteed by putting in place infrastructure and social services in all Iraqi governorates, districts, and rural and urban regions. However, development indicators still reveal high levels of spatial deprivation and dis-

parities among governorates and especially between urban and rural areas. Spatial disparities come as follow:

5-1-1 Spatial Disparities in Development

Spatial disparities are persistent in Iraq where economic and social progress is clearly concentrated in a limited number of governorates, or rather in large cities. Therefore, an exodus of people towards these cities grew larger and affected the spatial distribution of the population. In fact, the centers of population concentration are simultaneously the centers of economic growth even if these centers attract growth factors from other regions because of the positive correlation made between urbanization and economic and social development.

The analysis of the inputs of a number of sectoral indicators in production and services shows that the governorate of Baghdad ranked first and set a record in productive sectoral development (industrial and agricultural) while Al Muthanna Governorate ranked last and became the top priority in productive sectoral development where it should be subject to developmental efforts according to its comparative advantage and its development potential such as cement industries in Al Samawah desert in addition to oil industries. In fact, the strategic line passes by the governorate and there would be a possibility of setting up oil refineries in it. In terms of agriculture, it is important to increase agriculture development in the governorate in light of the agricultural development possibilities that it presents.

As for the priorities in infrastructure and social services development, Erbil, Baghdad, Al Basrah, Al Sulaymaniyah and Ninewa ranked highest. Babil, Wasit, Al Diwaniyah and Al Muthanna ranked lowest in comparison with other governorates and were characterized by negative records; therefore, they should be targeted as a priority for development schemes in infrastructure and social services.

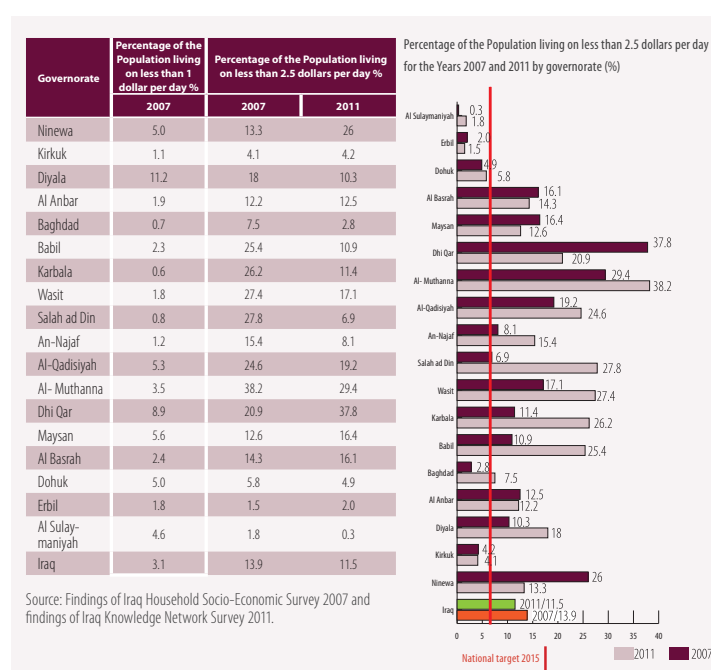
Table (5-1): Records for Spatial Development Priorities

Governorate	Record of Productive Sectoral Development	Governorate	Records of the services Sector Development
Baghdad	243.572669	Baghdad	34.82203831
Al Basrah	87.55542484	Al Basrah	34.91780585
Ninewa	213.001454	Ninewa	6.829276829
Kirkuk	61.68304901	Kirkuk	9.848053676
Al Sulaymaniyah	139.4623866	Al Sulaymaniyah	26.02974045
Dohuk	38.6851684	Dohuk	31.1374998
Erbil	167.5152235	Erbil	35.18339785

Governorate	Record of Productive Sectoral Development	Governorate	Records of the services Sector Development
Salah ad Din	60.65754364	Salah ad Din	1.332181918
Diyala	73.64343439	Diyala	5.829018587
Al Anbar	42.90879546	Al Anbar	8.853506208
Babil	92.60291018	Babil	-16.52178222
Karbala	56.61429641	Karbala	21.88004078
An-Najaf	72.52204527	An-Najaf	13.10045958
Wasit	110.5827769	Wasit	-4.313054898
Al Diwaniyah	81.35037584	Al Diwaniyah	-2.399354186
Al Muthanna	29.88197117	Al Muthanna	-1.923977389
Dhi Qar	85.03843283	Dhi Qar	6.390889669
Maysan	57.30779436	Maysan	1.302166774

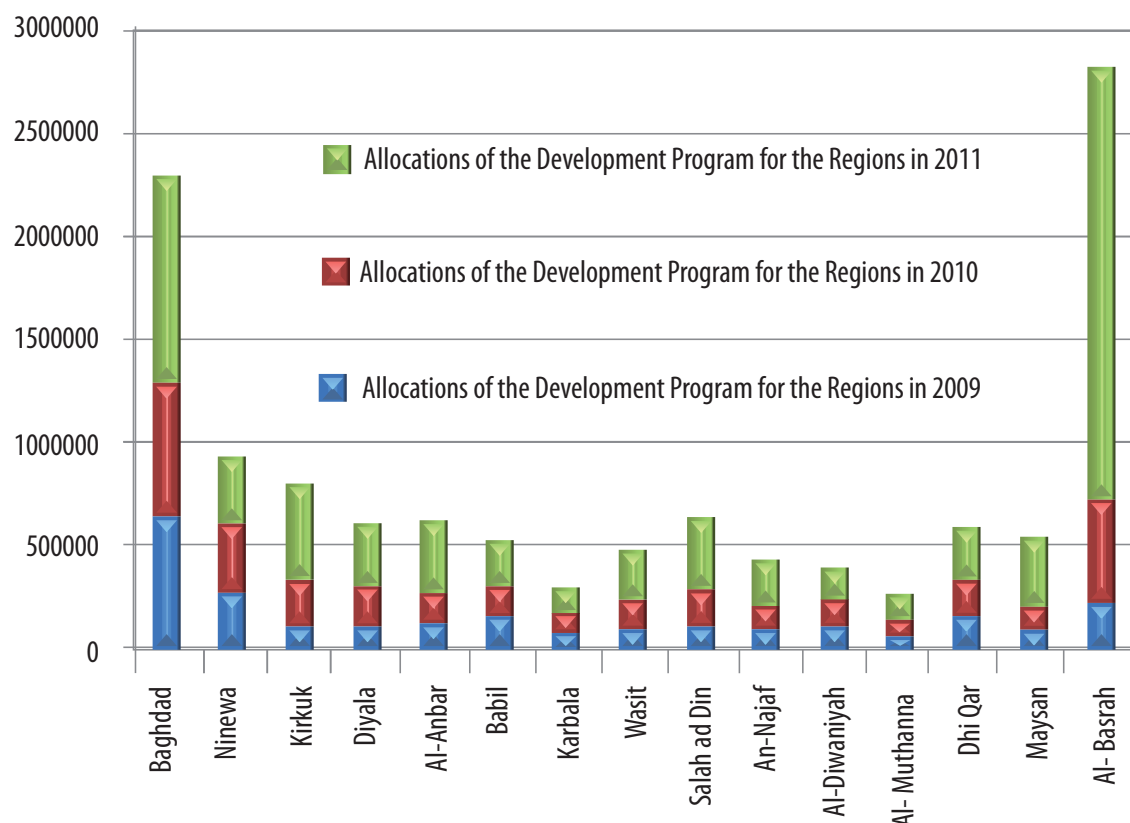
Expenditure indicators highlight spatial disparities among Iraqi governorates, Graph (5-1), where the percentage of citizens spending less than 3000 Dinars per day is close to 40% of the population in some governorates such as Al Muthanna and Dhi Qar while it was less than 2% in Erbil, Al Sulaymaniyah and Dohuk, which is lower than the percentage targeted at the national level in Iraq and reflects the purchasing power and the general economic situation of the population living in Kurdistan Region compared with other Governorates.

Graph (5-1): Spatial Disparities in Rates of Expenditure in Iraq's Governorates



In order to reduce spatial disparities in development, in 2006, Iraq came up with a special program for regions and governorates' development and allocated 2.5% of its total investment budget in 2006 and then increased to 20% in 2012 to implement this program that is focused on local services and activities distributed according to the population size in each governorate. Afterwards, the country adopted another constitutional indicator, the Petro-Dollar allocations for oil, gas and oil derivatives-producing provinces. This indicator had a positive impact on the share of oil-producing provinces from the total budget dedicated for regional development as a compensation for the negative environmental effects of oil production in said provinces and for the additional infrastructure needed for this process. Graph (5-2) shows the growth of the share of the Al-Basrah governorate of the total allocations of this program since it is the main oil-producing region and contributes the most to oil exports. Therefore Al-Basrah ranks first in this category before Baghdad despite the large population size of the latter.

Graph (5-2): Spatial Disparity and Balance in the Development Program for the Regions for the Years 2009-2011



Under this program, the state aimed at reducing disparities in development between the administrative units of the same governorate by allowing the governorates themselves to distribute the allocations of local projects according to the population size

of provinces and regions by allocating 20% of the investment program of any governorate to public projects which spatial dimension targets the whole governorate or serve a group of administrative units. In this context, Table (5-2) shows the spatial distribution of the local investment program for “regions’ development” in Al-Basrah governorates and reveals the effort undertaken by the local authorities to distribute the program’s allocations according to the population ratio while 23% of the budget is dedicated to projects with a wider spatial scope that target more than one administrative unit and serve Al-Basrah Governorate in general.

Table (5-2): The Spatial Distribution of the Investment Program in Al-Basrah Governorate in 2012

٢٠١٢	Region	Total Cost	Allocations for the year 2012	Percentage	Distribution of Allocations after Excluding the Cost of Public Projects	Population ratio in Al-Basrah Provinces and Regions
1	Year	132,443	389012	23%		
2	Al- Markaz	567,069	171,191	77%	43.35%	43.3
3	Al-Zabir	175,484	50,809		13.42%	13.6
4	Al- Qurnah	55,968	27,942		4.28%	4.8
5	Al- Madina	38,865	17,017		2.97%	2.8
6	Shatt-Al- Arab	70,648	27,080		5.40%	4.8
7	Abu Al- Khaseeb	78,635	38,160		6.01%	7.7
8	Al- Faw	15,386	11,509		1.18%	1.4
9	Safran	45,500	3,000		3.48%	2
10	Umm Qasr	32,530	14,372		2.49%	2.1
11	Al-Deir	44,110	17,522		3.37%	3.8
12	Imam Al-Qaem	18,183	9,504		1.39%	1.4
13	Ezeddin Selim	32,649	20,689		2.57%	3.1
14	Imam Al- Sadek	34,252	12,477		2.62%	2.4
15	Nashwa	36,885	7,934		2.82%	1.2
16	Al- Haritha	60,807	28,513		4.65%	5.6
	Total	1,696,984	606,512		100%	100

Note: This is the summary of the Projects Plan in Al-Basrah Governorate for the year 2012 that was ratified by the governorate’s council on 29/3/2012. The governorate shall receive other financial allocations according to which there will be another project plan in the future.

5-1-2 Spatial Deprivation

Development indicators show a contrast in the deprivation or need-satisfaction ratios among Iraqi governorates and between urban and rural areas, thus, it is necessary to raise these indicators to the nationally targeted level in order to achieve equality and justice among governorates, and therefore at the national level. In a bid to reveal the disparity in spatial deprivation, we will showcase some relevant indicators as an example.

Graph (5-3) illustrates clearly the deprivation in terms of accessing health services and its repercussions on infant mortality that is above the nationally targeted threshold,

except in Al-Sulaymaniyah that registered positive results and where children mortality reached 23.9 deaths for every 1000 births in 2011 which is close to the national-targeted rate.

Graph (5-3): Spatial Disparity in the Deprivation Rates (Health) according to the Infant mortality rate

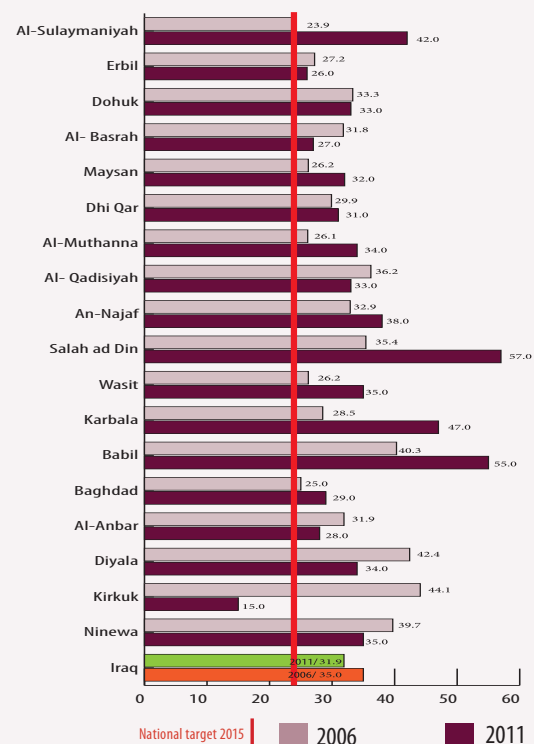
4-2- Infant Mortality rate for every 1000 Live Births

- According to this indicator, the human development standard adopted by the United Nations Development Program is measured based on the classification of states according to the level of the development achieved. The indicator is composed of the three components of the human development index (income, education, health) including the infant mortality rate per 1000 live births, thus, this indicator is critical in the states that aim to achieve an advanced level of development.
- The infant mortality rate in 1990 reached 50.0 deaths per 1000 live births in Iraq, according to the data of the Ministry of Health. The mother and infant mortality survey of 1999 shows that the infant mortality rate was 101 deaths per 1000 live births in Iraq and that the highest rates were found in the central and southern governorates while the lowest rates were found in Kurdistan Region.
- According to the findings of the MICS-3 for the year 2006, the infant mortality rate reached 35 deaths per 1000 live births in Iraq, reflecting a notable decrease compared with the year 1999. Salah ad Din governorate registered a high rate of 57 deaths per 1000 live births and Babil showcased a rate of 55 deaths per 1000 live deaths while other governorates scored rates that are close to the average.
- In comparison with the findings of the 2011 MICS-4, the infant mortality rate declined slightly, however nine governorates, such as Salah ad Din, Wasit and Karbala, have achieved noticeable progress in reducing said rates. Nonetheless, infant mortality rates rose in Kirkuk, the governorate that was previously among those with the lowest rates in 2006. The slight decline in infant mortality rates indicates that Iraq will fail to achieve its target for the year 2015, which is alarming for children's health.

Governorate	2006	2011
Ninewa	35.0	39.7
Kirkuk	15.0	44.1
Diyala	34.0	42.4
Al-Anbar	28.0	31.9
Baghdad	29.0	25.0
Babil	55.0	40.3
Karbala	47.0	28.5
Wasit	35.0	26.2
Salah ad Din	57.0	35.4
An-Najaf	38.0	32.9
Al-Qadisiyah	33.0	36.2
Al-Muthanna	34.0	26.1
Dhi Qar	31.0	29.9
Maysan	32.0	26.2
Al-Basrah	27.0	31.8
Dohuk	33.0	33.3
Erbil	26.0	27.2
Al-Sulaymaniyah	42.0	23.9
Iraq	35.0	31.9

Source: Findings of the MICS- 3-4

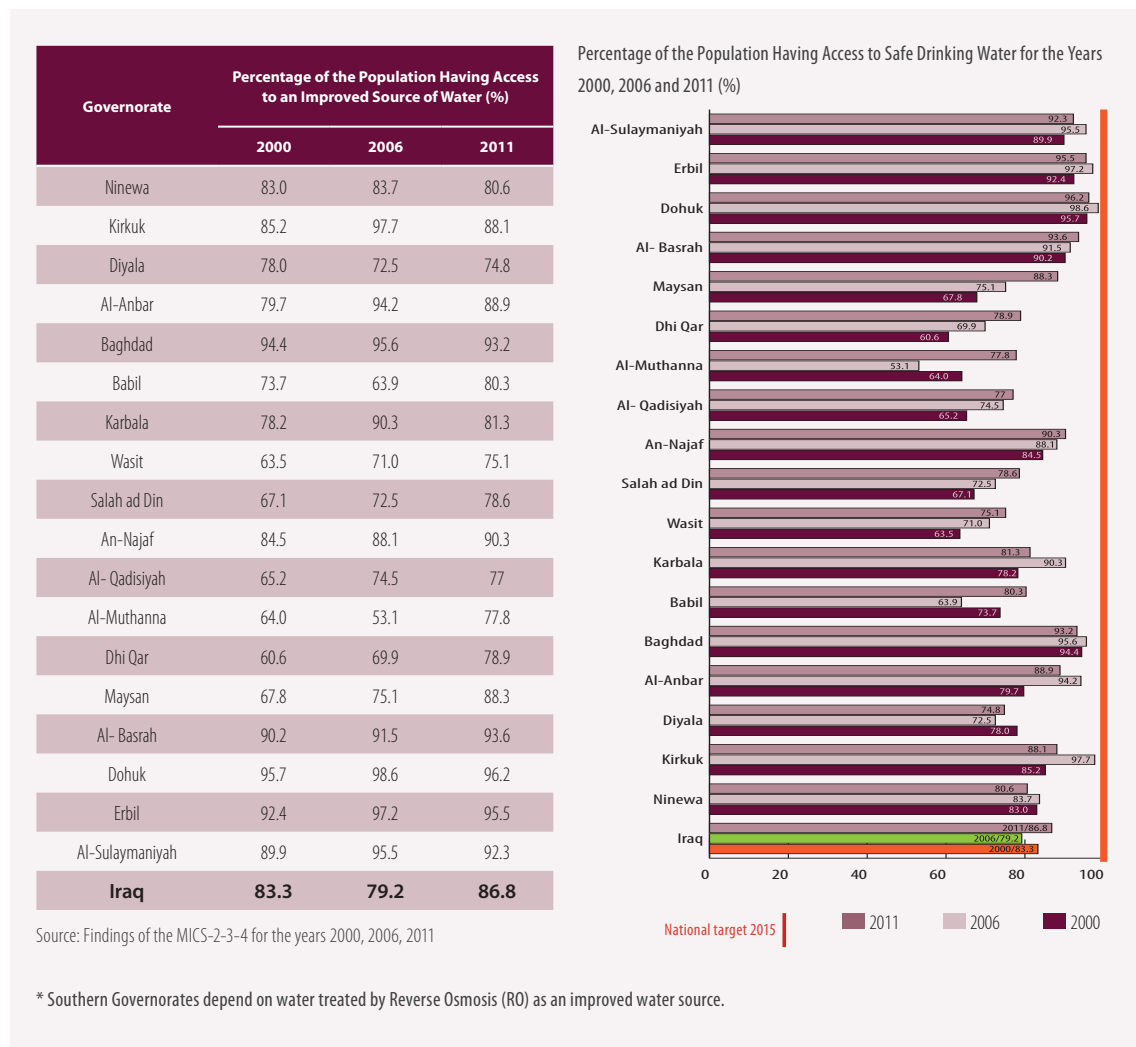
Infant Mortality Rate per 1000 Live Births by Governorate in 2006 and 2011



In terms of spatial disparity in infrastructure, access to safe drinking water is one of the main indicators that reveal the situation of the basic infrastructure for spatial development in governorates. This indicator shows a huge gap among governorates, in Al-Muthanna for example, only about half of the population had access to safe drink-

ing water in 2006, and their percentage grew to 78% in 2011 in comparison with other governorates that are progressing towards achieving the national target of 100%. Graph 5-4 gives more relevant details.

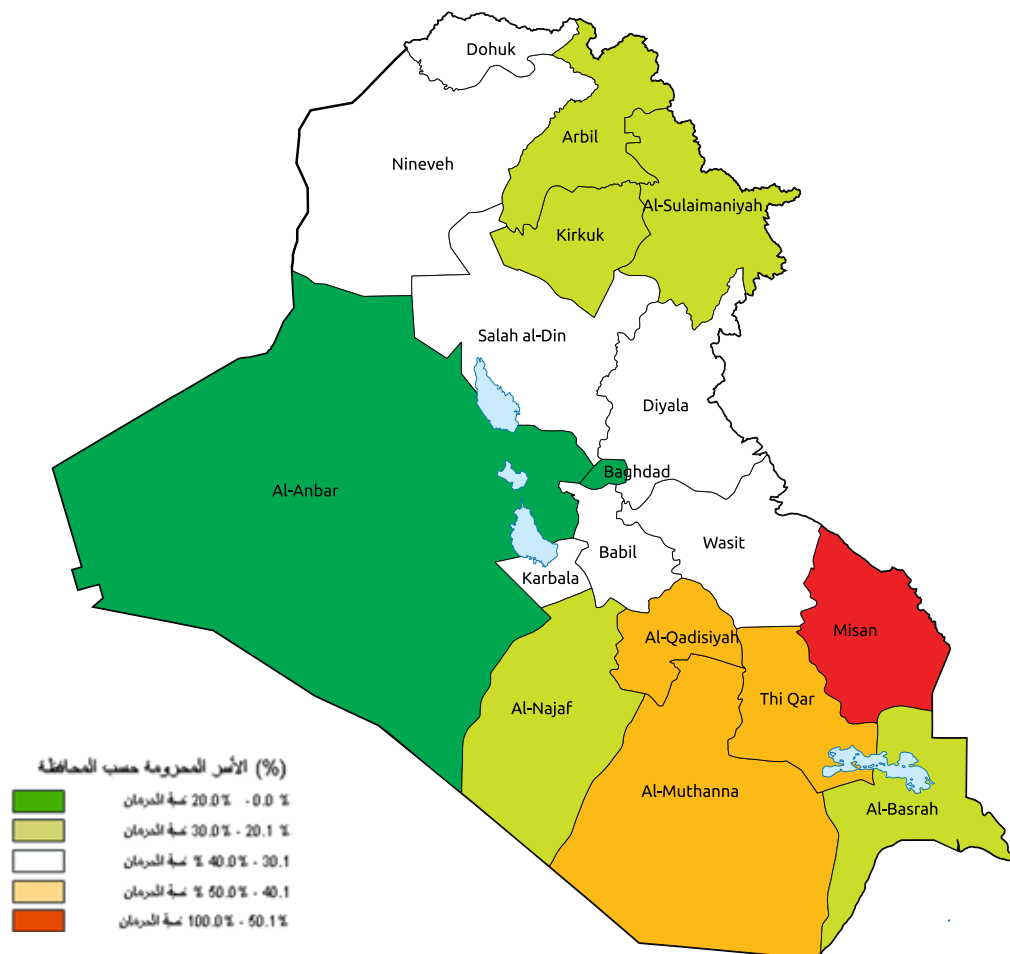
Graph (5-4): Spatial Disparity in Deprivation Rates (Infrastructure) according to the Indicator of Access to Safe Drinking Water



It is important to note in this regard that the latest data on spatial deprivation was published in 2012 based on the Socio-economic survey of 2007. This data shows that most of the governorates face housing challenges: Al-Qadisiyah, Dhi Qar and Maysan are the most deprived with 45% while Al-Anbar is the least deprived with only 5%. As for spatial deprivation in education, Karbala and Maysan registered the highest rate with more than 50%. Maysan is the most deprived governorate in terms of health services with more than 50% compared with other Iraqi governorates that register lower percentages.

Concerning the general economic situation based on economic and social indicators, Figure (5-5) shows huge disparities in the percentage of deprived households per governorates. The least deprived governorate is Al- Anbar (10%) while Maysan registered the highest level of deprivation with 56%. Dhi Qar, Al- Qadisiyah and Al- Muthanna scored high percentages of deprivation that ranged between 41% and 50%.

Figure (5-5): Percentage of Disadvantaged Households According to the Declared Indicators of 2012

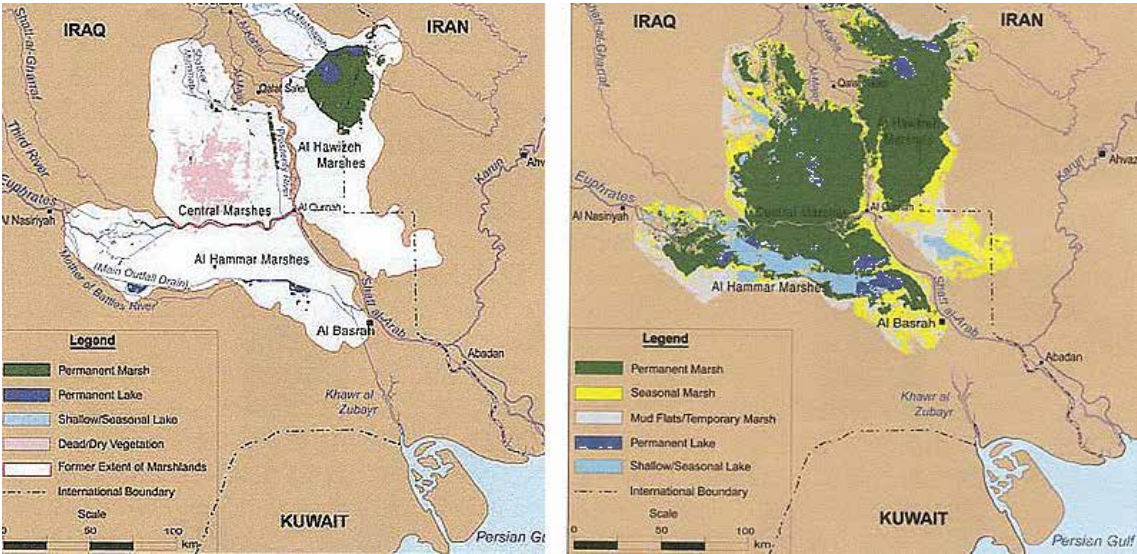


5-1-3 Developmental Disparities between Rural and Urban Areas

The living standard in Iraq is closely linked to the level of urbanization. In general, rural areas suffer from higher levels of deprivation, the more the agglomeration gets bigger in size, and the less deprivation occurs and reaches its lowest levels in large cities. This has constituted a major motive for internal displacement in Iraq towards large cities, especially in the fifties and sixties of the previous century.

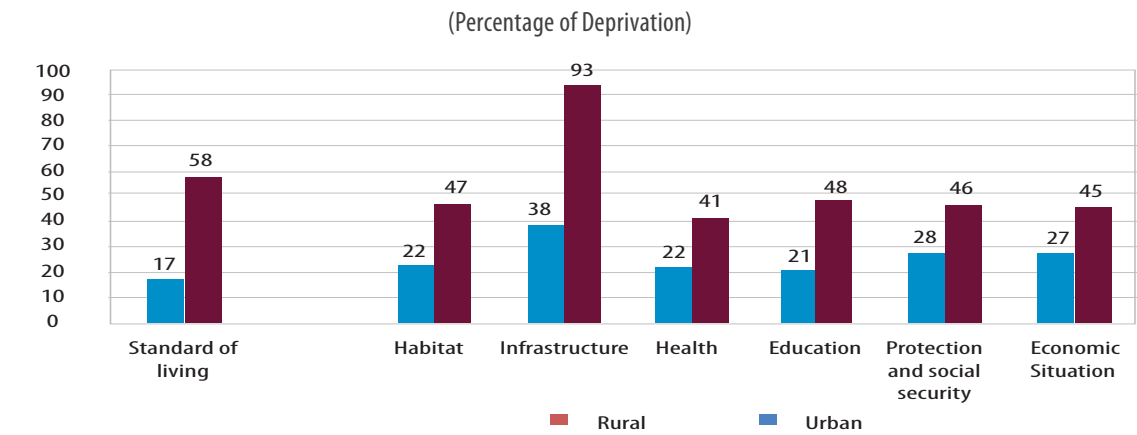
Under the reign of the previous regime, many coercive measures have led to degradation of rural areas and remote villages such as rural resettlement and marsh drainage in the nineties of the last century when a large population left rural villages due to water shortage, Figure (5-6).

Figure (5-6): The First Figure Shows the Marshes Regions before Drainage and the Second Figure Shows the Marshes Regions after Drainage



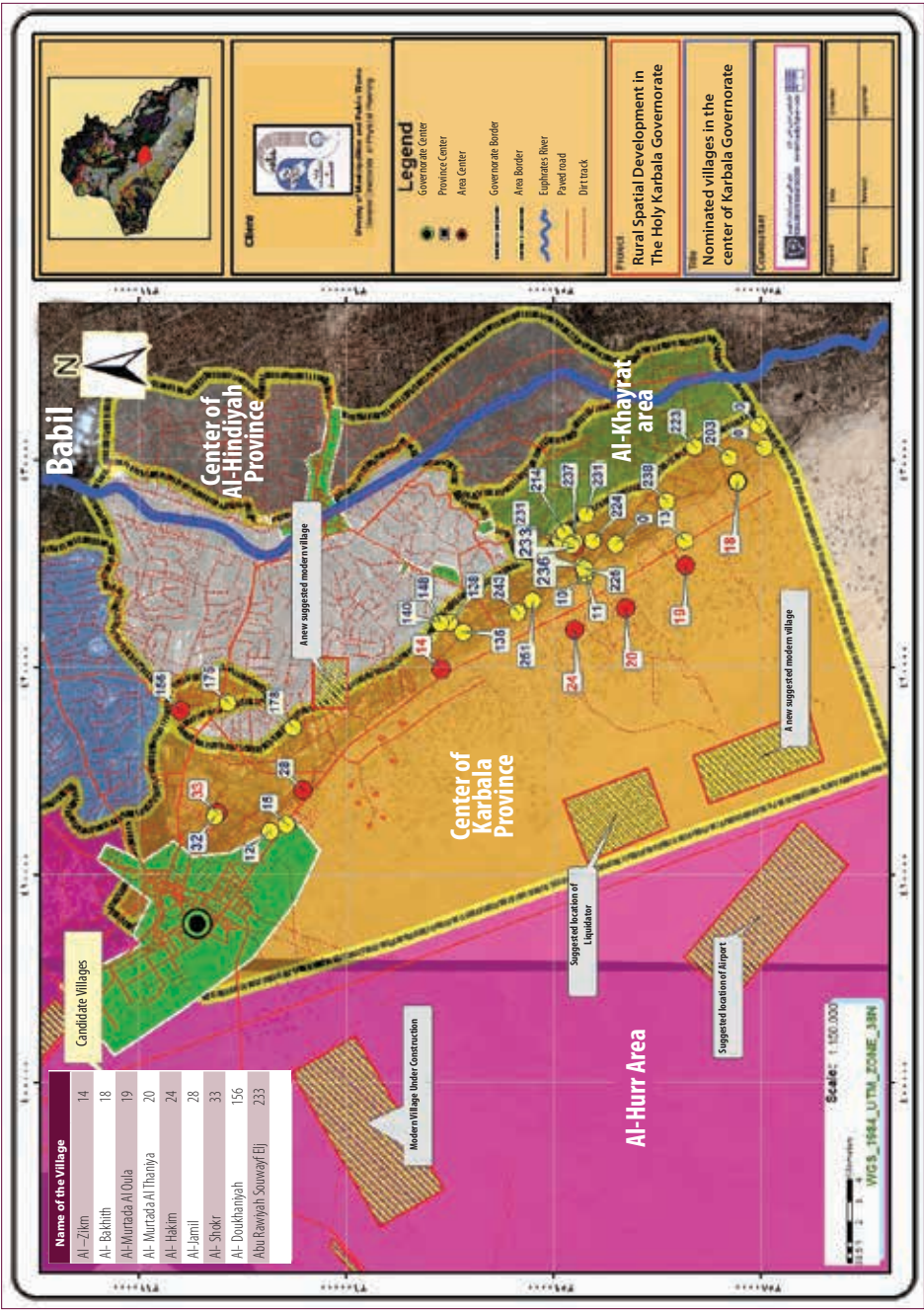
The latest declared indicators of 2012, Figure (5-7), reveal that rural areas, where deprivation rates reached 58%, suffer far more than cities and urban areas with deprivation rates of 17% according to the standard of living index. Urban regions, where the level of needs satisfaction is relatively high, are less deprived in all other sectors in comparison with rural areas. However, it is important to note that some neighborhoods in urban regions also suffer from deprivation and some, known as urban poverty pockets, are as deprived as rural areas.

Graph (5-7): Spatial Disparity between Urban and Rural Areas Based on Deprivation Indicators in the Economic and Social Fields



These types of indicators may help setting up rural spatial development strategies for governorates as shown in Figure (5-8) that details the rural spatial development plan for Karbala as a practical example. The figure indicates the villages that are candidates for undergoing a development process and receiving the services and basic infrastructure in rural areas based on acceptable economic grounds and that might become a model for replication in other governorates.

Graph (5-8): Rural Development Scheme and Candidate Villages to be Included in the Development Process in Karbala (suggestions for Mother Villages as service centers in rural areas)



5-1-4 The Absence of Hierarchy in the Urban System and in the Structure of Human Settlement

The urban structure in Iraq shows that Baghdad is the dominant city in the urban cities system in the country for the year 2007. The population of the second city after Baghdad constitutes 1/6 of the total population of the first city and not 1 /2 as determined by the Zipf's law.

Hierarchy classification in most of the governorates shows that the population is concentrated in a main dominant city. The urban system in the same governorate follows the same vision, when looking at the size of cities and regions and their hierarchy, there is usually a main city dominating the urban system of the governorate and representing a developmental center and pole that attracts all development investments.

Since the city of Baghdad is still in the first position, the urban system for Iraqi cities is likely to relatively improve during the next five years due to the balanced redistribution of allocations and the spatial relocation of development and investment projects. A hierarchy classification system for Iraq's cities has been put in place for the period 2013-2017 based on the expectations of the citizens of the main Iraqi cities stated in a survey by the Central Organization for Statistics according to the findings of the 2009 enumeration and listing process, Table (5-3), and by applying the hierarchical scaling law of cities, known as the Zipf law¹. Figures (5-9) and (5-10) show that the hierarchy improves gradually with the increase in growth in major cities such as Al-Basrah and Al-Sulaymaniyah.

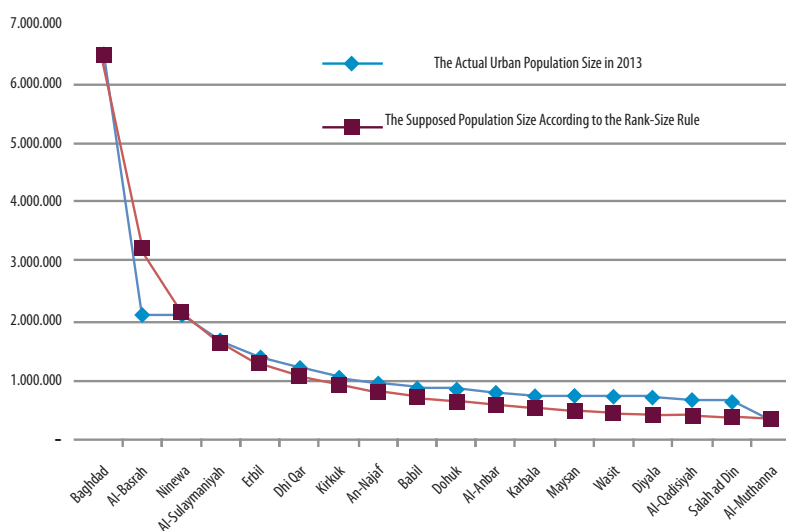
Graph (5-3): Calculations of the Urban System Hierarchy in Iraq for the Five-Year Plan 2013-2017

Governorate	Actual Urban Population Size in 2013	Assumed Population Size according to the rank-size rule	Actual urban Population size in 2017	Assumed Population Size according to the rank-size rule
Baghdad	6,478,449	6478449	7,207,972	7207972
Al-Basrah	2,132,504	3239225	2,372,640	3603986
Ninewa	2,094,123	2159483	2,329,937	2402657
Al-Sulaymaniyah	1,680,818	1619612	1,870,091	1801993
Erbil	1,412,817	1295690	1,571,911	1441594
Dhi Qar	1,216,929	1079742	1,353,964	1201329
Kirkuk	1,053,594	925493	1,172,237	1029710
An-Najaf	962,444	809806	1,070,823	900996
Babil	904,889	719828	1,006,786	800886
Dohuk	872,247	647845	970,468	720797
Al-Anbar	796,825	588950	886,553	655270
Karbala	747,081	539871	831,208	600664
Maysan	740,865	498342	824,292	554459

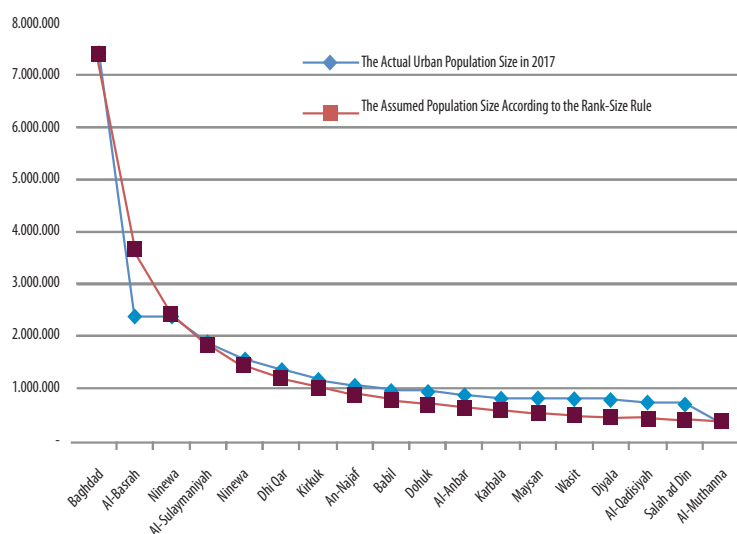
¹ The Zipf Law is associated with the rank-size rule where the size of the second ranked city is 1/2 the size of the first ranked and the third is 1/3 the size of the first, etc. . .

Governorate	Actual Urban Population Size in 2013	Assumed Population Size according to the rank-size rule	Actual urban Population size in 2017	Assumed Population Size according to the rank-size rule
Wasit	738,728	462746	821,915	514855
Diyala	728,930	431897	811,013	480531
Al-Qadisiyah	674,561	404903	750,522	450498
Salah ad Din	655,791	381085	729,638	423998
Al-Muthanna	331,311	359914	368,619	400443

Graph (5-9): The Urban System Hierarchy in Iraq for the Year 2013



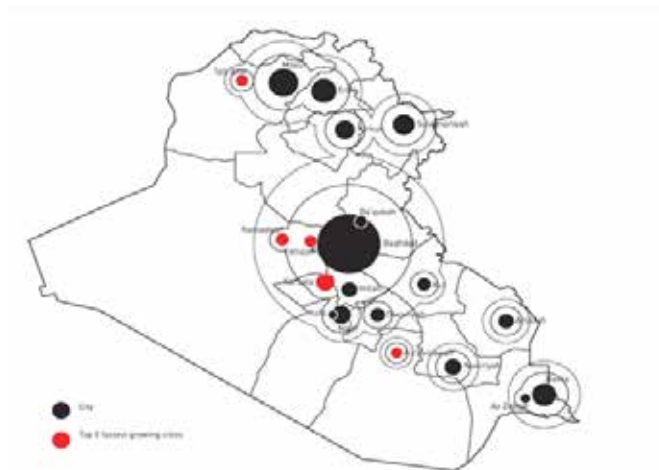
Graph (5-10): The Expected Urban System Hierarchy for 2017



Despite the persistent dominance of the main traditional urban centers in Iraq, the urban system has indicated a positive evolution with the increasing growth of a number of small and medium cities such as Talafar, Falouja, Al- Ramadi, Karbala and Al- Sama-

wa although the dominance of large cities is still a central characteristic of the urban system in Iraq, Figure (5-11).

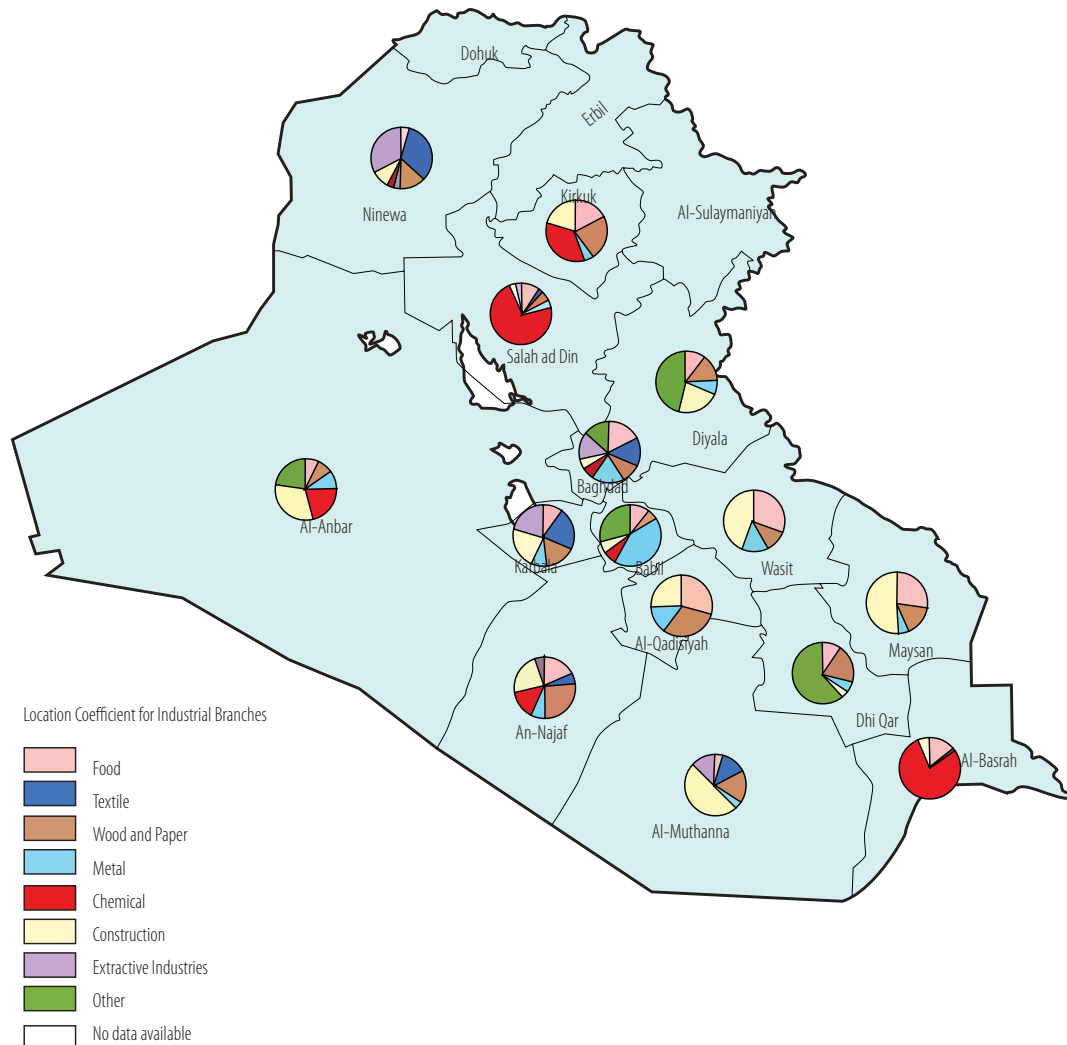
Figure (5-11): Represents the location of the 20 largest cities in Iraq, the red color represents the fastest growing cities in the country



5-1-5 Spatial Disparity and Polarization

The misbalanced urban system reflects a double-standard for development focused on specific regions that have comparative advantages such as urban characteristics and a wide location and that have attracted most of the investment. Based on the location coefficient, the analysis findings, Figure (5-12), showed that the governorate of Baghdad has attracted industrial projects in all industrial sectors which reflects the industrial concentration in this governorate. Baghdad has various location coefficients allowing her thus to attract all kinds and branches of industries. However, other governorates have witnessed the relative establishment of some industries such as chemical industries in Al-Basrah, Salah ad Din and Kirkuk due to the availability of oil resources or of the required infrastructure to transport these materials.

Figure (5-12): Spatial Disparity in Analyzing the Location Coefficient of Industrial Branches in the Iraqi Governorates for the Year 2010



The highest value of the location coefficient for food industries was registered in Maysan Governorate (1.72) and its lowest value was registered in Al-Muthanna Governorate (0.33). As for the location coefficient for textile industries, it reached its peak in Wasit (3.57) and its lowest point in Salah ad Din (0.02). The location coefficient for wood industries scored its highest value in Karbala (2.29) and its lowest in Basrah (0.06). The location coefficient of metal industries is the highest in Babil (2.99) and the lowest in Basrah (0.03). Concerning chemical industries, their location coefficient registered its highest score in Salah ad Din (3.48) and its lowest value in Diyala and An-Najaf (0.01). The location coefficient of construction industries reached its highest value in Al-Muthanna (4.06) and its lowest in Salah ad Din (0.16). The same coefficient for extractive industries scored its highest value in Ninewa (5.53) and its lowest in Salah ad Din (0.14). And finally, the highest location coefficient for the other industries was registered in Dhi Qar (6.65) and the lowest in Kirkuk (0.03).

5-1-6 Spatially Extended Transportation System

The transportation network in Iraq extends through roads or railways longitudinally, in parallel to the courses of the Tigris and Euphrates rivers, Figure (5-13), by which human activities and settlements were concentrated traditionally. On the other hand, other Iraqi regions faced a lack of main transportation hubs, thus, these traditional hubs suffered from high traffic volumes and the main roads in the country are increasingly under pressure. Consequently, there was a need to increase expenditure on road maintenance and to address the soaring rate of traffic accidents (5-14). Moreover, this situation was reflected in the high cost of delays in trips and had negative repercussions on other transportation related economic sectors.

The longitudinal extension of the Iraqi transportation network weakens the link between industry and agriculture and overlaps other economic sectors. Therefore, there is a need to establish a network of radial roads that would connect tier small and medium cities and create new hubs for development in Iraq.

Figure (5-13): The Transportation Network in Iraq, notice the concentration of the longitudinal extension that requires radial and networked hubs for traffic

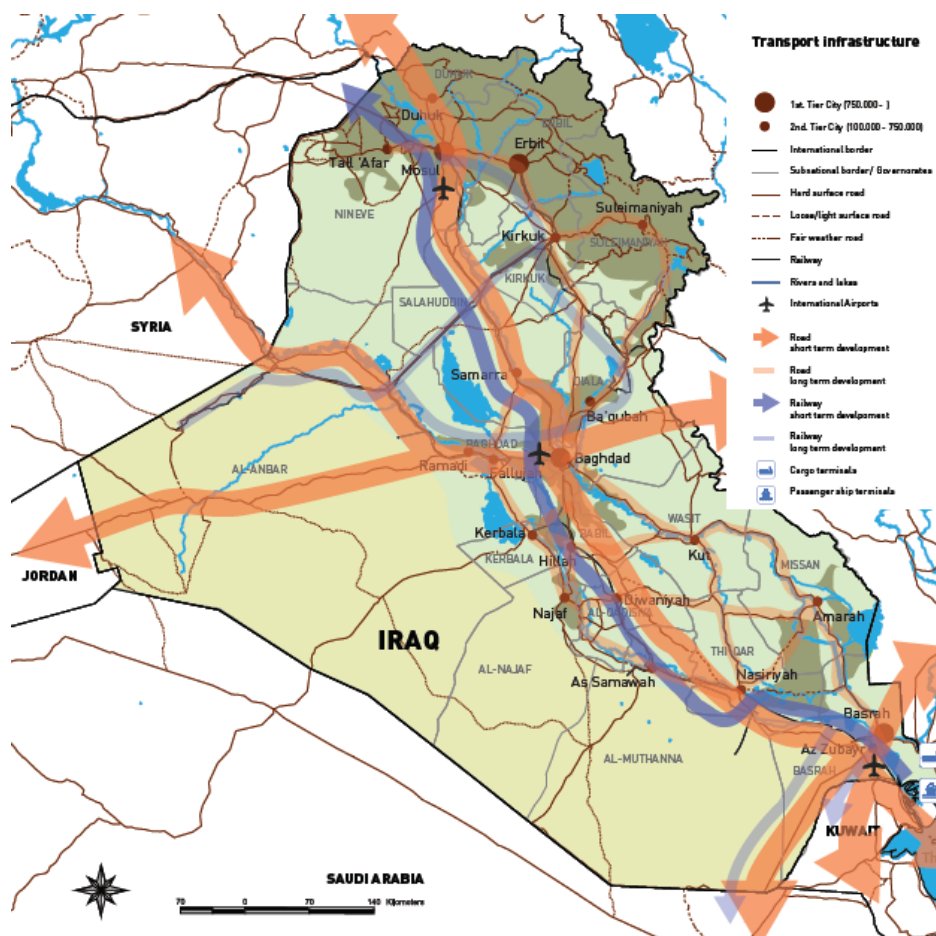
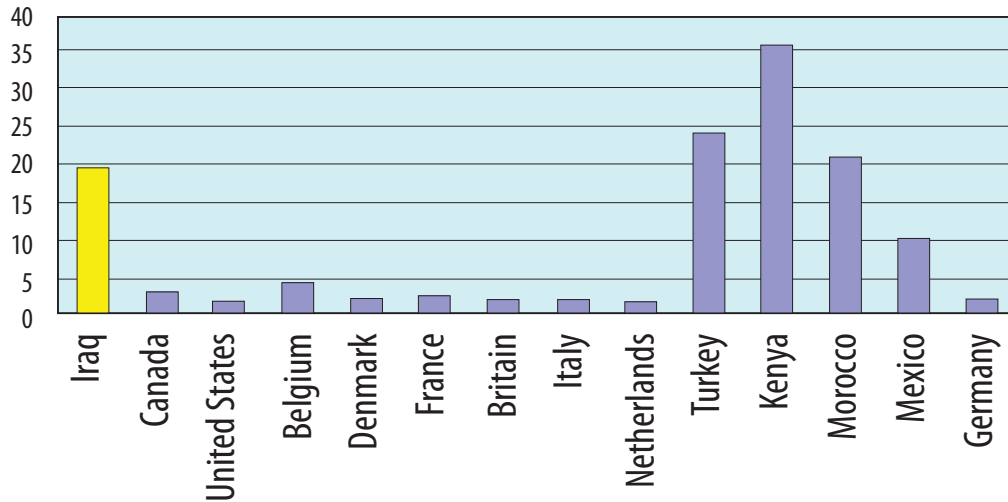


Figure (5-14): Annual Road Traffic Death Rate in Iraq Compared with other Countries in the World



5-1-7 Deterioration of City Centers and Heritage and Historical Regions therein

Most Iraqi cities have witnessed a huge deterioration of their traditional centers. Their cultural heritage has been desecrated and their historical streets and buildings have been subject to violation, Figure (5-15). This deterioration leads to the following:

- Historical and heritage sites have lost their unique traits due to neglect or the change in the use of some of them, or for being torn down in a bid to open streets and new paths for traffic. These procedures have tarnished the image of said sites such as Haifa Street where old sites are now located behind new buildings that aggravate visual pollution and have negative effects on their residents. Moreover, the pollution and vibrations emanating from traffic affect the condition and age of historical buildings in these sites, Figure (5-16).
- Visual contact is lost and the cultural sequence between old heritage sites is abolished due to the unrestricted invasion of modern construction in these areas.
- Old streets and heritage buildings are misused and do not undergo regular maintenance. Moreover, due to the rise in groundwater levels some of these sites were disfigured and are no longer safe, and parts of them have collapsed; the collapse is most likely triggered on purpose to allow the landlord to change their use.
- Some of the historical buildings have been distorted due to restoration works that were using materials that are not consistent with the buildings' original materials.

Figure (5-15): Commercial Streets Invading Heritage Areas and Their Impact on the Deterioration of Heritage Sites in Al-Kadhimiyah City in Baghdad



Figure (5-16): The Deterioration of the Civilizational Scenery in the City Center of Karbala, notice the visual pollution from trademarks and electricity wires.

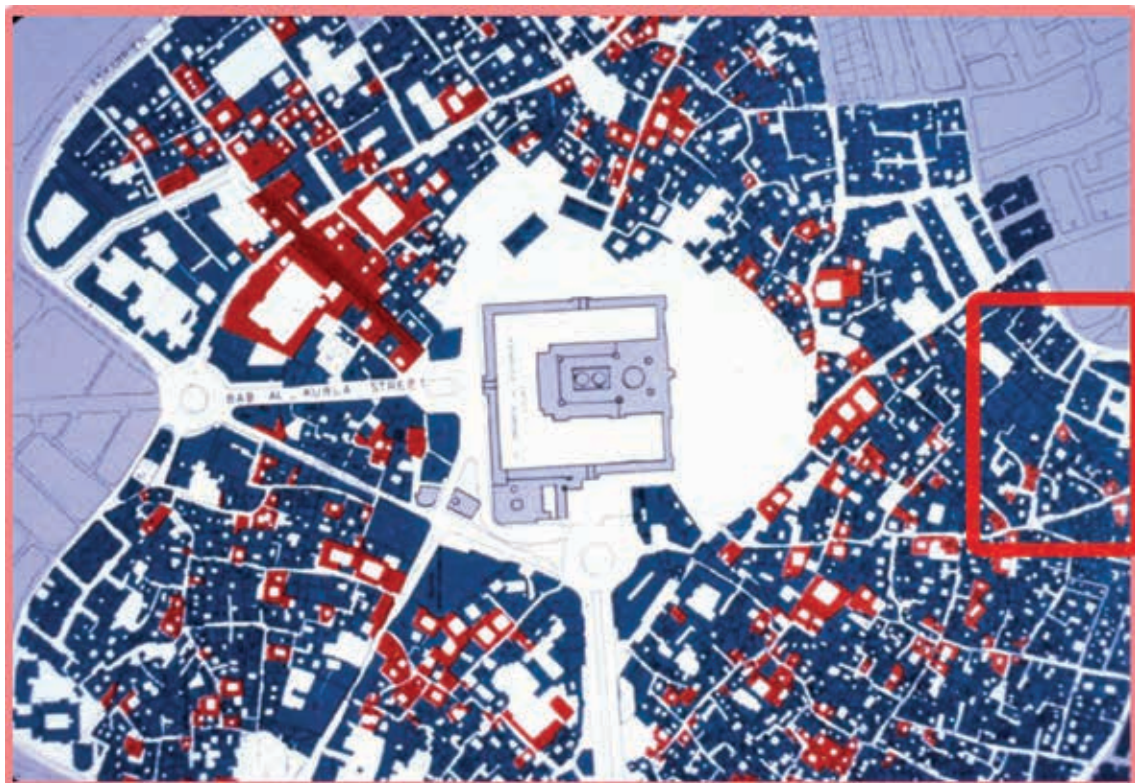


Figure (5-17): The Historical Kirkuk Citadel before and after becoming a lively urban center and until most of its heritage and archaeological buildings were demolished in the nineties of the previous century



The situation described above requires a regional urban development policy in city centers and especially in centers of heritage traits. It is worth mentioning that there have been comprehensive design studies about Al-Kadhimiyyah region and Al-Ra-sheed Street in Baghdad, as well as Al-Haramain region in Karbala, old Mosul, old Al-Kafal city center in Babil and other traditional urban centers. Figure (5-18) shows the urban development scheme for Al-Kadhimiyyah city in Baghdad. The main challenge in this regard is to find practical methods to implement these schemes given the situation facing these cities.

Figure (5-18): The Proposed Expansion of the Al-Kadhimiyyah Mosque and Garden in Baghdad



5-1-8 The Overlapping Powers between Federal Ministries and Local Governments in Iraqi Regions and Governorates

The post-2003 shift from a centralized to a decentralized system of administration has created many problems and challenges for development including the overlap of powers between federal ministries and local governments. Thus, governorates are demanding more constitutional powers to put an end to the confusion emerging from these overlaps. The Iraqi constitution, adopted since 2005, clarifies the nature of the distribution of power among the different Iraqi administrations by including articles stating the exclusive powers of the federal government and the joint powers between the federal government and local governments where the priority is given to the latter's opinion in case of disaccord, including issues pertaining to development policies and planning. However, many problems and obstacles still persist such as the overlapping powers between federal ministries and local governments. This problem was reflected in the implementation of the governorates law No 21 dated 2008 and led to the emergence of many visions and ideas aiming at organizing the relationship between federal ministries and local governments in the Iraqi governorates.

The shift from a centralized to a decentralized system, under which powers are distributed horizontally among ministries and governorates, requires more coordination and capacity building in order to achieve tangible results in development at the level of the governorates. Moreover, there is a need to identify the responsibilities and powers among governorates in the developmental field in a bid to overcome the obstacles that are impeding the fulfilment of goals set in the governorates' investment programs. It is also necessary to activate the single-window concept in order to increase foreign investments and create a suitable environment to achieve the development goals.

5-1-9 Informal settlements in Baghdad and Other Governorates

Slums are populated regions known to be the result of an arbitrary action aiming at occupying a place and residing in it without any prior planning. This type of housing can be built on lands that are dedicated to non-residential use such as green spaces and agricultural or industrial regions.

The urbanization in cities was accompanied by the informal settlements phenomenon as one of the prominent features of urbanization. The widespread presence of these informal settlements in urban regions is considered as one of the most complicated problems faced by Iraqi cities because it is hard to meet the housing need of their residents and due to the expansion of such run-down neighbourhoods, Figure (5-19), after the year 2003, following the deteriorating security situation and the waves of forced migration. Informal settlements are considered as one of the most prominent

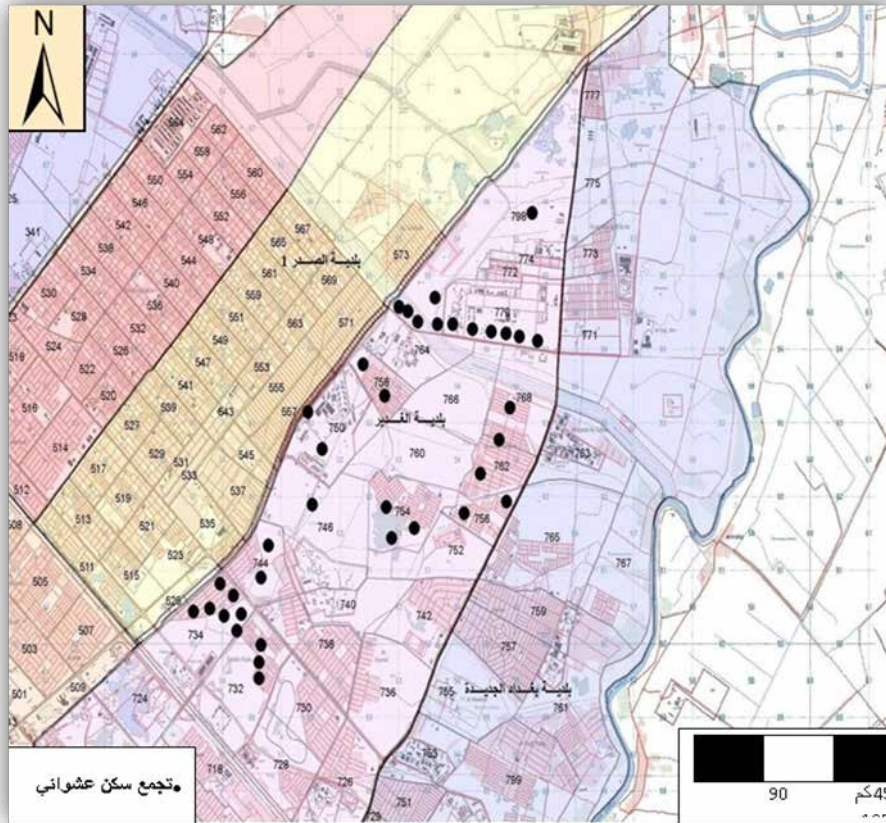
feature of urbanization including all relevant planning, social, environmental and economic problems and all the related deterioration in the urban development.

There are many planning problems emanating from the presence of informal settlements such as:

- Changing the use of land (industry, agriculture, services, transportation, playgrounds or green spaces) towards a residential use will lead to an imbalance in urban planning and standards.
- A direct impact on the base scheme since these infringements do not belong to the urban fabric of the city. Informal settlements do not follow an architectural pattern and lack planning standards and most are deteriorated because they were built without building permits or formal designs and with inferior materials. These areas suffer from the absence of infrastructure and superstructure services.
- Informal settlements are encroaching on the water and electricity networks of neighboring regions, putting pressure on the services provided in formal regions.
- Creation of economic and social imbalances in the city: a large proportion of informal settlement inhabitants come from outside the city and some of them are migrants. The majority of the inhabitants of informal settlements are unemployed, do not have a development card and have problems registering their children in schools. They also face many economic and social challenges.

One of the most important indicators that reveal the real size of the problem of encroachment and informal settlement expansion is the number of trespassing buildings. For example, the highest number of informal settlements in Baghdad is located in Al-Ghadeer municipality where the number of residential units reached 4617, constituting 25.6% of the total encroachments in the City of Baghdad. The municipalities of Al-Jadidah, Al-Sheala and Al-Sadr Al-Oula in Baghdad registered 23.22%, 15.83% and 0.83% respectively. The lowest percentage of encroachments is seen in Al-Mansour municipality with 65 residential units, representing 0.36% approximately, followed by Al-Karkh and Al-Rasheed municipalities with 0.83% and 1.21% respectively. As for households, the latest surveys undertaken in 2012 show that 35688 families live in 49 informal settlements in 9 Nisan District that includes Al-Ghadeer and Baghdad Al-Jadida municipalities, which reflects the scope of what is a growing problem in the city of Baghdad.

Graph (5-19): The Spatial Distribution of Informal Settlements in Al-Ghadeer Municipality in Baghdad



Efforts are being exerted to prepare structural plans in the governorates where some planning schemes have been implemented or are in the process of execution as in Al-Muthanna, Figure (5-20), Babil, Salah ad Din, An-Najaf and Wasit. These schemes aim at finding a future vision for local spatial development in terms of land use. The schemes shall be consistent with those implemented in neighboring governorates and with national spatial development plans and policies in Iraq. Moreover, it is important to adopt the basic scheme and its alternatives for the city of Baghdad, Figure (5-21), which are currently being prepared according to the spatial policies set by the National Development Plan. Such schemes have also been prepared for application in other Iraqi cities in order to address their problems including informal settlements. The activation and execution of these schemes require additional efforts while taking into consideration the different economic and social factors of the citizens' conditions.

Figure (5-20): One Aspect of the Structural Scheme for Al-Muthanna Governorate

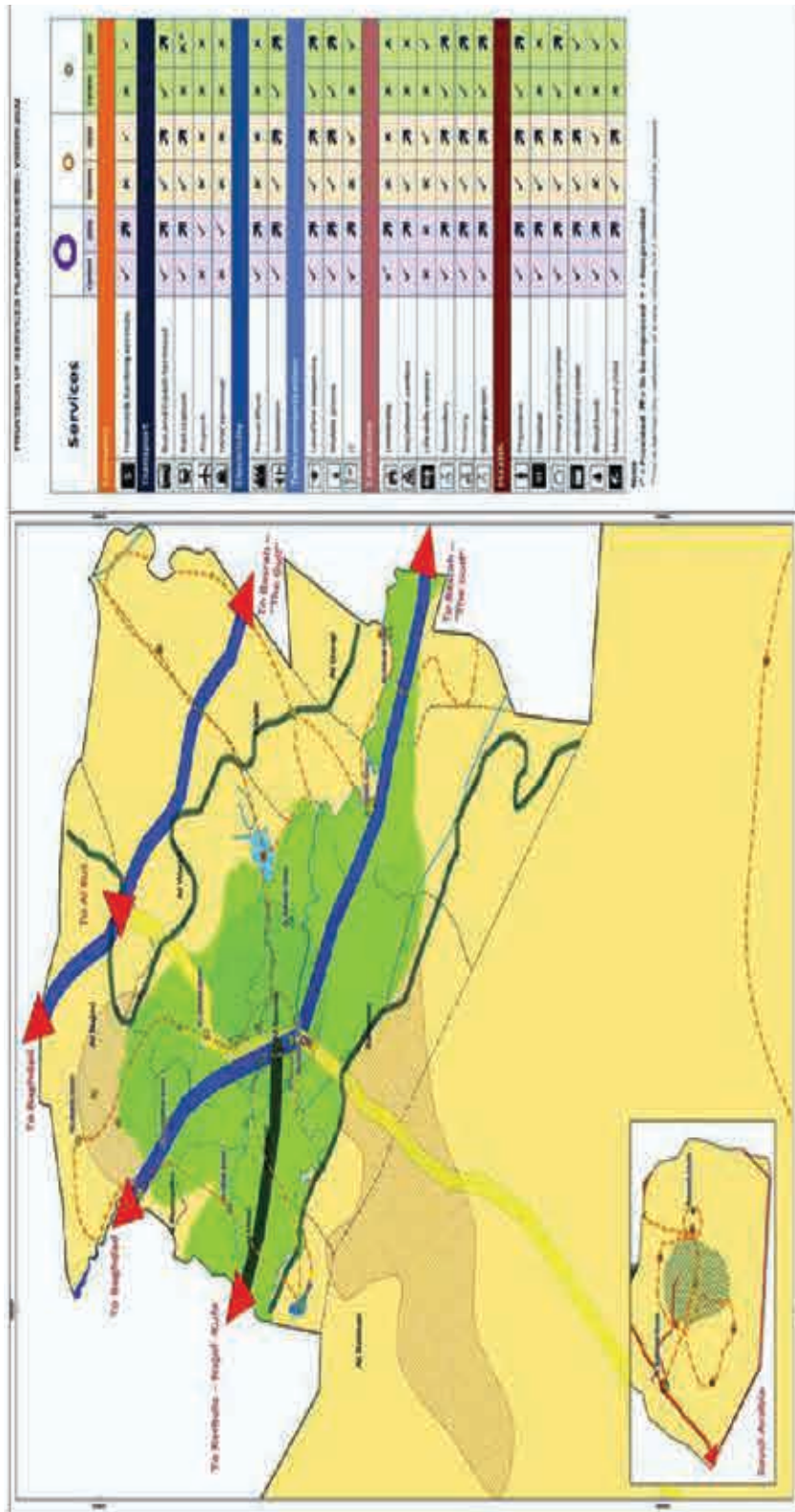
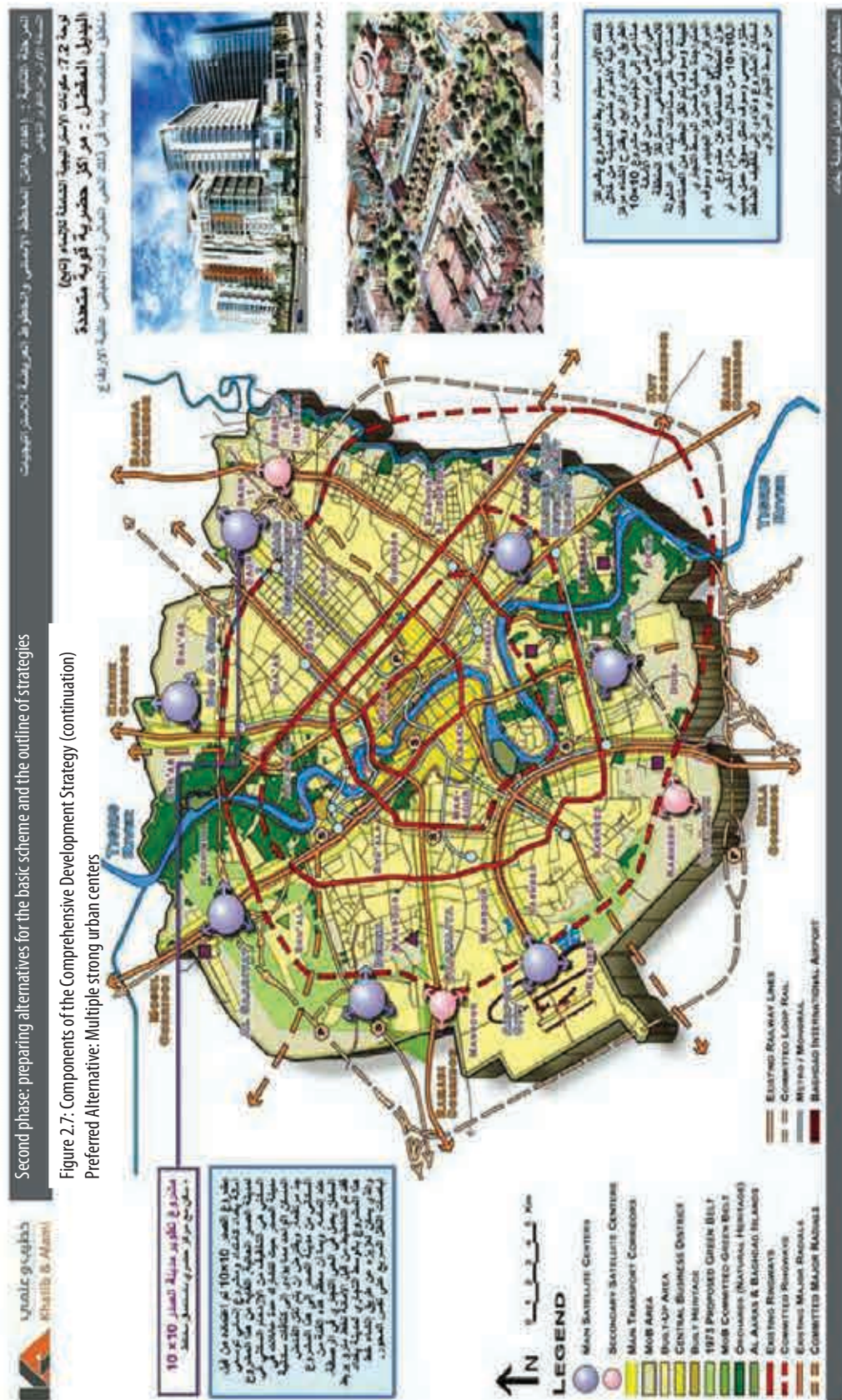


Figure (5-21): Alternatives for the Basic Scheme that is Being Prepared for the City of Baghdad



5-2 Resources and Comparative Advantages of Governorates

The infrastructure in Iraq is known for its diversity. While some governorates like Basrah, Maysan, Kirkuk and Dhi Qar have oil fields, other governorates, such as Ninewa and Salah ad Din, have the characteristic of being the leading regions in agricultural production. As for Al-Anbar, An-Najaf and Al-Muthanna, they are rich in metal and sand materials that are used in cement, glass and other productions. Iraq's spatial structure allows it to attract investments in religious tourism in Karbala, An-Najaf, Baghdad and Salah ad Din and estimation investments in the Kurdistan governorate. Other governorates showcase border outlets for the national and local economy such as the ports in Al-Basrah, and the outlets in Safwan and Al-Shalamija in Basrah and those in Taribil and Al-Waleed in Al-Anbar and in Al-Manziriyah in Diyala. Rivers, archaeological sites and the diversified terrain showcasing mountains, plains, valleys, lakes and marshes in the different Iraqi governorates constitute one of Iraq's most important features of diversity in the economic, social and architectural environment.

The country's natural conditions and terrain are diversified; its soil is suitable for agriculture and construction industries. Its territory comprises the Tigris and Euphrates rivers and their tributaries and is rich in carbohydrates. Moreover, the country's infrastructure and its primary and secondary development centers are spread across all Iraqi governorates, constituting a solid foundation to start the restoration of the spatial structure of development. This should be done by implementing construction and reconstruction schemes based on a more balanced and consistent distribution of economic activities and services according to the economic, social and human specificities of each governorate or part of governorate. Therefore, there is a need to bridge the development gap among the different governorates and between urban and rural areas and to eradicate the double-standard development phenomenon and the inadequate hierarchy among human settlements. The potential and characteristics of each governorate is detailed below.

5-2-1 Baghdad Governorate

Baghdad is considered as one of the most important Iraqi governorates since it is the country's capital and accounts for more than 20% of Iraq's population. Based on the listing and enumeration process, the population of Baghdad reached 7.239562 million in 2012, making it the country's largest city in terms of population. The governorate of Baghdad is located in the center of the country and because of its location has many comparative advantages since it hosts a large number of major industrial investments in the various economic sectors in addition to small industries and traditional handicrafts, products of which are marketed in the different Iraqi governorates. The location of Baghdad in the center of the country and its human and physical

resources made it the main growth center in Iraq that features diversified industrial and commercial opportunities. Baghdad is covered by large agricultural spaces and comprises water resources, represented by the Tigris River. It has important tourism resources namely when it comes to religious and archaeological tourism. Baghdad is also known for its human resources and cadres and for the presence of most of the universities and scientific centers therein. The governorate is also known for its competitiveness and marketing power and plays an important and pivotal role not only at the national level but also at the regional and international level.

5-2-2 Ninewa Governorate

Ninewa is the second biggest governorate in Iraq. It is known for its diversified topography, the presence of the Tigris River that passes by its land and of the Mosul dam. The production of grains is famous in Ninewa, especially wheat and barley, and constitutes 54% of Iraq's grain production and it is considered to be the bread basket of the country. Ninewa has many comparative advantages including its large agricultural spaces and abundant water resources such as the Tigris River and the numerous water sources and wells. It is also known for its rich livestock that accounts for 25% of Iraq's animal resources. Many industries have emerged in Ninewa like textile, garments, dairy, sugar, cement, medicines and others. This governorate is rich in mineral resources such as sulphur and is the world's largest sulphur reserve. Its land is also rich in oil and other minerals that are used as raw materials in many industries. Moreover, the Al-Qiyarah refinery in Ninewa produces oil derivatives and especially Asphalt. The geographical location of this governorate contributes to its role in promoting trade with Syria and other neighboring countries. It is also known for its natural, archaeological and religious tourism sites and its human resources.

5-2-3 Al-Basrah Governorate

Al-Basrah is Iraq's main trade center and the country's economic capital and is known for its unique location on the Persian Gulf that is the only maritime outlet in Iraq. This governorate stretches over 110 km on the Arabian shore and its city center is located at 67 km from the gulf. It is the country's breathing space and its outlet to connect with the outside world. It is bordered by three states: Saudi Arabia, Kuwait, and Iran and is connected to the outside world by three navigation lines. Al-Basrah has four ports: Khor Al-Zubair, Umm Qasr, Al-Maakel and Abu Flous, in addition to an international airport. It has two land outlets: Safwan with Kuwait and Al-Shalamajah with Iran. God has bestowed upon Basrah many resources and riches, it has the biggest oil reserve, estimated at 67.8 billion barrel and representing 59% of the total oil reserve in Iraq. There are 15 oil fields in Basrah including 12 actively productive fields, producing around 2 million barrel per day.

Moreover, this governorate has abundant agricultural, commercial and human resources that make her eligible to be the region's most important city. Given the diversity of soil in Basrah ranging from loam, clay to sandy soils and in light of Basrah's climate, there are numerous agriculture opportunities in this region such as the planting of strategic crops, dates and tomato. As for the industrial sector, Basrah has sufficient resources to service numerous oil industries, especially gas, petrochemicals, fertilizers, iron and steel productions. The presence of border outlets and ports has activated the commercial dynamism in Basrah. The Marshes' diversified resources and beautiful landscape are the home of abundant livestock, fishery and birds, resources that constitute an important component of biodiversity in Iraq and provide a future opportunity to promote year-round nature tourism.

5-2-4 Babil Governorate

Babil has a number of qualities that makes it a relatively important governorate in Iraq. It is a very important region in the Middle-Euphrates area since it is above all an agricultural governorate that has the elements for successful agricultural production such as wide agricultural lands and water sources in addition to a workforce that is specialized in the field of agriculture. Babil is known for the diversity of its agricultural and livestock production, which includes cattle, poultry, fish and bees. Moreover, the Euphrates cuts the governorate from North to South. It has an ancient and large industrial base specialized in textile, machinery, gear and cars industry. Babil has also the space to found tourism and entertainment projects since it is the site of many sacred shrines and mausoleums of Imams and Saints that can create wide religious tourism movements. Babil, Kish, Bour Sibam Al-Kafal and Al-Taliaa showcase archaeological sites from the most ancient human civilizations. The governorate has 157 archaeological sites including the historical city of Babylon and 100 religious sites, the most famous of which are the shrines of Imam Al-Kassem and Imam Al-Hamzah (peace be upon them). Babil is also known for its abundance of skilled labor that is specialized in several fields and that contributes to its developmental renaissance at the social and economic levels and in services.

5-2-5 Karbala Governorate

Karbala has many comparative advantages and is considered to be Iraq's most famous hub for religious tourism in Iraq since it hosts the shrines of Imams Al-Hussein and Al-Abbas (peace be upon them). It has many nature tourism attractions such as Al-Razaza Lake and Ain Al-Tamer and is also the site of many archaeological tourism monuments. Moreover, Karbala has many agricultural resources due to its vast agricultural lands and orchards where farmers grow vegetables, fruits and palm trees. It also has significant industrial potential mainly when it comes to extractive industries in sand quarries and the production of construction materials such as cement and

bricks. In addition Babil is rich in its human resources, labour force and technical skills in governmental institutions and is known for hosting Karbala University and scientific institutions.

5-2-6 Diyala Governorate

Located in the center of Iraq, Diyala governorate benefits from its unique location. Its geographical position draws its importance from the presence of two border outlets: "Al- Munzariya and Mendeli outlets" which connect it to Iran. These outlets are one of the shortest commercial channels leading to the capital Baghdad. Diyala represents 4.1% of Iraq's space and its population totals 137103 people, representing 4.3% of the total Iraqi population. This governorate is also known for its agricultural sector where its agricultural lands cover more than 41% of its surface. It has large spaces for fruit orchards and promising oil and gas fields. Diyala also features huge industrial facilities dedicated to electricity production and plants for the production of food and construction materials and it showcases several destinations for nature tourism.

5-2-7 Maysan Governorate

Maysan governorate benefits from many comparative advantages, mainly its shared borders and border outlets with Iran that could be used for trade. Its surface represents 3.7% of the total surface of Iraq and has 3.6% of the arable spaces in Iraq. This governorate is one of the country's most important centers for oil production and it is also involved in the production of construction materials such as asphalt and gravel. Maysan has also a tourism potential with the presence of Marshes that are considered as a tourism destination and a source of animal and fish wealth. The governorate counts 305 archaeological sites which makes it a suitable destination for archaeological and religious tourism.

5-2-8 Kirkuk Governorate

Kirkuk is an important governorate in Iraq since it links the mountainous areas with the plains. It hosts 4.13% of the total Iraqi population and has many comparative advantages including its industrial potential. This governorate is one the most important centers in Iraq for the production of oil and oil industries in addition to gas, sulphur, construction materials and cement productions. 61% of Kirkuk's surface is covered by arable lands that are known for their high production of wheat, barley and yellow corn, mainly in Al-Houwayja district. It is also a destination for nature, historic and religious tourism due to the presence of mosques, churches and Kirkuk citadel.

5-2-9 Salah ad Din Governorate

Its most important characteristic is its location in the middle of Iraq and its agricultural resources. Salah ad Din is covered by large arable lands that constitute 12% of the total Iraqi surface. Moreover, the governorate has many large industrial projects such as the Biji refinery, Samra pharmaceutical factory in addition to cement, oil and detergent factories that make Salah ad Din a main national industrial pole. This governorate is the site of many religious and historical tourism destinations and archaeological monuments mainly in Al-Rawdah Al-Askariya that hosts "the shrine of Imam Ali Al-Hadi and Al-Hassan Al-Askari" (peace be upon them). Salah ad Din is also a nature tourism destination with the presence of Al-Tharthar Lake. Furthermore, it has important scientific potential represented by Tikrit University and Samra University. It is also the hub of material and human resources however, there is a need to use these resources properly in order to transform this governorate into an important pole of agricultural, industrial and tourism development that would attract economic activities. This requires an adequate infrastructure and more investment opportunities in order to achieve an economic "agricultural and industrial" development.

5-2-10 Al-Anbar Governorate

Al-Anbar plays a unique role in Iraq since it is located near many governorates (Nine-wa, Salah ad Din, Baghdad, Karbala, An-Najaf, Babil) and it borders several Arab states (Syria, Jordan and Saudi Arabia). Thus Al-Anbar is considered the gate of western Iraq because it has four border outlets that could be used to boost trade. Due to its location, this governorate has many comparative advantages, the most important of which is its huge surface that is the biggest among other Iraqi governorates. Moreover, natural resources are abundant including mineral resources such as phosphate and natural gas, glass sand, cement, sulphur and other raw materials that are used in many industries. Large agricultural lands along the Euphrates River cover al-Anbar and other regions present promising agricultural investment possibilities in the northern desert. This governorate is also known for its groundwater that could be used in agriculture. Al-Anbar is the site of nature tourism attractions such as Al-Habaniyah and Al-Tharthar Lake. Sulphurous water and water sources are abundant in Haditha and Kanisa and could be used in medical treatments.

5-2-11 Al- Muthanna Governorate

Al-Muthanna is a border governorate sharing frontiers with Saudi Arabia from the South to the South- West. It is the second biggest governorate in terms of surface area and represents approximately 12% of the Iraqi overall surface area. Due to its geographical location, it gained many comparative advantages, the most important of which is being famous in agriculture due to the presence of the Euphrates River

and of wide lands including the arable desert areas that are capable of producing crops. Al-Muthanna benefits also from its industrial potential because it provides raw materials for some industries (such as Al-Muthanna cement factory, the South Cement Factory and the oil refinery in Al-Muthanna). It is important to note the presence of the Samawa salt pond as salt is used as a raw material in many industries. There are also many archaeological sites in Al-Muthanna (Al-Wakraa archaeological monuments) and nature tourism destinations (Sawa lake). Moreover, Al-Muthanna University is considered as a science and research hub in this governorate that embraces an abundant number of workers and a high percentage of working-age and economically active population.

5-2-12 Al-Qadisiyah Governorate

Al-Qadisiyah is known for its fertile lands that are located in the Middle-Euphrates region and represent 1.9% of the total Iraqi surface. This governorate benefits from many comparative advantages, most importantly, the large surface of arable acres that account for 14200 acres. Its most important agricultural products are rice and barley. Al-Qadisiyah is also rich in its cows and buffalo livestock. It has industrial potential due to the presence of many factories known for the production of rubber, car wheels and textile. Its tourism attractions such as archaeological and natural sites (Al-Delj marsh) located between Al-Qadisiya and Wasit could be targets for investment and developed to promote tourism in the governorate.

5-2-13 Dhi Qar Governorate

Dhi Qar gained many comparative advantages due to its oil resources present in large oil fields including Al-Gharaf and Al-Rafidein fields, Abu Amoud field, Al-Siba field and other unexplored fields that could be used in manufacturing. This governorate will hopefully become one of the most important oil and gas producers since its oil reserve is estimated at more than 6 billion barrels. Dhi Qar is also rich in minerals and other raw materials. It encompasses large agricultural lands and a wide irrigation networks. Moreover, there large bodies of water, mainly in the marshes region, that could be used for economic purposes (aquaculture, livestock farming and nature tourism). Dhi Qar is the site of archaeological attractions and has a big tourism potential and important human resources that are considered as a primary developmental factor in the governorate.

5-2-14 Wasit Governorate

The surface of this governorate accounts for 3.9% of the total Iraqi surface area and is mainly known for being a border governorate sharing frontiers with Iran in the east. Due to its location, this governorate gained a commercial importance and is

considered as a large market that could be used to establish services, commercial and tourism projects. It is also known for its arable lands and the relative abundance of water and for Al-Kout dam and its livestock. Wasit produces petrol from Al-Ahdab oil field. It is rich in mineral materials such as limestone and gypsum that are used as raw materials in many industries. There are many gravel quarries, cement, gypsum and ceramic factories in Wasit, in addition to tourism sites such as Al-Dalj marsh that could be developed to become a center of tourism and a natural reserve.

5-2-15 An-Najaf Governorate

The most important comparative advantage of this governorate is having arable lands that could be used in agricultural activities. An-Najaf occupies 6.6% of the total Iraqi surface area. 5% of this governorate is located in the sedimentary plain and its remaining part occupies the western hill. Among its industrial productions we cite industrial rocks and raw materials (limestone, gypsum, gravel and sand) in addition to dolomite, sulphur and uranium. Moreover, An-Najaf is a destination for religious tourism due to the presence of the shrine of Imam Ali Ben Abi Taleb (peace be upon him) and large number of religious and tourism regions and archaeological sites. The human resources in this governorate are abundant and could be used to support the agricultural, industrial and tourism development since the percentage of the economically active population in An-Najaf reached 54% of the total population of the governorate.

5-2-16 Erbil Governorate

Its most important advantage is its location in Northern Iraq and being bordered by Turkey in the north and by Iran in the east. It is known for its beautiful landscape represented by the most famous mountain chains in Kurdistan region. The highest mountaintop in Iraq is the top of Hasarout Mountain located in the northeast of Erbil. This governorate has the most stunning summer resorts such as Bikhhal, Shaklaw, Kili Ali Bek falls, as well as archaeological and historical sites that are scattered across the region. Erbil citadel is believed to be the world's most ancient city and dates back to more than 6000 years. Other historical sites include Almazvria Lighthouse, Tal Qasr and other monuments. Erbil is also known for its agricultural products such as wheat, barley and other crops in addition to trees and fruits. Its most important natural riches are oil, metallic and non-metallic mineral, limestone and marble. Erbil is connected to the other governorates and Iraqi regions by four external roads including the road that starts in Erbil and ends at the Haj Oumran crossing at the Iraqi-Iranian border. Another important road links Erbil to Kirkuk and connects Erbil to Baghdad in the south, starting from Kirkuk. The same road connects Erbil to Al-Sulaymaniya in the east via Kirkuk. It is important to mention in this regard the other two external roads,

Erbil-Mosul and Erbil- Duhok, in addition to secondary roads that constitute the arteries that link Erbil to neighboring region in particular and to Iraq in general.

5-2-17 Al-Sulaymaniyah Governorate

Al-Sulaymaniyah is bordered by Iran from the North and East. It consists of many districts including the district of Benjoin that is considered as a strategic location since it is one of the main border outlets between Kurdistan Region and Iran. Al-Sulaymaniyah is rich in minerals such as iron and Alabaster stones in its mountains. It has oil and gas fields in the district of Jamjamal and an oil field in Kour Mour. Its archaeological sites date back to thousands of years such as Kaji citadel. There are many beautiful summer resorts in this governorate including Ahmada, Awserjenar and Dukan and the famous Azmar Mountain in the city in addition to other sites. Al-Sulaymaniyah has two big dams that were built in the fifties of the previous century, the Dukan and Darbindikhan dams. The governorate is known for its agricultural crops especially grains, trees, fruits and sugar beet. It also has many natural rangelands. The city of Sulaymaniyah is a famous cultural center since it is the site of the biggest university in the Iraqi Kurdistan Region, Al-Sulaymaniyah University.

5-2-18 Duhok Governorate

Duhok is an important governorate both historically and geographically. The archaeological monuments and sculptures found in its hills and caves reveal its importance. Besides its unique location at the Turkish border in the North, the strategic international transportation line that connects Iraq, Turkey and the outside world passes by Duhok, in addition to the oil pipeline passing from Kirkuk to Turkey that cuts through its north-west corner. Duhok is known for its diversified terrain that showcases high rugged mountains that surround the city from three sides, and wide plains rich in agricultural resources in the southern part of the governorate. This region is known for its numerous orchards and fruits, specially vineyards and prune trees. The tributaries of the Tigris River irrigate this governorate that is rich in its water resources such as watersheds, waterfalls and natural lakes. Therefore, Duhok gained an agricultural and industrial strength and many beautiful tourism sites since waterfalls are considered as one of the most important power sources. Moreover, Duhok is endowed with oil fields such as Tawki, and Amidiyah oil fields and its soil is rich in sulphur, phosphorus and marble.

In order to link the poles of sectoral development proposed in the plan to their spatial characteristics and based on the current situation, the developmental potential and comparative advantage of each governorate, we suggested the following spatial developmental model for the upcoming phase:

Graph (5-4): Spatial Development Poles in Governorates

Governorate	Poles of Industry and Energy	Agricultural Poles	Tourism Poles
Baghdad	Development poles outside of Baghdad city such as the industrial city of Ouwairej an Al-Nahrawan	Agricultural development poles in the vicinity of the city of Baghdad	The pole of Tigris river and Al-Jaich canal; restoring historical and archaeological sites and Imam's shrines...
Ninewa	Developing and improving the proposed industrial pole in Hamam Al-Alil	The agricultural pole in the northern, southern and eastern Al-Jazeera lands	The development pole in the lake of Mosul dam; restoring forests, urban archaeology and nature, religious and archaeological tourism sites
Basrah	Exploiting oil fields and using it in oil and petrochemical industries, establishing the port of Al-Faw al Kabeer as a comprehensive economic investment city	Supporting the revitalization of large palm tree orchards on Shatt Al Arab	The tourism development pole in the marshes regions and in areas overlooking the banks of Shat Al Arab, especially the river islands therein such as Sindibad and Umm Al Rasas
Babil	The industrial development pole in Iskandariah and Jaraf Al Sakher regions	The agricultural development pole in the regions bordering the Euphrates and in Al-Qassem region through the green gardens of Al-Qassem university	The archaeological tourism development pole in the historical, tourism and religious monuments in Babil
Karbala	The industrial development pole for extractive industries in sand quarries and bricks and cement industries	The agricultural development pole in orchards and regions bordering the Euphrates	The religious tourism development pole represented by the Shrines of Al-Hussein and Al-Abbas (peace be upon them) and nature tourism in Al-Razaza Lake and Ain Tamr
Diyala	The industrial development pole represented by extracting oil and gas from Khan Field and other oil fields and promoting food industries	The agricultural development pole in fruit orchards that should be restored	The tourism development pole represented by Al-Soudour region and nature tourism destinations
Kirkuk	The industrial development pole represented by oil and gas fields in Kirkuk and Jambouroubay Hassan fields	The agricultural development pole in Al-Huwayjah District to grow strategic crops (wheat and barley)	The nature tourism development pole represented by Kirkuk citadel and religious tourism such as churches and convents
Salah ad Din	The industrial development pole represented by Biji refinery, Biji power plant, Samra pharmaceutical factory and cement and gypsum factories	The agricultural development pole in the orchards regions in the district of Al-Dajeel, Balad, Samra and Sharqat.	The religious tourism development pole represented by Al-Rawdah Al Askariya and the shrine of Ali Al-Hadi and Al-Hassan Al-Askari" (peace be upon them) and nature tourism represented by Al-Tharthar lake
Al-Anbar	The phosphate industry development pole in Akashat and glass, gravel, sand, limestone and dolomite production	The agricultural development pole in the regions bordering the Euphrates in the northern desert	The nature tourism development pole represented by Al-Habaniyah lake, Haditha dam and Al-Ouyoun in Haditha and Kabisah and promoting medical tourism therein
An-Najaf	The industrial development pole in the western hill in Al-Shabaka and regions with gypsum, limestone, gravel, sand and dolomite	The agricultural development pole in the regions bordering the Euphrates and in Al-Mekhashab district	The religious tourism development pole represent by the shire of Imam Ali Ben Abi Taleb (peace be upon him), the shrines of pure Imams and archaeological sites
Al-Diwan-iyah	The industrial development pole represented by rubber, car wheels and textile factories in Al-Diwaniyah in addition to cement and bricks factories	The agricultural development pole in the regions bordering the river and inside the Middle- Euphrates region, especially rice and barley crops	The nature tourism development pole represented by Al-Dalji Marshes in addition to the archaeological tourism sites

Governorate	Poles of Industry and Energy	Agricultural Poles	Tourism Poles
Wasit	The industrial development pole represented in Al-Ahdab and Badra oil fields and mineral materials such as limestone, gypsum, gravel and cement quarries, Al-Gharaf and Al-Rafidein field and other oil fields used for extractive industries and manufacturing	Promoting the agricultural development pole in Al-Souwayrah and Al-Hay districts	The nature tourism development pole represented by Al-Damlij marshes and natural tourism sites represented by Al-Kout dam
Dhi Qar	The industrial development pole represented by Al-Gharaf and Al-Rafidrein fields and other oil fields used for extractive industries and manufacturing	The agricultural development pole present around Al-Gharaf and Euphrates rivers	The nature tourism developmental pole represented by marshes and archaeological tourism in archaeological sites in Our...
Al-Muthanna	The industrial development pole represented by Al-Muthanna oil refinery and Al-Muthanna cement factory and Samawa salt pond	The agricultural development pole in the regions bordering the Euphrates and the desert region	The archaeological tourism developmental pole represented by Al-Warka ruins and nature tourism represented by Sawa lake
Maysan	The industrial developmental pole represented by the oil and gas fields therein and the raw material for sugar cane and paper factories and construction material industries	The agricultural development pole for sugar cane crops and canes used for paper production	The nature tourism development pole represented by the marshes and the religious and archaeological tourism based on the presence of numerous archaeological sites
Erbil	Oil fields, metallic minerals, limestone and marble	The agricultural development pole in fruit orchards and regions for wheat and barley production	The tourism development poles in the tourism mountainous areas and beautiful summer resorts in Shaklaw. Keli Ali Bek waterfalls and Salidin and in historical and archaeological sites represented by Erbil citadel, Almazvria lighthouse and Tal Qasr
Duhok	Productive oil fields such as Tawki fields and regions that are rich in sulphur, phosphate and granite	Fruit orchards and regions bordering the Euphrates tributaries	The tourism development pole in archaeological and historical regions in hills and caves and tourism regions showcasing waterfalls and natural lakes
Al-Sulaymaniyah	Oil and gas fields in Jamjamal district and kormor field and minerals such as iron, Alabaster stones, waterfalls and watersheds to produce electric power	Fruit orchards and grains and sugar beet production	Archaeological and historical regions represented by Kaji citadel and beautiful natural summer resorts in Sarjanar, Dukan dam and Darbandakhan

5-3 Spatial Visions

Achieving a sustainable and consistent spatial development that guarantees equal opportunities for the access to services and basic infrastructures in all Iraqi governorates, reducing the developmental gap between urban and rural areas and guaranteeing the best use of natural resources and comparative advantages of regions and governorates in order to achieve a balanced spatial development that is consistent with the needs, potential and comparative advantages of the different Iraqi regions and governorates and that puts an end to the double-standard spatial development, massive population concentration and the currently prevailing economic activities.

5-4 Goals and Means of 5Achievement

First Goal: Reducing Spatial Disparities among Governorates

Means of Achievement:

- Distributing investment fairly among the different governorates in order to achieve social justice in the provision of services according to planning and economic efficiency standards in commodity sectors.
- Optimizing the exploitation of resources and comparative advantages in governorates.
- Adopting the principle of spatially neutral activities in the regions that suffer from special problems or from weak development potential.
- Encouraging the private structure to invest in least-developed regions through exemption, taxes and fees policies.
- Taking advantage of the numerous developmental studies pertaining to the levels of development disparities among governorates and deprivation levels and adopting their findings when distributing investments in annual budgets.

Second Goal: Reducing the Urban Disparity between Urban and Rural Regions

Means of Achievement:

- Providing public services in rural regions.
- Investing the natural and human resources in rural areas in a proper manner.
- Connecting rural regions with urban regions and among them in order to increase investments in these areas at the economic level and especially in agriculture.
- Completing the comprehensive rural development studies in governorates.
- Giving the priority in service provision to the villages that are nominated to undergo an developmental process or the villages where the population size does not fall below 1000 people.
- Adopting an urban planning law in Iraq that would guarantee the inclusion of all rural villages and regions in municipal services, according to the functions of relevant administrative units.

Third Goal: Improving the Urban Ranking System in Iraq

Means of Achievement:

- Finding vacant regions or investment regions in all governorates and outside city centers and providing them with their own residential complexes.
- Exploiting the comparative advantages of medium and small sized cities and orienting investment and infrastructure towards them.

- Establishing new cities and affiliated cities around large cities especially around those that face future expansion determinants.
- Orienting spatially neutral activities towards small cities or cities with low growth such as universities, faculties and technical institutes.
- Transporting storage and industrial activities from city centers, especially large centers, to suburbs and small and medium cities based on environmental friendly planning grounds.

Fourth Goal: Integrated Transpiration Systems

Means of Achievement:

- Complete the building of highways and arterial roads among governorates such as the number 2 highway and ring roads around large cities including Baghdad.
- Complete the connection between highway number 1 and the urban centers located nearby and restoring this road.
- Cross-linking roads between governorates and medium and small cities.
- Strengthening the rural road network based on the priorities of comprehensive agricultural and rural development.
- Strengthening the road network that connects border outlets with cities located in their axis and that are not currently linked to them.
- Building the tracks of double railroads in the regions that are not served by railroads according to modern specifications in the axis of Baghdad, Kout, Nasiriyah, Basrah- Baghdad Kout, Amara, and Basrah.
- Improving the current transportation lines and transforming them to double lines with a speed limit of 250 km/hour.
- Executing the railroad track of Baghdad-Kirkuk that divaricates to Erbil and Al-Sulayaniyah.
- Building the ring railway line around Baghdad.
- Promoting public transportation in cities and specifically large cities in order to reduce traffic jam.
- Building a modern metro railway network.
- Edifying airports in several Iraqi regions based on the findings of the technical and economic feasibility studies.

Fifth Goal: Urban Renovation in City Centers and Reviewing the Use of Urban Lands

Means of Achievement:

- Preparing integrated studies about urban renovation regions in Iraqi cities, especially large and archaeological cities in order to conserve them and address the situation of its residents.

- Activating investment in urban renovation and restoration regions according to the basic scheme of cities and urban renovation studies and by different investment methods including selling the real estates of investing companies and founding a partnership between landlords and renovating companies. Transporting the unnecessary uses in cities such as industrial and storage use to adequate locations inside or outside the cities and within specialized complexes designed especially for such use.
- The compliance of the Secretary and municipalities of Baghdad to the planning uses and standards that are in force and prohibiting violations in the type of use or the segmentation of real estate below the approved planning standards.
- Conserving the historical and architectural heritage of buildings by encouraging their owners to preserve them and invest them at the economic level.
- Transforming some crowded commercial and subsidiary streets in city centers to pedestrian streets that are served by a public transportation such as tramways and subways.

Sixth Goal: Strengthening Participation and Decentralization in the Management of Development

Means of Achievement:

- Strengthening the development of regions and governorates by increasing the proportion of program allocations from the total investment budget of the state and determining the side responsible for executing local projects in governorates such as education, health, municipal services, water, sanitation and any other project covering a determined governorate.
- Strengthening the role of local administration in the decision-making process of federal ministries concerning projects at the local level.
- Activating the planning and development councils in governorates to coordinate between federal ministries and local governorates.
- Building the capacities of local cadres, allowing them to play their required roles properly during the planning, implementation, supervision and monitoring phases.
- Strengthening coordination and integration between planning administrations that are affiliated to the Ministry of Planning and the competent authorities in ministries and local governments; and preparing the plans for governorates in a participatory manner.
- Guaranteeing that governorates are respecting justice and transparency when distributing the outputs of development among all administrative units in the same governorates and according to the needs, population concentration of said governorates and in coordination with the local councils in districts and areas.

Seventh Goal: Solving the Informal settlements Problem

Means of Achievement:

- Setting a comprehensive plan to identify the size of the problem and its spatial distribution and giving the priority to solving this problem in the medium term.
- Choosing the right means to address the problem by:
- Reorganizing informal settlements in case it was possible to respect the minimum planning and environmental condition and requirements and including informal settlements in all basic services.
- The possibility to improve the situation of informal settlements by adopting a participatory method to develop informal settlements by dividing the land to highly concentrated residential units and to commercial investment units that would participate in funding the investing.
- Finding spaces to relocate trespassers in case it was impossible to reorganize their regions and in case the state takes charge of the relocation requirements or providing long-term soft loans.
- Providing job opportunities in relocation regions.
- Adopting the necessary proactive arrangements to prevent the establishment of new informal settlements.

Eighth Goal: Activating Urban Management and Urban Planning

Means of Achievement:

- Setting a national strategy for urban development and respecting its indicators when preparing and executing spatial development programs.
- Drafting and adopting a national law for urban planning that states the structure of the institutions that are in charge of urban planning at the federal level and in governorates and the planning functions of each, as well as the mechanisms for drafting and adopting plans and monitoring their implementation and the procedures to be taken in case the basic schemes were violated.
- Activating the commitment to the regulations and mechanisms of urban planning and the basic schemes of human settlements without violations.
- Developing mechanisms to control the implementation of basic schemes without violations.



6-1 Education

Education is still one of the major concerns facing both developing and advanced countries. Despite significant progress in developing primary education facilities, increasing school enrollment and literacy and efforts to improve the quality of education that are moving at a quickened pace, the challenge of keeping up with the knowledge structure and skills development is still a bigger challenge in developing countries in terms of kindergartens, pre-university education and all university levels and across all social and economic classes, both in rural and urban regions and in small and large cities and villages.

Planning and drafting policies to promote education and build knowledge are considered to be among the main steps to make people more aware of the biggest challenge they will face in the future in terms of obtaining knowledge and skills. Thus, there is an urgent need for them to understand their current situation and be aware of the steps that should be taken to improve the quality of their lives.

Education guidelines in Iraq are based on an integrated human capital that is considered as a guiding path towards development. This approach would increase and develop the capacities of Iraqi individuals during the education cycle, starting from early-childhood learning, to pre-university education and higher education in addition to the other paths of knowledge building.

6-1-1 Situation Analysis

Education policy in Iraq aims to build human capital based on an educational system that strives to prepare future generations to deal with constantly changing national, regional and international conditions. Simultaneously, the policy emphasizes the importance of national identity and social, ethical and cultural values.

Based on the constitutional principles, the state commits to provide education opportunities for all female and male citizens of school age and to increase the chances of receiving an efficient education at other levels such as higher education, including vocational and informal education.

During the last several decades, Iraq has accomplished many important achievements in literacy and education by allocating increasing financial and human resources to fight illiteracy, mainstream primary education and widen the scope of intermediate, secondary and higher education.

The state has also implemented additional procedures to bridge the remaining gender gap in enrollment rates at all levels and types of education. However, as some statistical indicators show, the education process still faces many challenges and problems that require institutional and social intervention to mitigate their repercussions.

Education indicators in Iraq are still low and lag relatively far behind the desired goals. Thus, education as an empowering tool, is still unable to solve the problems of illiteracy and school dropouts and to achieve gender equality in access to education. Gender disparities and geographical imbalances in education are still persisting: gender disparity in primary-school enrollment and between rural and urban regions and among governorates range between low and high rates. This constitutes an obstacle obstructing the achievement of the second Millennium Developmental Goal concerning the implementation of universal primary education by 2015. Moreover, the enrollment rates at the intermediate and preparatory education levels are also declining.

In light of increasing demographic growth and the gaps in financial, human and technical capacities, the quantitative aspect of education started to grow at the expenses of quality. Even if it is difficult to define the strength and the directions of these influences ever so often, much of the data and signs currently point to a setback or imbalances in educational advancement, especially in the short term.

First- Enrollment in Education

There is a persistent gap in school enrollment ratios between the three education stages (primary, intermediate and preparatory). According to this ratio's indicators, less than half of the outputs of primary education are enrolled in intermediate schools. The same goes for the outputs of the intermediate stage and reveals the extent of the squandering of education opportunities since more than half of the students in each stage are reluctant to finish their education within the determined timeframe.

A- Governmental Primary Education

Primary education is still suffering from gaps despite the fact that many regions of the world are getting close to mainstreaming this level of education. In Iraq, at least one child out of ten of primary-education age is out of school. Even children who are enrolled in schools face a variety of environmental, economic, social and logistical problems that are collectively impeding the education process and affecting its quality in addition to reducing school enrollment ratios. Girls are affected the most by this situation because they have to juggle their studies and other duties imposed by their cultural and economic milieu.

Palpable progress has been accomplished due to the effort made in education during the last academic years from 2004/2005 to 2011/2012 in terms of net enrollment ratios

for the primary stage that scored between 86% and 92% amongst children between the ages of 6 and 11.

B- Governmental Secondary Education

Disparities in the provision of education services still persist, especially in secondary education, between urban and rural regions, according to gender and among governorates. The most severe disparities are seen in the preparatory stage both in terms of the dissemination of education, i.e. school buildings (which can be measured based on disparity in the ratio of the number of schools for an education stage to the number of schools for the previous stage) or in terms of providing quality requirements for education (presence of operating school laboratories, disparities in the distribution of teachers of different skill levels). These requirements are usually met in the capital or the population centers of the various governorates and this situation has led to the loss of educational opportunities for young people and squandered the possibility of benefiting from more advanced specialization at higher levels on the academic ladder.

Despite the increase in school enrollment ratios amongst students between the ages of 15 to 17 between the years 2004/2005 to 2011/2012, there is still a huge gap in this field that is likely due to the delay in the intermediate stage that did not witness any improvement in enrollment ratios. The net enrollment rate for students between the ages of 12 to 14 settled down at 40% as shown in Table (6-1).

The persisting gap between the three stages reflects a clear structural imbalance in the knowledge building system. According to the above-mentioned indicators, less than half of the graduates of primary education are enrolled in the intermediate stage and the same goes for the preparatory level in comparison with the intermediate stage. This reveals the squandering of education opportunities since more than half of the students are reluctant to finish their education in each stage within the determined timeframe. The situation is exerting high pressure on the education budget and leads to the loss of financial allocations that could be invested in creating other education opportunities.

C- Private Education

The private sector contribution rate in providing education services has risen. The number of private schools in 2009/2010 and 2010/2012 has increased from 286 to 558 including a rise from 125 to 223 kindergartens, from 87 to 156 primary schools and from 74 to 176 secondary schools. Registered enrollment in these schools increased from 4999 to 6370 students. This is a very limited contribution to primary education in comparison with the public sector. Furthermore, infrastructure (school buildings) is not designed for academic and educational purposes and is not equipped with

complementary accessories such as playgrounds and laboratories that are required in order to guarantee adherence to health, environmental and educational standards when issuing licenses for such buildings.

Table (6-1): Net and Gross Enrollment Rates per Year, Sex, Age and Education Stage for the Period (2004-2005/ 2011-2012)

Year	Net Primary-Education Enrollment Rate for 6 to 11 years old			Gross Enrollment Rate in Primary Education			Net Enrollment Rate for 12 to 14 years old			Gross Enrollment Rate in Intermediate Education			Net Preparatory-Education Enrollment Rate for 15 to 17 years old			Gross Enrollment Rate in Preparatory Education		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
2004/2005	92	79	86	109	88	99	45	35	40	73	47	60	17	16	16	28	23	26
2005/2006	91	79	85	110	90	100	36	30	33	65	44	54	16	16	16	29	24	27
2006/2007	90	80	85	112	91	102	39	32	36	68	46	57	18	17	18	32	25	28
2007/2008	91	82	87	112	94	103	46	40	43	71	49	61	21	20	21	35	27	31
2008/2009	94	87	91	110	98	104	39	33	36	75	51	63	17	17	17	36	29	32
2009/2010	95	86	91	112	98	105	37	32	34	78	54	66	16	17	16	36	30	33
2010/2011	95	86	91	109	96	103	38	34	36	75	52	64	19	20	19	39	31	35
2011/2012	96	88	92	110	98	104	42	37	40	83	55	69	21	21	21	42	33	38

Source: Ali Al-Zoubaydi, PhD, Directorate General of Educational Planning, Ministry of Education, Baghdad

Table (6-2): Number of Primary Schools, Faculty Members and Students and Student/School and Student/Teacher ratios (only in urban regions)

Governorates Number of Schools	2004/2005						2007/2008						2011/2012					
	Num- ber of Schools	Number of Teach- ers	Number of Stu- dents	Student/ School Ratio	Student/ Teacher Ratio	Num- ber of Schools	Number of Teach- ers	Number of Stu- dents	Student/ School Ratio	Student/ Teacher Ratio	Num- ber of Schools	Number of Teach- ers	Number of Stu- dents	Student/ School Ratio	Student/ Teacher Ratio			
Ninewa	529	8191	280305	530	34	562	10253	288760	514	28	639	11285	319245	500	28			
Salah ad Din	270	6530	125349	464	19	240	5968	83949	350	14	304	6645	99944	329	15			
Kirkuk	314	6036	100552	320	17	366	6395	115382	315	18	442	7645	128058	290	17			
Diyala	218	5935	93351	428	16	241	7451	89298	371	12	285	8044	119888	421	15			
Rasafa /1	488	11817	264689	542	22	295	9940	157227	533	16	321	10824	178264	555	16			
Rasafa /2	340	9406	242915	714	26	310	10150	248096	800	24	366	11212	287362	785	26			
Rasafa /3	-	-	-	-	-	294	7865	184854	629	24	328	7885	181693	554	23			
Karkh /1	159	5187	92219	580	18	181	6777	81305	449	12	179	7485	84849	474	11			
Karkh /2	282	6271	156495	555	25	263	8119	118414	450	15	300	9849	158129	527	16			
Karkh /3	142	5571	117824	830	21	157	6684	103807	661	16	169	6801	114265	676	17			
Al-Anbar	316	5475	93726	297	17	493	8545	127817	259	15	457	9957	151080	331	15141589			
Babil	251	6633	118427	472	18	257	8300	141589	551	17	302	8666	161466	535	19			
Karbala	228	5198	88086	386	17	240	7318	114221	476	16	265	7549	132931	502	18			
An-Najaf	263	5622	126067	479	22	302	7516	146054	484	19	340	8357	168104	494	20			
Al-Qadisiyah	223	2559	92108	413	36	245	7257	114432	467	16	283	8146	126705	448	16			
Al- Muthanna	125	2191	45864	367	21	160	3130	48397	302	15	176	3106	55755	317	18			
Wasit	136	5661	85121	626	15	277	6220	100613	363	16	321	7065	117822	367	17			
Dhi Qar	411	9003	144072	351	16	421	10530	173419	412	16	468	11472	195616	418	17			
Maysan	184	3900	78686	428	20	281	7568	94218	335	12	343	8671	120485	351	14			
Al-Basrah	623	10961	253843	407	23	635	13887	301879	475	22	720	15100	352853	490	23			
Total	5502	122147	2599699	473	21	6220	159873	2883731	456	18	7008	175764	3254514	464	19			

Source: Ali Al-Zoubaydi, PhD, Directorate General of Educational Planning, Ministry of Education, Baghdad

Table (6-3): Educational Indicators in the Primary Stage for Selected Years

Governorates	2004/2005		2007/2008		2011/2012	
	Student/School Ratio	Student/Teacher Ratio	Student/School Ratio	Student/Teacher Ratio	Student/School Ratio	Student/Teacher Ratio
Ninewa	530	34	514	28	500	28
Salah ad Din	464	19	350	14	329	15
Kirkuk	320	17	315	18	290	17
Diyala	458	16	371	12	421	15
Baghdad/ Al-Rasafa 1	542	22	533	16	555	16
Baghdad/ Al-Rasafa 2	714	26	800	24	785	26
Baghdad/ Al-Rasafa 3	-	-	629	24	554	23
Baghdad/ Al-Karkh 1	580	18	449	12	474	11
Baghdad/ Al-Karkh 2	555	25	450	15	527	16
Baghdad/ Al-Karkh 3	830	21	661	16	676	17
Al-Anbar	297	17	259	15	331	15
Babil	472	18	551	17	535	19
Kabala	356	17	476	16	502	18
An-Najaf	479	22	484	19	494	20
Al-Qadisiyah	413	36	467	16	448	16
Al-Muthanna	367	21	302	15	317	18
Wasit	626	15	363	16	367	17
Dhi Qar	351	16	412	16	418	17
Maysan	428	20	335	12	351	14
Al-Basrah	407	23	475	22	490	23
Total	473	21	456	18	464	19

Second- The Quality Gap

Despite the clear progress that has been achieved in female education in general, there are still many problems and challenges in this field. Female illiteracy rates are higher than those of males in both the 15 years and older and in the 15 to 24 years old age categories. At the pre-university and university education levels in Iraq, gross and net female enrollment rates are lower than those registered in many other countries in the world.

The findings of the latest surveys reveal disparities between male and female enrollment rates which indicate that the education system has failed to bridge the gap in gender-based enrollment. The net male enrollment rate in primary education reached 96% compared with 88% for females, and 42% compared with 37% respectively in intermediate education. As for the preparatory stage, the education system managed to score equal rates of 21% for both genders. These indicators show that the education system is influenced by the cultural systems and social customs and tra-

ditions that continuously prevent women from pursuing their education and reflect disparities in the delivery of education services.

Third- School Buildings

- The number of school buildings reached 10451 in the 2010-2011 academic year and 10658 in 2011/2012.
- The double-shift system is implemented in 5502 buildings while 609 schools are operating according to the triple-session system during the academic year 2010/2011.
- There are 497 schools made from mud, 1904 inadequate schools and 6271 schools that need restoration.
- The number of vocational education buildings in Iraq reached 295 for the three academic years 2009/2010, 2010/2011 and 2011/2012, distributed as follows: 198 schools for industrial specializations, 87 schools for trade specializations, 8 schools specialized in agriculture and 2 schools for domestic arts. There are 205 boys' schools, 71 girls' schools and 18 mixed schools.
- 30% of school buildings suffer from the low efficiency of health facilities, 28% suffer from weak drinkable water systems and 41% have inadequate sanitary networks. 17% of schools are not equipped with fences.

Fourth- University Education

- Iraq currently has 19 universities excluding the proposed additional 12 universities among which includes 8 new ratified universities and 4 new universities going through the process of ratification.
- The number of governmental faculties reached 273 while there were 45 private faculties during the 2011/2012 academic year. The interest in technical education is reflected by the presence of 16 technical faculties and 27 technical institutes. 5 practical faculties are currently under construction.
- The admissions rate in Iraq is estimated at 14% of the population in university-stage age and by far lower than the global rate of 27%. Admission rates registered 13% for females compared with 16% for males. The numbers of applicants for central admissions grew from 88837 in 2009/2010 to 112019 in 2010/2011 (increasing by 26%).
- The number of students admitted in governmental and private Iraqi universities and institutes rose from 116308 female and male students in 2003/2004 to 157560 students in 2010/2011, increasing by 41252.
- The number of students admitted in private faculties grew from 13973 in 2009/2010 to 20631 in 2010/2011, registering an absolute increase of 6658 students and by 47.6% during 2009/2011, including a rise of 35% for females and 65% for males.

- The percentage of students admitted in morning classes for the academic year 2010/2011 reached 80% compared with 20% in night classes.
- The percentage of students admitted in private universities reached around 12% of the total number of students admitted in overall university education for the year 2010/2011.
- The quantitative expansion in the capacity of governmental and private universities has not been matched by a qualitative expansion that takes into consideration the specializations of preparatory education graduates as 60% of students graduate from the scientific branch and 40% from arts.
- 70% of students admitted in universities and institutes are concentrated in humanities, literature, management and economic specializations while scientific and engineering specializations only attract 30% of graduates.
- Despite the rise in student tuition rates in Iraqi universities and their variance among human and scientific specializations, these fees are still below those registered in advanced states.
- The number of students in higher education increased by 22.4% from 17252 in 2009/2010 to 21121 in 2010/2011, an absolute rise of 3859 students.
- The percentage of female students in higher education rose from around 37% in 2010/2009 to 38.6% in 2010/2011.
- The number of PhD students reached 6303 in 2009/2010 and increased to 7296 in 2010/2011 while the number of masters students increased from 10051 in 2009/2010 to 12687 in 2010/2011. Students studying for high diplomas saw their numbers increase from 898 in 2009/2010 to 1138 in 2010/2011.

Fifth- Expenditure on Education

Despite the continuous rise in the percentage of GDP expenditure on education and the state's public budget that allocated 6.9% for education and 2.6% for higher education in 2012, it still does not meet the basic requirements for infrastructure development and for improving the educational environment. Current expenses constitute the biggest part of the Iraqi education budget while investment expenses rank low, especially during the last few years. This hinders the improvement of education infrastructure and reduces the rate of implementation of the investment budget. The state is also failing to meet the requirements of scientific research in terms of providing raw materials, equipment, computers and specialized laboratory equipment.

In comparison with other countries, the share of education expenses per student is limited in Iraq. Moreover, there is still an urgent need to increase public expenditure on education, especially when it comes to investing in the basic educational environment.

- 10% of the state's public budget is dedicated to the education sector for the year 2010-2012.

- The reality of investment expenses in the Ministry of Education show a relative decrease in the year 2011-2012 compared with 2010, while current expenses grew during the last couple of years.
- As for higher education, investment and occupational expenses increased in 2012 with a clear decline in the Ministry's share of the public budget during the last two years, as shown in the table below.

Table (6-4): Amounts Dedicated for Education and Higher Education from the Public Budget for the Years 2010-2012

Ministry of Education				
Years	Current	Investment	Total	Percentage of Public Budget Allocation %
2010	5044.444	500.000	5544.444	6.5
2011	7133.005	450.000	7583.005	7.8
2012	7603.235	455.000	8058.235	6.9

Ministry of Higher Education and Scientific Research				
Years	Current	Investment	Total	Percentage of Public Budget Allocation %
2010	2198.563	350.000	2548.563	3.0
2011	2174.414	400.000	2574.500	2.7
2012	2612.382	490.000	3102.382	2.6

Sixth- Illiteracy:

Despite immense efforts exerted in combating illiteracy and promoting adult education and the clear progress in this field reflected by the decrease of illiteracy rates over the past two decades, these efforts were disproportionate and have declined in terms of scope, size, sustainability and results to the extent that they are now believed to be the biggest obstacle to the education and knowledge building system in Iraq. The average percentage of the population that is illiterate reached 22.9% and the percentage of minimum literacy (basic education) scored 58.3% while the share of the population who pursued an advanced level of education (preparatory and above) was limited to only 19.8% (2011 Iraq Knowledge Network Survey). These figures vary based on gender, region and age category. Illiteracy registered high percentages among women in comparison with men and in rural areas compared with urban regions. It reached noticeably high rates among adults, especially those who are 50 years old and above. Statistical data in this field show the following:

- Disparities in the provision of education services in Iraq, which explains the wide gender gap in illiteracy. Female illiteracy reached 28.5% compared with 14% among males; 16.8% of women received basic education in comparison with 20.9% for men.
- Disparities in illiteracy rates vary based on region where illiteracy reached 30.5% in rural areas compared with 16.6% in urban regions.

- Disparities in illiteracy rates vary by governorate: 11.9% in Baghdad, 22.4% in other governorates and 26.3% in the Kurdistan Region.
- The total number of literacy centers for the academic year 2010/2011 was around 724, including 178 for females, 529 for males and 17 mixed centers. 73.6% of these centers are located in urban regions while 26.4% are in rural areas.
- The number of students enrolled in literacy centers reached 53403 in 2010/2011 after the opening of new centers.
- Al-Muthanna, Maysan and Duhok Governorates registered the highest illiteracy rates with 32.9%, 30.8% and 30.7% respectively while Baghdad, Diyala and Babil scored the lowest rates with 11.9%, 15.8% and 17.1% respectively.

6-1-2 Challenges:

Since the sixties, Iraq has made important achievements in the fields of education and combating illiteracy by allocating increasing the financial and human resources available to fight illiteracy, mainstream primary education and by widening the scope of intermediate, secondary and higher education. However, the circumstances related to the war during the eighties, the economic embargo and their subsequent repercussions led to increasing disparities in education levels among genders and between geographic regions. Enrollment rates in primary and intermediate education are still low and there is a huge gap between men and women, among residents of rural and urban areas and between governorates. This situation has obstructed the achievement of the second Millennium Development Goal that aims for universal primary education by 2015.

First- Pre-University Education

- Illiteracy is the biggest obstacle in the education building system due to low enrollment rates in literacy centers.
- Net enrollment rates in the primary, intermediate and secondary stages are still low (92%, 40% and 21% respectively) and the quality of education therein does not match modern advancements in education.
- There are still huge disparities between rural and urban areas and among governorates in accessing education services at all levels.
- Many remote rural areas and urban slums are the most affected by these disparities and the most deprived from education.
- The weak infrastructure in the operating education sector, especially in terms of school numbers, overcrowding and the increasing number of schools using the double and triple shifts system.
- The percentage of students enrolled in vocational education in the secondary stage is still low.

- Education outputs are inconsistent with labor market needs and enrollment rates between vocational and general academic education are disproportionate.
- Education curricula, programs and practices do not meet the requirements of the knowledge economy.
- The capacities and skills of education entities are weak and do not cope with global advancements which is reflected on the quality of the education system outputs.
- The weak infrastructure of information and communication technology and knowledge networking at all levels.
- Some cultural and social practices, such as early marriage for girls and poverty in households, limit the options of pursuing education for girls.

Second – University Education

- Admission policies are not consistent with the capacity of universities and universities and faculties are built before securing the necessary requirements such as laboratories and competent teachers.
- The outputs of the education system do not match labor market needs.
- Limited quantitative investment aiming at improving the education environment which makes it difficult to access modern technologies, inventions and innovations at an early stage.
- The scientific research field is weak in its capacities, activities, production and quality which limits the possibility of publishing Iraqi research in international journals.
- The weak implementation and decline of quality management.
- Practical teachings and the topics of higher education theses are not tightly linked with practical problems facing the Iraqi economy; these efforts are not oriented to address some of the problems faced by businessmen in the private sector.
- A large and unplanned expansion in private university education that focuses on human and management specializations that are not consistent with the labor market needs.
- The prevalence of materialistic values and uncontrolled changes in the system of values, at the individual or community level, constitutes a huge challenge for the education system in Iraq.

6-1-3 The Vision

“Education opportunities for all that meet the requirements of the labor market and the knowledge economy and that promote the values of citizenship.”

6-1-4 Goals

This Plan is based on the goals and targets of the 2012 National Education Strategy that asserted that education is a basic factor for the advancement of society and a right guaranteed by the state. It is compulsory in the primary stage. The state has pledged to combat illiteracy and encourage the private sector to play an important role in the education and higher education sector while upgrading its level and content. The aim is to also increase the competency of Iraqi people both in Iraq and abroad while consolidating the requirements of education quality in all levels in order to prepare and qualify human resources to carry the burden of the Iraqi society and state. Scientific research for peaceful purses will be encouraged in order to serve humanity and support excellence, creativity, innovation and all aspects of ingenuity. Based on these goals and targets, this five-year Plan will focus on the following quantitative and qualitative phased goals:

First- Quantitative Goals

A- Enrollment

- Increasing the net enrollment rate in kindergartens to 15% in the target year
- Increasing the net enrollment rate in primary education to 95%.
- Increasing the net enrollment rate in intermediate education to 45%.
- Increasing the net enrollment rate in preparatory education to 30%.
- Increasing the net enrollment rate in vocational education to 5%.
- Increasing the number of private schools to 7500.
- Increasing the number of schools for the talented and gifted to 28.
- Increasing the enrollment rate in higher education from 14% to 20%.
- Increasing the net enrollment rate in higher education either inside or outside Iraq from 5% to 10%.
- Promoting the private sector's share in the provision of general and higher education opportunities to at least 20%.

B- Buildings and Equipment

- Providing sufficient buildings to absorb the increase in the targeted numbers of students in kindergartens and schools, improving the organizational structure and creating a safe and healthy educational environment in all education and learning institutions as follows:
- Building 7220 new facilities for kindergartens and primary schools to increase the net enrollment rate to 15% in kindergartens and 95% in primary schools.

- Building 2250 new secondary schools to increase the net enrollment rate to 45% and 30% in intermediate and preparatory education respectively.
- Building 100 new vocational schools to increase net enrollment to 5%.
- Building 294 facilities to do away with the triple shifts system in Baghdad and the governorates.
- Building 67 pavilions for the triple shifts system in Baghdad and the governorates.
- Rebuilding 497 schools to replace schools made from mud.
- Rebuilding 559 dilapidated schools.
- Providing adequate education, health, sports, environmental and psychological services in all kindergartens and schools.
- Opening of more schools in rural and remote areas and opening girls' schools in rural regions and one-semester community colleges to achieve gender equality by increasing the percentage of females enrolled in general and high education to 50% of total registered students both in rural and urban areas.
- Providing independent rooms for instructors, spending on university buildings and facilities and providing adequate space for reading halls in university libraries. Building teacher-spaces for reading and information exchange, upgrading laboratories and providing the necessary equipment. Providing computers, Internet connections and the adequate infrastructure to equip universities with Internet connection by optic fibers and other communication supplies.

Table (6-5): Some Current and Targeted Quality Indicators

Indicator	Teaching (teacher)/ Class	Teaching / other) Class	Student/ Desk	Student/ Reading Desk	Teaching/ Computer	Student/ Computer	Higher education student/ Computer
Current Situation	4	4	12	19	7	24	21
Targeted Situation	1	2	4	6	1	6	4

Means to Achieve the Quantitative Goals

- Providing the necessary financial allocations to build kindergartens and schools and equip them by implementing annual investment programs and the Regions' Development Program.
- Strengthening the environment of empowerment to improve private sector contribution to general and university education.
- Adopting international standards in determining the number of students per teacher or school or university instructor.

Second: Qualitative Goals

First Goal- Improving Education Status

Means of Achievement

- Creating an environment that would improve the quality of education based on upgrading the economic and social levels of workers.
- Empowering and building the capacities of workers in this field.
- Increasing the social status of teachers and instructors.

Second Goal- Reducing school-drop-out rates

Means of Achievement

- Increasing enrollment rates in all education stages while taking in account population growth rates of groups at the age of receiving education.
- Creating an environment that guarantees success for every student enrolled in education and providing help for reluctant students and reducing overcrowding in classes.
- Creating an adequate educational and learning environment to attract students.
- Adopting programs to make people aware of the importance of enrolling in all education stages.
- Early detection of talented students, enrolling them in schools for the talented and gifted and providing them with necessary care and support.

Third Goal – Literacy

Means of Achievement

- Dedicating the necessary financial allocations from the federal budget and the Regions' Development Program to implement the literacy program.
- Providing infrastructure such as centers, equipment and teachers.
- Imposing compulsory education at the intermediate stage (basic).
- Distributing literacy promoting activities among governorates and between urban and rural areas based the illiteracy levels therein.

Fourth Goal- Bridging the Rural-Urban Gap

Means of Achievement

- Delivering education services to rural and remote areas.
- Drafting a rural development plan that guarantees the provision of basic services through mother villages or based on an adequate economic ground.
- Giving material incentives to students and teachers, especially in rural areas and to poor households.

- Encouraging people living in rural and remote areas to engage in educational functions.

Fifth Goal – New Curricula to Promote Innovation and Creativity

Means of Achievement

- Attracting and developing distinguished talents in the teaching profession and increasing training opportunities for teachers and instructors.
- Adopting new teaching curricula in primary and secondary schools that promote innovation and the values of creativity and critical thinking.
- Building units in the teaching design and curricula by providing a means to guarantee the progress of students based on their capacities.
- Supporting students to become responsible for their education through exploration and unleashing their potential.
- Focusing on innovation and promoting entrepreneurship in all teaching materials.

Sixth Goal – Preserving a Strong Ethical Environment

Means of Achievement

- Adopting curricula and programs that promote ethical standards and values as a model for good joint management and promoting social responsibility and citizenship values in Iraqi society.
- Encouraging civil society institutions to organize programs that would instill moral and ethical values.
- Encouraging media to play a more active role in disseminating and instilling moral and ethical values among people by diffusing targeted and consistent materials and programs that would strengthen trust and positive behavior and values.

Seventh Goal- Supporting Students with Special Needs

Means of Achievement

- Creating an adequate environment that would reduce deprivation, increase opportunities for capacity building and lead them to digital learning as needed.
- Building private schools and/ or dedicating special classrooms in schools to create an adequate and dignified environment for students with special needs to guarantee academic accomplishment.
- Developing instructors' and teachers' skills and introducing them to the development and rehabilitation field; launching awareness campaigns about students with special needs.
- Developing special curricula and programs for students who suffer from a special condition that prevented them from completing their education.

Eight Goal- Upgrading Universities in Consistence with the Knowledge Economy Requirements

Means of Achievement

- The university's autonomy, organizational and structural flexibility in all its institutions.
- Developing human resources competencies and qualifications.
- Developing curricula and teaching methods.
- Supporting scientific research according to international standards as a main foundation to build and develop modern universities.
- Developing the quality assurance system as a step towards progress for the short term and as a mechanism to be adopted for the long term in order to disseminate the culture of quality among all development partners.
- Focusing on the qualitative aspect in higher education rather than the quantitative aspect.

Ninth Goal – Focusing on Vocational Training

Means of Achievement

- Increasing the percentage of students enrolled in vocational schools and technical institutes and reducing dropout rates therein.
- Reallocation of resources in favor of technical education.
- Expanding the admissions opportunities of graduates in technical education.
- Bridging the gender gap in technical education enrollment.
- Linking technical education expansion policy to the governorates' comparative advantages and to the prevalent economic activities therein.

6-2 Health: A Healthy Society and Population

The right to good health is one of the basic factors of human rights. Guaranteeing health and wellbeing is a principal component of achieving sustainable economic and social developmental goals.

The health of Iraqi citizens started to improve during the seventies of the last century when the country adopted an advanced health system and a comprehensive basic healthcare network. However, war and crisis has halted the improvement of health conditions. The health system in Iraq suffers from the burden of hundreds of thousands of disabled people and the spread of different types of cancers and congenital malformations resulting from environmental pollution caused by radiation from internationally prohibited weapons during the wars. Moreover, psychological

and chronic diseases such as heart disease, diabetes, and high blood pressure have spread across the country and other contagious diseases that had disappeared in the seventies and eighties of the previous century emerged once again due to poor environmental sanitation, health services and infrastructure.

Based on the belief that the human being is of supreme value and the mainstay of every human environmental effort, Iraq aims at expanding the scope of basic health-care services for all citizens and at building a health system according to international standards which would be managed in a professional manner and provide services for all at reasonable prices in order to achieve relative improvement by adopting institutional regulations, guaranteeing comprehensive coverage and justice in distribution, improving the quality of services and keeping pace with global developments.

6-2-1 Situation Analysis

This health care situation analysis evaluates the accomplishments that have been achieved and the setbacks in the provision of primary, secondary and tertiary health-care. It would help policy-makers draft short, medium and long term plans to improve the healthcare situation and keep pace with global developments. Indicators show, in general, progressive improvement when compared with previous years as follows:

A- Infant Mortality

- Infant mortality rates declined from 65 in 2006 to 33 per thousand live births in 2011. This rate is still high compared with many other countries: United Kingdom 4.9, Hong Kong 4.7, Singapore 2.3, Malaysia 6.1, Thailand 13.0, the Philippines 26.0, and Indonesia 31.0. In neighboring countries, infant mortality rates registered 11 deaths per thousand live births in Kuwait, 26 per thousand in Saudi Arabia and Jordan and 15 per thousand in Syria.
- The mortality rate for children under five years of age decreased from 41 to 38 deaths per thousand live births of the population. Despite the continuous reduction of these rates, they are still high in comparison with some Arab states such as the United Arab Emirates where the rate reached 11 deaths per 1000 live births, 11.5 per thousand in Qatar but with the exception of Yemen where it reached 105 per thousand.
- Infant mortality rates are higher among males than females; it increased to 36 deaths per thousand male live births compared with 30 deaths per thousand female births.
- Infant mortality rates among mothers with low education levels reached 37 deaths per live births while it decreased to 28 deaths per thousand live births for mothers of intermediate or high educational levels. The same pattern occurred with the under-five mortality rates where the level of women's education has positive impact on the infant's chances for good health and survival.

- Infant mortality rates are higher in rural than in urban regions with 36 and 31 deaths per thousand live births respectively.
- Vaccination rates increased by more than 10% - DPT (diphtheria-pertussis-tetanus), Polio, Measles and Hepatitis).
- Clinical capacity is a very important factor that is reflected by the bed occupancy rate indicator that registered 60.1 in 2011 and the beds/1000 people indicator that registered 1.17.

B- Life Expectancy at Birth

Life expectancy at birth witnessed a clear increase during the last few years. After registering 58.2 years in 2006 as in 61.6 years for women and 55 years for men, it increased to 69 years overall in 2011 with 70.6 years for women and 67.4 years for men. This indicator reflects the improvements achieved in all health, economic and cultural conditions. Despite this increase, Iraq still has the lowest life expectancy rate at birth when compared to its neighboring countries, such as Kuwait (77.3 years), Jordan (71.9 years) and Syria (73.6 years).

C- Human Resources

The last three years from 2009 to 2011 did not witness a tangible increase in the rate of doctors, dentists, and pharmacists per 1000 people with an average annual increase of approximately 0.01% in general. The ratio of health professionals per 1000 people grew by 0.01% per year and the nursing staff/ doctor indicator increased from 1.4 to 1.5 during the same period. Although the Ministry of Health has committed to appointing and recruiting all graduates from medical and health universities and institutes to work in health institutions, there is still a need for and a lack of health and medical personnel. This is likely due, among other things, to the demographic growth that prevents full-sufficiency, in addition to the lack of interest in medical staff as shown by the data in Table (6-6) that showcases the percentage of medical staff per 1000 people.

D- Reproductive Health

The Ministry of Health has adopted a health system based on primary health care as the foundation and according to quality standards since they are the first level of services provided to citizens. The Ministry also guaranteed the integration of these services with all service provision levels. However, some communities in villages and rural areas lack access to primary healthcare in general and to comprehensive reproductive health services in particular. The findings of statistical surveys in this field reveal the following:

- The use of modern family planning methods registered 28% of total married women, a low rate in comparison with other Arab and neighboring countries.

- The percentage of unmet needs (women desiring to postpone or stop child-bearing and who are not using contraception) reached 22% of married women of childbearing age.
- The percentage of married women aged between 15 and 49 years and who or whose husbands are using any contraception method increased from 49.8% to 51.2% between 2006 and 2011, which reflects a rise in the general level of reproductive awareness.
- Early marriages and the extended fertility period among Iraqi women is one of the factors that influence reproductive health. The percentage of women between 15 to 49 years old who married before the age of 15 increased from 22.6% to 24.2% between the years 2006 and 2011. Moreover, the percentage of women in the same age group who married before the age of 18 grew from 5.4% to 5.7% during the same period.

Figure (6-1): Percentage of Modern Contraceptive Use in Iraq Compared with other Arab and neighboring States

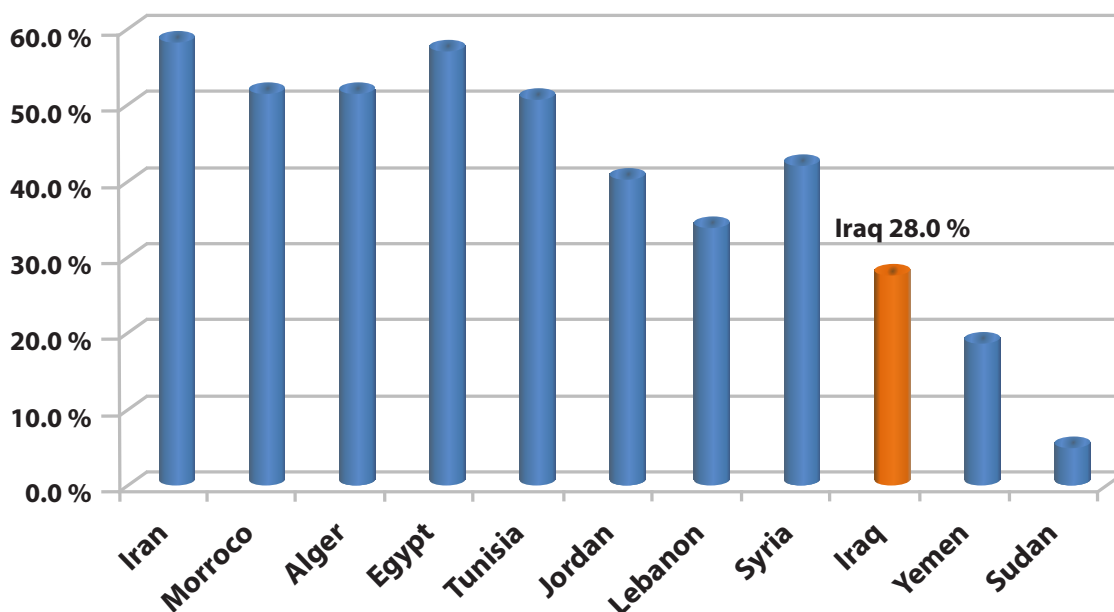
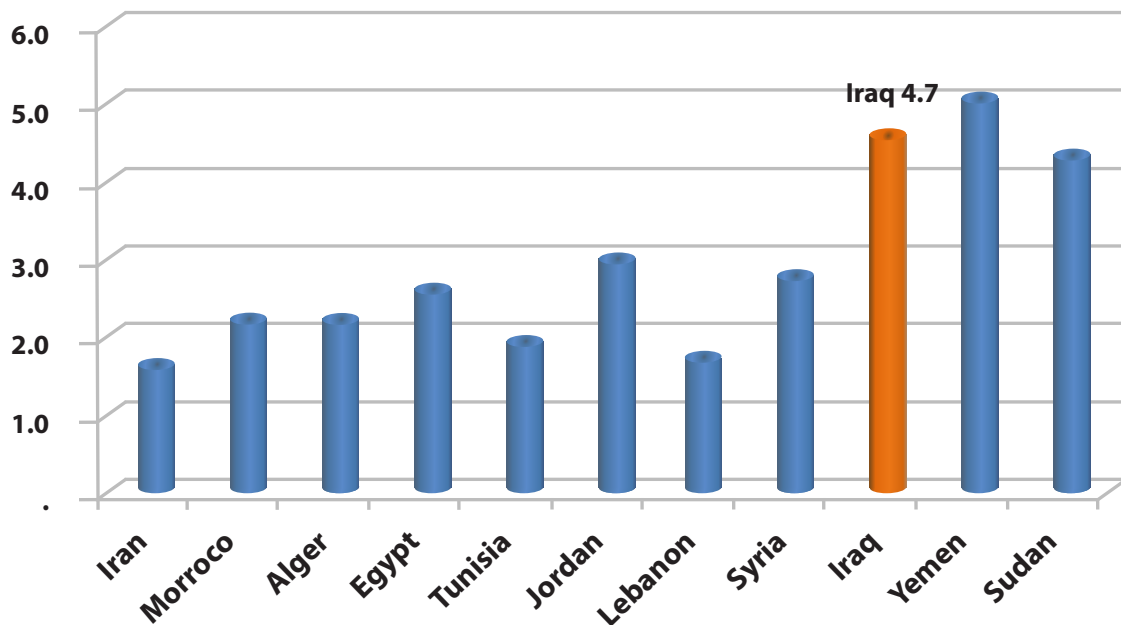


Figure (6-2): Fertility Rate in Iraq Compared With Other Arab and Neighboring States



E- Transmissible Diseases

- ▶ Malaria: the continued implementation of the epidemiological monitoring problem made Iraq a country free of Malaria.
- ▶ Tuberculosis: Iraqi citizens still suffer from the prevalence of this disease in many communities, however positive indicators show a relative improvement in this field during the last three years such as:
 - * Rates of Tuberculosis prevalence per 100000 people declined from 78 to 65/ 100000.
 - * Rates of Tuberculosis-related deaths per 100000 people decreased from 11 to 10/100000.

The proportion of Tuberculosis cases detected and cured under directly observed treatment short course grew from 88% to 89% and the percentage of Tuberculosis cases detected increased from 46% to 61%.

As for the indicators that did not witness any improvement for the period 2009-2011, they are the following:

- The percentage of the population suffering from food insecurity is 3.1%
- The percentage of births attended by skilled health personnel reached 89%.

- The rate of HIV among childbearing women aged between 15 to 24 years old per 100000 women registered 0.01/100000.
- The percentage of vaccination coverage among childbearing women aged between 15 to 49 reached 29%.
- The percentage of prenatal care coverage of fifth visits in primary health centers registered 32%.

On the other hand, the rate of Hepatitis A, B, C, D and E incidence per 100000 people doubled according to the following indicators:

- ▶ The incidence rate of Hepatitis A /100000 people grew from 5.2 to 14.4.
- ▶ The incidence rate of Hepatitis B /100000 people grew from 6.1 to 10.4.
- ▶ The incidence rate of Hepatitis C /100000 people grew from 1.75 to 3.6.
- ▶ The incidence rate of Hepatitis E /100000 people grew from 0.55 to 1.2.
- The percentage of vaccination coverage among pregnant women declined from 80% to 75% for the period 2009-2011.

F- Chronic Diseases

The number of deaths caused by chronic diseases grew slightly from 49.4 to 50.5 per 100000 people for the period 2009-2011.

Table (6-6): The Reality of Health Indicators for 2009-2011

ت.س	Indicator	2009	2010	2011
1	Doctor/Population	0.72	0.74	0.75
2	Dentist/Population	0.16	0.17	0.18
3	Pharmacy/Population	0.19	0.20	0.21
4	Health Professionals/ 1000 people	1.5	1.6	1.7
5	Nursing Staff/Doctor	1.4	1.4	1.5
6	Beds/1000 people	1.14	1.15	1.17
7	Bed occupancy rate %	51.6	51.4	60.1
8	Number of children friendly hospitals	36	36	37
9	Infant mortality rate per 1000 live births	35 per thousand	-	33 per thousand
10	Under-five mortality rate per 1000 live births	41 per thousand	-	38 per thousand
11	Percentage of Under-Five Children Underweight (%)	7.6% مكس 3	-	8.4% مكس 4
12	Percentage of Food Insecure population	3.1 for 2007	3.1	3.1
13	Percentage of Births Attended by Skilled Health Personnel	89	-	89
14	Ratio of Condom Use to Contraceptive Prevalence	1.1	1.1	2
15	Percentage of the People at Risk of Malaria Taking Prompt and Effective Treatment	No cases found	No cases found	No cases found
16	Malaria Infection Rate per 100000 people	No cases found	No cases found	No cases found
17	Tuberculosis Prevalence Rates Per 100000 people	78	78	65

تسلسل	Indicator	2009	2010	2011
18	Rates of Tuberculosis-Related Deaths per 100000 People	11	3	10
19	Proportion of Tuberculosis Cases Detected and Cured Under Directly Observed Treatment Short Course (%)	88	88	89
20	Tuberculosis Cases Detection (%)	46	49	61
21	Percentage of Antenatal Care Coverage of fifth visit in primary health centers	32	32	32
22	Percentage of Vaccination Coverage Among Pregnant Women	80	68.9	75
23	Percentage of Vaccination Coverage among Child Bearing Women Aged Between 15 to 49	29	27.5	29
24	Rate of HIV among Child Bearing Women Aged Between 15 to 24 years old per 100000 women	0.1	0.01	0.01
25	Incidence Rate of Hepatitis A/100000 people	5.2	15.8	14.4
26	Incidence Rate of Hepatitis B/100000 people	6.1	9.6	10.4
27	Incidence Rate of Hepatitis C/100000 People	1.75	3.6	3.6
28	Incidence Rate of Hepatitis E/100000 People	0.55	0.7	1.2
29	Reduction in Premature Mortality from Non-communicable Diseases for Persons Under 60 years of age per 100000 people	49.42	49.99	50.5 (approximately)

G- Health Expenditure

- Financial allocations from the federal budget to the health sector are fluctuating. After increasing from 3% to 7.6% for the years 2007 to 2010, it decreased again to 7% in 2011 and then to 5.5% in 2012.
- There is an imbalance in the health expenditure structure in favor of occupational expenses by 80% to 95%, at the expense of investment expenditure with a percentage ranging between 0%-25 % for the period 2007-2012.
- Effective implementation competency declined as revealed by the decrease in financial expenses that did not exceed 20% of the annual allocations for the year 2010 and 57.5% for the year 2011.

Graph (6-7): Health Sector Allocations for the Years 2007-2012 (Dinars)

Years	Current	Investment	Total
2007	1.860.750.000.000	430.500.000.000	2.291.250.000.000
2008	2.247.343.520.000	100.000.000.000	2.347.343.520.000
2009	3.650.936.315.000	481.500.000.000	4.132.436.315.000
2010	4.632.416.965.000	1.127.000.000.000	5.759.416.965.000
2011	4.672.442.839.000	1.050.000.000.000	5.722.442.839.000
2012	4.941.930.189.000	735.000.000.000	5.676.930.189.000

Source: Ministry of Health Annual Report

H- Services in Hospitals and Specialized Centers (Secondary and Tertiary Healthcare).

- In 2011, there were 327 public hospitals in Iraq distributed as follows:
 - ▶ 297 governmental hospitals including 83 specialized hospitals, 66 teaching hospitals and 30 private hospitals.
- The total number of beds in governmental hospitals reached 44464 in 2011 at a ratio of 1.3 beds per 1000 people.
- People's health clinics services are provided by 297 clinics in 2011.
- Tertiary health services are provided by 68 specialized centers distributed as follows: 17 centers in Baghdad and 8 in Al-Basrah and the remaining centers are distributed among Iraqi governorates with the exception of Maysan, Diyala and Salah ad Din governorates that lack such types of centers.

6-2-2 Challenges

- The major lack of infrastructure for health services affected provision of said services in terms of quantity, quality, capacity and extent of coverage.
- Huge disparities in the extent to which health services needs are satisfied among governorates and between urban, rural and remote areas.
- The absence of a healthcare system where primary, secondary and tertiary healthcare are integrated.
- The continuous increase in fertility rates that exert great pressure on the health care system and cost of service provision.
- The significant lack of specialized medical and health professionals and the continuous drain of such personnel abroad.
- The expanding technological gap in the medical field where many health facilities lack modern equipment.

- The limited investment role played by the private sector in building health institutions.
- The reduced coverage of environmental sanitation and waste processing and management problems that increased the numbers of diseases linked to environmental sanitation.
- Weak basic services, especially electricity that affected the possibility of running health institutions according to their design capacities.
- The reluctance in building health institutions such as specialized, public and teaching universities and health centers that were approved in annual investment programs.
- The weak participation of civil society and media in strengthening the citizen's trust in Iraqi health care institutions.
- Poor nursing services and the low social status of the nursing profession.

6-2-3 The Vision

"A Healthy Society and Population".

6-2-4 The Goals

First Goal- Widening the coverage and improving the quality of health services

Means of Achievement

- Expanding the provision of infrastructure by building hospitals, health centers and medical clinics.
- Providing supplies for existing and new health institutions including equipment and qualified medical, health and nursing personnel.
- Delivering health services in rural and remote areas and reducing the spatial disparity in satisfying the need to receive health services between governorates and among rural and urban regions.
- Promoting primary healthcare services as a first step to strengthen secondary and tertiary health care.
- Managing health and medical services for emergencies, crises and catastrophes in an integrated and competent manner and responding quickly to changes.
- Developing a statistical system for health information, adopting unified information systems for all health institutions, in addition to monitoring and improving the quality of such information.

Second Goal – Keeping pace with global developments in the health

and medical field:

Means of Achievement

- Adopting an integral electronic information system concerning technological innovations, inventions and developments in the medical and health field.
- Mainstreaming the use of the best modern technologies in diagnosis and treatment.
- Increasing the chances of participation in national, regional and global activities.
- Connecting specialized medical centers with counterparts in developed countries and exchanging visitor physicians.

Third Goal – Prevention First

Means of Achievement

- Setting up comprehensive programs for rural and urban regions to prevent transmissible diseases and securing its implementation requirements periodically.
- Raising awareness in society about healthy lifestyles, especially in rural and remote regions and allowing people to participate in self-care to maintain good health.
- The active participation of civil society organizations in promoting social awareness.
- Continuing the implementation of the national anti-smoking law.
- Activating the national strategy to promote diet, physical activity and health.
- Expanding health awareness campaigns that promote physical health and put an end to smoking, alcoholism and drug addiction and targeting children and adolescents to achieve better outcomes in terms of health.

Fourth Goal- Upgrading the quality of health human resources

Means of Achievement

- Developing teaching curricula for medical and health faculties and institutes and updating them to keep pace with global developments.
- Setting up restoration and development programs targeting medical, health, technical and administrative personnel to build their professional capacities.
- Creating an environment that would encourage the resettling of medical staff already existing in the country and attracting those who are abroad.
- Raising awareness about the humanitarian value of nursing as a profession and encouraging females to study and work in this domain.
- Improving the quality of healthcare professionals by awarding them accreditation certificates, distinctions and regular training.

Fifth Goal- Improving reproductive health services

Means of Achievement

- Preparing programs aiming at protecting women, especially reproductive health programs.
- Providing high quality antenatal care services and guaranteeing a safe and clean delivery by skillful professionals.
- Increasing social awareness concerning reproductive health concepts and mother and child healthcare.
- Providing high quality abortion and post-abortion healthcare services.
- Dedicating programs and strategies to protect children's health including breastfeeding, safe nutrition at early stages, focusing on vaccination programs, increasing school health and monitoring infant mortality.
- Providing an expanded vaccination program service and making it accessible in all primary healthcare centers.
- Supporting and developing a family planning program and building and developing the capacities of the staff providing family such services to households. Increasing the participation of other sectors especially the Ministry of Education, Ministry of Women and the civil society.

Sixth Goal- Developing psychological health services

Means of Achievement

- Opening psychological health units in clinics and health centers.
- Opening specialized health centers to treat traumatized patients in health departments in collaboration with international organizations.
- Raising awareness in society about the size of challenges resulting from psychological and neurological problems.

Seventh Goal – Developing the administrative and regulatory structures

Means of Achievement

- Developing administrative and regulatory structures in order to give local actors and bodies the powers that allow them to perform their tasks more efficiently and away from centralization.
- Considering governmental health facilities as independent cost centers that are subject to evaluation and accountability based on adequate performance standards.

Eighth Goal- Promoting the private sector's role

Means of Achievement

- Encouraging the private sector to implement health projects by providing adequate facilities and exemptions.
- Promoting the development of bank credits that are dedicated for health projects.

Table (6-8): Targeted Indicators in the Health Sector Until 2017

	Indicator	2013	2014	2015	2016	2017
1	Doctors/ 1000 People	0.75	0.75	0.76	0.77	0.78
2	Dentists/ 1000 People	0.18	0.19	0.2	0.23	0.25
3	Pharmacists/ 1000 People	0.2	0.22	0.23	0.24	0.25
4	Health Professionals/ 1000 People	1.8	1.85	1.9	0.95	2
5	Nursing Staff/ Doctor	2.6	2.7	2.8	2.9	3
6	Beds/1000 People	1.2	1.25	1.3	1.4	1.5
7	Bed Occupancy Rate %	61	63	65	67	70%
8	Number of Children Friendly Hospitals	37	40	42	44	46
9	Infant Mortality Rate per 1000 Live Births	22	21	20	19	17
10	Under-five Mortality Rate per 1000 Live Births	28	27	26	25	24
11	Percentage of Under-Five Children Underweight (%)	7	6	5	4	3
12	Percentage of Food Insecure Population	3	3	3	3	3
13	Percentage of Births Attended by Skilled Health Personnel	93	93	93	93	93
14	Ratio of Condom Use to Contraceptive Prevalence	4.2	4.5	5	5.5	6
15	Percentage of People at Risk of Malaria Taking Prompt and Effective Treatment	No cases detected	No cases detected	No cases detected	No cases detected	No cases detected
16	Malaria Infection Rate per 100000 People	No cases detected	No cases detected	No cases detected	No cases detected	No cases detected
17	Tuberculosis Prevalence Rates per 100000 People	45	40	35	30	25
18	Rates of Tuberculosis-Related Deaths per 100000 people	1.3	1	0.5	0.5	0.5
19	Proportion of Tuberculosis Cases Detected and Cured under Directly Observed Treatment Short Course (%)	89.4	90	91	92	93
20	Tuberculosis Cases Detected (%)	69	70	70	70	70
21	Percentage of antenatal care coverage of fifth visit in primary health centers	37	45	60	75	90
22	Percentage of Vaccination Coverage Among Pregnant Women	75	85	85	90	90
23	Percentage of Vaccination Coverage among Child Bearing Women Aged 15 to 49	35	50	60	65	70
24	Rate of HIV Among Child-bearing Women Aged Between 15- 24 years old per 100000 women	0.01	0.01	0.01	0.01	0.01
25	Incidence Rate of Hepatitis A /100000 People	12	11	10	9	8
26	Incidence Rate of Hepatitis B/100000 People	8	7	6	5	4
27	Incidence Rate of Hepatitis C/100000 People	2	1	0.9	0.8	0.7
28	Incidence Rate of Hepatitis E/100000 People	0.9	0.8	0.7	0.6	0.5
29	Reduction in Premature Mortality from Non-communicable Diseases for (under 60 years of age) per 100000 people	49	48	47	46	45

6-3 Gender

The interest in women's issues and their participation and contribution to social development was based on the developmental fact stating that human resources make wealth. Thus, since women constitute half of the society both quantitatively and qualitatively, their development should be focused on empowerment as women are considered to be the basic foundation for the building of human capital. This requires the support of women's leverage, organizing their skills and upgrading their status in addition to changing women's self-perception to make them capable of taking decisions and increase their capacity to participate in the policy and decision making process.

The Iraqi state is addressing gender issues based on its strong belief in the importance of gender equality in rights and responsibilities that is reflected in the Iraqi constitution that consecrates equality among male and female citizens in all rights and responsibilities and in all fields (political, economic and social). Moreover, Iraq has ratified the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW), the Convention on the Rights of the Children and other international conventions and instruments related to women. The establishment of the Ministry for Women's Affairs in 2003 reflects the State's commitment to these goals by founding national mechanisms and bodies that are conscious of women's affairs and that operate at the highest levels to detect and monitor the recommendations of international and regional conferences, charters and conventions, to empower women in all fields and domains.

6-3-1 Situation Analysis

In order to activate the positive role of women in development and carry on the efforts undertaken by the government during the previous period, the fundamental guidelines of women's empowerment in the National Development Plan 2010-2014 are based on the principal axes that are detailed in the introduction: increasing women's participation in economic and political life, eradicating all types of discrimination against women and achieving gender equality, a goal which Iraq committed to achieve by 2015.

A- The Education Domain

- Illiteracy rates are still high among the population but are even higher for women. Recent surveys show correlation between age and the increase of female illiteracy rates that reached 16% for the age group 12 to 19 and around 20% in the 20 to 39 age group and 67% for women aged 50 years old and above.
- The academic achievement of women declined. Around 22% of women cannot read or write and more than one third of the female population did not finish their academic path after primary education. 18% of women finished their

preparatory or higher studies. Female illiteracy rates score high in the Kurdistan Region (32.1 %) compared with other governorates (19.6 %).

- Illiteracy registered higher rates in rural areas than in urban regions.
- The gender gap in primary school enrollment is wide since male enrollment registered 96% compared with 88% for females. This gap becomes narrower in the intermediate stage and is totally bridged in preparatory education where enrollment rates register 21%.

B- The Health Domain

There are no gender disparities in the health sector in Iraq since health services are available for both sexes and at the same level and with a gender-based focus, except for the increase in breast cancer cases that affect women. 35% of Iraqi women suffer from breast cancer according to the registered cases in the Ministry of Health.

On the other hand, there is a correlation between the reproductive health of women and their education level in terms of vaccinations, visits to neonatal clinics and whether they give birth under medical supervision.

C- The Social Domain

- The percentage of female-headed households declined from 11.5% to 7.7 % in 2011.
- The average age of marriage for women decreased from 23.5 to 22.4 years in 2011. The percentage of women who got married before the age of 18 increased from 22.6% in 2006 to 24.2% in 2011. This negative indicator led to a rise in divorce rates in this category.
- Divorce rates in Iraq grew sporadically from 28690 cases in 2004 to 59515 cases in 2011 an increase of more than 100%. This shows the deterioration of the quality of social life in the country.
- Marriage rates in Iraq declined from 262554 cases in 2004 to 230470 cases in 2011, registering a reduction rate of 12.2%. This is due to the increase in marriage expenses and the complicated social life, education and other.
- Many women are still facing all types of violence: 46% of girls aged between 10 and 14 years old were subject to violence by one of their family members and around 36% of married women suffer from one of the types of psychological violence in marriage.

D – The Economic Domain

- The rate of female participation in economic activity declined from 14.2% in 2003 to 13% in 2011. The participation rates vary between genders per geographic area. In rural areas, it registered 14% compared with 75% for males

and in urban areas the female participation rate registered 13% compared with 76 % for males.

- The gap between female and male participation in the labor market in urban areas grew wider in comparison with rural areas with 60.6 % of the economically active population in urban regions and 57.7 in rural regions in 2003. This rate declined to 57% in urban areas and to 51% in rural areas in 2011.
- Around 11% of women aged between 15 and 54 are involved in paid employment and this percentage increases to 12.8% in urban areas and decreases to 6% in rural regions.

E-In Participation

- Despite the obvious increase in female parliamentary seats in Iraq after 2003, the percentage of women in parliament declined in the current cycle to reach 25% after it had registered 27.3% in 2007. Female representation in government declined from six female ministers to only one.
- Women's participation in elections decreased from less than the half in 2005 to more than two thirds in 2010. Female participation in governorates' councils also grew by 45%.
- Women's participation in the Iraqi community declined since less than one woman out of ten is enrolled in a social club or forum, trade union, political party or womens' association.
- Despite the fact that Iraqi legislations and laws do not discriminate between women and men in all different fields including leading or senior positions, cultural and social factors are still the main determinants of said roles.
- The percentage of female decision-makers increased to reach 9 director general positions in the Ministry of Planning, 33 expert positions in the Ministry of Power and rates vary in other ministries.

6-3-2 Challenges

Despite the achievements accomplished by Iraqi women in all aspects of life, they are still facing major challenges, including:

- Cultural and social values impose restrictions on women's participation, work and movement, under a patriarchal masculine culture dominated by men and where women are subordinates.
- The level of women's education and training opportunities is low. They have limited chances to participate in politics and have been deprived from entering specific areas of work for a long time. Moreover, the burden and pressure carried by women at home and in work grew larger.

- Despite the participation of women in public life, this does not guarantee their autonomy and equality with men. Women are not participating effectively and actively in most of the legislative, judicial and executive powers.
- The typical Iraqi household's perception of the type of work suitable for women is still traditional to a large extent. Government jobs are the most desired and preferred type of employment. Many women still suffer from unemployment and from lengthy job searches and consequently, more women are working marginal jobs and in informal labor markets.
- Women's participation in economic activities is weak, especially in rural areas where many women work without getting paid which affects the developmental role played by women and their social status.

6-3-3 The Vision

"Empowering Iraqi women and widening their choices"

6-3-4 Goals and Means of Achievement:

The National Development Plan 2013-2017 sets a referential framework for advancement that highlights an integrated approach to improve the situation of women and guarantee their participation in the economic and social development of the state.

The Plan's strategic foundation underlined the interest in women's affairs and capacity building by setting a national strategy for the advancement of women, aiming at removing the obstacles obstructing their participation in developmental activities. Moreover, the Plan's chapters included goals and policies concerning the improvement of women's conditions in many fields such as education, health and social care and the labor force.

The State did not limit its efforts to increase women's participation in economic activity to strategic goals and policies but focused directly on the establishment of executive mechanisms to promote and reinforce this participation.

Concerning the increase and diversifying job opportunities for Iraqi women, the cabinet adopted a national employment plan in 2010 which includes a set of directions and procedures aiming at promoting women's economic participation. The implementation of this plan would achieve a quantum leap in the trend of women's participation in all developmental activities.

First Goal- Integrating Gender in Development

Means of Achievement

- Setting a practical and rational framework to draft and develop policies and programs aiming at raising awareness about the effects of gender on development results.
- Increasing the chances to meet gender needs by:
 - ▶ Participating in the steps and fields related to the development of society as a whole.
 - ▶ Guaranteeing the integration of gender in all processes, steps and stages of development.
 - ▶ Making it possible to benefit from development revenues
 - ▶ Strengthening women's knowledge in legislations and their legal, practical and political rights.
 - ▶ Increasing the role of civil society organizations working on women's affairs in introducing women to their rights and community roles and empowering them.
- Increasing the chances of female empowerment in rural areas.
- Conducting outreach and communicating with local and international organizations and UN agencies to build a true partnership aiming to improve the status of women and changing stereotypes rooted in society.

Second Goal- Women's Empowerment

Means of Achievement

- Increased education opportunities for women
 - ▶ Implementing compulsory primary education to bridge the gender gap in education
 - ▶ Securing the requirements to accelerate the program for combating illiteracy among women
 - ▶ Promoting directives that allow women's integration in scientific, technical and applied sciences faculties.
- Providing more health care for women as suggested by the means to achieve the goals in the health sector
- Providing training to build capacities:
 - ▶ Increasing women's participation in training and building the capacities of workers in state institutions and the private sector.
 - ▶ Widening the scope of career opportunities for women, promoting their education and training in unconventional fields.
 - ▶ Increasing the use of craftsmanship, manual and traditional skills among rural women

- Promoting gender culture in society in order to upgrade women's social, economic and cultural status
 - ▶ Changing the perception of society to do justice to their status and increase their roles
 - ▶ Raising awareness concerning women's rights and responsibilities
 - ▶ Reinforcing positive stances towards women's roles

Third Goal- Increasing the Opportunities for Women's Political and Economic Participation

Means of Achievement

- Providing more opportunities and participation for women in economic activities
- Providing credit and soft loan opportunities for women, especially vulnerable women such as widows and female breadwinners.
- Promoting productive households programs, especially in the field of handicrafts and craftsmanship.
- Providing marketing services for productive households in small enterprises by holding temporary, permanent and seasonal exhibitions.
- Adopting adequate procedures to build the capacity of women to increase their chances in participating in political and parliamentary fields.
- Building the capacity of women to participate actively in parliamentary committees, especially those that serve national reconciliation and local conflict resolution goals.
- Increasing women's representation opportunities in organizations and international conferences that address women's affairs.
- Empowering women to play leading roles in female civil society organizations dealing with peace, reconciliation and construction.
- Improving women's representation in social dialogue in order to increase decent work opportunities and guaranteeing the reduction of gender-based discrimination.

6-4 Youth

The United Nations identified youth as individuals aged between the ages of 15 and 25 years but in Iraq this age group expanded to include individuals up to 29 years of age. In general, youth do not constitute a harmonized group due to cultural, economic, social and geographical conditions that vary among regions and even within the same region.

In every society, young people are the builders of the economy and society; they are the ones carrying the promise of a better future for this society. They are the most important human resources at all.

The high percentage of youth in society carries both a positive and negative significance. The positive indicator shows that they are a demographic endowment that leads to the reduction of dependency rates and to satisfying the need for labor in the economy. The negative indicator shows that this large youth population would exert pressure on social services and the labor market and represents a huge challenge for development if it was not invested rationally.

Youth participation constitutes a main investment opportunity in the developmental process. Thus, emerging societies seek to reduce the political, economic, social and cultural marginalization of young people and to expand the intervention circle in order to increase sustainability and justice. These states work on helping youth find more opportunities in targeted regions, in addition to building the trust, increasing the social capital and building their capacities to satisfy their living needs in order to guarantee the sustainability of developmental roles.

6-4-1 Situation Analysis

Young people are not only Iraq's most important capital but also the biggest proportion of the population. According to the expectations of enumeration and listing survey in 2009, the number of young people reached 9.3 million and almost 28% of the Iraqi population is aged between 15 and 29 years.

In order to provide a comprehensive briefing of the youth condition in Iraq, we will tackle the following three dimensions:

A- Education

- Youth enrollment rates are still low (21% in preparatory and 14% in higher education).
- There is a clear disparity in education enrollment rates between male and female youth with 44.4% for male and 33.5% for women. This is due to reasons

related to the cultural structure that prefers to keep girls at home, especially in rural areas.

- School dropout rates in the age group (15 to 24) exceed half because many young people are not willing to pursue their education. The choice between pursuing education and work constitutes a big concern for many young people, especially those who face difficulties in education. The reasons pushing youth to prefer work over education is primarily earning money and achieving economic autonomy.
- Despite the relative improvement achieved in literacy rate among youth, illiteracy rates are still high in this age category. The 2011 Iraq Knowledge Network survey showed that illiteracy rates in the age group (20 to 29) reached 16.3% of total youth population and increased to 21.2% among females compared with 11.7% for males that affects the level of productive skills and capacities amongst young people.

B- The Economy

- Recent surveys indicate a relative decline in youth economic activity rates for the 15 to 24 age group compared with other surveys where these rates registered 43.2% in 2008 and 38.4% in 2011.
- The youth economic activity rate is increasing in rural areas in comparison with urban region with 43% and 36% respectively as shown by the 2011 Iraq Knowledge Network Survey.
- There is still a significant gender gap in economic activity rates for the 15 to 29 age group. Male economic activity scored higher with 63.4% compared with 12% for females.
- The economic activity rate amongst females is higher in rural areas than in urban regions with 15% and 11% respectively. The highest economic activity rate for illiterate and literate males registered around 83% while the highest rates for female graduates reached 66.7%.
- Around 5.4% of young females are self-employed and 41% of young women work in the public sector while 58.2% of them work in the private sector. On the other hand, 17.5% of young males are self-employed, 71.5% work in the private sector and 27% in the public sector. This reflects the desire of women to work in the public sector.
- The public sector is still attracting the highest percentage of young degree holders while the private sector attracts young people of low educational levels.
- The percentage of youth working in unprotected labor rose to 68% compared with 32% in protected labor. This situation requires the legislation of social security laws that would cover all workers.

C- Unemployment

The youth unemployment rate declined from 2008 to 2011 due to the nature of the employment policy adopted by the state in 2005. This policy was designed to increase the number of public sector workers, especially in the security apparatus and to increase already significant investment expenditure to create job opportunities during the implementation and operation of projects.

- The youth unemployment rate in the 15 to 29 age group reached around 18.2% and is higher than the general employment rate in Iraq (11.1 %) with 15.5% for males and 33.3% for women.
- The percentage of unemployed certificate holders graduating from preparatory schools and below reached 16.6% while unemployment among holders of higher degrees registered 24.4%. This rate reflects the unemployment of high degree holders in Iraq due to university admission policies that do not match labor market needs.

6-4-2 Challenges

It is an objective statement that these challenges represent- from one aspect at least- the legacy of decades of bad economic management and of poor investment in human and financial resources, the results of which have been amplified by consecutive wars and crises. When studying the obstacles to an effective and fruitful policy that invests the capacities of the youth, employs them and reduces the number of unemployment among them, we see that the most important challenges facing Iraqi youth are:

- High rates of population growth that pose a challenge to development in Iraq. Iraq's population has grown rapidly due to previous pro-growth policies since the 1970s. The country's population in 2007 was 10 times greater than it was in 1927. The total population of Iraq was 31664466 according to the inventory of all buildings, households and establishments issued in July 2011. If fertility rates continue as they are at the moment with 4.3 children for every woman, the population of Iraq will double again in 23 years.
- Increase in the percentage of youth, which now forms 28% of the population. This rate is expected to continue rising during the coming two decades and will challenge the economy to provide suitable job opportunities.
- Weakness of the employment policy in providing new job opportunities for unemployed youth and a weak role played by the private sector.
- Absence of a comprehensive national policy targeting the youth. This has made services provided to the youth unclear, empty and ineffective.
- Weak coordination between institutions providing services to the youth. This has led to wasted efforts.

- The youth worry about the future in unstable economic and political conditions. With the rise in living costs and the rise in unemployment, many live with the stressful burden of their future whether professional or personal.
- Weak skills acquired by the youth in their daily lives (inherited professions, technical skills...). This reflects on the participation of the youth.
- Decline in civic values among the youth such as volunteering, participation and responsibility.

6-4-3 The Vision

"Youth that is aware; has faith in citizenship and is an essential partner in achieving sustainable development."

6-4-4 Goals and Means to Achieve Them

First Goal: Empowering the Youth

Means of Achievement

- Reinforce educational opportunities and decrease the level of youth dropouts.
 - ▶ Develop the educational system and guarantee a link between education and the job market.
 - ▶ Expand literacy classes at youth centers that help reduce levels of illiteracy.
 - ▶ Develop the infrastructure of youth centers and centers for education and youth leadership. Developing the infrastructure of youth centers in governorates, districts and regions.
 - ▶ Adopt educational curricula that develop the sense of citizenship among the youth.
- Improve health services provided to the youth
 - ▶ Improve and develop health services, especially in schools and universities.
 - ▶ Introduce health plans that meet the health and psychological needs of the youth.
 - ▶ Guarantee that the youth have psychological and social guidance especially for those exposed to trauma.
 - ▶ Promote health awareness among the youth in terms of public health, reproductive health and psychological health.
 - ▶ Promote and Develop healthy prevention, behavior and conduct.
 - ▶ Reinforce the role of the youth in environmental issues and increase their knowledge of the subject. Link their environmental activities to development and sustainability needs.

- Put in place plans and programs to rehabilitate and train the youth.
 - ▶ Provide suitable rehabilitation and training for the youth in order to empower them in facing the challenges and demands of the market as well as of the economic, political and social changes.
 - ▶ Develop the career guidance programs provided to students in a way that leads them towards the most desired scientific specializations.
 - ▶ Expand the options available for the youth in a way that guarantees equal opportunities for both genders in the work field.
 - ▶ Organize training sessions targeting the skills needed in the market.

Second Goal: Achieve a Real Decrease in Youth Unemployment

Means of Achievement

Activate and support the role of the national employment policy in a way that contributes to raising awareness among the youth about the need to stop depending on the public sector for employment, especially among women.

Establish a loan fund for youth projects and support young people establishing small businesses.

Third Goal: Develop the Values of Citizenship and Belonging

Means of Achievement

- Develop laws and legislation relating to civil, individual and collective rights.
- Reinforce awareness programs among the youth, especially those concerning citizenship and the sense of national belonging.
- Promote volunteering and expand the spectre of initiatives and achievements. Establish regulations for civil work that demand the existence of youth volunteering programs.
- Establish social guidance centers to identify the problems faced by the youth and help find solutions for them.

Fourth Goal: Sports for Everyone

Means of Achievement

- Support the infrastructure of sports in Iraq from fields to clubs and sports equipment in all governorates.
- Continue to build and develop human resources working in the field of sports. Encourage the private sector to invest in sports.
- Pay attention to sports in all levels of education. Develop scouting centers and pay special attention to paraplegic athletes.

- Improve sports medicine and expand the establishment of such units in all governorates.
- Pay attention to high profile sports by coordinating with the National Olympic Committee of Iraq and providing support for these athletes.

6-5 Social Development

Circumstances resulting from crises and the rapid changes occurring in Iraq have affected social capital. The latter changes have directly or indirectly affected all social groups and some of these groups have suffered from deprivation in education, health, housing and social protection. The protection of individuals and communities from such risks and helping them to overcome the challenges they face have become top priorities for development partners. The priorities mainly focus on the State's commitment to social care and job development in order to create an environment that permits social development for all groups and reinforces the capacities that support opportunities of security and stability.

Social development in Iraq today- despite the new challenges in human security, public services, the environment and life sustainability- has overcome boundaries and has set a clear path for a social policy that starts with defining the relationship between the various actors in society (official and unofficial). This policy also focuses on reinforcing a sense of citizenship as well as instilling the principles of participation and equal opportunities. The policy then pays special attention to the social aspect of development and emphasizes care to marginalized groups with limited incomes in order to improve their living conditions and reinforce the opportunities for collective stability. This can be done by improving educational and health services, providing direct monetary aid and other support to those who deserve it within a regulated and comprehensive framework of social security networks.

Social development is based on a wide range of concerned parties that are present from childhood until old age. These include the State's responsibility to its citizens and the people's responsibility to those families and local communities. To this end, a social policy must contribute to helping individuals deal with daily demands and fulfill their needs. Also, the government needs to take effective measures to reinforce the values of collaboration and tolerance. It should be noted in this context that the population is growing in numbers and variety and marginalized groups are taking up a larger space in the social pyramid. Development efforts, by expanding the specter of traditional social policy and improving the government's efforts to care for communities, can establish the foundations of a strong welfare society and of a social structure that is safe and healthy. After the political and economic conditions changed radically in 2003, the State prepared the 2010-2014 National Development Plan guided by the 2005 permanent constitution and other national strategies. The

plan aimed at creating a link between social situation in crisis and a wanted development alternative. Afterwards, the State sought to set a 2013-2017 Development Plan in order to establish the foundations for an empowering environment that includes marginalized and weak groups of society and the work force. This policy would guarantee that these groups have access to education and medical services. This would be done by expanding the participatory base to reinforce the contribution of the private sector and civil society in supporting the social protection system and by reinforcing the existing social protection network. As a result, the decrease in social capital would be halted and a guarantee would be reached that the social capital would meet the needs of marginalized and weak groups as well as establish foundations for cooperation and social solidarity.

Article 14 of the 2005 Iraqi constitution set a general rule for equality in rights. The latter is taken from the Universal Declaration of Human Rights. The constitution also confirmed that the State guarantees the protection of motherhood, childhood and old age and shall care for children and youth (Article 29). Furthermore, it mentioned that the State shall guarantee to the individual and the family -- especially women and children -- social and health security and the basic requirements for leading a free and dignified life a suitable income and appropriate housing. (Article 30). The second paragraph of the same article also mentions that the State guarantees the social and health security to Iraqis in cases of old age, sickness, employment disability, homelessness, orphanage or unemployment, and shall work to protect them from ignorance, fear and poverty.

6-5-1 Situation Analysis

First: Children

According to Article 1 of the Convention on the Rights of the Child- which was ratified by Iraq in 1994- a child means every human being below the age of eighteen years unless under the law applicable to the child, majority is attained earlier. The 0 to 17 age group is considered the largest of all age groups in Iraq and constitutes almost half of the country's population, or 49.3% in 2011.

A- Registering Births

The Convention on the Rights of the Child has confirmed that every child has the right to a name and to acquire a nationality. Registering newborns is essential to guarantee the right of the child. Recent survey results have indicated that the rate of registering children below the age of 5 has increased from 95% in 2006 to 99.1% in 2011. This reflects a rise in awareness among families of the importance of this issue, especially that there are no major differences for registering females or males, or based

upon improvement in the educational level of mothers or a rise in the economic level of households.

B- Orphan Children

Children's circumstances are affected by their family environment and living conditions in addition to social variables in their local communities. This affects their education, health, economic situation and cultural situation.

The rate of orphans in Iraq for the age group 0-17 was stable at 8% between 2006 and 2011 according to a recent survey results. Among these children, those who had lost one parent formed 6% of orphans and those who lost both parents formed 2% in 2006. The first decreased to 5% and the latter increased to 3% in 2011.

Survey results have shown that orphans, or those living far from their parents, are more at risk of marginalization and abuse because they are deprived of the help of their parents. Orphan hood also affects the enrollment of orphans in school. The rate of orphans enrolled in schools between 2006 and 2011 varied between 0.84 and 0.83 respectively compared with non-orphaned children.

The rate of orphan children enrolled in schools also depends on the social background of the child. With orphans who have lost both parents the rate of school enrollment for males is 80% and 59% for females. Those aged 10-14 who have lost one parent and are still living with the other register a rate of 82% enrolled.

The Ministry of Labor and Social Affairs is in charge of providing care for orphan children (beneficiaries of State orphanages).

- The number of State-run orphanages reached 23 in 2012 in all Iraqi governorates with the exception of Al-Anbar with a capacity to handle 1040 children.
- The number of beneficiaries benefiting from the State's role in care provision was 460 in 2012: 299 males and 161 females.
- The rate benefiting from the capacities of orphanages varies according to each orphanage and each governorate but the number of males is remarkably higher than that of females.

C- Child Labor

Child labor is a flagrant violation of the International Convention on the Rights of the Child as well as enforced labor laws. It also constitutes a real problem and obstacle for development in Iraq. This phenomenon has resulted from the series of wars that the country has witnessed and children have been thrown into the labor market under harmful circumstances and conditions imposed by employers who abuse the needs and provide poor living conditions, as well as high living costs, lack of awareness,

widespread illiteracy and unemployment, and the growth of unregulated economic sectors that attract children to work under unsuitable circumstances and conditions.

The 2012 Multiple Indicator Cluster Survey categorized the section concerning child labor according to the nature of the work and work hours, including economic activities that children practice at home whether paid or unpaid. The rate of working children between the ages of 5 and 14 decreased from 11% in 2006- the equivalent of one out of nine children- to 7% in 2012- approximately one out of 14 children. Amongst these children, 10% work in rural areas and 5% in urban areas. The percentage of working males is higher than working females with 8% and 6% respectively. The highest rate for child labor was registered for the age group 12 to 14 at 8%. It increases in unregulated sectors and private factories. Furthermore, children who work are less inclined to continue their education with a percentage of 6% compared with 10% for children who do not work.

When comparing child labor with other countries, it appears that the rate in Iraq is higher than that in neighboring countries (5% in Bahrain for example) but far lower than many developing countries (India 12%, Yemen 23%, and Sierra Leon 48%).

The absence of current and comprehensive information about the size and structure of child labor has led to the adoption of uncoordinated intervention measures. The problem was aggravated by continuous poverty, orphan hood, violence and immigration (mainly), an increase in the level of unemployment, and limited income opportunities.

Second: The Disabled

The Iraqi constitution confirms in Article 32 that the State shall care for the handicapped and those with special needs, and shall ensure their rehabilitation in order to reintegrate them into society. People with disabilities (physical or mental) now form a large part of Iraqi society due to wars and crises as well as the terror and violence that has accompanied them. There are no precise statistics about the number of disabled people in Iraq but their integration into development activities is one of the essential indicators of improvement.

The State provides welfare assistance to disabled people through a series of institutions that offer the following services:

- Services for people with mental disabilities
 - ▶ The number of institutes for mentally challenged people is 17 with 35.3% of them in Baghdad and the rest in only 10 of the country's other governorates.
 - ▶ The number of people benefiting from mental illness departments was 842 in 2012: 598 male and 244 female.

- Services for people with physical disabilities:
 - ▶ The number of institutes for people with physical disabilities is 34 with 35% of them in Baghdad and the rest divided among the remaining governorates.
 - ▶ The number of beneficiaries benefiting from the departments of physical disabilities was 2051 in 2012: 1262 male and 789 female.
- Workshops and organizations:
 - ▶ The number of protection workshops (workshops for the employment of disabled people) is 11 and they have the capacity to handle 775 people. Most of them are based in Baghdad.
 - ▶ The number of beneficiaries of these protection workshops was 339 in 2012: 175 female and 164 male.

Third: The Elderly

With fertility rates on the decline and life expectancy rates on the rise, Iraq's population is headed towards senescence. The number of elderly citizens above 65 years of age exceeded 1.016 million in 2010 and is expected to rise to 3.736 million in 2040, with an increase rate of 6.6% that rises to 8.9% in 2050.

- The number of elderly care homes in Iraq was 10 in 2012, eight of which were traditional elderly care homes and two were care homes for the completely disabled. These are divided between Baghdad and seven governorates.
- The number of beneficiaries of elderly care homes was 391 in 2012 as for those benefiting from care homes for the severely disabled elderly, their number was 241.

Fourth: Services for Juvenile Offenders

- The number of schools and observation centers for arrested, convicted or homeless juveniles is nine and they are divided between Baghdad and Ninewa.
- The total number of beneficiaries benefiting from schools and centers was 1275 by mid-2012 in Baghdad and Ninewa. As for the Kurdistan Regional Government, there were 83 juveniles most of them being male.
- There are two shelters for the homeless in Baghdad for both males and females. It has 85 juvenile beneficiaries.

Fifth: Social Protection Network

One of the key principles of human rights that have been stated in the constitution is the State's commitment to provide care and social protection to members of the community through appropriate protective and preventive measures that aim at alleviating poverty.

The social protection network project started at the end of 2005 by providing aid to the poor and marginalized: assistance and cash payments. The number of people benefiting from the network decreased by 13.1% from 2009 to 2010 due to a change in the requirements set for integration in the network, especially for women. This number increased between 2010 and 2011, with the number of beneficiaries reaching 363316 in mid-2012. The unemployed were the main beneficiaries- with 90% of the total number of people benefiting from the social protection network- followed by the sick and the elderly.

Sixth: Non-Institutional Care

This care includes many programs including foster families, care programs for paralyzed children within their families, and aid programs for the disabled.

Seventh: Families as a Development Project

Iraqi families have been continuously changing in terms of structure and functions. The most important of these changes is the increase in the number of unmarried women (spinsters) as well as the increase in divorce rates, especially during the first years of marriage, and an increase in the average age for the first marriage.

Rapidly changing conditions and circumstances of crises have led to a change in the structure of relationships within the family and have aggravated problems and challenges for both families and individuals. By admitting that there is a need to reinforce the role of family as a specific development project, and by realizing its status as a social sponsor, we believe in the importance of efforts that consider motherhood and fatherhood to be fundamental values that gather and spread morals, norms and formulas of actions and interactions that support and instill healthy and harmonized moral values.

Table (6-9): Development Indicators for Vulnerable Groups 2009-2012

		Reality			
		Indicator	2009	2010	2011
1		Number of State Orphanages	19	19	23
2	Orphans	Orphans/ Social Researcher	6.8	5.9	6.2
3		Orphans/ Teacher	7	5.1	5.5
4		Number of Nursing Homes for the Elderly and Severely Handicapped	8	9	10
5	Elderly and Severely Handicapped People	Elderly/ Social Researcher	26.8	29.3	31.8
6		Elderly Beneficiaries and Severely Disabled/ Service Officer	4.18	4.5	4.7
7		Institutes for Disabled People	51	51	51
8	Disabled People	Disabled People/ Social Researcher	21.7	22.9	23.2
9		Disabled People/ Teacher	5.2	6.6	5.6
10	Protected Work-shops	Paid Beneficiaries/ Protected Workshop and Cooperative Association	35	34.9	28.1
11		Number of Kindergartens	42	43	41
12	Kindergartens	Child/ Kindergarten	52.7	58.2	58.8
13		Child/ Educator	15.2	16.7	12.5
14	Juveniles	Number of Schools and Observation Centers for Juvenile Convicts, Arrested and Homeless Juveniles	9	9	9
16		Social Researcher for juveniles	56	56	55
17		Number of Beneficiaries from the 84 billion Dinar allocation Under the poverty reduction strategy if the financial allocation was received/ Ministry of Planning	There is no funding for lending		
18		Parliamentary Allocation for the Ministry of Labor, Beneficiaries from the 150 billion Dinar of the Lending Fund According to Law Number 10 dated 2012 if the total amount of 32000 Dinar was Received	73501 Unemployed Benefited from Lending Funded by the Ministry of Finance	Suspended	In the Stage of Fund Organization
19	Social Protection Network	Number of People Covered by the Social Protection Network	734572	317468	395126
20		Social Researcher, Network	66	61	58

6-5-2 Challenges

- The shift towards a focus on economy while policies aimed at social protection such as social protection networks remain absent will lead to high social costs for marginalized groups.
- The events that Iraq has witnessed before and after 2003 have led to an increase in certain phenomena such as the number of orphans, homeless, beggars, disabled, women as heads of households and other groups that need special care and attention.
- There is a large deficit in financial and human resources as well as technical abilities that are needed to fulfill the needs of marginalized groups, provide social security, respect laws protecting children, implement the social protection network, etc.

- Social care provided for marginalized groups has not kept up with the ongoing increase in living costs.
- The rise of numerous and complicated social problems as well as the effects they have on children, families and communities such as common-law marriage, refusal of marriage due to economic conditions, divorce, substance abuse, drugs, perversion, etc.
- The lack of precise statistical data and databases about the movement of families, children and women, beggars, homeless, etc. in unregulated sectors.

6-5-3 The Vision

“A welfare society that is steadfast; provides protection and justice; and reinforces achievements and participation”

6-5-4 Goals and the Means to Achieve Them

First Goal: A Steadfast and Effective Welfare Society

Means of Achievement

- Reinforce social awareness about the importance of social work on the individual and collective levels in terms of prevention and treatment.
- Support social care institutions, especially in awareness activities.
- Develop civil society through participation.
- Empower families to face modern challenges.
 - ▶ Reinforce building family units that instill positive family values and shared responsibility among family members in their children all the while supporting the institution of marriage, which constitutes a priority for development and its elements.
 - ▶ Instill positive family values in order to provide more flexibility, integrity, collaboration and solidarity within the institution of family.
 - ▶ Broaden awareness programs in order to raise awareness about the shared role and responsibilities within the institution of marriage. Create an environment of understanding between couples ready to get married and start strong families.
- Guarantee opportunities to protect children and preserve their wellbeing
 - ▶ Reinforce opportunities to protect children from the dangers of slipping into unacceptable social behavior and from the dangers of abuse within their families.
 - ▶ Improve the quality of care for children and reinforce related support programs, including building the capacities of care providers and developing

existing social care institutions such as orphanages, shelters for the homeless, centers for juveniles, rehabilitation centers and foster homes.

- ▶ Build centers that organize activities targeting children (sports, social activities, learning programs, advisory councils). This will allow children to alleviate psychological stress and will increase their chances of social integration.
- ▶ Improve the conditions for implementing protection and rehabilitation programs in order to limit the effect of many social problems on the lives of children.
- ▶ Develop institutions that shelter children with special needs.
- ▶ Guarantee the protection of Iraqi children from violations by completing the child protection policy in Iraq project.
- Provide care for arrested and imprisoned juveniles as well as rehabilitating them in terms of work and education
 - ▶ Develop work rehabilitation programs for juveniles who receive behavioral rehabilitation and financial support. This includes blacksmithing, sewing, carpentry, electricity, and mechanics.
 - ▶ Build correction houses with international standards provided they include departments that are common in such houses (juvenile court, schools, comprehensive health center)
 - ▶ Reinforce projects for family reintegration targeting convicted juveniles and children with family problems. These projects aim at returning children to the safety of their families and developing their personalities.
- Support the elderly in playing fruitful roles in society
 - ▶ Guarantee the availability of a sufficient number of elderly care homes and guarantee financial sufficiency for the elderly.
 - ▶ Reinforce opportunities to guarantee the health and wellbeing of the elderly so they can live with dignity and respect.
 - ▶ Adopt programs that provide elderly-friendly infrastructure and improve health care provided at reasonable prices.
 - ▶ Encourage new initiatives for social work, especially providing care for the elderly. Provide opportunities to protect the elderly in the absence of family members.

Second Goal: Reinforce Opportunities for Justice and Fairness through an Efficient and Effective Protection Network

Means of Achievement

- Achieve a fundamental change in the bases of social safety and security in Iraq in a way that takes into consideration the new role of the State in a political

environment within which elements of decentralization and democracy interact. This change should also take into consideration the anticipated role of civil society organizations, especially in terms of empowerment.

- Develop rural areas by implementing participatory civil society development programs with the aim of improving the social and economic conditions of people living in rural areas.
- Reinforce the abilities and capacities of social institutions to achieve sustainable development.
 - ▶ Provide job opportunities that are suitable for the unemployed and those recently entering the job market.
 - ▶ Develop the principles and traditions of social solidarity in order to support the poor and needy.

Third Goal: Empower the Disabled and integrate them in Society

Means of Achievement

- Provide the rights of the disabled in practical and modern ways.
- Provide safe access (transportation and buildings) in order to create daily satisfaction in the lives of the disabled and provide them with a positive environment.
- Prepare treatment and rehabilitation programs for disabled children at an early age. Have disabled children undergo rehabilitation and therapy through support services given to parents who need to face the problem at hand.

Fourth Goal: Reinforce the Role of Humanitarian and Charitable Organizations in Providing Social Services

Means of Achievement

- The State must encourage social development programs through facilities, tax exemption, etc.
- The State must adopt standards that guarantee the efficiency of the service provided and that this service covers all groups in all regions.
- Advocate the development of bank loans granted to fund development projects with a social and humanitarian aspect.
- Reinforce the role of civil society in spreading social awareness in terms of social care and the protection of families and children.

Table (6-10): The Targeted Indicators in Social Development until 2017

Indicator		2013	2014	2015	2016	2017
Orphans	Number of State Orphanages	22	23	23	23	23
	Orphans/ Social Researcher	10.3	9.9	9.7	9.6	9.1
	Orphans/ Teacher	4.9	4.7	4.6	4.5	4.5
Elders and Severely Handicapped People	Number of Nursing Homes for Elders and Severely Handicapped	14	16	18	18	19
	Elder/ Social Researcher	21.7	20.9	20.3	20.0	19.4
	Elderly Beneficiaries and Severely Disabled/ Service Officer	4.7	4.7	4.7	4.7	4.7
Disabled People	Institutes for Disabled People	55	59	62	64	67
	Disabled People/ Social Researcher	22.1	21.2	20.9	20.6	20.20
	Disabled people/ teacher	6.5	6.5	6.5	6.4	6.4
Protected workshops	Paid beneficiaries/ protected workshop and cooperative association	30.6	31.7	32.9	34.2	35.4
Kindergartens	Number of Kindergartens	45	46	51	52	53
	Child/ Kindergarten	57.1	56.3	54.7	54	53.9
	Child/ educator	11.4	11.2	10.7	10.5	10.5
Juveniles	Number of schools and observation centers for juvenile convicts, arrested and homeless juveniles	9	11	14	15	16
	Social researcher for juveniles	66	81	96	96	96
	Juvenile procedural powers	453	453	453	525	1325
Number of beneficiaries from the 84 billion Dinar allocation under the poverty reduction strategy if the financial allocation was received/ Ministry of Planning		10000	10000			30000
Parliamentary allocation for the Ministry of Labor, beneficiaries from the 150 billion Dinar of the lending fund according to law number 10 dated 2012 if the total amount of 32000 Dinar was received		17000 beneficiaries Loan (5 to 10) million	Grace period of one year to pay the loan	4000 beneficiaries The amount is recovered by retrieving amounts of money from borrowers	5000 beneficiaries The amount is recovered by retrieving amounts of money from borrowers	6000 beneficiaries The amount is recovered by retrieving amounts of money from borrowers

The environment was not one of the country's priorities over the past three decades. The environmental infrastructure deteriorated and was destroyed during the decades of war, economic blockade, and absence of security and stability. In addition, there were high annual population growth rates at 3% and increased levels of urbanization, along with desertification and deterioration in the quality of agricultural lands as well as salinization and overwatering, especially in the central and southern areas. Drain water, sewage, and waste water from factories and hospitals were disposed of without being fully treated and treatment units were not secured for dust and gas waste from industrial projects. Methods for dealing with solid wastes are rudimentary

Environmentally Sustainable Development... The Path to a Green Economy



and community awareness of the importance of the environment and the need to protect it is weak. These along with other matters were all behind the deterioration of Iraq's environment.

The 2010-2014 Development Plan was cognizant of the danger of this situation to sustainable development in Iraq and the great cost to the national economy that would ensue over the long term in the event that the neglect of the environmental dimension continued. Thus, the plan gave priority to caring for this aspect and keeping in line with international trends in regarding the environment as one of three central focuses for sustainable development and set forth a clear and ambitious vision for such, which was translated into a group of goals and methods by which to achieve them.

The 2010-2014 National Development Plan aimed to boost environmentally friendly activities and adopt visions, programs, and strategies strengthening these activities, thereby striving to limit the quantity of pollutants and various kinds of waste produced, to lessen the intensity of the use of environmentally harmful material in production, and to recycle hard waste as a source for generating energy and fertilizers, achieving a tangible decrease in pollution rates in the main environmental components of air, water, and soil. There were environmentally approved implementation programs and investment projects, and systems for evaluating environmental impact and the international cooperation tied to Iraq's signing of more than 11 international treaties (seven of which it has officially announced its accession to while the instruments of the remaining treaties are currently being studied for signing during the coming years). All of this has contributed and continues to contribute by improving national work mechanisms and adopting international environmental standards, making them more specific, solving problems related to them, and bringing them into accordance with national, regional, and international requirements. These facts are a convincing explanation of the successes achieved and an objective justification for the projects carried out from 2009-2011. The other projects scheduled for completion during the coming five years (2013-2017) will strengthen the course of sustainable development in Iraq, readying the capacities for the creation of a green economy during the coming stage, taking into consideration the resolutions of the Rio +20 Conference in 2012 that asserted that the green economy is a tool for sustainable development, requiring a gradual transition as suits the economic and social capacities and characteristics of each country.

7-1 Situation Analysis

The environmental situation in Iraq is embodied by an image with two-sides. On one side are the features of a negatively-impacted environmental situation and on the other side are the features of a positively-impacted environmental situation; both define the mechanism for attaining a green economy.

7-1-1 The Sustainable Development Field

Iraq sought to strengthen the foundations of sustainable development throughout 2009-2011 in many areas of the economy and its production and service activities. Iraq seeks to establish pillars on those foundations throughout 2013-2017 by completing and strengthening the programs, projects, and policies it started to implement. Iraq will continue to adopt the gradual method of changing concentrations on non-environmentally friendly resources in production operations, especially with relation to oil products, where the quantity of tetraethyl lead (TEL) added to gasoline before 2003 was 0.48 grams of lead per liter as an upper limit and was reduced to 0.15 grams of lead per liter as an upper limit. The amount actually added currently is 0.05-0.1 grams of lead per liter for a decrease of 80% over the short term up to 2014. Current refineries will be rehabilitated by adding isomer units and improving gasoline to produce lead-free gas. Likewise, the sulfur content in the white gas and gas oil production process was decreased to 50 ppm in 2011 with the goal of reaching an upper limit of 10 ppm by 2017. Hydrogen sulfide gas was eliminated in electrical stations through withdrawing the gas through air vents. Renewable energy (solar and wind power) projects were also expanded and the goal is to expand the scope of their use throughout the coming five years. Although they do not number more than around fifteen, these projects nevertheless still represent a positive step in the direction of adopting renewable energy sources and allowing them as an alternative to non-renewable resources that pollute the environment. Among the most prominent programs and projects that Iraq aims to continue translating in detail on the ground and that support the course of sustainable development are:

- The implementation programs of the National Strategic Plan to fight desertification and drought (2011), which encompasses a group of projects to build a database to monitor, evaluate, and rebuild deteriorating ecosystems and develop the capacities of institutions that fight desertification.

- Projects arising from Iraq becoming a signatory to the Vienna Convention and the Montreal Protocol, the goal of which is the total elimination of the production and use of ozone-depleting materials.
- An emergency environmental management program in cooperation with the World Bank whose goal is to build capacities in the field of environmental management at state and private environmental institutions.
- An investment program in air quality observation systems in Baghdad and the governorates, which was implemented in two phases during 2009-2010. In 2011 the project programs were expanded to include a larger number of governorates (Najaf, Maysan, and Al-Qadisiyyah). Pursuant to this, six new integrated systems to monitor and measure air pollutants were set up and operated, and expansion of the geographical reach of the project is anticipated in the coming years.
- A remote sensing project to monitor sewage waste in the Tigris and Euphrates rivers.
- A remote sensing project to monitor water resources in Baghdad which aims to focus on the state of chemical, physical, and biological pollutants thrown directly into the river. Fourteen stations were set up, of which seven are on the western shore of the Tigris, and seven others are on the eastern shore of the Tigris. An area of 92 km in length of the Tigris waterway was covered. Two stations were set up on the Diyala River and one station was set up on the main river head in 2011.
- Projects to build large industrial complexes with high environmental quality specifications continued. After completing four industrial complexes in Basrah, Ninewa, Dhi Qar, and Al Anbar in 2011, Iraq aims to implement two projects during the coming years. These projects are to replace the foam production line at the Nassr State Company for Mechanical Industries and also a project to replace the refrigerator and freezer production line at The Light Industries Company.

7-2-1 Monitoring the Environmental Situation

One: Natural Phenomena:

Iraq, like the rest of the countries of the world, is affected by climate change, including the greenhouse effect, decreasing rainfall, increasing annual temperature and humidity rates, increasing rates of evaporation, dust, and dust and thunder storms. Iraq has sought to monitor and observe the changes in these rates through stations for monitoring natural conditions, which increased in number to ten fixed stations in 2011, four of which are in Baghdad, Basrah, Mosul, and Ar Rutba. The six remaining stations are distributed across the cities of the Kurdistan region. As a result, tangible progress was made in monitoring and observing the environmental situation and

that was improved by ongoing and regular readings of natural phenomena. However, this was not at the desired level due to the quantitative lack and limited geographical spread of the monitoring stations. Iraq seeks to increase these stations and expand the scope of their geographical reach in 2013-2017, making them into an early warning system against natural phenomena and a meter of pollutants in order to confront the negative effects which might extend to include the natural, artificial, and human environment.

Two: Protecting and Improving the Quality of Water Resources:

Iraq suffers from a decline in its water quantity and quality due to external and internal factors. The external factors are seen in the continued qualitative decline of water within Iraq's regional lands because of the various uses of upriver countries. Interior factors are due to untreated water related to agricultural and industrial uses as well as civil use. Thus, aside from treating the causes of pollution at the source, whether by establishing units for treating factory and hospital waste water or increasing the families covered by sanitation projects or expanding land reclamation, in 2010-2011 Iraq witnessed the implementation of a number of modern irrigation projects characterized by an efficient use of water resources including Al-Azizia project in Wasit governorate with around 3000 dunams for cultivation of feed with modern irrigation methods and Al-Jazeera irrigation project in Ninewa governorate. Iraq also strives to expand the construction of pilot systems relying on the use of solar power in modern drip and spray irrigation technology. A pilot unit to provide water to greenhouses and open areas using wells was implemented and solar power was used to operate water pumps with modern irrigation technology to reduce water waste and provide power alternatives. Iraq seeks during the 2013-2017 five-year plan to expand the implementation of such projects in order to redress the dilemma of the scarcity of water coming from Iraq due to the effect of the share obtained from the rivers shared between it and Turkey, Syria, and Iran as a result of those countries implementing a number of projects to build dams on those rivers.

Iraq has adopted an integrated system for monitoring and following-up on the quality of water resources based on the instructions set out in preservation of the environment Regulation No. 2 of 2006, the determinants for maintaining the rivers and public waters from pollution Regulation No. 25 of 1967, as well as the law for protecting and improving the environment No. 27 of 2009. Usually the observation process takes place by identifying sites for taking water samples from the monitoring stations on Iraqi river waterways, numbering 148 stations in 2011. On the Tigris, 14 stations have been set up. There are two stations on the Diyala River and one on the main river head. This is considered a translation of the remote sensing project to observe water resources where observation results for 2011 showed an increase in chlorides, sulfates, and solid matter dissolved in the Tigris River.

The water quality observation system expanded to include oil pollution in interior waters, that is, the waters of the Tigris, Euphrates and their subsidiaries, and the Shatt al-Arab, through three control authorities covering Iraq's geographical area. In 2011, a national plan was prepared to respond to oil spills in cooperation with the Japanese International Cooperation Agency which will be fully completed at the end of 2012. Despite these positive trends, the limited use of environmentally-friendly technology and the continued dependence on traditional systems for monitoring water quality and limiting the causes of pollution are among the challenges facing the observation activity for the environmental situation in Iraq. It is worth pointing out that Iraq has special programs for industrial water treatment in refinery companies in the oil sector. Units for treatment of industrial water exist in the three refinery companies in the oil sector. The current capacity of the treatment units at the North Refineries Company is 1200 cubic meters per year and will be expanded to 135 cubic meters per year at the end of 2012. Current capacity of the treatment units at Midland Refineries Company is 85 cubic meters per year and will reach 1380 cubic meters per year at the end of 2013. The current capacity of the treatment units in the South Refineries Company is 470 cubic meters per year. An increase in the current treatment capacities is planned in the coming years by building two units, the first with a capacity of 1200 cubic meters per year and the second with a capacity of [missing information] cubic meters per year. There is movement around the issue of reusing industrial water in the Midland Refineries Company where a contract with a Korean company was signed for the purpose of preparing a FEED study. This will be completed in the middle of 2012 and the project will be included in the North Refineries Company and South Refineries Company plans as well.

A national plan to respond to oil leaks was also prepared and adopted in 2011, especially for crude oil export installations, through coordinating with the Japanese International Cooperation Agency (JTCA) and other companies. This will be completed at the end of 2012.

Water associated with wet crude amounts to around 24 thousand barrels per day in the northern fields, which is treated in specialized treatment equipment and then captured in oil reservoirs for the purpose of raising reservoir pressure. In the southern fields, it amounts to about 10-15% of daily production. To solve the problem of associated water in the southern fields, a study was conducted with the Japanese agency on the treatment and reuse of water associated with wet crude and its reuse by capturing it for the purpose of raising reservoir pressure of the oil reservoirs, due to water scarcity and to avoid using internal water. Project capacity reaches 10 million barrels per day over three stages and the project includes construction of the system and extending the pipes to the oil fields.

Three: Protecting and Improving Air Quality

The tangible progress Iraq has made in limiting air pollution rates and improving air quality is a result of the implementation of many programs and projects during 2010 and 2011. These resulted in the creation of programs for monitoring air quality through fixed stations to measure pollutants in just three governorates (Baghdad, Basrah, Ninewa) and an increase in the number of specialized stations for air quality inspections and decisions, totaling 17 integrated stations. At the end of 2012, six other stations will be added to cover the governorates of Najaf, Karbala, and Maysan with two stations for each governorate, aside from the approval of national regulations such as ambient air quality and emissions determinants for different activities, not to mention updating and activating regulations and instructions for protecting and improving the environment.

Policies directing production activities like industry, electricity, oil (energy), transportation and communications toward limiting air pollutants by relying on air treatment systems and using environmentally cleaner technologies are among the factors boosting the improvement of air quality. This is especially so as we know that those activities are among the sources that most contribute to air pollution and the increase of concentrations of toxic gasses in the atmosphere, especially concentrations of heavy metals like lead and suspended particles.

a. In the Industrial Field

Dust precipitators were renovated and rebuilt at 14 cement factories in 2011, and work will continue during the plan period (2013-2017), strengthening the tendency to decrease furnace dust emissions rates and concentrations and expanding production of non-renewable alternative energy in the industrial fields. The number of these projects that were implemented exceeds 15 industrial projects at the end of 2011, making it a positive factor in air quality improvement during the coming years.

b. In the Electricity Field

It is noted that most electricity generation plans lack air treatment systems and that the air technology systems stop due to their low efficiency, which caused these stations to work for only 50-60% of their operational lifespan.

There is a current and prospective trend of using environmentally friendly technology by replacing gas stations at a greater rate than other types of stations and exploiting alternative and renewable energy sources. Around 6000 megawatts from 12 stations were converted to work on natural gas. Solar heaters will be distributed to houses, providing a capacity of 150 megawatts commencing in 2013. A programmed time table has been adopted for converting single cycle stations to combined cycle, and

this will assist with the utilization of the hot air produced by gas stations to operate the steam stations without using liquid fuel.

c. In the Oil and Gas Field

Iraq seeks to limit the process of burning associated gas and to utilize it completely.

During the coming five years, Iraq seeks to utilize fuels that cause less pollution by approving the use of liquid gas (LPG) as a fuel for vehicles along with gasoline and diesel in order to utilize the liquid gas surplus. This is starting in 2014 and the years following supported by the following procedures:

- Constructing essential stations along with all auxiliary plants in Baghdad, to be equipped with gas then spread out across the rest of the governorates.
- Adding a system operating on liquid gas alongside the working stations.
- Providing gas for residential complexes, taking into consideration all environmental determinants and safety and security conditions.

Construction is also planned for FCC units in the three refinery companies to increase production of intermediate distillates aside from liquid gas from tailings and work will be done to build four new refineries: in the Karbala governorate with a capacity of 140 thousand barrels per day to be completed in 2015, in the Maysan governorate with a capacity of 150 thousand barrels per day to be completed in 2016, in Kirkuk governorate with a capacity of 150 thousand barrels per day to be completed in 2017, and in Dhi Qar with a capacity of 300 thousand barrels per day to be completed in 2017. Their products will be within ORUE-4 international specifications, namely producing unleaded gasoline, white oil, and gas oil with a sulfate content of less than 10 ppm. As part of the plans to rehabilitate the current refineries, a study is currently being done on a project to build a system that works to raise the pressure of flare gas to be reused as fuel in the furnaces and boilers and adding a unit for acid gas for the purpose of removing sulfuric compounds before use.

d. In the field of Transportation

Iraq's adoption of open trade policies free of import controls brought about an increase in the number of cars imported by 127% compared to the period before 2003, replacing 80% of old cars. This had a dual impact on the environment, one positive, seen in air quality improvement, and the other negative, resulting from the absence of environmentally-related import controls, in particular on the type of gasoline imported, the rates of which grew to cover the increase in local demand. This was one of the causes for the increase percentages of air pollutants.

The increase in the number of cars after 2003 gave birth to traffic congestion, a phenomenon whose negative effects were exacerbated by the actual increase in traffic points and fixed and mobile controls, which led to increasing pollution concentrations in the air during times of traffic congestion, including nitrogen oxide and carbon monoxide.

Thus, Iraq seeks during the plan years to adopt a collection of procedures to limit the negative effects resulting from the application of open trade policies free of any environmental controls especially as relates to the importation of cars, in line with the international agreements Iraq has signed, especially with regard to the importation of environmentally-friendly cars and the utilization of clean fuels in order to protect and improve air quality and promote sustainable human development.

Four: Protecting and Improving Soil

Iraq adopted a group of programs aspiring to protect and improve soil as one of the elements of the environment. Such programs can be summarized as follows:

a. Land reclamation program:

In this program, 4.4 million dunams were reclaimed as of 2011. There is a need to reclaim 8 million dunams over the long term. The 2013-2017 Development Plan has designated 2.5 million dunams for reclamation, at 500 thousand dunams annually.

b. Fighting desertification

The areas affected by desertification not only expanded but desertification was exacerbated in Iraq over the last years because of climate changes and other environmental factors. Leaving matters as they are will have adverse economic, social, and environmental effects. Thus, the plan aims to take effective measures to face and fight the phenomenon through combating the desert's advance onto agricultural lands by stabilizing sand dunes in the central and southern governorates; establishing desert oases; developing plant cover in desert areas; increasing natural pasture area and increasing the number of natural preserves; expanding the areas of artificial forests; not allowing agricultural lands to lie fallow during droughts and the ongoing decrease in water resources, according to the indications before the item on agricultural sector development.

Five: Marshland Restoration

The Iraqi marshlands are considered the biggest ecosystem fed by the Tigris and Euphrates rivers abounding with all kinds of diversity and biological richness and nurturing many species of endangered and threatened wildlife. The area of Iraq's marsh-

lands before the desiccation process was estimated at about 20 thousand square kilometers, between permanent and seasonal marshlands depending on changes in water returns in the scarce seasons versus the flood seasons. A project to restore the marshlands was adopted after 2003, and is considered one of the biggest strategic projects in Iraq where 2710 square kilometers of marshlands were restored at the end of 2011, forming 48% of the total overall area that can be restored of 5560 square kilometers.

The 2013-2017 Development Plan aims to make the marshland environment and its biological diversity sustainable by making marshland water resources sustainable, protecting water sources from pollution, and creating a fine balance between protecting the natural environment of the marshlands and the social environment and requirements of the population within an integrated ecosystem.

Six: Developing and Improving Waste Management and Recycling

Iraq aims to achieve sound waste management, especially of solid wastes, hazardous and non-hazardous, in a way that guarantees environmental safety and community health. It aims to achieve such through an integrated multi-sided, multiple-component, continuous-cycle system. In 2010, the executive entities commenced implementation of the best options for meeting environmental standards at the lowest cost, such as setting out an integrated national plan for solid waste management, deemed a guide for policy makers in managing those wastes in order to establish specific plans to improve the environmental situation in all governorates. The plan included a technical, legal, institutional, financial, and social framework. In 2011, a plan for the Basrah, Dhi Qar, and Al Anbar governorates was prepared, which is also a strategic plan extending for 25 years over three stages:

First stage: Qualifying the personnel implementing the 2010 plan

Second stage: Increasing the numbers of staff and mechanisms, and formal landfill sites.

Third stage: Construct hard waste recycling, restoration, and reuse factories and invest in them in order to generate energy from that waste and produce fertilizers and primary materials for various industries.

As an outcome of this effort, waste collected reached 48.1 thousand tons per day in 2010, of which 42.6 tons a day are hazardous waste from health establishments. Waste collection services covered all urban areas at a rate of 65.7% distributed among 91.3% for urban areas and 7.5% for rural areas in 2010. The cause of the decrease in waste collection service coverage in rural areas is due to the lack of their inclusion in municipal services under the municipality management law in effect.

Implementing advanced projects to treat waste and limit their environmental effects in a practical way has started to come under consideration. An ideal model for a land-fill site was built and applied in the city of Kirkuk with an overall area of 120 hectares, of which 60 hectares was actual waste collection area, where standard specifications for burying wastes and for transforming them into a system for collecting gases to be used in generating power are followed.

The 2013-2017 National Development Plan seeks to treat these problems and surmount most of the challenges through calling for good waste management. The responsibility for managing wastes is not limited to the public sector alone; the private sector has a no less important role as well in the field of waste management with its involvement in municipal programs for recycling waste, utilizing organic waste, and producing electricity.

Seven: Sound Uses of Outer Space:

The World Summit on Sustainable Development confirmed the benefit of space technology and its applications in boosting sustainable development as in the UNISPACE III Conference to confirm the relationship of space to human development and to the core of the strategy to meet global challenges such as protecting the Earth's environment, managing resources, utilizing space applications to secure humankind and its development and welfare, strengthening knowledge of space science, protecting space environment, boosting education and training opportunities, and increasing public awareness of the importance of space activities. The Rio +20 Conference in 2012 also highlighted the importance of exploiting geographic spatial data for sustainable development purposes and strengthening decision-makers' awareness of the benefits of space technology science and its applications in meeting sustainable community development needs.

Iraq began by taking serious steps in the field of data collection, management, analysis, and publication and its applications by using remote sensing technologies in 1987 then sought in 2004 to build a national center for geographical information systems and remote sensing technologies. A strategy on geographical information systems was prepared within the national strategy for statistics in Iraq whose draft was released in 2008, which serves as an integrated structure supporting implementation of survey and census projects using geographical information technologies and systems.

Iraq uses GPS systems in determining the sample spatially and collecting information for the purposes of spatial data analysis. Statistical maps and atlases were produced as a way of developing and publishing data.

Iraq released the results of the survey on the sound uses of outer space in the governmental sector in December 2012 to evaluate the situation of state institutions in this

area. The results of this survey indicated that more than one ministry utilizes space survey outputs in its activities to carry out its tasks, particularly in the fields of agriculture, urban planning, regional planning, and reading natural phenomena.

The plan aims to adopt the projects that can boost sound uses of outer space in the fields of:

- Building infrastructure and expanding related applications specific to these technologies;
- Building geographical information systems that are useful in constructing plans, following up on their implementation, and decision making;
- Boosting the exchange of services and projects of these technologies and the utilization of their shared sources.

Eight: Environmental Awareness

No matter how significant and important the programs directed at sustainable development were, they remain lacking unless there is a sense of community awareness that believes in the value of these programs and their significance, and hence the importance of raising awareness about protecting the environment from deterioration and encouraging rational use of its natural and economic resources to ensure that sustainable development is achieved and the rights of future generations secured.

From here, the law on the formation of the Ministry of the Environment No. 37 of 2008, Article 4.10 states working to spread environmental awareness and education and activating civil society's role in this field. During 2010-2011, Iraq made the following achievements on the ground:

- Introduction of environmental and sustainable development subjects into school curriculums at the various stages, creation of environmental and sustainable development studies at universities, and preparation of advanced level theses and dissertations in this field.
- Spread environmental awareness using all different visual, audio, and printed media.

The plan aims to strengthen this reality through emphasizing the importance of relying on modern means of communication and social media networks due to the low cost, ease, and speed of reaching users, not to mention developing a spirit of "environmental citizenship" as one of the rights of humankind. This in addition to empowering and motivating citizens to protect the environment and actively involving them in decision making, and regarding accountability as one of the main conditions for evaluating the degree of environmental awareness among citizens.

7-2 Challenges

- Despite the achievements made in the field of environmental sustainability for development during the past few years, the environment is still one of the focuses for sustainable development that suffers from great deterioration in all of its components and has not been given advanced priority in developmental decisions.
- Continued imbalance of the relationship between resources and the population due to a 3% increase in the population growth rate and the expansion of urbanization, which is one of the ways pressure is placed on the urban environment which most depletes resources and pollutes the environment.
- Growth of the fiscal gaps between the amount of allocations set aside for the environment in the public federal budget and that required to protect and improve the environment.
- Failure to keep pace with capacity building programs in the environmental field and the requirements of protecting and improving the environment, especially in the governorates.
- Weak enforcement of environmental legislation, especially aspects related to penalties and holding violators accountable to environmental conditions, and the lack of enforcement of the principle “the polluter pays”.
- Limited use of environmentally-friendly technology in most fields of life, especially in industrial and energy activities that most pollute the environment, and continued reliance on traditional systems having a negative impact on the environment.
- Limited scope of the environmental dimension of basic and higher education policies and directives, which contributed to the continued decrease in the level of environmental awareness among the population, especially the youth segment.
- Weak response to international environmental standards, especially after Iraq signed 11 international environmental agreements, which require securing the necessities for meeting the requirements ensuing from being a signatory to these agreements.
- The absence of a comprehensive national strategy for sustainable development led to the reliance on improvisation and selectivity when implementing environmental programs and projects.
- The private sector is still absent as a main partner in strengthening the pillars of sustainable development in Iraq.

7-3 Vision

"A green Iraqi economy based on localizing environmental policies as an integral and inseparable part of overall economic policies attaining sustainable growth."

7-4 Goals and Means

Goal One: Protecting and improving air quality

Means of achieving the goal:

- Adoption of implementation programs specialized according to the source of air pollution, including natural sources, fixed industrial sources, mobile industrial sources, noise.
- Increase measurement, inspection, and fixed observation stations to cover all of Iraq's governorates.
- Establish an environmental database and manage it with regard to collection, documentation, and publication electronically.
- Production and use of clean fuels.
- Approval of environmentally cleaner production technologies.
- Tendency toward the utilization of renewable energy (such as solar and wind energy, hydroelectric power, and biomass energy to reduce emissions).
- Strengthen international cooperation based on the goal of improving air quality as one of the conditions of entering into contracts.

Goal Two: Protecting and improving water quality

Means of achieving the goal:

- Signing agreements with neighboring countries to determine the water shares entering Iraq in line with the principle of partnership and equity.
- Sustainable and integrated management of water resources through programs to develop and build capacities and programs to regulate water demand management.
- Develop marshland restoration programs ensuring the following:
 - ▶ Mobilize international and regional support alongside national efforts
 - ▶ Limit river water scarcity and deterioration of water quality
 - ▶ Limit migration rates from the marshlands to urban areas
 - ▶ Generate new work opportunities by increasing investments
- Develop water quality monitoring programs ensuring the following:
 - ▶ Increase the number of study and measurement stations

- ▶ Increase frequency of water bacteria and chemical tests
- ▶ Monitor upper and lower water pollution limits
- Develop sanitation water treatment programs ensuring the following:
 - ▶ Increase number of treatment stations
 - ▶ Expand absorptive capacity of the stations
 - ▶ Increase the scope of sanitation networks connected to treatment stations
 - ▶ Increase the quantity of water being reused instead of draining the quantity of water returning to the rivers

Goal Three: Limiting land deterioration and fighting desertification

Means of achieving the goal:

- Adoption of a national plan for land management and use and determining the deteriorating areas
- Adoption of programs to manage the sustainability of desert oases especially the northern and western deserts through the following:
 - ▶ Creating oases possessing the basics for subsistence
 - ▶ Revitalize the desert areas strongly affected by drought
 - ▶ Limit the rapid advance of urbanization of agricultural land
- Continued implementation of programs for fighting desertification and treating deteriorating soil through:
 - ▶ Increasing the green belt around the cities and the areas affected by desertification
 - ▶ Raising the efficiency of irrigation water use
 - ▶ Reducing the rates and intensity of dust storms by relying on GIS technology
 - ▶ Limiting soil erosion
- Treating soil pollution through:
 - ▶ Determining the lands polluted with unbroken projectiles and mines
 - ▶ Developing irrigation methods and limiting irrigation runoff routes to prevent increased salinization and overwatering
 - ▶ Calculate and limit sites of chemical and oil derivative soil pollution
- Preserving natural plant cover through:
 - ▶ Adopting a green environment policy for the utilization of abandoned areas
 - ▶ Establish programs to restore and develop natural pastures and regulate grazing especially in desert areas

- ▶ Sustainable development of forests and jungle areas

Goal Four: Preserving the Sea and Coastal Environment

Means of achieving the goal:

- Limiting coastal water pollution through:
 - ▶ Programs to monitor sources, quantities, and causes of pollution connected to oil activity and a mechanism for prevention
 - ▶ Programs to monitor sources, quantities, and causes of pollution connected to non-oil activity and a mechanism for prevention
 - ▶ Approval of water quality and sea sediment indicators
 - ▶ Activate sustainable management of sea fish resources by calculating and registering the types of sea fish and estimating the stock
 - ▶ Building indicators or qualitative proof of sea and coastal environmental pollution in Iraq
 - ▶ Developing fishing methods, means, and tools and eliminating methods that do not meet the required environmental standards
 - ▶ Determine and manage coastal and sea locations as environmental preserves for protecting biological diversity
 - ▶ Defining the types of sea organisms that can be utilized as indicators for detecting pollution
 - ▶ Developing the coastal areas through preparing modern environmental maps on sound environmental uses

Goal Five: Preservation and Sustainable Use of Biological Diversity

Means of achieving the goal:

- Monitor and document national progress toward achieving the 2020 goal of biological diversity set by the 2010 Nagoya Convention for the Protocol on Biological Diversity.
- Adoption of national programs to protect biological diversity including:
 - ▶ Studies and projects on the components of an environmental infrastructure that ensures the longevity and subsistence of natural species
 - ▶ A comprehensive field study to identify all local species quantitatively and qualitatively, including animal and plant groups
 - ▶ Advanced methods of environmental management to lessen damage affecting natural biological diversity
- Establish a specialized national bank called the gene bank for local species and genetic origins, through which advanced data on the genetic makeup of local species can be documented and gene maps made.

- Determine and publicize the threatened natural ecosystems (marshlands, rivers, coasts), monitor them and follow up on changes, fund requirements for their protection, and organize national sustainability days for them.
- Give special importance to biological diversity in all educational curriculums to educate students to protect biological diversity and care for natural ecosystems.

Goal Six: Developing and improving a system for waste management

Means of achieving the goal:

- Developing integrated management systems for non-hazardous waste emphasizing the following aspects:
 - ▶ Involving the private sector with the public sector in municipal waste recycling projects
 - ▶ Providing a detailed database and establishing a research roadmap in the field of waste sector administration
 - ▶ Develop observation and monitoring tools through the unification of the control system with environmental monitoring activity in one institutional framework
- An advanced administrative system for hazardous waste with a level of effectiveness requiring the following:
 - ▶ An institutional and administrative system supporting the waste management process technically, technologically, and legally
 - ▶ Creation and establishment of landfill sites for hazardous waste meeting all site and environmental stipulations
 - ▶ Issuance of legislation and determination of the mechanisms for dealing with hazardous waste

Goal Seven: Limiting Oil Pollution

Means of achieving the goal:

- An integrated inter-institutional legislative observation system whose goal is to set up preventative procedures in cases of oil leaks.
- Utilization of modern technology in the field of controlling, treating, and strengthening environmental monitoring and early warning and building a data bank for such.
- Activating the role of public participation in collaborating with civil society organizations in raising the level of awareness of the environmental risks formed by oil leaks.
- Attention to translating the items of international and regional agreements on transportation and oil products control for the purpose of controlling regional oil leaks.

- Developing technological tools for carrying crude oil to and from vehicles with the goal of reducing oil spills and managing large oil spills which are one of the problems causing oil pollution.

Goal Eight: Limiting Radiation Pollution

Means of achieving the goal:

- Building a database on sources of radiation in Iraq.
- Training programs for technical teams responsible for radiation surveys, investigation, evaluation, and methods of protecting against radiation.
- Evaluating and monitoring the radiation pollution situation, especially depleted uranium.
- Determining landfill sites and treating radioactive waste and developing suitable technology for such.
- Issuing and updating legislation on the regulation of radioactive waste treatment.
- Approving a principal of granting licenses to control movement of sources of radiation.
- Establishing national radiation environmental determinants based on global determinants.

Goal Nine: Integrated Management of Hazardous Chemical Materials

Means of achieving the goal:

- Calculating and evaluating poisonous and hazardous chemical materials whether produced locally, coming across borders, or resulting from industrial and agricultural activities and civil and military uses.
- Establishing an accurate and continuous environmental monitoring mechanism for the handling of toxic and hazardous chemical materials.
- Establishing controls and instructions on transporting toxic and hazardous chemical substances inside Iraq and abroad.

Goal Ten: Developing the Institutional and Legal Framework for the Environment Sector

Means of achieving the goal:

- Developing programs for evaluating the environmental impact of activities and projects.
- Amending and updating environmental legislation and policies.
- Adhering to international agreements, charters, and treaties on the environment and translating them into goals upon implementation.

- Forming a capable, qualified, and active environmental court as well as an environmental police agency to be considered one of the pillars of environmental protection.
- Building databases of environmental information, data, and indicators.
- Reviewing the structure of environmental institutions and units in the ministries in order to achieve environmentally effective institutions.
- Preparing an integrated plan for environmental awareness and education programs in order to instill a concept of environmental citizenship.
- Approving the principle of the environmental fingerprint for imported commodities and services in order to ensure health and qualitative value of imports.

Goal Eleven: The Private Sector as a Sustainable and Active Partner in the Environmental Field

Means of achieving the goal:

- Priority in granting banking credit to private projects adhering to environmental quality standards.
- Granting preferences, within the bounds of tax exemptions, in accordance with the degree to which environmental standards are applied.



If good governance means, as such, a system of traditions and institutions through which power is exercised in a country, including the election and oversight process, change of the individuals handling the affairs of governing, the ability of the authorities to draft and implement effective policies, respect of the citizens and the state for the institutions that govern by administering economic and social activities, then these meanings make it clear that governing is a complicated phenomenon having repercussions on economic, social, and human development. Good administration guarantees respect for the political, civil, and human rights of citizens through providing equal opportunities for all and relying on a culture of performance and achievement to access their political, economic, and social options. In addition, good administration ensures equality for all citizens before the law, protects them from administrative oversteps, or from repressive procedures undertaken by executive authorities. Good administration also means the existence of types of specialized bureaucracy capable of developing and implementing special development policies and ensuring that public services are provided efficiently. On another level, it must be acknowledged that service provision and easy access to services does not necessarily mean that good governance has been achieved. Therefore, good governance is a necessary requirement for achieving real human and economic development.

8-1 Situation Analysis

The need for good administration emerges as an effective reform tool through which political, economic, and administrative power is exercised in managing economic resources to turn the wheel of the national economy toward improving state institutions (public, private, and civil society) to achieve economic growth and social welfare.

Governance continues to be an integrated system with three main axes for reform (administrative, fiscal, and judicial), based on the pillars of the rule of law, participation, transparency, accountability, responsiveness, and efficiency. Thus it ensures the effective monitoring of good economic administration through expanding public participation, strengthening decentralization, activating oversight agencies, increasing the ability of the national economy to employ reserves and raise investment rates, aside from expanding the concept of development to include, besides the economic goals, goals aimed at providing citizens with a suitable standard of living based on equality and respect for human rights.

If Iraq, under the circumstances and great challenges of the day, needs a methodology and to expend extensive effort on the national and regional level as well as at the governorate level to develop the infrastructure and an effective mechanism for enforcing government programs and policies, citizens from all sectors, professions, cultural and educational levels, are also a part of the process of rebuilding the state, which is the main requirement for achieving long-term stability and development.

With regard to the administration in Iraq, the weakness of the pillars of good governance is evident. This is a result of cumulative negative phenomena affecting the Iraqi administrative body which have lasted for decades and constitute a great challenge to development programs and projects, and a waste of effort, energy, and money.

8-1-1 Decentralization and Local Governance

Decentralization in the administration of local affairs plays an important role in achieving and increasing administrative efficiency and effectiveness. This is achieved through efficient service performance and eliminating the bureaucracy characteristic of a concentration of power, as well as through contributing to investing available resources and activating public participation in proposing and carrying out development projects in a way that leads to the provision of services to service beneficiaries at the lowest cost to the individual and the national economy.

The ability of decentralized administration of local affairs to achieve and increase administrative efficiency and effectiveness is tied to a collection of variables, the most important of which is the relationship of the central government to local administrations. The more that relationship is based on reasonable legal limits and on cooperation, support and assistance, the more the ability of local administrations to manage their affairs increases, emphasizing that decentralization is not limited to transferring the powers of federal authorities to local authorities alone but rather empowering local authorities to face the financial and investment burdens necessary to make their areas grow and that fluctuations in the returns of local authorities does not lead to fluctuations in growth.

As a system, decentralization was applied in Iraq during the establishment of the Iraqi state in 1921, strengthened by the issuance of the first law of the governorates in 1969 that gave certain powers to local councils and smaller administrative units formed for the governorates by the higher authority for local administration. This was followed by the issuance of the Iraq interim constitution in 1970 that asserted the decentralized form of the state, where Section I, Article 8(b) provided for the division of the Iraqi Republic into administrative units regulated on the basis of decentralization.

After the political transformation in 2003, the law on the administration of the Iraqi state for the transitional period was issued in 2003, which asserted in Articles 4 and 10 that decentralized administration of the Iraqi State is the future political and administrative form for Iraq. Section 8 of the same law defines the regions, governorates, municipalities, and local entities that form the state. Then Coalition Authority Order No. 71 of 2004 was issued which provides that Iraq shall be a republic, federated, democratic, and pluralistic, and the authorities therein shall be divided among the federal government, the regional government, the governorates, the municipalities, and the local administrations, and that the regions and governorates will be regulated on a decentralized basis and authorities shall be delegated to local and municipal governments. The permanent Iraqi constitution of 2005 asserts in Section V, Chapter 1, "Regions", Article 116 thereof, that the federal government of the Republic of Iraq consists of a capital, regions, decentralized governorates, and local administrations. Article 110 of the constitution specifies the jurisdiction of the federal authority and defines certain of the issues within the shared jurisdiction of the federal government and the regional governments, including economic policies and planning (Article 114). The remainder is the share for the regions and the governorates not organized by region (Article 115).

One: Challenges

- The orientations and tendencies of the current administrative structure still reflect a centralized program, despite the constitution's support of decentralization.
- Powers and authorities overlap between the federal government and the local governments, where a character of antagonism prevails instead of one of harmony and unity, and there are many constitutional loopholes which have come up directly or indirectly in the overall process of planning, oversight, public participation, and engagement of the private sector, starting with the constitution effected in 2005 and the amendments needed, including but not limited to dealing with aspects related to foreign and local investment, dealing with intersections in powers between the federal and local government and surmounting unfamiliar terminology like 'sovereign external commerce' and reviewing the shared limited powers.
- In relation to the Law of the governorates of 2008, an interpretation of the content of local legislation, regulations, and instructions for regulating administrative and fiscal affairs and activating the role of local governorates in accordance with paragraph 5 of Article 7 is needed, aside from the need to clarify what is meant by writing policies and establishing strategies by the governorates in a way that does not contradict national development and reformulating the powers between the central government and local authorities.

- Limited role of the governorate councils in certain areas having a solid tie to local jurisdiction such as choosing administrative leaders and preparing operating budgets.
- Weak coordination between the federal ministries and governorate councils which reflects primarily on the precision of defining development priorities by governorate, the two-fold nature of the implementation of certain projects, and the declining efficiency of implementation of the plans made.
- Weak reliance on administrative decentralization in delegating powers at the centralized and local levels, aside from weak capacities and expertise of administrative officials in dealing with modern administrative work methods and systems.

Two: Goals

Goal One: Increasing the level of administrative decentralization in sectoral ministries and governorates

Means of achieving the goal:

- Activating and improving the legal and administrative framework to increase decentralization.
- Strengthening the regulations and procedures that support decentralization.
- Establishing clear policies to strengthen the role of municipalities in developmental planning.
- Spreading a culture of administrative decentralization.

Goal Two: Supporting fiscal administrative improvement in Iraq

Means of achieving the goal:

- Finding sources for generating local resources to be at the disposal of local administrations.
- Revising the fiscal administration law and reviewing the distribution of tasks to strengthen fiscal administration decentralization.
- Studying the subject of decentralized disbursements through the governorate treasuries and providing support with specialized and trained staff.
- Changing from the method of line item budgeting to program budgeting in budget preparation.
- Improve oversight and accountability systems and evaluate institutional performance.

Goal Three: Supporting local government capacities to provide services

Means of achieving the goal:

- Calculate the provision of basic public services by local administrations.
- Approve programs to develop capacities of members of local and municipal councils and local department staff.
- Strengthening coordination and interaction with advisory agencies and specialized scientific centers.

8-1-2 Public Sector Challenges

One: Public Participation

Increasing public participation in the governmental decision-making process is considered a primary part of the democratic process and the strengthening of civil society, and requires adopting a concept of integration or social solidarity, guaranteeing freedom of speech and expression, and opening good channels of dialogue and communication between all levels of society.

Public participation is a process that ensures dialogue, interaction, exchange of information, and presentation of opinions, with decisions being made on a given matter by individuals and groups that are interested in or affected, positively or negatively, by that matter, whether it be a project, program, or policy. That is, it is, in sum, a way of making social reforms that enables all members of the nation to share the fruits of development.

Through a review of the information available, data from a field survey conducted by the National Center for Administrative Development and Information Technology with support from ESCWA on the evaluation of public participation plans in four main service sectors showed that 54% of those included at the ministries covered by the study confirmed the weak participation vision and strong centralization in writing policies and formulating results. Public participation in decision making and drafting strategies of governorate councils, the business sector, citizens, and civil society organizations reached the lowest level at 18%, which indicates weak public participation in policy writing and decision making. As relates to mechanisms for communication and delegation of powers, the percentage of those confirming the need for improvement reached 72%, that is, there is a pressing need to amend legislation and regulations that allow a greater space for delegating [authorities] in order to achieve progress in communication among the ministries and their formations, as well as strengthening the role of governorate councils in selecting leaders, participating in budget creation, coordinating powers, and defining work requirements among governorate councils and sectoral ministries.

Public participation plays a fundamental goal in the accountability, oversight, and follow up process through the governorate councils and civil society, however, a decline

of 32% in participation of the parties mentioned above in all follow up and oversight operations is indicated, of which the ministries and their formations had the largest role. While 75% indicated weak public participation in preparing budgets, this may be due to the inability to mobilize fiscal resources and failure to make the best allocations for such.

a. Challenges

- Weak participation of active parties (citizens, local councils, civil society organizations, administrative formations in the ministries) in defining priorities and the decision-making mechanism.
- Weak culture of public participation in oversight, follow-up, and accountability mechanisms and taking corrective measures.

b. Goal: Strengthening the principle of participatory planning

Means of achieving the goal:

- Implementing programs to boost a culture of public participation in sectoral ministries and governorate councils to build administrative leadership capacities.
- Activating coordination between sectoral ministries and governorate councils and working in coordination and harmony in requesting fiscal allocations.
- Training workers in participatory budget preparation, fiscal oversight, and planning mechanisms to provide a greater area of fiscal decentralization.

Two: Public-Private Sector Partnership

Partnership is considered an effective developmental entryway for institutions from the public and private sectors and civil society to collaborate in supporting development efforts and improving the quality of public services. Despite the 2010-2014 National Development Plan's emphasis on the main role of the private sector in development, the importance of finding a suitable environment for its work, and the establishment of partnerships between it and the public sector, this continued to represent a general direction that did not include specific programs for nudging the partnership process forward. Reviewing the results of a survey of partnership plans in a number of service ministries for 2011¹, an absence of partnerships between the two sectors was seen, at 72%, as well as the absence of a clear partnership vision among those who had partnerships, at 59%. The partnership process also suffers from organizational shortcomings in the administrative, fiscal, and technical aspects, at a rate fluctuating between 71-75%. On the other hand, the role of civil society in the partnership triangle (which includes the public sector, the private sector, and civil society), as the link between the citizens and the state, is very weak.

¹ Field study "Assessing Public-Private Sector Partnership Plans" carried out by the National Center for Administrative Development and Information Technology in four service sectors with support from ESCWA, 2011.

a. Challenges

- The state's limited experience in public-private sector partnerships.
- Absence of the legislative and legal framework which regulates public-private sector partnership.
- Unpreparedness of the governmental sectors to deal effectively with the private sector.

b. Goal: Strengthen public-private sector partnership in the field of service provision and infrastructure

Means of achieving the goal:

- Issue legislation regulating the principle of public-private sector partnership.
- Strengthen capacities of the relevant ministries in administering public-private sector partnership operations.
- Restructure public companies toward privatization, ensuring the rights of the workers at these companies.
- Adopt modern methods of public-private sector partnership such as build-operate, build-operate-transfer, and build-operate-maintain-transfer.
- Strengthen the duties and independence of the legal system, including dispute resolution and contract enforcement.

Three: Civil Service

Iraq was considered an advanced country, having capacities in public sector administration and a highly proficient civil service cadre, however, the effects of decades of war and international isolation lead to weakened civil service administrative abilities aside from a lack of investment in the main public sector fields and a doubling of employees as a result of the lack of alternative work opportunities in the private sector. Despite efforts after 2003 to improve the civil service system and the issuance of the federal service council law in 2009, which has not yet had an impact on the low level of performance of Iraq's governmental administrative body, the sector suffers from a decline in the level of services, complicated procedures, and delays in carrying out transactions aside from the spread of fiscal and administrative corruption, a slack administrative body, and the resulting decline in performance efficiency and depletion of a high percentage of the state's federal budget.

a. Challenges

- Inflation of the administrative entity and dual roles and tasks as a result of the creation of new ministries and public authorities.
- Lack of consistency between the organizational structures and their internal regulations, based on the results of the abovementioned surveys.

- Concentration of authorities in the hands of administrative leadership and failure to delegate these authorities.
- Shortcomings in human resources planning and poor workforce distribution.
- Absence of clear and transparent standards for choosing competent administrative leadership.
- Absence of job descriptions in most of the administrative formations, which reflected negatively on human resources and the determination of training needs, and opened the door to a random distribution of appointments and promotions.
- Absence of clear standards for hiring and evaluating worker performance.
- Lack and age of legislation and laws regulating civil service and the failure to form the federal service council to date.
- Absence of clear standards for measuring institutional performance.

Goal: Raise the efficiency of the governmental administrative body

Means of achieving the goal:

- Expediting legislation of a modern civil service law.
- Setting up a program for a comprehensive update of civil service systems.
- Building human capacities through performance-directed training.
- Setting up a policy to slim down the size of the governmental body.
- Reform the institutional system (organizational structures, internal regulations, job description, job requirements) in accordance with modern administration standards.
- Improve communication mechanisms and define the responsibilities of federal and local institutions.
- Develop oversight and accountability mechanisms and contain them in one entity having technical and legal abilities and high powers of enforcement.

Four: e-Government

Reforming the public sector can only be effective if communication and information technology has a key role in updating the work tools that allow for raising the level of performance and speeding up transaction completion, simplifying procedures, and improving the level of welfare, aside from securing precision in transaction follow up and giving precise statistics on the transactions completed.

Iraq sought to establish and enforce advanced policies on e-government, which is considered an important tool that can help boost transparency and accountability, keeping in mind the fact that the success of the e-Government project is tied to im-

proving public administration and providing a transparent administrative environment (good governance).

There has been joint coordination between the e-Government committee and UNDP since 2009, where several initiatives were undertaken and applied, the most important of which include convening an international conference on e-Government, called "Building e-Iraq and e-Governance", which was held in December 2009. This resulted in:

- Holding the first training conference for trainers in 2010 in which national training program methods for e-governance were specified, which included five main units: general governance framework, governance strategy, government planning, change management, and e-governance implementation. Thirty expert trainers were trained in this field.
- Launch of the e-Iraq portal in July 2011, which contains informational and interactive services.
- The Iraqi interoperability document was launched in December 2011 on the exchange and connectivity of information.
- The training program for trainers was expanded, and 200 expert trainers were trained in different ministries, who contributed to spreading the e-governance culture in the ministries and governorates.

Within the first stage of the public sector reform project, an electronic readiness survey was carried out where data for 2010 showed that 91% of the ministries have LANs or WANs and that the percentage of computers connected to these networks reached 63%. This is considered a good indicator of the possibility of inter-ministerial information exchange and communication. In the field of improving working on computers and using the internet, which is a basic element of e-government work, the percentage is still weak, where the number of workers who are proficient at using the internet reached 16% of the total number of workers, and the number of workers who are proficient at using computers reached 43% of the total number of workers.

With regard to website administration, most of the Iraqi ministries handle the task of publishing their activities online and communicating with its agencies and service beneficiaries themselves, as there is a lack of website designers, who account for 1% of the total number of workers.

a. Challenges

- Absence of legal legislation that supports and regulates e-government (such as electronic signatures, e-commerce, computer crime, identification) and not using documents sent electronically in the enforcement of government contract instructions in 2008.

- Absence of change management, which leads the process of conversion to e-government models because changing the relationship of the government body with its internal and external environment in this field requires redesigning the administrative process by which the administrative body conducts its affairs, and resistance to change on the part of the workers and weak human resources capacities.
- Technical challenges are seen in:
 - ▶ The need for large fiscal investments to secure information technology
 - ▶ The digital gap resulting from educational, economic, and regulatory obstacles that make the process of entering the digital world difficult
 - ▶ Weak communication infrastructure
 - ▶ Lack of a sustainable, stable computer network for governmental interoperability
 - ▶ Limited internet connectivity and high subscription costs
 - ▶ Availability of mechanisms for cyber security and how to deal with hostile cyber attacks (cyber terrorism)
 - ▶ The banking system's lack of mechanisms for electronic payment

b. Goals

Goal One: Developing a knowledge-based society and closing the digital gap

Means of achieving the goal:

- Establishing legislation and laws that support e-government, such as electronic signatures, e-commerce, computer or information crime, identification.
- Carrying out programs to improve human resource capacities in information and communications systems.
- Increasing investment in information and communication technology in public institutions to achieve good governance.
- Spreading and supporting new e-government services in the governorates to strengthen the principle of equal opportunity.
- Develop an institutional framework for organizing e-government activity.
- Spreading awareness among public sector employees of Iraq's interoperability frameworks, standards, and certification.
- Developing work systems and procedures for applying e-government.

Goal Two: Boosting interaction and strengthening foundations of partnership between development partners in the transformation to a digital economy

Means of achieving the goal:

- Spreading e-awareness among employees, the business sector, and civil society organizations.
- Coordinating with training and development centers at universities.
- Holding informational sessions for decision makers, higher administrations, and leaders in the center and in the governorates.

8-1-3 Integrity, Transparency and Battling Corruption

Iraq faced great challenges that lead to the spread of many phenomena, including corruption in its various forms. The effects of this corruption were reflected in governmental institutional performance and the efficiency of national development program implementation. To confront this, Iraq began to adopt mid-term strategies and programs as a framework for fighting corruption. The government signed the United Nations Convention against Corruption in 2008, and Iraq is also a member of the Middle East and North Africa Anti-Corruption Working Group, and established a multi-sided strategy to fight corruption that was launched in 2010.

Since 2003, the government has also supported capacities building for the Commission on Integrity, the Financial Oversight Agency, the office of the Inspector General, the office of the coordinator to the Prime Minister for oversight affairs, and the Joint Anti-Corruption Committee. Iraq became a member nominated to the extractive industries transparency initiative. In this context, the government has expanded the scope of public disclosure of oil and production returns. Legislative oversight has been improved, the Council of Ministers and the governmental integrity committees are conducting public audits of the executive authorities, and an integrity commission was established in the parliament of the Kurdistan region.

One– Challenges

- The prevalence of social, political, and administrative values nurturing, protecting, or permissive of corruption and strengthening it.
- Weak culture of fighting corruption.
- Outdated banking system and its inability to retain tools for sound application of the procedures and requirements for preventing money laundering operations.
- Failure to apply professional standards in filing positions, especially leadership positions, by relying on biased allotment methods and political considerations.
- Weak procedures for collaboration, coordination, and integration among public institutions and entities concerned with fighting corruption.
- Lack of transparency in financial transactions, especially in revealing the results of the implementation of budgets and disclosing fiscal interests.

- Shortcomings in penalizing officials accused of corruption and abuse of office.
- Lack of confidence in governmental institutions, particularly those that provide services directly to citizens, especially with the spread of bribery in these institutions.
- Disregard for instructions and mechanisms for implementing public governmental contracts, voiding them of the elements of competitiveness and transparency.

Two– Goals

Goal One: Protecting society from corruption and spreading a culture of integrity

Means of achieving the goal:

- Utilization of a national program to protect society from corruption crimes and establishing mechanisms and controls to guard the national economy from negative practices and raise the ethical standards of public service occupations.
- Reform the educational system, securing the spread of a community culture starting from the schools by educating the new generation about the risks of corruption and cultivating sound morals, ethics, and upbringing.
- Revealing instances of corruption after issuance of a court ruling and making them known to the general public, in implementation of the principle of transparency.
- Developing procedures for building the databases needed to make the right decisions and undertake the correct procedures in the field of fighting corruption.

Goal Two: Building a legal state and good administration, and spreading a culture of protecting human rights

Means of achieving the goal:

- Developing the legal measures necessary to strengthen the rule of law and activate the abilities of entities dedicated to implementing anti-corruption procedures.
- Simplifying and guiding administrative procedures and periodic self-evaluation procedures for institutions, with the objective of achieving effective service provision for citizens.
- Developing and building the tenders and contract system in accordance with the principles of transparency to ensure the strengthening of the foundations of competition and equal opportunities in accordance with the standards of the free market.

- Strengthening the role of observation agencies, ensuring that coordination and cooperation procedures are established between them and boosting citizens' confidence in these agencies.
- Strengthening internal monitoring and control procedures in all state departments to boost the ability of the administration to control and limit the risk of collusion and fraud.
- Relying on principles of good governance through application of related agreements and laws, especially the United Nations Convention against Corruption.
- Restoring the legal standing of natural persons and legal entities upon being proven innocent of corruption and holding accountable those who file malicious cases.

Goal Three: Strengthening a culture of integrity, transparency, and social responsibility in public service occupations

Means of achieving the goal:

- Holding relevant officials accountable for presenting financial disclosures when they fail to do so.
- Approving programs and curriculums to spread a culture of integrity and transparency in institutions and society.
- Activating regulations for occupational conduct rules and boosting a culture of ethical conduct in the public and private sector.

Goal Four: Increasing the efficiency of administrative leaders in the governmental body

Means of achieving the goal:

- Making nominations for leadership positions on the basis of professional and objective considerations.
- Avoiding biased allocation of positions and relying on ability and merit as the basis for filling public positions.
- Penalizing leaders accused of corruption and abuse of office.

Goal Five: Strengthening oversight and accountability procedures in the performance of public services

Means of achieving the goal:

- Holding accountable those accused and convicted of bribery and abuse of office.
- Simplifying transaction flow procedures so they are completed in fewer cycles and with clarity and transparency.
- Approving mechanized information systems to follow up on existing and completed transactions.

- Publicizing information on the official websites of the ministries and non-ministerial entities about all controls and instructions for completing citizen transactions.

8-1-4 Rule of Law, Human Rights and Access to Justice

Strengthening rules for sound governance requires boosting the state's capacities by relying on the rule of law, which presumes that the law is the sole valid authority to which reference can be made in the administration of the affairs of the country and controlling relations between the components of the state and society on the basis of equality and equal opportunity. The rule of law rests on the separation of powers, which forms the cornerstone of a true democracy, and on the existence of an integrated and independent legal system, starting with the constitution and extending to any regulatory text whether issued by the government or any institutions, in a way that protects human rights and guards the rights of citizenship as stated in international treaties and by the international community, and the existence of an environment ensuring a just, independent, and impartial judiciary.

One: The Constitution and Separation of Powers

The constitution, which sits at the top of the legal pyramid, is a supreme legal document considered the basis of all legal legislation – the law acquires its legitimacy only by being based on one or more constitutional principles, and the powers cannot be considered legitimate unless its authorities, formations, and work mechanisms have been provided through a direct reliance on the constitution.

In its third section, the Iraqi Constitution defined the components of the federal powers. Article 47 of the Constitution states:

"The federal powers shall consist of the legislative, executive, and judicial branches, exercising their jurisdictions and performing their duties on the basis of the principle of separation of powers."

The parliamentary system is considered the correct image and model expressing the principle of the separation of powers in its true form, where state power is distributed among three bodies, legislative, executive, and judicial, without there being an absolute separation between these entities. Rather, they work in collaboration and partnership in exercising certain authorities, especially between the legislative and the executive powers. The judicial power must remain at a distance from the traditional struggle between the other powers and must have a degree of independence in line with the characteristic impartiality, integrity and distance from political factions and sectarian struggles of all kinds required in order to perform its critical function.

a. Challenges

- Lack of awareness and understanding with regard to the separation of powers and independence of the judiciary from the legislative and executive powers.
- Iraq's slow legislative process, which isn't in line with the political transformation of a totalitarian system to a democratic one.
- Lack of mature democratic experience in Iraq and continued dominance of tribal, sectarian, factional, and regional loyalties.
- Weak spirit of citizenship and entrenchment behind weak interests.
- Weak role of political parties and civil society organizations in taking responsibility for teaching the public about democracy.
- Failure to legislate a law regulating the work and roles of political parties in the democratic process.

b. Goal: Strengthen the principle of the separation of powers

Means of achieving the goal:

- Spreading and deepening awareness of the importance of the separation of the three powers.
- Developing the capacities of the judicial system (court employees and judges).
- Strengthening the security situation and the work environment of judges and the public prosecution.
- Strengthening oversight and accountability mechanisms in the legislative, executive, and judicial powers.
- Boosting the capacities of civil society organizations to contribute to spreading awareness of the importance of the separation of powers and supporting the pathways of democracy.

Two: Human Rights and Rule of Law

Good governance and human rights strengthen one another. Human rights principles provide a collection of values for directing the work of governments and other active political and social entities. They also provide a collection of performance standards on the basis of which these entities can be made accountable. In addition, human rights principles contribute to boosting good governance by improving legislative framework, policies, programs, budgets, and procedures. On the other hand, the application of human rights relies on the existence of a supportive environment of legislation and an institutional framework, aside from a political and administrative environment responsible for fulfilling the rights of citizens.

What Iraq has suffered in terms of the wars and struggles over the past decades, and the many violations of rights and freedoms and the sacrifices made by Iraqis in terms

of human life, are known. This required the creation of institutional formations after 2003 working to strengthen and respect human rights, and the Iraqi constitution of 2005 was made to include human rights issues in the second section ("Rights and Freedoms"). Iraq was chosen as an observing member of the UN Commission on Human Rights in Geneva.

During the past period, many studies, reports, and initiatives have been carried out that included monitoring human rights infringements. These were submitted to the Iraqi government and the relevant ministries. The Iraqi government placed great importance on improving Iraq's record and programs in the field of adhering to respect for and activation, protection, and strengthening of human rights and ensuring they are enjoyed. In order to realize this, a sectoral committee was formed representing a base of the governmental and non-governmental institutions and with the reliance on national, regional, and international expertise. The national plan for human rights was prepared, which aims to strengthen respect for all rights through active programs, policies, and legislation in the activities handled by institutions, each according to their specialization and authorities. The national strategy for human rights, which included recommendations on women, children, and other recommendations that concern human rights, was launched on January 15, 2012.

a. Challenges

Aside from the challenges faced by children, women, widows, female heads of households, the elderly, and special needs individuals, discussed in the community development section, there are social phenomena that affect human rights like begging and homelessness which have turned into phenomena that have intensified over time due to poverty and deprivation and an increase in the numbers of victims of violence, refugees, and displaced individuals, as well as non-conformance of prisons to international standards and a delay in settling court cases, which require establishing remedies for these negative phenomena in society.

b. Goals

Goal One: Strengthening mechanisms for translating human rights principles on the ground

Means of achieving the goal:

- Approval of international human rights rules and standards within the judicial system.
- Activating government capacities to perform state obligations around international human rights agreements.

- Strengthening the capacities of institutions concerned with human rights in achieving their goals by observing, protecting, and strengthening human rights and investigating infringements.
- Strengthening capacities of national and local authorities to create and maintain modern statistical databases capable of being relied on in documenting human rights infringements.
- Strengthening the role of civil society organizations in dealing with human rights issues within a legal work framework in line with international standards.
- Providing legal and institutional protection in dealing with vulnerable groups, such as minorities, internal migrants, refugees, incapacitated individuals, and individuals returning to Iraq.
- Spreading awareness of human rights within educational curriculums, state institutions, and all sectors of society.
- Establishing policies and activating the institutions concerned with the rule of law.
- Strengthening administration of the judicial system and criminal courts to be in line with international standards, reduce the average time available to solve disputes, and increase the number of investigation judges.

Goal Two: Promoting the standard of living and life for citizens

Means of achieving the goal:

- Increasing efficiency of social security networks, expanding its coverage, and ensuring its accessibility to those who deserve it.
- Empowering vulnerable groups to facilitate opportunities for integrating them into society.
- Expanding the scope of access to basic education and promote higher education and scientific research.
- Provide and improve public services such as water, electricity, and sanitation in residential areas.
- Protecting and improving the environment through reducing water and air pollution.
- Providing work opportunities securing a sustainable income.
- Placing importance on rehabilitating and providing care for individuals recently released from correctional facilities.
- Intensifying efforts to deal with begging and homelessness.
- Treating the problem of informal settlements in accordance with the principles set out in the spatial development section.

Three: Qualified Judiciary

The judiciary forms the main foundation on which the rule of law relies. It is the main authority entrusted with interpreting the laws to be applied. It settles disputes and protects the rights of individuals and groups, it is the safety valve for peace and democracy, and it is the main lever for development. Without confidence in the judiciary and without a sound legal environment, there is no motivation for investment and development. It is also the essence of the principle of the separation of powers, which forms the cornerstone of the establishment of a true democracy, constituting the environment guaranteeing the rule of law, based on the presumption of an independent and impartial judiciary.

Iraqi laws and legislation have confirmed the principle of judicial independence since the establishment of the Iraqi state. The constitutions of 1925, 1970 (amended), and the 1990 draft constitution confirmed this. This principle was also included in the 2005 Iraqi constitution, which provides in Article 19 (I): "The judiciary shall be independent and there shall be no authority over it other than the law."

a. Challenges

- Weak capacities of some organs of the judiciary branch.
- Repercussions of the security situation and the resulting anxious environment in which the judges and the general prosecution work.
- Duration of the procedures for settling and holding cases.
- Limited judicial system access to members of marginal social groups who require it.
- Need to restructure judicial system institutions.

b. Goals:

Goal One: Strengthening judicial independence

Means of achieving the goal:

- Boosting the institutional capacities of the judicial system:
 - ▶ Simplifying litigation and transaction completion procedures
 - ▶ Support criminal court systems and integration and completeness of information
 - ▶ Strengthen oversight and accountability mechanisms in the judicial system
 - ▶ Boost capacities of workers in the judicial system
 - ▶ Reform appointment procedures for the public prosecution, judges, and lawyers to be based on merit and competence

- Establish mechanisms for regulating and improving judicial work among the Higher Judicial Council and judicial institutions in the region and governorates not regulated by region.

Goal Two: Spread legal culture in society

Means of achieving the goal:

- Strengthen the role of civil society to advocate for and monitor legislative amendments in parliament.
- Secure and improve opportunities for citizens to access justice.
- Spread awareness of the necessity of respecting the judicial branch and ensuring its independence.



9-1 Why Follow-Up and Evaluation?

While establishing the plan in accordance with sound methodological foundations and practical data is a primary condition for its success, the plan remains lacking unless it is complemented by clear and defined mechanisms for following up on plan performance in terms of achieving its goals at various levels. Thus, the Ministry of Planning strived to develop a system for tracking the achievement of development plan goals, thereby ensuring that there would be follow up on plan implementation and annual feedback.

Following up on the implementation of development plans is a primary part of the development planning system. Preparation and implementation without controls does not guarantee high qualitative results. Designing and implementing a national system for follow-up and evaluation in accordance with modern methods will provide the opportunity to conduct periodic evaluations of development plans and programs and to monitor achievement progress based on the plans made. It will also provide an incentive to governmental ministries and entities to carry out their responsibilities according to a fixed time table, in addition to determining the obstacles that these entities face and preparing a comprehensive database to assist in the creation of future development plans and strategies.

Establishing a comprehensive follow-up and evaluation system will:

- Help attain a high level of institutional performance in the public sector.
- Improve the decision-making process at the central and local level.
- Boost the efficiency of resource allocation and project and program planning.
- Indicate the degree of success in completing projects and providing services through continuous recording of progress made toward achieving the planned targets.
- Strengthen the commitment of the relevant parties to achieving the desired results.
- Provide a knowledge base for periodic review and revision of policies and programs.
- Clearly define the responsibilities of the various development partners.
- Provide the facts required to ensure accountability before target communities and groups as well as funding entities.

- Raise the level of coordination and collaboration between all different concerned parties at the various entities.
- Establish a strong culture of accountability and compliance, learning, and achieving results.
- Improve paths of dialogue and increase the ability of concerned parties to clearly submit the results achieved to the parliament and international funding agencies.

9-2 Building a Follow-Up System and Evaluating Development Plans

A division for follow-up and evaluation was formed at the Department of Economic and Fiscal Policies based on the Law of the Ministry of Planning No. 9 of 2009. This division is responsible for establishing the framework and mechanisms for following up on the achievement of National Development Plan goals. The division also works on annual monitoring of achievements and progress in the implementation of national plans vis-à-vis national goals, policies, and aims, in addition to collecting information on the performance of ministries and non-ministerial entities and governorates and entering them into the follow-up and evaluation databases. This is in addition to preparing annual achievement reports, which analyze performance in the development field and offer suggested solutions to the relevant entities for use in drawing up future development plans and programs. Perhaps the most prominent challenges faced by the follow-up process for the 2010-2014 development plan are:

- Periodic issue of contradictory information from one ministry to another as a consequence of the working conditions particular to each one, which had a major impact on the establishment of a regular mechanism for following-up on performance and issuing reports.
- Lack of clarity with regard to roles and responsibilities among the Ministry of Planning, non-governmental entities, and the governorates, which requires roles be defined precisely and clearly.
- The process of choosing indicators and defining their base and target values did not take place with the active participation of the relevant ministries.
- Absence of a system for measuring the performance of the main sectors, which requires that subsidiary sector activity indicators be relied on to measure the achievement of the goals of the main sector.
- Weak technical abilities of workers in the field of follow-up and evaluation; this area must be improved and supported in order to perform at the level of the responsibilities entrusted to it.
- Vast shortcomings in data, especially at the local and central level; one area in which there are shortcomings is the very weak follow-up on investment activity in the private sector, both local and foreign.

In this regard, a preliminary framework was constructed for 2010-2014 development plan follow-up, ensuring a number of administrative processes, indicators, information systems, and reports. This system included six components, as follows:

- Goals and means
- Performance measurement indicators
- Implementation structures
- Data collection sources
- Data collection methods
- Training and guidance

Work was also done on designing an electronic database, which was included in the goal measurement indicators and means of implementation. The aim was to link the system with the ministries and non-ministerial entities for ease of system use and operation, giving these entities access commensurate with their responsibilities and areas of competence.

9-3 Development of the System to Follow Up on Achievement of the 2013-2017 Plan Goals

The Ministry of Planning placed great importance on follow-up activity for the 2013-2017 National Development Plan and on developing a system for current follow-up. Focus was placed on building a results-based follow-up and evaluation system, providing a system capable of measuring the performance of the National Development Plan as well as future development plans and programs. Results-based follow-up is considered one of the best methodologies used currently in administration and accountability.

C - System Goals

- Create ties between following up on the achievement of National Development Plan goals at the various levels and following up on implementation of governmental investment programs, providing periodic assessment to know whether the policies drawn up at the aggregate and sectoral levels of the plan led to the desired results, and working to amend them if they fail or to change the local and external circumstances that affected their performance.
- Provide a report on the performance of decision-makers and the concerned parties on the degree of the performance efficiency of governmental agencies and the extent of their ability to achieve the goals (results) desired, and giving sufficient detail on the nature of the problems faced in plan implementation and the measures proposed to deal with implementation problems, to be relied on in supporting and making decisions.

- Conducting an assessment of the impact made by the projects.
- Complete the automated system for following up on plan implementation and goal achievement, as said system facilitates communication and direct ties with higher entities and all governmental bodies, governorates, and regions for following up implementation progress of the projects and goals of the economic plan, and produce the related reports.
- Seek to establish an indicator matrix in accordance with international standards to be used in following up on the performance of the national economy and sectors thereof.

D - Proposed System Structure (a results-based follow-up system)

Plan performance will be followed up at two levels:

- Follow-up on plan results at the short- and mid-term level
- Technical and financial follow-up on project implementation results

The first steps in building a framework for following up plan performance may include:

- Agreeing upon the results (the goals) desired at the different levels, which will be followed-up on according to each main plan activity.
- Choosing performance measurement indicators suitable for the results at the different levels.
- Determining the priority values for the chosen indicators (baseline data) before commencing plan implementation, i.e. 2012 data.
- Establish realistic targets based on an appropriate analysis, with the participation of the relevant ministries, and guided by the results achieved in prior plans.
- Following up on achievement of results at the short- and mid-term levels, defining performance gaps, if any, and proposing solutions to such.
- Ongoing evaluation of plan activities including mid-term evaluation and final evaluation at the end of plan implementation and then an assessment of the impact (produced) approximately two years after completion of plan implementation.

9-4 Requirements to Implement the System Developed

The proposed follow-up and evaluation system is based on the present system and works to develop this system. This requires a clear definition and distribution of roles and responsibilities among the federal government, local governments, the private sector, and civil society organizations as well as continuous support at all levels. The most important requirements for the success of the new system may be:

- Developing the abilities of workers in the field of follow-up and evaluation. The Ministry of Planning will play a main role in strengthening national follow-up and evaluation abilities through helping local governments and ministries to follow-up on and assess the implementation of national development plan goals by coordinating international and national efforts in developing national institutional abilities in the field of follow-up through training activities and ensuring the flow of information on implementation and follow-up among beneficiaries.
- Ensure the involvement of the concerned parties from the ministries, governmental and non-governmental institutions, and the governorates at all stages of plan preparation and follow-up, from agreeing on the results desired at the short- and mid-term levels to choosing performance measurement indicators and establishing values to collecting and analyzing performance data.
- Transparency in publishing and sharing results in order to benefit from them in undertaking support procedures to improve and control performance during the remaining portion of implementation time, ensuring that short- and mid-term plan goals are reached.
- Guarantee feedback in order to benefit from follow-up and evaluation results in supporting and making programming decisions (preparation of future plans – supporting work in time remaining for plan implementation) or administrative decisions.
- Documenting the lessons learned and reflecting them in subsequent implementation and planning processes.

9-5 System Outputs

The most significant results of the application of the results-based follow-up and evaluation system are:

- Issuance of an annual report on the follow-up results of plan goal achievement in addition to following up on the implementation of policies and programs carried out periodically to measure the progress made towards achieving the results and changes desired over the short-, medium-, and long-term, as well as comparing the achievements made with those planned, identifying the discrepancies, if any, and suggesting the practical and correctional procedures necessary to control development performance.
- Issuance of a mid-term performance evaluation report on plan application to determine the change calculated in the desired results due to the implementation of plan goals or an analysis of inputs and outputs of each activity to determine their contribution to the overall results.
- An evaluation report at the end of plan implementation, to determine the changes that occurred over time in the results of the national development plan

in general and determining the number of changes made resulting from the projects and programs carried out as part of the national development plan.

- Evaluation study of plan impact on the economy, individuals, and society.

9-6 System Results Assessment Mechanisms

- Formation of a higher committee presided over by the minister of planning, two deputy ministers, representatives of ministries with active development influence and a number of governorates, and representatives of the private sector and civil society. The committee meets biannually to follow up on the progress made in achieving plan goals.
- Holding biannual sectoral workshops sponsored by the Ministry of Planning called by representatives of all ministries and non-ministerial entities related to the sector, governorates, and representatives of the private sector and civil society, to review and discuss the progress made in implementing sector activities and proceedings within the plan and suggesting remedies to be submitted to the higher committee for following up on the progress in achieving plan goals.
- Convening an annual conference sponsored by the Ministry of Planning to review follow-up results and evaluate the degree to which plan goals have been achieved. The Ministry of Planning presents the foundational paper for the conference in which it states the degree to which goals have been achieved in the fields covered by the plan, indicates discrepancies in the degree to which goals have been achieved, and offers suggestions for remedies, while the ministries, non-ministerial entities, and the governorates present reports on the progress in achieving plan goals within their spatial sectors and areas of competence, according to the indicators to be included in the proposed system.
- Approving the results of the annual conference called by representatives of the higher entities, the Council of Ministers, the ministries and non-ministerial entities, the governorates, civil society organizations, academics, and the media as one of the main documents in the process of reviewing and evaluating goals and policies of the five-year plan.
- Undertaking a broad media campaign to mobilize and familiarize people with the plan, its goals, the means of achieving these goals, and the roles required of all partners in the state sector, the private sector, academics, civil society, international partners, and donors.

