



Lebanese Republic  
Ministry of Agriculture

# Lebanon National Agriculture Strategy 2020 - 2025



# **Lebanon National Agriculture Strategy (NAS)**

**2020 – 2025**

*This document reflects the priorities of the agrifood sector in Lebanon. It is based on a series of stakeholders' consultations conducted by the Ministry of Agriculture in collaboration with its international, regional and national partners. It is a results-based document as per the findings summarized in the **Agriculture Sector Review** (FAO, June 2020 – under finalization), and the FAO's special **Report on Assessing the impact of the financial crisis** on agriculture in Lebanon (FAO, June 2020 draft), building on **additional analyses and discussions** with **resource persons** and with the MoA's Steering Committee members presided by the Minister of Agriculture; and the input of the MoA Core Team responsible for the development of the National Agriculture Strategy 2020-2025 (NAS).*

*Developed in the framework of FAO support, it is a living document that will be regularly updated during the NAS implementation in order to address the needs emerging in the rapidly evolving Lebanon context.*

## Preface

I am pleased to present the document “the Lebanon National Agriculture Strategy (NAS) 2020 – 2025” to all concerned actors in the agri-food sector as well as to our development partners.

This strategy establishes a joint vision to develop the agri-food sector and achieve sustainable development. The NAS long-term vision is to making the agri-food sector a main contributor to the achievement of food security and a key driver of resilience and transformation of the Lebanese economy into a productive economy. As such, it responds to the challenges of the critical period Lebanon is facing due to the economic and financial crisis as well as the COVID-19 pandemic, and whereby the agri-food sector constitutes an opportunity to become a key contributor to the recovery of the Lebanese economy.

The NAS affirms that food security is a national responsibility, and this requires a comprehensive approach to the agri-food sector in addition to coordination and complementarity between the macroeconomic policies, and the agri-food sector policies and their related regulatory measures, under a clear national priority framework that emphasizes the development of the agri-food sector, strengthening of its institutional structure and improving its overall management.

The NAS reflects the priorities of the agri-food sector in Lebanon through five pillars that were structured into priority programs and interventions. In fact, it followed a new twin-tracked approach that aims to achieve the intended objectives. On one side, it aims at restoring the livelihoods and productive capacities of the farmers, producers and all actors in the agri-food value chain, in order to maintain their production capacities and enhance their resilience. On the other side, the NAS focuses on increasing the production and productivity in order to make agriculture a more profitable sector that contributes to reducing the import bill, and enhancing efficiency of the value chains and their competitiveness to increase agricultural exports, as well as ensuring sustainable management of natural resources and increasing the use of renewable energy to mitigate the impact of climate change. This will be achieved through an advanced, efficient and transparent governance system, in line with the principles and founding elements of justice and equality.

Recognizing the importance of the continuous cooperation and coordination among all main actors concerned in the agri-food sector, we adopted a participatory approach in the design of the NAS by involving all relevant ministries and public institutions, in addition to the civil society, private sector, research centres, universities, development partners, and other main stakeholders. We will also work on adopting the same participatory approach in the implementation, monitoring and evaluation of the NAS; in this regard, a close collaboration and participation of all concerned actors will be enhanced in support of strategy implementation, mobilization of the required resources, as well as updating it on a regular basis in order to respond to the rapid economic and financial developments that Lebanon is witnessing.

The international organizations and donor agencies are called upon to give priority to this strategic document in any future technical and financial support to agrifood projects and programs in Lebanon. At the same time I trust that their support to this sector will be further strengthened through a solid and fruitful partnership.

Finally, I would like to seize this opportunity to express my gratitude to all those actors who have participated in the preparation of this strategy. I thank the members of the steering committee that was established at the Ministry of Agriculture for this purpose. I would like as well to extend my thanks, in particular, to all staff and experts that worked at the level of the Core Team at the MoA, and the FAO for their efforts and support throughout the formulation of the present strategy.

July 2020

Minister of Agriculture

Abbas Mortada

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## List of acronyms:

AFD	Agence Française de Développement	JL	Jouzour Loubnan (Lebanese NGO)
AKIS	Agricultural and knowledge information system	KfW	German state-owned development bank
ASR	Agriculture Sector Review	Kg	Kilograms
AUB	America University of Beirut	KPI	Key performance indicator
BdL	<i>Banque du Liban</i> (Central Bank)	LARI	Lebanese Agricultural Research Institute
CAS	Central Administration of Statistics	LBP	Lebanese Pound
CCIA	Chambers of commerce, industry and agriculture	LCA	Lebanese Customs Administration
CCFD	Comité Catholique Contre la Faim et pour le Développement – Terre Solidaire	LRA	Litani River Authority
CDR	Council for Development and reconstruction	LIBNOR	Lebanese Standards Institution
CEDRAR	CEDRAR sal is a real estate company for land development in the Cedars region/Lebanon	LU	Lebanese University
CEDRE	Economic Conference for Development through Reforms and with Businesses	M&E	Monitoring and Evaluation
CEPF	Critical Ecosystem Partnership Fund (CEPF)	MoA	Ministry of Agriculture
CGIAR	Consortium of International Agricultural Research Centres	MoE	Ministry of Environment
CNRS	National Council for Scientific Research of Lebanon	MoEHE	Ministry of Education and Higher Education
CREAL	<i>Centre de Recherche et d'Etudes Agricole Libanais</i>	MoET	Ministry of Economy and Trade
COVID-19	Corona Virus Disease 2019	MoEW	Ministry of Energy and Water
CSO	Civil Society Organizations	MoF	Ministry of Finance
CSR	Corporate Social Responsibility	MoFA	Ministry of Foreign Affairs and Emigrants
DRM	Disaster Risk Management	MoH	Ministry of Health
EMAA	Euro-Mediterranean Association Agreement	Mol	Ministry of Industry
EFTA	European Free Trade Association	MoIM	Ministry of Interior and Municipalities
ESCWA	Economic and Social Commission for Western Asia	MoL	Ministry of Labor
EU	European Union	MoPWT	Ministry of Public Works and Transport
FAO	Food and Agriculture Organization of the UN	MoSA	Ministry of Social Affairs
FTA	Free trade agreements	NAS	National Agriculture Strategy
GAC	Global Affairs Canada	NDC's	Nationally Determined Contribution
GAFTA	Greater Arab Free Trade Area	NDU	Notre Dame University
GCC	Gulf Cooperation Countries	NGO	Non-Governmental Organization
GD	General Directorate (of the MoA)	NPTP	National Poverty Targeting Programme
GDC	General Directorate of Cooperatives	NRM	Natural Resources Management
GDP	Gross Domestic Product	NUCC	National Union for Cooperative Credit
GEF	Global Environment Facility	ODA	Overseas Development Assistance
GoL	Government of Lebanon	OSRO	FAO Office for Special Relief Operation
GP	Green Plan	PACM	Public Authority for Consumer's Markets for Lebanon
Ha	Hectare	PCM	Presidency of Council of Ministers
HS	Harmonized Commodity Description and Coding Systems	PMO	Prime Minister Office
IAEA	International Atomic Energy Agency	PPP	Public-Private Partnerships
ICARDA	International Center for Agricultural Research in the Dry Areas	R&D	Research and Development
ICT	Information and communications technology	RF	Results Framework
IDAL	Investment Development Authority of Lebanon	SDG	Sustainable Development Goal
IFAD	International Fund for Agricultural Development	ToC	Theory of Change
IFC	International Finance Corporation	TFP	Total Factor Productivity
IFI	International Financial Institutions	UOB	University of Balamand
ILO	International Labour Organization	UK	United Kingdom
IMF	International Monetary Fund	UN	United Nations
ITC	International Trade Centre	UNCBD	United Nations Convention on Biological Diversity
IU	Islamic University	UNCDD	United Nations Convention to Combat Desertification
		UNDP	United Nations Development Programme
		UNFCCC	United Nations Framework Convention on Climate Change
		UNICEF	United Nations Children's Fund
		UNIDO	United Nations Industrial Development Organization
		USAID	United States Agency for International Development
		USD	United States Dollar
		USEK	University Saint Esprit-Kaslik
		USJ	University Saint Joseph
		WB	World Bank
		WFP	World Food Programme of the UN

## Definitions:

<b>Farms:</b>	any production units of the agriculture sector (i.e., farmers, fisherfolks, bee-keepers, etc.).
<b>Agrifood business:</b>	firms providing goods and services to farms + firms beyond the farm gate downstream the value chain (post-harvest handling, processing, logistics, retail), as well as upstream (e.g., agricultural input suppliers, etc.).
<b>Agrifood sector:</b>	farms + agrifood business (firms / cooperatives).
<b>Agrifood system:</b>	farms and firms (production side) + households (consumption side).
<b>Agrifood Value Chain:</b>	consists of all the stakeholders who participate in the coordinated production and value-adding activities that are needed to make food products. <sup>1</sup>
<b>Theory of Change:</b>	it is a representation of how and why a complex change process will succeed under specific circumstances. <sup>2</sup> It describes the logic underpinning the expected results identified in the NAS result framework. Each intervention is contributing to outcomes and impacts in the result chain, revealing the complex web of activities required to bring about change.
<b>Results Framework:</b>	it explains how results are to be achieved, including causal relationships and underlying assumptions and risks. The results framework reflects strategic level thinking across the NAS.
<b>Aid Effectiveness:</b>	part of the Paris Declaration, <sup>3</sup> the concept of aid effectiveness lays out a practical, action-orientated roadmap to improve the quality of aid and its impact on development around five principles that make aid more effective, namely: ownership, alignment, harmonization, managing for results, mutual accountability.
<b>Gender sensitive:</b>	interventions aimed to address and overcome gender based constraints, and to facilitate the realization of gender equality and the empowerment of women and girls. <sup>4</sup>
<b>Public investment:</b>	investments are outlays carried out in a given moment to increase future benefits (financial, economic, social, environmental...). In the frame of the NAS, public investments include projects and programmes financed by public (Government, donors...) or private resources (foundations, private contributions...) relevant to the achievement of the NAS 2020-2025 objectives and consistent with its results framework.
<b>Results:</b>	measurable changes derived from a cause/effect relationship. There are three types of such changes: Outputs, Outcomes and Impacts that can be set in motion by a development intervention.
<b>Performance indicator:</b>	a qualitative or quantitative means of measuring an output, outcome or impact, with the intention of gauging the performance of an intervention (or a strategy). It is a unit of measurement that specifies what is to be measured along a scale or dimension, but does not indicate the direction or change.
<b>Stakeholders:</b>	all relevant actors in the agrifood sector such as government bodies and institutions, farmers and farmers' organizations and cooperatives, agrifood industry, private investors, civil society, academia, research and development partners.

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<sup>1</sup> <http://www.fao.org/sustainable-food-value-chains/library/en/>

<sup>2</sup> Funnell and Rogers, 2011; Taplin and Clark, 2012; Vogel 2012.

<sup>3</sup> <https://www.oecd.org/dac/effectiveness/parisdeclarationandaccraagendaforaction.htm>

<sup>4</sup> Among other sources, FAO has issued "A tool for gender-sensitive agriculture and rural development policy and programme formulation (available here: <http://www.fao.org/3/i3153e/i3153e.pdf>).

# 1. Executive Summary

Lebanon is facing an unprecedented period of challenges and stresses that calls for a clear definition of national priorities and solid partnerships and social cohesion to make possible immediate recovery, build longer term resilience and pave the road for a transformative sustainable development. The agriculture sector and the agrifood systems are highly affected by the ongoing crises, and yet they can play a critical role to provide a positive spin to the economy.

## ***What is NAS about***

The National Agriculture Strategy 2020-2025 (NAS), provided with the agreed priorities and related set of interventions, represents the operational instrument through which the agrifood sector can contribute to absorb the crises-induced economic shocks as well as to recover the Lebanese economy.

As the economic outlook is highly volatile, the NAS is purposely considered as a living document, subject to regular monitoring and open to continuous dialogue and updates to ensure a continuous relevance and response to the needs emerging in the rapidly evolving Lebanon context.

Specifically, the NAS canvasses a consistent policy and investment framework for the agrifood sector that will help in:

- a) mobilizing required national and external resources for priority public investments;
- b) encouraging/triggering private investments in the sector;
- c) supporting the coordination between different actors;
- d) consolidating the policy framework.

## ***Purpose of the NAS***

The NAS is a tool to facilitate evidence-based decision-making for the stakeholders involved in the agrifood sector. While it primarily serves as strategic guiding document for the Ministry of Agriculture (MoA), it aims to reach out all stakeholders involved in the agriculture, water and natural resources, food and nutrition security sector – within the public institutions as well as among external actors, development partners and private entrepreneurs and their organizations.

***Maximizing efficiency of public finance, and catalysing private financing to bring results to scale.*** Although the NAS is meant primarily to mobilize resources for public investment, it offers also policy, regulatory and institutional measures to encourage private investment, with public resources geared to provide the enabling conditions to unlock the investment potential.

***NAS vision.*** The NAS long-term Vision is to make the agrifood system a main contributor to the achievement of food security and a key driver of resilience and transformation of the Lebanese economy into a productive economy.

***NAS objective.*** The NAS overall objective is to transform the Lebanese agrifood system in a more resilient, inclusive, competitive, and sustainable agrifood system.

## **Guiding principles**

The design and implementation of the NAS reflects key principles aimed to guarantee inclusiveness, relevance to national priorities and sustainability. These include: (a) national ownership (involving all relevant stakeholders, such as the government, farmers, agrifood industry, private investors, civil society, academia, development partners; (b) stakeholders inclusion (ensuring to voice out especially the most vulnerable stakeholders); (c) gender-sensitiveness and people orientation; (d) evidence-based identification of priorities; (e) flexibility and effectiveness; (f) transparency of the governance; (g) alignment with country's policies and strategies; (h) aid effectiveness; and (i) consistency with the SDG 2030 Agenda and alignment with Paris Agreement.

## **NAS design process**

The NAS structure and contents fully reflect national priorities (*the ownership*), identifying a set of feasible interventions that are based on analytical works (*the evidence*) and respond to stakeholders' perceptions and priorities (*the demands*) as identified through the consultations organized throughout the NAS development process.

NAS design fully acknowledges existing evidence on the sector's weaknesses and threats – e.g. high production costs, low productivity, poor producers' organization and limited participation in value chains, weak post-harvest infrastructure and organization, high import and export dependencies, cumbersome business procedures, unsustainable production practices – as well as strengths and opportunities – e.g., favourable agro-ecological conditions, favourable geographical location, high innovation potential, high-quality product demand growth, domestic market and export potential; in addition to a large cooperatives sector with high potential for development and organization. Furthermore, the NAS has been developed building on the lessons learnt from previous agricultural strategies, specifically in designing the NAS results architecture and governance mechanisms.

In order to ensure effectiveness in implementation, the NAS is rooted in a clear theory of change, indicating avenues for transformative change. It identifies governance mechanisms, defining clear roles and responsibilities in implementation and coordination. It is guided by a results-framework, with an agreed monitoring, evaluation and learning system; and identifies and prioritizes flagship programs.

## **NAS structure: strategic interventions**

The NAS core structure is composed of five strategic axes (pillars), structured in programmatic areas of interventions (programmes). The five pillars, and related programmes, are the following:

### **Pillar 1: Restoring the livelihoods and productive capacities of farmers and producers**

Programme 1.1: Ensure and facilitate access to inputs and tools to maintain agricultural production capacity.

Programme 1.2: Facilitate access to subsidized agri-loans for farmers and small and medium enterprises (SMEs) working in the agrifood industries to revive the sector.

Programme 1.3: Reduce risk of worsening levels of food and nutrition insecurity (including via subsidized food import).

## **Pillar 2: Increasing agricultural production and productivity**

- Programme 2.1: Increase the total agricultural production by increasing the total cropped areas, animal and aquaculture production and enhance productivity.
- Programme 2.2: Support adoption of good agricultural practices and good livestock management.
- Programme 2.3: Encourage and support the adoption of innovative and modern technologies.
- Programme 2.4: Improve the quality and safety of agricultural and food products

## **Pillar 3: Enhancing efficiency and competitiveness of agrifood value chains**

- Programme 3.1: Support the modernization of value chain infrastructure and post-harvest handling systems, wholesale and local markets.
- Programme 3.2: Encourage private investment along the agrifood value chains.
- Programme 3.3: Provide enabling conditions to promote agricultural and food industries and enhance utilization of locally produced primary products.
- Programme 3.4: Support agricultural exports and access to new markets.
- Programme 3.5: Promote and organize cooperative work and farmers' associations and groups at the level of the value chains (targeting smallholders producers).

## **Pillar 4: Improving climate change adaptation and sustainable management of agrifood systems and natural resources**

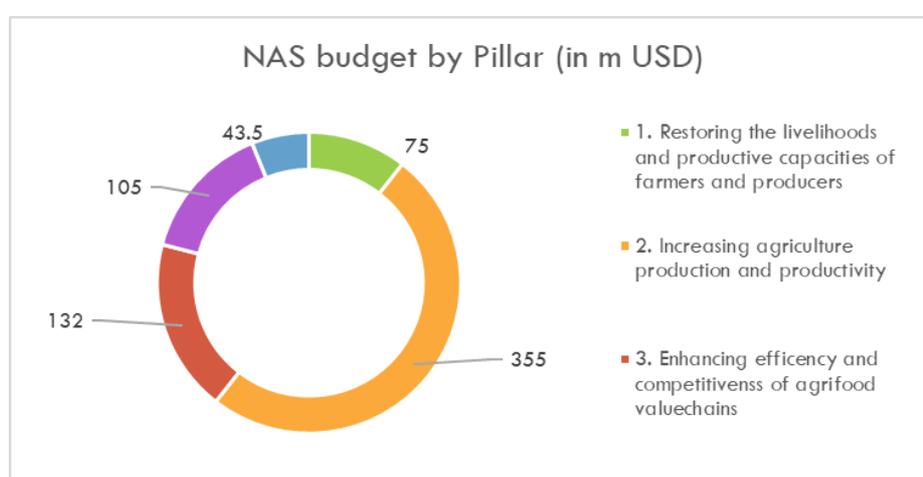
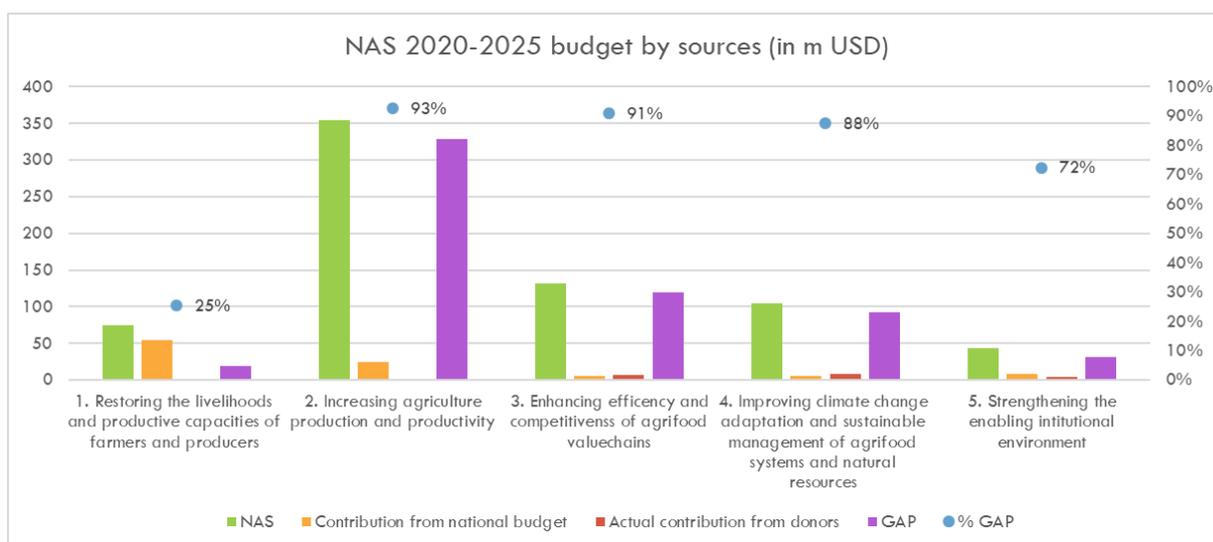
- Programme 4.1: Increase climate change adaptation and encourage related private investment along the agrifood value chains.
- Programme 4.2: Promote sustainable use of natural resources (soil, pastures, forests and fisheries).
- Programme 4.3: Enhance the efficient use of irrigation water and expand the supply of water resources for irrigation.
- Programme 4.4: Encourage and support the use of renewable energy in the agricultural sector.

## **Pillar 5: Strengthening the enabling institutional environment**

- Programme 5.1: Enhance the effectiveness of MoA services and affiliated institutions and developing staff capacities.
- Programme 5.2: Strengthen the efficiency and effectiveness of the agricultural and knowledge information system (AKIS).
- Programme 5.3: Enhance sectoral governance to maximize public and private development financing and encourage agricultural investment.
- Programme 5.4: Create enabling conditions for the development of agricultural insurance also to mitigate the impacts of natural disasters.
- Programme 5.5: Develop a social protection system for vulnerable farmers, farm workers, producers and fishers.

## ***NAS indicative costs and financial gap***

The NAS is a results oriented document provided with a results oriented development budget, arranged by Pillars and Programmes. The overall cost for the NAS 2020-2025 life cycle is estimated at about 710m USD, with an estimated Government contribution of around 14 percent, matched by an equivalent amount from ongoing and projected pipeline of donors, and a 73 percent financial gap to be covered by systematic resource mobilization.



### **NAS flagship programmes**

The NAS proposes four criteria for prioritizing flagship programmes, namely: *feasibility*, i.e. interventions that are low cost and/or easy to implement; *impact*, i.e. high-potential interventions having large expected impacts; *constraint-removal*, i.e. interventions that remove factors that crucially hinder the performance of the agrifood sector; and *inclusiveness*, i.e. interventions aiming at keeping alive the actors of change, especially the most vulnerable ones.

According to these criteria, the following flagship programmes have been identified:

- **Inclusive access to inputs and credit** for agricultural recovery: Programme 1.1 (access to inputs) and Programme 1.2 (access to credit);
- **Enhanced governance** of the agrifood sector: Programme 5.3;
- **Increased agrifood production and export** via investing in smart technologies, markets and efficient organizations: Programme 3.5. (horizontal and vertical value chain networking – such as coops, sub-sector associations) and Programme 3.2 (support to value chain modernization) coupled with enhanced access to finance;
- **Improved and modernized digital services** to farmers: Programme 5.1 (effectiveness of MoA services), and Programme 5.2 (AKIS efficiency/effectiveness).

## ***NAS governance***

In order to pursue the NAS objectives, essential actions need to be taken both within and outside the Ministry of Agriculture. Internally, this calls for significant investments in developing human capacities (more and better trained staff) in key areas (planning, management, statistics, information and communication) and streamlining responsibilities deriving from the NAS mandate (and possibly changing the internal structure of MoA). Externally, it means engagement in policy dialogue with stakeholders having widely recognized political visibility and a mandate in the national context.

The creation of an effective coordination body is key for NAS governance. In fact, the NAS is a strategy that, given the current Lebanese institutional setting, extends beyond the mandate of the sole Ministry of Agriculture. Its implementation requires the strong involvement of a large number of Ministries and other public institutions. Hence, identifying effective coordination mechanisms is a key issue for successfully achieving NAS objectives.

To this end, the NAS proposes the following:

- re-activate the Higher Council for Agriculture (originally established in 1954) as a multi-stakeholders counselling body to provide advice to the Minister of Agriculture, prepare action plans and their budgets and create ad hoc sub-committees; and
- establish a Higher Inter-Ministerial Committee presided by the Minister of Agriculture and involving other concerned ministries, which has the power to make policy decisions on agrifood matters thus stimulating coordination, harmonization and alignment to the NAS.

## ***NAS monitoring and dialogue promotion***

Monitoring and stakeholders dialogue is key to keep momentum and relevance to NAS initiatives. The regular monitoring and communication mechanism related to the NAS will allow to identify progress and advancements towards the set targets, but also to facilitate an evidence-based stakeholders dialogue in order to provide continuously relevant strategic guidance. The MoA will play a critical role in this, and its success depends on other relevant institutions joint effort.

## **2. The National Agriculture Strategy 2020-2025**

### **2.1 Introduction**

**Background and context.** Lebanon is facing an unprecedented period of challenges and stresses, triggered by the financial and economic crises following the start of the popular protests in mid-October 2019, coupled with the effects of the Covid-19 outbreaks in mid-March 2020. The risks and uncertainties the country is facing require an effort by all productive sectors. In such a difficult context, the agrifood sector can play a key role in absorbing the crises-induced economic shocks as well as contributing to the recovery of the Lebanese economy, eventually contributing to bring the economy on a sustainable growth path.

This calls for a clear set of interventions and priorities to make possible immediate recovery, build longer term resilience and pave the road for a transformative sustainable development. To this end, the National Agriculture Strategy 2020-2025

(NAS) represents the operational instrument to transform the agrifood sector thus responding to the various demands accruing from the Lebanese society.

**The NAS canvasses a consistent policy and investment framework for the agrifood sector** that will help in:

- (a) mobilizing required national and external resources for priority public investments;
- (b) encouraging/triggering private investments in the sector;
- (c) supporting the coordination between different actors;
- (d) consolidating the policy framework.

This is fully acknowledged by the Response Plan,<sup>5</sup> endorsed by the Government in May 2020. In these two documents, the agrifood sector is considered as one of the drivers for the relief, recovery and development of the whole country's economy.

**NAS Overall Objective.** The NAS will contribute to increase the standards of living of the Lebanese people both in the short-run (recovery) and in the longer run (development) because it will transform the Lebanese agrifood system in a **more resilient, inclusive, competitive, and sustainable agrifood system**. The NAS structure and contents fully reflect national priorities (*the ownership*), identifying a set of feasible interventions that are based on analytical works (*the evidence*) and respond to stakeholders' perceptions and priorities (*the demands*).

**Audience.** The NAS is a tool to facilitate evidence-based decision-making process for the **stakeholders involved in the agrifood sector**. While it primarily serves as strategic guiding document for the Ministry of Agriculture (MoA), it aims to reach out all stakeholders involved in the agriculture, food and nutrition security sector – within the public institutions as well as among external actors, development partners and private entrepreneurs and their organizations.

**Maximizing efficiency of public finance, and catalysing private financing to bring results to scale.** The NAS broad audience and the breadth of interventions represent an opportunity to enlarge the participation in the decision-making process. Moreover, although the NAS is meant primarily to mobilize resources for *public* investment, it offers also policy, regulatory and institutional measures to encourage *private* investment in the agrifood sector as the major contributor to the dynamics of the sector, with public resources geared to provide the enabling conditions to unlock the investment potential.

**Monitoring and stakeholders dialogue to keep momentum and relevance.** The regular monitoring and communication mechanism related to the NAS will allow to identify progress and advancements towards the set targets, but also to facilitate an evidence-based stakeholders dialogue in order to provide continuously relevant strategic guidance. The MoA will play a critical role in this but a joint effort is required also by other institutions to ensure an effective NAS governance.

## 2.2 Principles and founding elements

The preparation of the NAS reflects the following principles:

- **National ownership.** The NAS has been designed and will be implemented involving relevant partners in the Government of Lebanon (GoL) and outside

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<sup>5</sup> Cf. the Government of Lebanon Financial Recovery Plan: <http://finance.gov.lb/en-us/EventPdfs/English/The%20Lebanese%20Government's%20Financial%20Recovery%20Plan.pdf>.

such as farmers, agrifood industry, private investors, civil society, academia, development partners.

- **Stakeholders inclusion.** The NAS design and its implementation follow an inclusive process, ensuring to voice out all relevant stakeholders, especially the most vulnerable groups, to value their opinions and include their priorities.
- **Gender-sensitiveness and people orientation.** The NAS aims to achieve equality between women and men in sustainable agricultural production and rural development.
- **Evidence-based identification of priorities.** Building on the analyses and findings summarized in the Agriculture Sector Review and available data, the NAS aims to ensure pursuing the most relevant and justified priorities.
- **Flexibility and effectiveness.** The NAS is a living document, monitored on regular basis to ensure continuous relevance to nationally shared priorities and consistency with the evidence as well as the rapidly evolving economic and financial developments in the country.
- **Shared and transparent governance.** The implementation of the NAS requires the strong involvement of a large number of Ministries, other public institutions as well as civil society and private sector: an effective coordination mechanism is key for the successful achievement of the NAS objectives.
- **Alignment with country's policies and strategies.** The NAS ensures consistency and harmonization with the national priorities, building on the existing process of planning and coordination.
- **Aid effectiveness.** The NAS promotes alignment and harmonization to enhance the effectiveness of development assistance support, between donors, donors-government, donors-NGOs-government, aiming to maximize efficiency of public funds use and catalyze private finance.
- **SDG 2030 Agenda consistency.** As part of a global challenge, Lebanon is committed to the sustainable development agenda, and the NAS in particular will support the achievement of national targets for SDG 2: Food and Nutrition Security and Sustainable Agriculture, and related SDGs and UN conventions (UNCBD, UNCDD, UNFCCC);<sup>6</sup> and the alignment with Lebanon's commitments under Paris Agreement to reduce greenhouse gas emissions and improve adaption to climate change by 2030.

Key elements to ensure effectiveness in implementation include the following:

- **Long-term vision (towards 2030 Agenda),** shared at national level and sufficiently comprehensive to guide the whole sector's transformation.
- **Core structure, composed of evidence-based agreed strategic axes (pillars),** structured in programmatic areas of interventions (programmes).
- **Theory of change,** indicating main bottlenecks to achieving the vision and goal, and the avenues for transformative change.
- **Results-framework,** with an agreed monitoring, evaluation and learning system, with roles and responsibilities.

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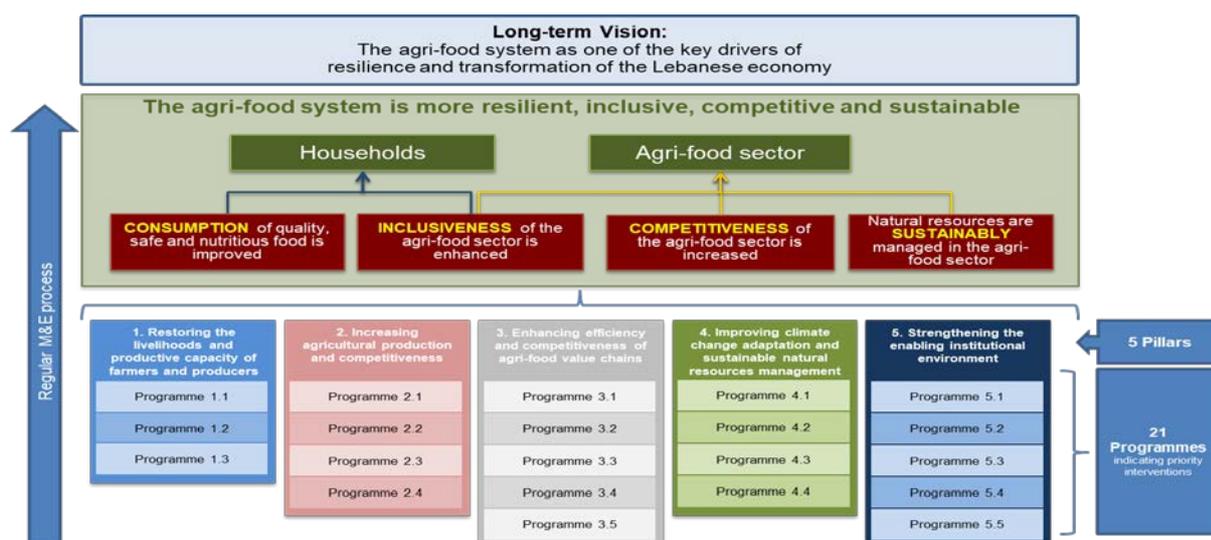
<sup>6</sup> United Nations Convention on Biological Diversity (UNCBD), United Nations Convention to Combat Desertification (UNCDD), and United Nations Framework Convention on Climate Change (UNFCCC).

- **Governance mechanism**, defining roles and responsibilities in implementation and coordination / M&E / communication / resources mobilization
- A systematic **communication and advocacy framework**, to ensure transparency, accountability and information flow on the results of regular monitoring.
- **Prioritization criteria** and ranking of potential investments (see Annex V).
- **A repository of relevant investment interventions** (on-going, planned, financial gap).

The chart below (Figure 1) presents the NAS structure, showing the relationship between the long-term vision, how the NAS will contribute to such a vision, and the articulation of the five pillars needed to operationalize NAS interventions, namely:

1. Restoring the livelihoods and productive capacity of farmers and producers;
2. Increasing agricultural production and productivity;
3. Enhancing efficiency and competitiveness of agrifood value chains;
4. Improving climate change adaptation and sustainable natural resources management;
5. Strengthening the enabling institutional environment.

Figure 1. Result structure of the NAS



## 2.3 Lessons learned from the previous strategy

The implementation of the Ministry of Agriculture Strategy (2015-2019) presented some obstacles and challenges. Important lessons can be drawn from that experience that have been considered in designing the NAS results architecture and governance mechanisms. The main lessons can be grouped into the following main clusters:

- **Governance.** The strategy needs to have a clear governance system, that allows a high-level political endorsement, and needs to generate interest and attention from stakeholders (pulling information instead of pushing information), through simple and participatory monitoring and communication mechanism.
- **Coordination and cooperation between different stakeholders.** The universe of stakeholders with high potential for agricultural development in Lebanon is large and fragmented. National institutions, and primarily the MoA,

should implement mechanisms to involve all relevant stakeholders – e.g. donors, NGOs, universities, research centres, etc. – to ensure alignment to NAS and stimulate synergistic effects.

- **Modernization of the provision of public services.** Adopting and promoting the use of digital technologies to improve outreach efficiency and effectiveness is critical in the delivery of public services to farmers and agribusiness. Opening to private sector and to public-private partnership can also be an effective option.
- **MoA organizational reform and capacity development.**<sup>7</sup> Updating the organizational structures and improving the staff capacity is critical to make MoA better responding to the actual priorities and needs of the sector, taking into account regional differences. While this challenge requires a major institutional work (beyond the scope of the NAS itself), this document and its governance can play an important role in highlighting the major obstacles and bottlenecks to unlock effective support to the sector.
- **Effective Monitoring and Evaluation (M&E) mechanism.** The availability and reliability of data and the lack of a clear monitoring and evaluation system is a major challenge for evidence-based policy making in the sector. The NAS includes a M&E system and includes provisions to ensure the availability of sector statistics.
- **Results-orientation.** The public budget to support the sector has been largely insufficient or unpredictable in the past. Evidence and results oriented planning and budgeting needs to be a guide for an effective strategy.
- **Resource mobilization.** Increase coordination and cooperation with donors and international organizations for aid effectiveness and to maximize development financing is required. Some activities to be considered by national institutions, and primarily by the MoA, to include preparing regular meetings with donors, developing joint programs and submitting annual programs to donors for fund raising.
- **Gender and social inclusion.** Evidence shows that women and other vulnerable people (e.g. the youth, landless farmers, smallholders)<sup>8</sup> are least benefitting from the economic opportunities in the agriculture sector. Mainstreaming a gender and inclusive approach is critical to ensure a people-oriented strategy.

## 2.4 NAS design process

The National Agriculture Strategy 2020-2025 is based on the matching between evidence from data and statistics, the related analysis, and the demand from the agrifood sector's stakeholders. As anticipated in the principles, the NAS is a living document, subject to regular update for continuous relevance and response to the needs emerging in the rapidly evolving Lebanon context.

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<sup>7</sup> Capacities at the three dimensions are interlinked: individuals, organizations and the enabling environment are parts of a whole. Capacity development often involves enhancing the knowledge and skills of individuals, whose work results greatly rely on the performance of the organizations in which they work. The effectiveness of organizations is influenced by the enabling environment. Conversely, the environment is affected by organizations and the relationships between them.

<sup>8</sup> For a definition of who are vulnerable groups in Lebanon, cf. UNICEF-OCHA-REACH, 2015, Defining Community Vulnerability in Lebanon, Assessment Report, Beirut: <https://data2.unhcr.org/fr/documents/download/44875>

**Evidence.** Key background evidence for the design of the NAS is primarily drawn from the Agriculture Sector Review (FAO, June 2020 – under finalization), the NAS background document. Additional evidence, emerged throughout the design process, is summarized in the FAO's special Report on Assessing the impact of the financial crisis on agriculture in Lebanon (FAO, June 2020 draft). Complementary information was also gathered from discussions with resource persons, and with the MoA's Core Team responsible for the NAS development and consultations with stakeholders organized by the MoA to develop the NAS.

**Analysis.** The analytical work based on the above allowed identifying the key challenges of the sector and defining priorities for interventions, in turn structured in Pillars and Programmes. This process is described in the NAS theory of change (Section 4) as basis for the NAS pillars (Section 5) and for its results framework (Section 7).

**Demand.** The stakeholders consultations allowed to discuss and validate the technical findings and to provide the complementary vision and priorities for intervention, embedded into the description of the pillars and programmes (summarized in each pillar).

### *The process*

The design process is structured in three main phases. The first, dedicated to setting the national priorities; the second, re-discussing priorities in light of the emerged effects of the financial and economic crisis on one side, and the COVID-19 related on the other; and a third phase of consultative planning.

Setting the scene. With the ambition of a game changer for the agrifood sector, the design of the NAS started in September 2019, in line with an increased attention in-country on the agrifood sector as a driver for economic transformation, and in a timely fashion responding to the need to update the Ministry of Agriculture Strategy 2015-2019. Following such momentum, the Ministry of Agriculture, jointly with other institutions organized a series of open and informed multiple stakeholders discussions to pave the road for an inclusive sector strategy. During this phase, a preliminary consensus was created around the main priorities in the process of the agrifood sector transformation, with a focus on: (a) competitiveness of the agrifood sector; (b) sustainability of natural resource management; (c) efficiency of support institutions in service delivery; and (d) women and youth's inclusion in the development of the agrifood sector.

Embedding response to the crisis. Since the financial crisis hit the country in Autumn 2019, with increasing effects on the economy, coupled with the effects of the COVID-19 related crisis from March 2020, the stakeholders and MoA reviewed the priorities as emerging needs and evidence of the crisis was arising (see also Section 3.3). An agriculture recovery plan was prepared (April 2020), and the NAS structure was revised to include a specific focus on maintaining domestic agrifood production and transformation.

Agreeing on intervention priorities. Aiming to endow the country rapidly with a strategic framework for the agrifood sector, the MoA called internal and open discussions to discuss the agriculture strategy framework. After an internal discussion within MoA, three multi-stakeholders<sup>9</sup> consultations were carried out in June 2020, including Public institutions, Research and academia, private sector representatives (including farmers, the industry and their associations). Further to this phase, the set of priorities was confirmed in the form represented in the NAS.

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<sup>9</sup> The list of participating institutions is presented in Annex I.

### 3. The Lebanon agrifood sector at crossroad

In this section we briefly assess the current situation of the Lebanese agrifood sector. The data refer to the most updated available statistics, mostly from the Ministry of Agriculture, the Lebanese Central Administration of Statistics (CAS), FAO, IMF and the World Bank.

#### 3.1 Background

The development of the NAS is taking place in a very difficult and rapidly deteriorating context.<sup>10</sup> The Syrian crisis negatively impacted an economy already featuring serious macroeconomic problems. From late 2019, political crisis and social unrest compounded with economic fragility further worsening the Lebanese socio-economic situation. More recently, the COVID-19 outbreak and related measures have further exacerbated the situation. The overall outcome is a surge of unemployment, household income reduction and supply chain disruption, with increased risk of food insecurity.<sup>11</sup>

In such a context, the agrifood sector and its players, that were already experiencing serious structural problems, are facing new challenges. The NAS aims at addressing both new and old problems.

##### 3.1.1 Macroeconomic context

Lebanon is an upper middle-income economy whose growth relied largely on inflows of remittances from diaspora and foreign investments. While the real GDP annual growth between 2006 and 2010 averaged 9.2%, it decreased to almost nil in 2018-2019.<sup>12</sup> Over the last two years the Lebanese percapita income shrunk.<sup>13</sup> Significant fiscal deficits – around 11% in 2018-19 – and increasing debt service burden that consumes around half of state revenues determined a constant increase of government debt that reached 155% of GDP in 2019.

Current account deficit is over 25% of GDP due to low export recovery since the Syrian crisis and high fuel imports. Despite repeated attempts by the Central Bank in support of the country's net foreign asset position, the economy has been steadily draining US Dollars over last years. An acute shortage of USD threatened to disrupt supplies of imported gasoline, medicine and food.

Inflation rate has been steadily increasing since 2015, effectively cutting salaries in half and decreasing purchasing power of the population. Consumer prices increased 46.6% year-on-year in April 2020, while food price inflation spiked to 150.3% over the same period<sup>14</sup> with the increasing prevalence of parallel exchange rate which is making imports increasingly expensive.

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<sup>10</sup> The financial and economic situation has been rapidly deteriorating over May-June 2020. Consultation with IMF, started on May 13<sup>th</sup> seeking a multi-billion-dollar bailout. Cf. Transcripts of IMF Press Briefing, June 18<sup>th</sup> 2020: <https://www.imf.org/en/News/Articles/2020/06/19/tr061820-transcript-of-imf-press-briefing>.

<sup>11</sup> World Food Programme, 2020, Assessing the Impact of the Economics and COVID-19 Crises in Lebanon, Beirut, June 2020: <https://docs.wfp.org/api/documents/WFP-0000116784/download/>.

<sup>12</sup> International Monetary Fund, 2019, Lebanon, Staff Report for the 2019 Article IV Consultation, August 21, 2019: <https://www.imf.org/en/Publications/CR/Issues/2019/10/17/Lebanon-2019-Article-IV-Consultation-Press-Release-Staff-Report-Informational-Annex-and-48733>. The GDP contraction in 2020 is expected to be as high as 12% as a result of the economic and financial crisis as well as COVID-19 crisis: <https://www.imf.org/en/Countries/LBN>.

<sup>13</sup> World Bank, 2020, World Development Indicators, accessed on May 23, 2020: <https://databank.worldbank.org/source/world-development-indicators>.

<sup>14</sup> Central Administration of Statistics, 2020, Consumer Price Index: <http://www.cas.gov.lb/index.php/economic-statistics-en/cpi-en>, accessed on June 10, 2020.

As the confidence in the banking system further decreases, the economic crisis deepens and spills over to the real economy. Some businesses have already closed down. To survive, others have cut salaries or decreased hours worked for their employees, resulting in employees' decreased incomes and/or pushing them in informal labor markets that already accounted for 54.9% of the workforce in 2018-19.<sup>15</sup>

This increases the already high unemployment rate, which was on average 11.4% in 2018<sup>16</sup> and as high as 40% in some governorates. Lebanese unemployment shows marked structural gender and age disparities. Women unemployment rate is 40.3% higher than the male unemployment rate, while the youth unemployment rate is more than double the national average.

Decreased livelihood opportunities, lower incomes and increased prices have resulted in further reduced access to basic services and food for both vulnerable Lebanese citizens and Syrian/Palestinian refugees. The economic and financial crisis is estimated to put 850 thousand individuals (or 22% of the Lebanese population) under the extreme poverty line and 1.7 million individuals (or 45% of the Lebanese population) under the upper poverty line in 2020.<sup>17</sup> In the medium to longer-term, the number of vulnerable families including farmers and agrifood producers is likely to rise and the situation for those already living in poverty is expected to worsen.

### **3.1.2 Agriculture in the Lebanese economy**

Although agriculture plays a relatively important role in economic terms, the economic contribution of the agrifood sector as a whole is much larger. On the other hand, the social role of agriculture as a source of household resilience to shocks, especially during the crisis, has been crucial.

Agriculture accounts for only 3% of GDP in 2016-2018.<sup>18</sup> However, it contributes about 12% of the labor force on a full-time basis and another 13% (mostly unpaid family labor) is employed in the sector on a part-time or seasonal basis. The agrifood sector makes up one quarter to one third of the economy, providing employment for a quarter of the industrial workforce. The employment of agriculture and agrifood industry is estimated at 24% of total employment.<sup>19</sup>

Agrifood trade is an important share of Lebanese trade. Agriculture – mostly fruits and vegetables, raw tobacco, spices and live sheep – and agribusiness – mostly processed and semi-processed food – are a major source of exports, accounting for over 20% of total exports (or USD 0.7 billion on average between 2014 and 2018).<sup>20</sup> At the same time agrifood imports represent an important share of total imports accounting for 18% of total (or USD 2.9 billion on average between 2014 and 2018). The domestic agrifood production satisfies only 20% of the local demand. As a result, Lebanon has import dependency in most food products that in some cases, such as grains and sugar, is very high.

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<sup>15</sup> International Labour Organization - Central Administration of Statistics, 2020, Labour Force and Household Living Conditions Survey 2018-2019 Lebanon, Beirut: <http://www.cas.gov.lb/index.php/latest-news-en/212-2020-03-05-08-03-36>.

<sup>16</sup> Central Administration of Statistics, 2020, Labor Force Statistics: <http://www.cas.gov.lb/index.php/demographic-and-social-en/laborforce-en>, accessed on June 10, 2020.

<sup>17</sup> World Bank, 2020, Targeting Poor Households in Lebanon, Factsheet, April 21, 2020: <https://www.worldbank.org/en/news/factsheet/2020/04/21/targeting-poor-households-in-lebanon.print>.

<sup>18</sup> World Bank, 2020, World Development Indicators: <https://databank.worldbank.org/source/world-development-indicators>, accessed on May 23, 2020.

<sup>19</sup> Food and Agriculture Organization of the United Nations, 2020, FAO in Lebanon, Lebanon at a glance: <http://www.fao.org/lebanon/fao-in-lebanon/lebanon-at-a-glance/fr/>.

<sup>20</sup> International Trade Center, 2020, Trade Map, ITC: <https://www.trademap.org/>, accessed on June 28<sup>th</sup> 2020.

Lebanese agriculture is characterized by a marked dualism. On the one hand, commercial agriculture, which accounts for no more than 25% of total agricultural holdings, is generally efficient, export-oriented, and run as a business for profit. On the other hand, non-commercial farming is practiced in smallholdings with limited investment or profit opportunities, mainly as subsistence agriculture devoted to provide a household income integration or to preserve cultural and family heritage.<sup>21</sup> With increasing costs of production, income diversification and engagement in income-earning non-farm activities have become a necessity for many small farmers.

The rural population in Lebanon accounts for only 11.2% of the total (or some 771 thousand people in 2019)<sup>22</sup> but it is relatively poorer than the rest of the population.<sup>23</sup> In the poorest regions of the country such as in Akkar, Dinnyeh, the Northern Beqa'a and the South, agriculture-related activities account for up to 80% of the local GDP. About 9% of farm operators are females, involved mainly in the production of dairy products, food preserves and subsistence farming.

### ***Weaknesses and Threats***

**Small farms and agribusinesses.** Farm holdings are small, averaging 1.4 hectares (13.6 dunums), and there is a significant inequality in the distribution of land. The Gini index of land distribution is 0.774 for the whole country, but it is even higher for intensively cultivated areas such as the Central and west Beqa'a.<sup>24</sup> According to the last Agricultural Census, about 70% of farm operators cultivate less than 1 hectare and only 4% of farms operate on more than 6 hectares.<sup>25</sup> More than 90% of the food industry is composed of small businesses of less than 50 employees.

**High production costs.** Most of Lebanese agriculture is characterized by high costs of production driven by the lack of agricultural credit institutes and financial products to farmers at affordable prices, high input costs – starting from fixed costs such as land rental, high cost of imported inputs (e.g. agrochemicals, seedlings) that skyrocketed as a result of LBP depreciation– and the small size of holdings which are unable to take advantage of economies of scale.

**Low productivity in key products.** While the annual growth of agricultural total factor productivity between 1991 and 2015 increased in the MENA region, Lebanon TFP on average decreased of 0.46% per year.<sup>26</sup> Outdated techniques and low investment in technology makes Lebanon yields underperforming vis-à-vis MENA region countries in most items, except chicken, goat and sheep meat. This is true also for the most exported items such as potatoes and apples.<sup>27</sup> Wheat yields are relatively high, which might be in part explained by government support of this staple.

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<sup>21</sup> Farmers with less than 1 ha represent 70% of farms (and operate on 18% of used agricultural area - UAA), 26% of farms have an area between 1ha-6ha (40% of UAA) and 4% of farms have more than 6 ha. Out of the latter, holdings of 6-20 ha operate in 20% of UAA, while holdings above 20 ha operate on 22% of UAA. Cf. Ministry of Agriculture - Food and Agriculture Organization of the United Nations, 2010 Agricultural Census, Beirut-Rome.

<sup>22</sup> Rural population is defined as opposed to those not living in urban centers. Cf. World Bank, 2020, World Development Indicators: <https://databank.worldbank.org/source/world-development-indicators>, accessed on June 28<sup>th</sup>, 2020.

<sup>23</sup> Food and Agriculture Organization of the United Nations, 2020, FAO Country Profile – Lebanon: <http://www.fao.org/faostat/en/#country/121>.

<sup>24</sup> Hamade, K., 20, "Lebanon's Agriculture: Dynamics of Contraction in the Absence of Public. Vision and Policies", in Arab NGO Network for Development, Arab Watch on Economic and Social Rights, Right to Food, 2019 Report, Beirut, pp. 256-271: <http://annd.org/arabwatch2019/righttofood/en/index.pdf>.

<sup>25</sup> Ministry of Agriculture - Food and Agriculture Organization of the United Nations, 2010 Agricultural Census, Beirut-Rome.

<sup>26</sup> International Food Policy Research Institute, 2019, Global Food Policy Report 2019, Annex Table 4: <https://dataverse.harvard.edu/dataset.xhtml?persistentId=doi:10.7910/DVN/9IOAKR>, accessed on June 29<sup>th</sup>, 2020.

<sup>27</sup> Apples have 50% higher yields in Jordan and Spain. Cf. Food and Agriculture Organization of the United Nations, 2020, FAOSTAT: <http://www.fao.org/faostat/en/#data>, accessed on June 29<sup>th</sup>, 2020.

**Poor farmers' organization and limited participation in value chains.** The farmers' organizations appear to be quite inefficient. Only about one third of the 1,229 registered agricultural cooperatives are deemed active.<sup>28</sup> Currently the GD of Cooperatives is assessing the efficiency and activities of the agricultural cooperatives with the aim to provide the necessary support to revitalize this sub-sector. Small and medium farmers have difficulties in participating in the food value chains because of human capital and financial capital constraints. Lebanese producers need to grow varieties that meet consumer demand in high-end markets, increase production quality and volumes in order to comply with international standards. Farmers often perceive themselves as victims of traders who are earning high profit margins with limited benefits to the farms.

**Weak post-harvest infrastructure and organization.** Post-harvest practices in Lebanon are below international standards. Weak cold chain management throughout the supply chain, poor organization of wholesale markets, weak storage and handling facilities in the ports makes agrifood logistics, distribution and marketing quite inefficient, causing high rate of post-harvest losses.

**High import and export dependencies.** Lebanese agribusinesses have a high import content of raw materials and other inputs: of the top 25 exported agriculture products, 17 are also imported in sizeable quantities, with some items re-exported with little value addition and others transformed in-country for higher value exports.<sup>29</sup> Import dependency averages at 75-80% of total food consumption<sup>30</sup> and at the moment suffer from US\$ liquidity and credit issues. Agrifood exports depend on Arab markets, where there is growing EU products competition and tightening quality requirements.

**Cumbersome business procedures.** Lebanon ranks 143<sup>rd</sup> out of 190 countries in the Ease of Doing Business indicator,<sup>31</sup> 88<sup>th</sup> out of 141 countries according to the Global Competitiveness Index<sup>32</sup>. On average, it takes 96 hours to comply with border procedures only, twice as much as the MENA regional average, which hurts exports of perishable products.

**Poor land and soil management.** Land is usually rented for a very short term (often for only one season) and carry exuberant rental values. Very short-term rentals discourage any significant land-improving investment and focus on short-term profit only. Lebanon suffers from land erosion and soil degradation (e.g. alkalinity, salinity, or moisture deficit), with 39% of the Lebanese territory highly exposed to land degradation.<sup>33</sup> Soil nutrition and plant protection are mismanaged with Lebanon showing some of the highest per hectare use of fertilizers (331 Kg/ha) and pesticides (7 Kg/ha) in the world.<sup>34</sup>

**Rising water stress and increasing water use competition.** Water resources are under increasing pressure because of climate change and population growth. The agriculture sector is the single largest consumer of water in Lebanon, with a water

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<sup>28</sup> McKinsey, Lebanon Economic Vision, Full Report, Beirut, July 2018: <https://www.economy.gov.lb/media/11893/20181022-1228full-report-en.pdf>.

<sup>29</sup> International Trade Center, 2020, Trade Map, ITC: <https://www.trademap.org/>, accessed on June 28<sup>th</sup> 2020.

<sup>30</sup> Food and Agriculture Organization of the United Nations, 2020, FAOSTAT: <http://www.fao.org/faostat/en/#data>, accessed on June 29<sup>th</sup>, 2020.

<sup>31</sup> World Bank, 2020, Ease of Doing Business rankings: <https://www.doingbusiness.org/en/rankings>, accessed on June 29<sup>th</sup>, 2020.

<sup>32</sup> Klaus Schwab – World Economic Forum, 2019, The Global Competitiveness Report 2019, Geneva: [http://www3.weforum.org/docs/WEF\\_TheGlobalCompetitivenessReport2019.pdf](http://www3.weforum.org/docs/WEF_TheGlobalCompetitivenessReport2019.pdf).

<sup>33</sup> Land Degradation Neutrality Target Setting Programme, 2018, Final National Report on Lebanon, Beirut, February 2018: [https://knowledge.unccd.int/sites/default/files/ldn\\_targets/Lebanon%20LDN%20TSP%20Country%20Report.pdf](https://knowledge.unccd.int/sites/default/files/ldn_targets/Lebanon%20LDN%20TSP%20Country%20Report.pdf).

<sup>34</sup> Food and Agriculture Organization of the United Nations, 2020, FAOSTAT: <http://www.fao.org/faostat/en/#data>, accessed on June 29<sup>th</sup>, 2020.

withdrawal share of 61% and the water transmission and distribution networks are quite old, with more than 50% of them their useful life span<sup>35</sup> irrigating about 40 % of agricultural lands. In addition, the water sector has also management shortcomings.

### ***Strengths and Opportunities***

**Favourable agro-ecological conditions.** Lebanon has a Mediterranean climate and a high variety of agro-ecological conditions suitable for a wide range of agricultural products. Despite the increasing competition between different land uses there is still room for limited sustainable expansion of arable land (at the moment totalling 132,000 ha) and irrigation (78.8% of arable land is equipped for irrigation).

**Favourable geographical location.** Lebanon's location, with close proximity to Arab, African, European and Russian markets, and its five existing sea ports give Lebanon natural advantages for trade and the opportunity to develop as a trade hub provided that the required investment in logistics to upgrade post-harvest practices to international standards are made.

**High innovation potential.** The current low agricultural yields leave room for significant improvement. As shown by the recent, slow expansion of greenhouses and small start-up investments in hydroponic cultivation there is a huge untapped potential for high-end crops production with limited use of agrochemical and water inputs provided that more effective research and extension as well as access to credit and cheaper and more efficient energy provision is guaranteed to farmers.

**Niche product demand growth.** There is high-end market demand growth for organic, corporate social responsibility (CSR) and ethnic products. The need to address environmental and social concerns gives Lebanon an opportunity to position itself in this area. Customers, primarily foreigners but also Lebanese as the financial/economic crisis will be over, sensitive to environmental and social concerns are willing to pay a premium for quality differentiated products that meet higher sustainability and/or social standards.

**Domestic market expansion potential.** The aftermaths of the financial crisis will reduce the Lebanese household purchasing power towards imported agrifood goods opening a window for opportunity for more import-substitution domestic production. It is an opportunity in terms of reduced consumption of foreign exchange, increased value addition of the economy, and increased employment especially for the more marginal population groups.

**High export potential.** Based on the ITC methodology to assess a country's export potential, the untapped agrifood export potential in Lebanon amounts at USD 900 million, almost half (47.7%) of which is from fruit and vegetable production and another fourth of it (23.8%) made by food products (prepared or preserved). The main fruits with the largest export potential are fresh apples, of which only a third of the total potential is achieved, while the vegetable with the largest export potential is fresh potato.<sup>36</sup> This untapped potential could be exploited thanks to a number of already existing trade agreements (e.g. GAFTA, EMEA, EFTA) and will be boosted by the likely depreciation of the LBP, provided that adequate quality assurance and logistics systems will be in place.

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<sup>35</sup> Bassil, G., 2010, National Water Sector Strategy, Ministry of Energy and Water, Beirut, December 27<sup>th</sup>, 2010: [https://www.pseau.org/outils/ouvrages/ministere\\_de\\_l\\_energie\\_et\\_de\\_l\\_eau\\_national\\_water\\_sector\\_strategy\\_2010\\_2020\\_2012.pdf](https://www.pseau.org/outils/ouvrages/ministere_de_l_energie_et_de_l_eau_national_water_sector_strategy_2010_2020_2012.pdf).

<sup>36</sup> International Trade Center, 2020, Export Potential Map, ITC: <https://exportpotential.intracen.org/en/>, accessed on June 30<sup>th</sup>, 2020.

**High cooperatives potential.** Enhancing the role of cooperatives across the value chain and in supporting SME's development is seen as an emerging opportunity to mitigate the impact of the financial crisis on farmers, and small and medium producers in the agrifood sector.

### **3.1.3 The institutional setting**

#### *Institutional actors*

The agrifood sector is a multifaceted sector whose governance involves many governmental, non-governmental, civil and private actors. The functions and powers of these actors can be summarized as follows:

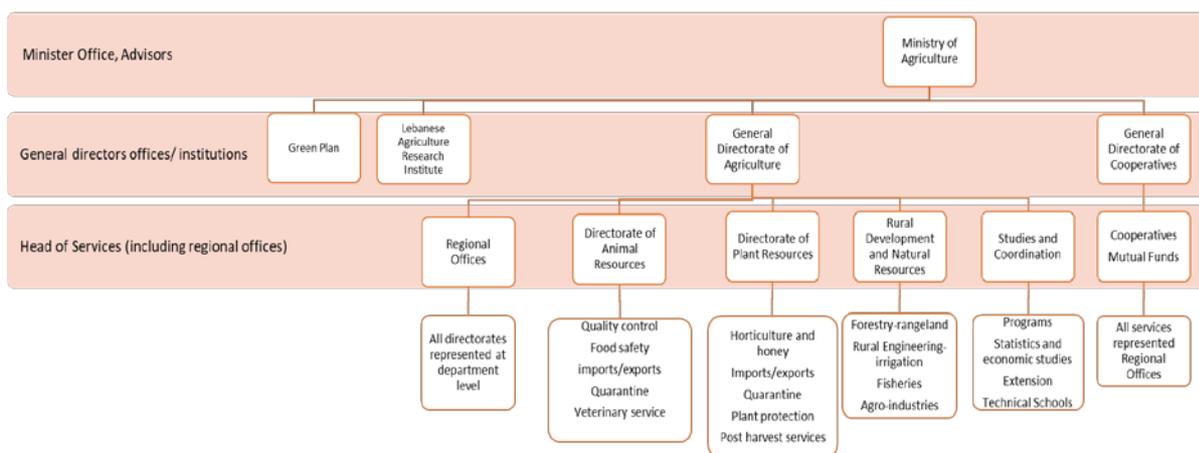
The GoL influences the agrifood sector directly through its public budget allocation towards the sector and the issuance of relevant legislation as well as indirectly framing the overall economic and institutional space for the involved actors through the management of foreign aid as well as informing donors' actions.

Various governmental institutions are involved in the agrifood sector with responsibilities split among different ministries and public institutions. The **Ministry of Agriculture** is the most important governmental body involved in the agrifood sector, performing major duties in the regulation and management of agriculture in addition to the oversight, supervision and delivery of certain basic services. The MoA carries out these functions from its headquarter and governorate offices.

The MoA has two general directorates (Figure 2): agriculture and cooperatives. The General Directorate (GD) of Agriculture is organized in four (specific) Directorates, covering all aspects of the agrifood sector except cooperatives. The GD of Cooperatives is responsible over all cooperatives active in agriculture, food processing, and other non-related fields (i.e. construction). The GD-Cooperatives is also responsible on mutual funds that can manage funds related to agri-business, social security, health, disaster risks, etc.

The two GD's suffer from the insufficiency of human resources and a chronic scarcity of financial resources. Many positions are vacant with more than 80% of positions occupied on interim basis. The human resource problem is amplified by the scarcity of means of implementation of daily work, especially in agriculture centres mainly due to budgetary constraints. Furthermore, the coordination between departments and between regional offices and headquarters is hampered, due to limited digitalization of the workflow and administrative process.

Figure 2. Organigram of the MOA



Two autonomous bodies affiliated to the MoA play a major role in the agrifood sector governance:

- **Lebanese Agriculture Research Institute (LARI)**, whose mandate covers agriculture research and public services (e.g. lab analyses, early warning). The major problems LARI is facing are: the lack of a secure financial base, the lack of public-private-partnership legal framework and the continue loss of staff attracted by the academic sector that hinder the sustainability of LARI operations;
- **Green Plan (GP)**, that supports investments in land reclamation and agriculture development (e.g. water harvesting and irrigation facilities) through demand-driven matching grant programs that co-finance agricultural investments made by private actors. Three problems are undermining GP operations: the sharp reduction in its budget, which is almost exclusively depending on external funds, the lack of staff, and updating legal framework.

In addition to the MoA and affiliated bodies, a number of Ministries and public institutions play important roles in the development, regulation and delivery of services to the agricultural sector (Annex III).<sup>37</sup> The mandates of the public institutions cover in some cases similar areas. In most cases, the competences on a specific agrifood issue are fragmented among several institutions. This is particularly concerning for some key issues that typically span across administrative boundaries, such as:

- Food security, a topic split under the mandates of the Ministries of Agriculture, Economy and Trade, Industry, Social Affairs, Environment, Energy & Water, and Health;
- Water resources, requires the involvement of the Ministries of Environment and of Energy and Water as well as of the Council for Development and Reconstruction (CDR), or the Green Plan for and Water establishments, the Litani River Authority (LRA) and Municipalities;
- Agricultural Finance, supported by IDAL (investments and exports), Ministries of Economy and Trade, and Finance (for subsidies), the Lebanese Central Bank (BdL) and the banking sector, but also Green Plan, CDR and Directorate of Cooperatives.

<sup>37</sup> Details are presented in the draft Agriculture Sector Review (FAO, 2020).

Addressing agrifood issues requires a synergetic effort by many bodies to provide the agrifood stakeholders the required guidance and support. In principle, several bodies might contribute to coordination within the agrifood sector:

- **Councils under the Prime Minister presidency**, such as the National Council for Scientific Research, the Investment Development Authority of Lebanon, the Council for Development and Reconstruction, the Economic and Social Council, the Higher Council for Relief, the Public Authority for Consumers Markets for Lebanon, etc.;
- **Inter-ministerial high-level committees or councils**, such as the Higher Council for Urban Planning, the Committee for Food Safety and the Committee for Rural Development, represented at the ministerial or director general levels;
- **Inter-ministerial technical coordination committees**, such as the Committees for LIBNOR, the technical committees at the DRM unit or the Climate Change NDC coordinated by the MOE,; and
- **Public-private committees**, established under the MoA on a sub-product basis, embracing all value chain players such as the Phyto-pharmacy Committee, the Fertilizers Committee, the Organic Agriculture Committee.

### *Policy frameworks*

The most important policy framework addressing some of the issues facing the agrifood sector is the **Ministry of Agriculture Strategy 2015-2019**. However, this strategy fell short of its ambitions because it did not address some crucial issues such as the coordination among different actors or the provision of financial instruments. (cf. section 2.3).

The lack of a comprehensive policy framework for the sector is also witnessed by the various pieces of policies/legal provisions that mainstream interventions in the agrifood sector. The backbone of financial support for agricultural production relies on two commodity support programs – tobacco and wheat – both administered outside of the MoA and payments disbursed after the agricultural season is completed. The Department of Tobacco Control in the MoF administers a quota-based tobacco program which guarantees purchases of the tobacco from the farmers holding a quota of 4 dunums. The MoET<sup>38</sup> administers a wheat support program and is also responsible for wheat imports as well as monitoring silos and milling sector. The objective is to keep wheat stocks sufficient for three to four months of consumption. This is done through both domestically procuring, guaranteeing a fixed price to wheat producers, and importing wheat.

Besides production subsidies, trade policy is the second important mode of intervention in the sector. IDAL Agri-Plus program provides agricultural export subsidies to local producers and other incentives to enhance product quality and improve packaging, promotion and marketing. Furthermore, Lebanon has signed a number of free trade agreements (FTAs) with the EU, EFTA and the Gulf Cooperation Countries (GCC) and it is also a member of the Greater Arab Free Trade Area (GAFTA). Free trade agreements usually include some concessions related to agricultural exports, such as potatoes with the EU, though this opportunity has not fully exploited.

The agricultural sector relies on protection measures by using import quotas and licenses, mostly on seasonal basis. Border protection led to a rise of several industries

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<sup>38</sup> The MoET also used to support sugar beet production, but the programme was abolished several years ago.

such as wine<sup>39</sup> and poultry. Likewise, high import duties of 70% are applied to imports of many fresh fruits and nuts also produced domestically, including bananas, apples, almonds, etc. Special treatment is granted to exports from the EU and GAFTA.

Policy instruments other than subsidies and tariffs are:

- ad hoc distribution of inputs by the MoA (finding adequate funding permitting) to contribute to a more widespread use of new – or advanced – technologies by reaching key farmers.
- extension services provided by the MoA aiming at expanding good agricultural practices and/or introducing new practices; and
- investments in rural infrastructure by the Green Plan, specifically land reclamation and land development (e.g., water harvesting) projects, with focus on supporting smallholders in hilly and deprived areas.

## 3.2 Challenges

The challenges the Lebanese agricultural sector is facing depend on a set of root causes, generating some problems to be addressed in order to prevent/solve some negative consequences (Figure 3).

### 3.2.1 Root causes

The root causes determining the problems faced by the agrifood sector can be summarized as follows:

- **High regional and national political instability:** the proximity to several turbulent areas in the Middle-East region (e.g. Syria, Palestine), generates high risks and uncertainties as well as inflows of refugees and disturbance to trade of goods including agricultural inputs and products. Furthermore, the complex structure of the national institutional set-up and socio-political fragmentation lead to weak governance.
- **Weak institutions and governance:** historically, the agrifood sector has received low priority by all governments as proven by the inadequate allocation of resources in the public budget. This is also reflected by the lack of a comprehensive and coherent policy framework as well as the fragmentation between different institutions and ministries lacking effective tools of coordination. This results in limited public investment in infrastructures, research and development, extension, and poor organization of the agrifood value chain, eventually leading to inefficiencies.
- **Climate change and environmental fragility:** climate change shocks and stressors coupled with the environmental fragility and limited resources determine an increased competition over use of natural resources, especially land and water, high risks and uncertainty for the sector operators that are not offset by effective preparedness and disaster risk management plans, and weak adaptation and mitigation response (Figure 3.)
- **Macroeconomic disequilibria and the twin crises:** the twin crises (i.e. the financial/economic crisis and the COVID-19 pandemic) further constrained the already limited fiscal space for government interventions, reduced farmer access to credit and imported inputs, increased difficulties in importing food and disrupted the

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<sup>39</sup> Wine imports from the EU face a 30% duty, while a 75% duty is applied to wine imported from other countries. About 15 years ago there were 7 to 8 wineries, now there are 52 wineries in the country.

agrifood value chains, eventually putting at risk the national food and nutrition security.

### **3.2.2 Problems**

The compound effects of the economic fragility and political instability, weakness of institutional setting, environmental and climate change challenges, and the financial and COVID-19 crises generate a set of problems for the development of the agrifood sector that can be clustered as follows:

- **Household food insecurity:** sharp decline in purchasing power due to the economic recession (escalating unemployment and poverty), coupled with rapidly rising food prices due to excessive reliance on food imports, depreciation of the LBP and value chain disruption is leading to reduced economic access to food, inadequate nutritional intake, limited stability of access to food, and limited awareness of food safety/quality.
- **Livelihood opportunities:** high unemployment and limited employability especially for women and for the youth, presence of barriers to entrepreneurship (again, especially for women and the youth), limited availability of and access to financial services (credit, savings, insurance) to help starting business, making the required investment and managing enterprise risk hinder the participation of some groups (e.g. smallholders, the poor, the youth, women) to socio-economic development.
- **Farming and agribusiness:** high fragmentation of ownership and limited access to key inputs (i.e. fertilizers, pesticides, seeds), financial services (i.e. credit and insurance), natural resources (e.g. land and water) as well to key services (e.g. extension, technical assistance, market information), farmers' inadequate education and skills, farmers' old age, high transaction costs and poor marketing functioning (both at infrastructure and information level), poor horizontal organization (e.g., cooperatives, farmers' associations) and poor vertical integration of actors along the value chain, inadequate quality assurance system of food and agrifood products determines low yields and limited value addition, sub-optimal farm/firm management and unbalanced power within the agrifood value chains, and ultimately hinder the development of the agrifood sector.
- **Environment and climate change:** low adaptation capacities and limited mitigation (including via energy saving technologies) to climate change, mismanagement of limited natural resources (land, water, rangelands, forests, fisheries) and environmental pollution, limited preservation of the natural resource base, high risks of natural hazards (droughts, floods), and poor preparedness systems including data generation and dissemination (e.g., for early warning systems or insurance) determine environmental/natural resource degradation as well as an inadequate response to climate change.

### **3.2.3 Final consequences**

The variety of problems faced by the agrifood sector generates a set of adverse consequences that need to be addressed, namely:

- **Inadequate food consumption**, determined by reduced food intake, inadequate food quality, high levels of food losses and wastes and increasing levels of poverty due to the compound effects of the twin crises the country is currently experiencing.
- **Socio-economic exclusion** of vulnerable groups (such as the poor, smallholders, women and the youth), due to inadequate transformative capacities of the agrifood sector, high barriers to entrepreneurship development, and cultural elements.

- **Low competitiveness** of the agrifood sector, due to market fragmentation, unbalanced power within the value chains and sub-optimal farm and firm management, as well as to environmentally-related challenges.
- **Unsustainable practices** in farming and agribusiness, given by degradation of natural resource base, inadequate responses to climate change as well as a limited capacity of firm and farm management.

### 3.3 The twin-crises impact

#### 3.3.1 *The impact of financial and economic crisis*

The financial and economic crisis has exacerbated pre-existing macroeconomic problems in Lebanon, namely a structural fiscal deficit and an overvalued exchange rate that have an impact on the operation of agrifood economic agents. At the same time, as the crisis deepened, the BdL tightened monetary policy aiming at defending its foreign exchange reserves and limit currency substitution in agents' portfolios. This had immediate far-reaching consequences for the sector as well.

Lebanon's public finances have been structurally weak, with high deficits driven by below potential growth. Therefore, financing fiscal deficits is key for the country. Borrowing credit from the domestic market – which is the prevailing public debt servicing mode in Lebanon – increases the interest rate and crowd-out private sector borrowers, including farmers.

The tighter monetary policy implemented by the BdL from October 2019 on translated in higher agriculture production costs and costlier access to credit for farmers. High interest rates and a sovereign guarantee on public debt helped render the state the dominant client for banks, crowding-out the private sector operators. This is especially the case for sectors, such as agriculture, that lacks public specialized credit schemes. Restrictions on USD account withdrawal and controls on capital movements had far reaching consequences at different stages in the agrifood supply chain.

Importers were faced with a situation where their credit facilities were cut, did not have access to their dollar denominated deposits, and were requested to repay their outstanding credit facilities at rates much higher than before. Currently the private sector, traditional provider of agricultural credit to farmers, is unable to continue this task because of unavailable credit facilities by the banks previously extended in USD, and currency fluctuations as most of their costs are in USD and revenues in LBP.

This had immediate consequences on farming. In the past farmers would buy inputs on credit extended to them by input suppliers or wholesale and middle-persons, and repay after the harvest. Farmers, although used to rough economic conditions from the past, have been further pressed by lack of credit to purchase fresh inputs, being requested to pay old arrears, and having to purchase inputs in cash either at face value in USD or in LBP using unofficial exchange rate.

Finally, wholesalers in the past provided farmers with some financial resources early in the season to guarantee cash flow and farmer would repay in-kind (as a portion of the output) at the time of harvest. Like input suppliers, wholesale traders were taking advantage of credit facilities offered by commercial banks. These credit facilities were interrupted and delayed payments to farmers – who need liquidity to buy inputs in

cash, previously bought on credit from input suppliers, or using credit from wholesalers.

In conclusion, lack of access to credit and inputs is the key short-run issue farmers are facing and needs top priority of intervention.

### **3.3.2 The impact of COVID-19 crisis**

On March 16 2020 the Lebanese Government declared a State of Full Mobilization in response to the COVID19 pandemic, halting all non-essential commercial activity. The outbreak of COVID-19 is both a supply shock (i.e. disruption of the global value chains) and a demand shock (i.e. household income reduction).

The impact on the agrifood supply chains has been relatively modest on domestic value chains, and more significant on international value chains making import and export more difficult during the lockdown period. The COVID-19 impact on domestic agrifood markets was in any case modest as compared to the massive impact of the overvalued exchange rate between the LEB and USD that brought about a skyrocketing food inflation.

Much more serious is the demand side impact of COVID-19 on the ongoing economic recession, compounding existing weaknesses and increasing vulnerabilities of all residents in Lebanon. The food security situation which was already been declining was further exacerbated due to the consequences on the economy of movement restrictions, loss of jobs and income reduction. Two out of every three households suffered from a reduced income compared to the previous year.<sup>40</sup> Nearly one out of every three Lebanese was pushed into unemployment, while one in five respondents saw their salary being reduced. Lebanese women as well as young adults between 25-34 years of age have been particularly affected by reduced salaries. The situation is even worse for refugee households.

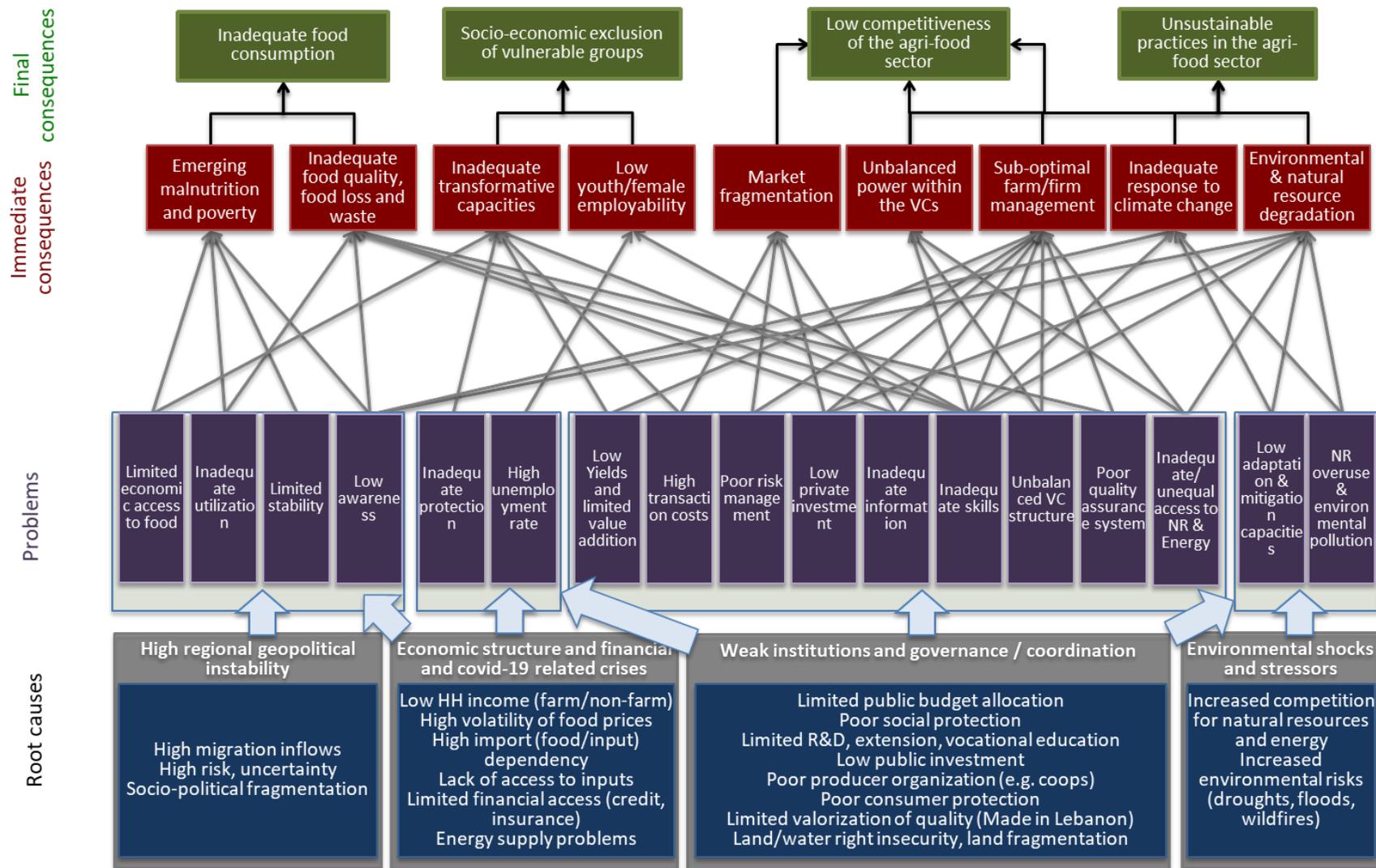
The most impacted economic sectors are construction as well as services and sales including accommodation and tourism, restaurants and food services. Agriculture, forestry and fishing has been relatively less affected, although 23% of interviewees employed in this sector lost their jobs and 32% got their salary reduced. However, this sector is one of the most affected before the COVID-19 outbreak with 24% of interviewees responding they had lost their jobs or had gotten their salary reduced in the months before.

The figures above are alarming and show that the combined effect of the financial and economic crisis and the COVID-19 outbreak seriously threaten the livelihood of significant population strata. The most affected are the most vulnerable ones, including the poor and the dependent ones such as the women and the youth. In the agricultural sector this is true specifically for smallholders. Ensuring the livelihood to these groups is a top priority not only for saving lives but also to make possible recovery and development.

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<sup>40</sup> World Food Programme, Assessing the Impact of the Economics and COVID-19 Crises in Lebanon, Beirut, June 2020: <https://docs.wfp.org/api/documents/WFP-0000116784/download/>.

Figure 3. Simplified problem tree of Lebanon agrifood sector



## 4. Theory of change

The NAS Theory of Change (ToC) describes the logic underpinning the expected results identified in the results-framework, highlighting how interventions are causally related to impacts in the result chain, revealing the complex web of activities required to bring about the intended objectives.

### 4.1 NAS Change logic

The theory of change of the strategy is transforming the agricultural and food system to improve and restore the livelihoods of farmers and other actors in the agrifood system in order to:

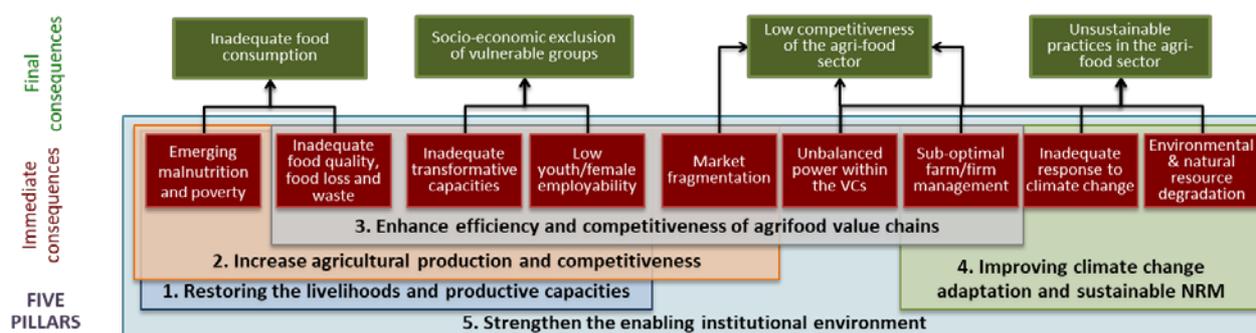
- Achieve recovery, growth and sustainability: by providing support, incentives and services;
- Achieve justice and equality: by targeting the most marginalized, especially in rural areas.

The problem framework described in section 3.2 above allows to sketch a set of priority areas of intervention (Figure 4). The Theory of Change (ToC) underpinning the NAS is that by supporting Lebanese efforts in the areas of (a) restoring the livelihoods and productive capacity of farmers and producers; (b) increasing agricultural production and productivity; (c) enhancing efficiency and competitiveness of agrifood value chains; (d) improving climate change adaptation and sustainable natural resources management; (e) strengthening the enabling institutional environment and regulatory frameworks, the country will be able to unlock and ensure progress towards:

- more resilient and better-off households with reference to food and nutrition security, and
- more resilient, inclusive, competitive and sustainable agrifood sector.

The adopted approach aims to favour transformative dynamics that is changes towards wellbeing-enhancing outcomes. Operationally, this translates into addressing ongoing or expected negative dynamics (e.g., the likely Lebanese Pound devaluation resulting from the current economic and financial crisis makes problematic importing agricultural inputs and food) while exploiting the opportunities offered by already operating or expected positive dynamics (e.g., the likely Lebanese Pound devaluation represents an opportunity for agrifood export-promotion and import-substitution, provided that access to credits is secured for farmers and agribusiness).

Figure 4. Addressing main issues in the sector via priority areas of intervention



## 4.2 NAS Assumptions and preconditions

The ToC rests on certain assumptions and preconditions.

Assumptions for the NAS ToC are the following:

**Assumption 1:** A wide consensus does exist in the country on key areas of intervention for the transformation of the agrifood sector as a way to ensure inclusiveness and development.<sup>41</sup> This represents an asset that allows shaping the coming NAS against agreed priorities and catalysing stakeholders' engagement and donors' alignment.

**Assumption 2:** Lebanese farmers and other agrifood actors have unique entrepreneurial skills and are traditionally and culturally quick-responding to incentives. This represents an asset to ensure their effective engagement and contribution to public and private sector interventions towards the NAS targets.

Necessary preconditions for changes to happen are the following:

**Precondition 1:** The Lebanese Government and all involved stakeholders are committed to work on a common development and reform agenda, which is conducive to pursue NAS objectives and implement NAS interventions;

**Precondition 2:** The Development Partners provide aligned, sufficient and catalytic support not only on humanitarian but also on development matters, contributing to de-constrain or de-risk private sector investments, thus ensuring meaningful implementation of NAS interventions.

## 4.3 NAS Vision and Objectives

The NAS long-term Vision is to make the agrifood system **a main contributor to the achievement of food security and** a key driver of resilience and transformation of the Lebanese economy into a productive economy.

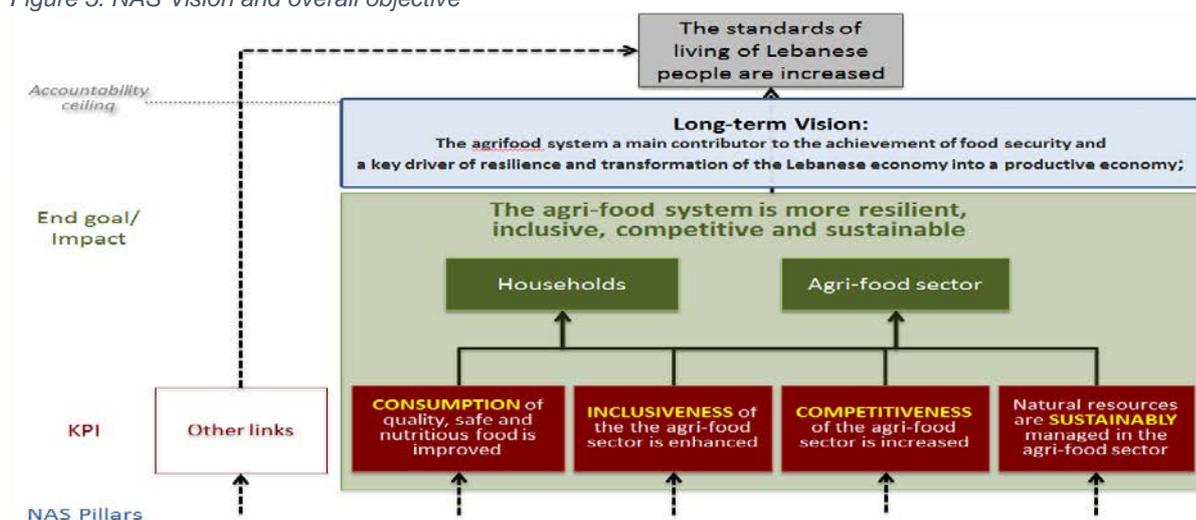
The overall objective of the NAS is to contribute to the increase in the standards of living of the Lebanese people including farmers and all actors in the agrifood system. This will be done pursuing the following end goal: transform the agrifood system to make it more resilient, inclusive, competitive, and sustainable.

In order to do this, the NAS will target both the production side – i.e. farms and other agri-businesses composing the agrifood sector – and the consumption side – i.e. households' food and nutrition security (*Figure 5*).

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<sup>41</sup> This is the result of dedicated consultations and recent engagement with stakeholders, started with the CEDRE and unfolded over the last two years with a leading role by the MoA.

Figure 5. NAS Vision and overall objective



### Box 1. NAS. Boosting domestic agrifood value chains.

Studies and analyses carried out by various stakeholders have highlighted constraints and opportunities for the development of agrifood value chains in Lebanon. These are summarized in the Appendix of the ASR, sourcing (among others): USAID (2014),<sup>42</sup> McKinsey (2019),<sup>43</sup> UNIDO (2019),<sup>44</sup> recent assessments from IFC (2020).<sup>45</sup>

Boosting development of agrifood value chains can be structured in two main clusters, in turn encouraging: agrifood production for local markets, and export.

The first category, supporting domestic consumption of local products, includes **value chains characterized by high domestic consumption** (high demand, with limited capacity to afford imported products), and/or widespread production base (with high impacts on livelihoods of rural and agricultural dwellers). High attention to this end will have to be placed on sustainability of the production (duly considering the land, water, energy related constraints). Such value chains comprise vegetables, legume production – under the condition that public support is provided to produce new varieties coupled with quality control throughout the value chain, and the dairy sector – provided sufficient support is provided both on the public side and on the enterprise side to ensure satisfactory levels of food safety and quality.

The second category, **export oriented value chains**, requires in turn a twofold support. On one side, specific products with high potential and high demand, including table grapes, avocadoes, cherries would require a minimum public interventions to facilitate trade and access to foreign markets. A second group exists, comprising (among others) citrus, apple, potatoes, olive oil. While presenting a high potential for export, these products present higher and major challenges to meet the quality, stability and safety of supply demanded by international markets.

As general approach, the NAS provides support to both categories of agrifood products, and with attention to all segments of the corresponding value chains, from access to high quality inputs (Pillar 1 and Pillar 2), innovative and sustainable production techniques (Pillar 2 and 3), post harvesting technologies and infrastructures (Pillar 3), vertical and horizontal integration of value chain players (Pillar 3), access to domestic and foreign markets including reducing information asymmetries (Pillar 3), reduce environmental footprint and maintain ecosystem services (Pillar 4), access to adapted and affordable financial products, such as savings, credits, insurance, etc. (throughout the NAS, but specifically in Pillar 5), AKIS and the whole enabling environment for an efficient public service provision to the sector (Pillar 5). The ensemble of these interventions will allow restoring the sector's capacity throughout the crisis, and de-constraining private financing to boost and modernize the sector.

<sup>42</sup> USAID, 2014. Value Chain Assessment Reports. Lebanon Industry Value Chain Development (LIVCD) Project.

<sup>43</sup> McKinsey, 2019. Lebanon Economic Vision. Full Report.

<sup>44</sup> UNIDO, 2019. Roadmap for the development of the agrifood sector.

<sup>45</sup> IFC, 2020 (draft). Lebanon Agribusiness Deep Dive.

## 5. NAS Pillars

In order to pursue the NAS overall objective (end goal) of transforming the Lebanese agrifood system making it more resilient, inclusive, competitive and sustainable, interventions<sup>46</sup> can be clustered around five key areas of interventions (Pillars), broken down in programmes to facilitate the planning, implementation, monitoring and advocacy. The Pillars and their programmes were defined according to the *evidence*, the *analysis* depicted in the theory of change, and the *demand* emerged throughout the consultative process.

Each Pillar is presented starting with its **Objective**, time bound to the NAS implementation cycle 2020-2025, an introductory **narrative**, including **priorities from the consultations** and the **gender focus**, the Pillars' **Programmes** with a selection of the main priority interventions envisaged, and a **summary Theory of Change** (ToC) of the Pillar itself.

The Action Plan of the NAS that will be prepared after the adoption of the NAS will include details on interventions and their indicative timeline of implementation. Such interventions will be selected according to the agreed set of prioritization criteria (presented in Annex IV).<sup>47</sup>

### Pillar 1. Restoring the livelihoods and productive capacities of farmers and producers

**Objective:** By 2025, the livelihoods and productive capacity of the agriculture and agrifood sector players (including farmers, livestock keepers, fisher folks, small and medium-size producers...) are sustained and restored at least to their levels of 2019

The interventions under this pillar are essential for (i) equity reasons, that is to help the most vulnerable ones to overcome the hardships caused by the economic/financial and Covid-19 crises, and (ii) enabling growth, that is supporting farmers and other agribusiness actors. The productive capacity needs to be restored in order to allow them to benefit from and contribute to the implementation of interventions to foster transformation of the agrifood system (Pillars 2 to 5). This Pillar will ensure that women's priorities and vulnerable groups are duly taken into account at planning, and implementation stages. It will emphasize the need to facilitate the access to productive inputs for farmers including women, especially women headed households, while aiming to enhance livelihoods and food security. The ToC is depicted in Figure 6.

With specific reference to the economic and financial crisis, this pillar represents the needed response to ensure immediate recovery of the sector to support maintaining agrifood production capacity by enhancing access to emergency financing facilities to farmers and other agribusinesses and access to imported inputs for farmers.

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**Stakeholders priorities for Pillar 1:** Support access to financial instruments for the most vulnerable, facilitate access to inputs such as seeds, plants, fertilizers, but also equipment for crop, livestock and fisheries (including via subsidized prices) as a measure to ensure recovering from the crises, maintaining the production level and to meet increasing deficit in purchasing power of food items were all highly mentioned.

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<sup>46</sup> Interventions are any kind of activities (a single programme or a coordinated initiative clustering several programs/projects) that bring about the results identified in the NAS result framework.

<sup>47</sup> These helped identifying the NAS' flagship programmes presented in Annex 7.

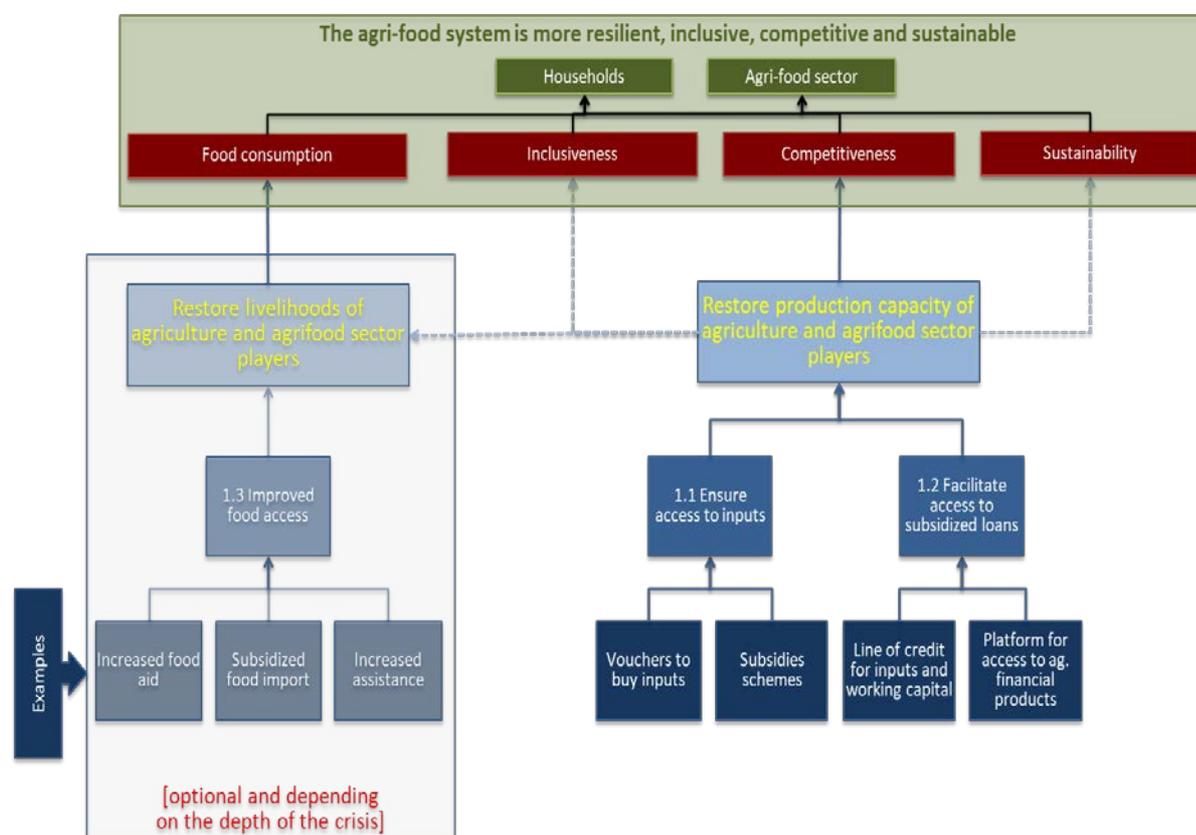
The interventions are structured around three programmes:

**Programme 1.1: Ensure and facilitate access to inputs and tools to maintain agricultural production capacity.** Priority interventions include in-kind and cash assistance (including subsidies, voucher schemes and cash grants...) to farmers and producers to specifically access high quality seeds, seedlings, fertilizers, fodder, dairy cows, small tools and equipment including irrigation equipment, greenhouses related needs (plastic sheets, ...) .

**Programme 1.2: Facilitate access to subsidized agri-loans for farmers and small and medium enterprises (SMEs) working in the agrifood industries to revive the sector.** Priority interventions include developing a subsidized loan system for farmers and small and medium-sized enterprises, possibly establishing an institutional and financial mechanism (a platform) to ensure match making between demand (from value chain players) and offer (from financial institutions) of financial products tailored around farming and agrifood SMEs, or a fund for the agri-sector (e.g., AgriFund).

**Programme 1.3: Reduce risk of worsening levels of food and nutrition insecurity** (including via subsidized food import). Priority interventions include: the development of a platform to attract funding in cooperation with associations, funding parties and donors (directly between funding parties, farmers and producers), and definition of a system of subsidized food import associated with promotion of healthy and nutritious food consumption patterns.

Figure 6. ToC of Pillar 1



## Pillar 2. Increasing agricultural production and productivity

**Objective:** By 2025, agriculture in Lebanon will become more productive and profitable and increased production will contribute to reduce the food import bill

Making the Lebanese farm sector more productive encompasses many dimensions such as resilience, efficiency and profitability. This Pillar includes specific interventions aimed to increase the production basis of agrifood products – increasing access to and to the possible extent also the availability of land (e.g., via land reclamation). The ultimate objective is transforming the Lebanese farming sector: increasing agricultural output quantity and quality to substitute import of selected products according to the country's comparative advantages (see ToC sketched in Figure 7). This programme will mainstream a gender approach by focusing on the inclusion of women in agricultural production, processing and marketing being essential and needs to be valorised.

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*Stakeholders priorities for Pillar 2: Specific requests were raised by farmers organizations to subsidize land reclamation and irrigation schemes for expanded production; to map agriculture zones and apply protective measures to limit land fragmentation, and prevent further urbanization expansion; and protect local markets. Support development of innovations in agriculture (agri-tech, digital technologies...) and supporting traceability of the products (including via using digital technologies to increase and improve outreach) were also highlighted. Reviewing the trade agreements was also identified as a need under this pillar.*

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The interventions under this pillar include four Programmes:

### **Programme 2.1: Increase the total agricultural production, by increasing the total cropped areas, animal and aquaculture production and enhancing productivity.**

Priority interventions include: increasing the cultivated areas (investing in abandoned lands and in land reclamation and increase the cultivated areas for cereals and legumes); this to be associated with updating land use/ land cover, land fragmentation analysis, increase production of seeds and seedlings (mother trees/seed bank); seed certification systems, surveying and controlling quarantine pests and transboundary pests and developing an early warning system for crop pests; developing and supporting fodder cultivation; preserving animal health and improving breeds and animal nutrition; increasing livestock production; developing the dairy<sup>48</sup> and meat value chains and the products from the small ruminants. The programme will closely work with **Pillar 4** on sustainable use of water sources for irrigation. Complementary interventions related to revising trade agreements to incentivize domestic production and improved access to working capital (also relevant to enhanced risk management capacity) will be addressed under **Pillar 5**.<sup>49</sup>

### **Programme 2.2: Support the adoption of good agricultural practices and good livestock management.**

Priority interventions include: Implement a nationwide program for the adoption of good agriculture practices, supporting and training farmers on the use of biological pest control (BPC) and integrated control with the aim of decreasing the use of chemicals and pesticides and mitigating pollution; improving livestock management practices including implementing national vaccination programs, and improving animal nutrition and health and veterinary services.

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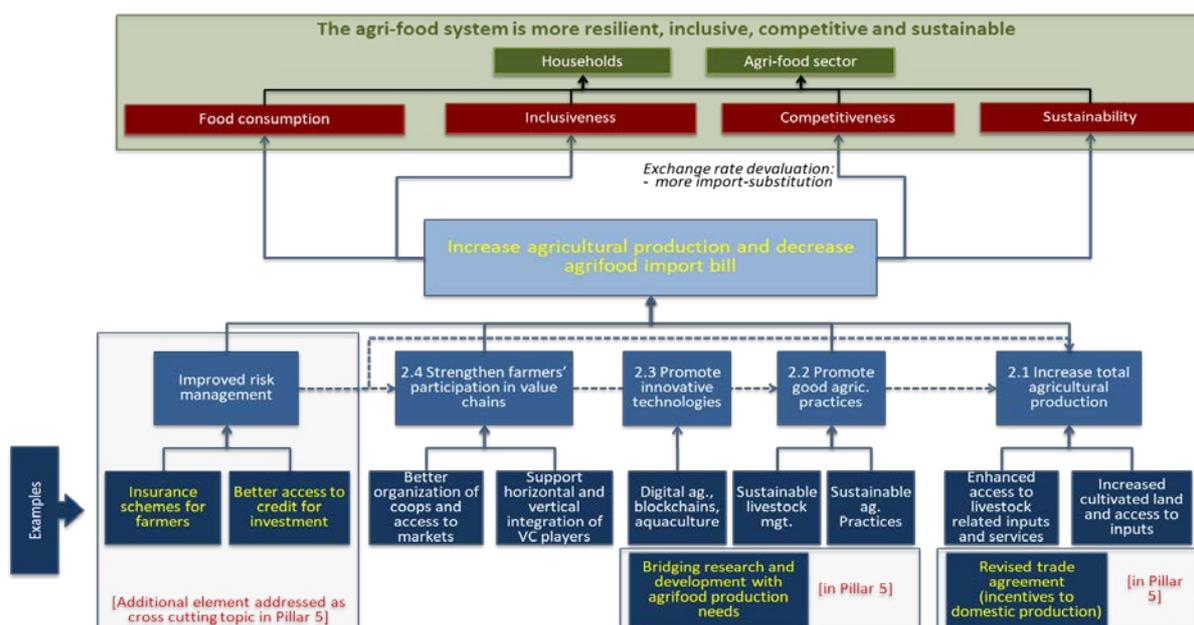
<sup>48</sup> Also via subsidized increase of the number of dairy cows.

<sup>49</sup> Improve risk management capacity providing insurance schemes for farmers and thus improving private investments in agriculture is key and will be addressed as cross-cutting topic in Pillar 5.

**Programme 2.3: Encourage and Support the adoption of innovative and modern technologies.** Priority interventions include promotion of digital agriculture, innovative agricultural systems (e.g., block chain based traceability system at farm level), precision agriculture, climate-smart agriculture, cutting edge irrigation techniques, aquaculture;<sup>50</sup> facilitating platforms for knowledge sharing between farmers/producers and the research centres, improved extension/technical assistance, bridging R&D with agrifood production needs; and enhanced access to credit for investment in innovative and modern technologies (linking interventions to **Pillar 5**).

**Programme 2.4: Improve the quality and safety of agricultural and food products.** Priority interventions include: enhancing food quality and safety assurance system based on improved traceability tools, improved lab capacities (e.g., tracking chemical residues and contaminants in food products from plant and animal origin), strengthening control over local production, as well as imports and exports of plant and animal origin, in accordance with international health and phytosanitary standards (according to the risk based assessment/analysis system), establishing a system of denomination of origin of Lebanese products (including Geographic Indications), labelling/branding and better certification (link to **Pillar 5** for enabling stronger certification bodies).

Figure 7. ToC of Pillar 2



### Pillar 3. Enhancing efficiency and competitiveness of agrifood value chains

**Objective:** By 2025, the value of agricultural and agrifood products sold in local markets is enhanced and export revenues increased

This Pillar will favour the participation of Lebanese farmers including the smallholders in agrifood value chains and will increase the organizational capacity of Lebanese value chain players to integrate (both horizontally and vertically), thus enhancing their participation in value addition generation. Interventions under this pillar aim at reducing information

<sup>50</sup> Development of aquaculture will require developing appropriate legal frameworks (under Pillar 5).

asymmetries along the value chains as well as eliminating bottlenecks that can prevent a smooth and efficient post-harvest handling, logistics and processing. While this pillar focuses specifically on the development of selected sustainable agrifood value chains, the NAS approach to value chain development is cutting across all Pillars. The interventions under this pillar focus also on women and youth inclusion in the agrifood industry, especially for the high potential for employment and self-employment generation. To this end, the digital agenda plays a critical role. The ultimate objective is transforming the Lebanese agrifood businesses, identifying new exports channels and allowing more high-value exports (see ToC in Figure 8, page 32 – and the value chain development potential in Box 1, page 26); especially (but not limited to) the organization of cooperatives as entrepreneurial activities.

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**Stakeholders priorities for Pillar 3:** *The highlighted priorities spanned from the need for improving market infrastructure and establish new ones to protect local industry, open to new export markets by enhancing the coordination with exporters, cooperatives and farmers' groups (and possibly including the role of embassies), and ensuring promotion of organic production (also as a way to reduce the use of chemicals). Fish farming, improvement of the fisheries value chain, upgrading of the Lebanese fishers fleet, data collection and processing, etc. was also mentioned as a priority. Promote traceability in the value chains and focus on promising value chains, jointly with renovating the wholesale markets favoring use of transparent technologies to trace transactions were also highlighted as priorities, as well as establishing farmers' markets. The need to support to cooperatives was raised by producers and their representatives but also from academia and research.*

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Interventions under this pillar include the following five programmes:

**Programme 3.1: Support the modernization of value chain infrastructure and post-harvest handling systems, wholesale and local markets.** Priority interventions include: organizing the wholesale markets and enhance transparency of transactions (e.g. via e-payments, developing blockchains, etc.); establishing permanent and seasonal agricultural farmers' markets for direct sale; investing in the infrastructure and information system of post-harvest handling systems to reduce food loss and waste; establish incubators and promote marketing through agricultural service centres. This programme will act in close linkage with **Programme 3.5**, aiming to reduce market fragmentation and increase farmers' participation in the agrifood value chains through better producers' organization, multi-stakeholders' platforms, value chain agreements and contract farming.

**Programme 3.2: Encourage private investment along the agrifood value chains.** Priority interventions include measures aiming to increase the credit worthiness of agribusinesses (technical assistance on technical aspects as well as business planning, market intelligence, and other ad hoc support to facilitate the agrifood enterprises to increase their capacity to access to financial services), thus stimulating foreign and domestic agricultural investments. Parallel work will be required to remove barriers to development of and access to financial products by facilitating a match-making between the demand and offer of financial services, including stimulating the development of innovative products adapted to agrifood value chains<sup>51</sup> or the support to a guarantee scheme. (this will also include promoting investment in promising agriculture value chains and providing adequate legal framework and suitable infrastructure (such as medicinal plants-Cannabis and others, marine aquaculture, protected crops etc. )

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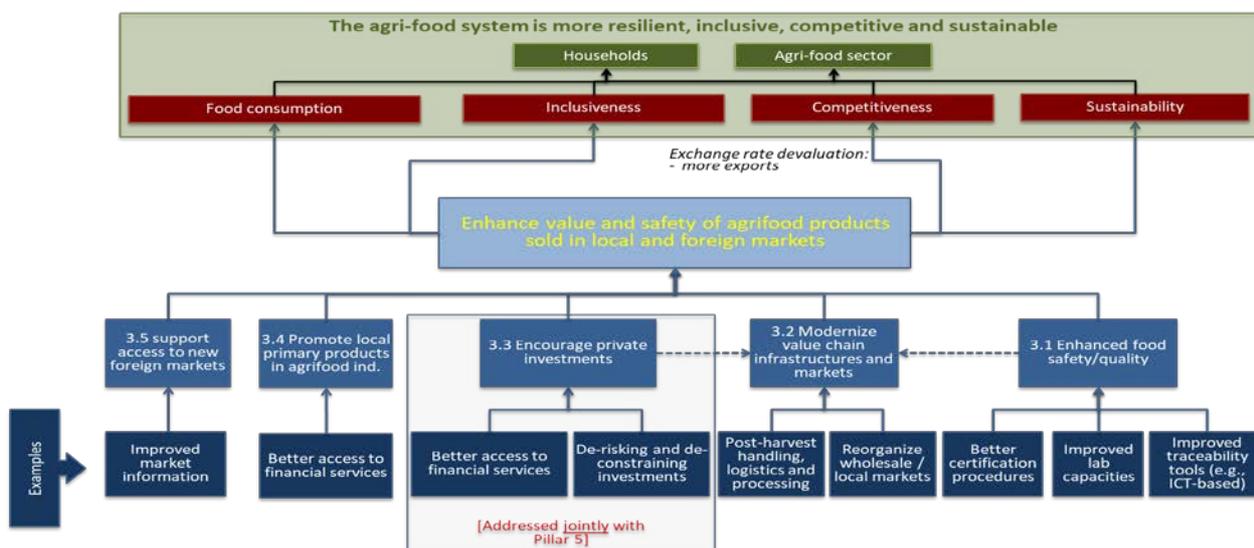
<sup>51</sup> One of the bottlenecks in Lebanese rural finance is the shortage of availability of financial products for agriculture sector.

**Programme 3.3: Provide enabling conditions to promote agricultural and food industries and enhance utilization of locally produced primary products.** Specific interventions could include development of olive oil, dairy and cheese industries, traditional and artisanal food products, Lebanese wine, ready-to-eat processed food and promotion of the Mediterranean diet, and healthy eating patterns. Stimuli will also be generated via stronger linkages with cooperatives groups as well as between agriculture and industry (potential agrifood products are mentioned in Box 1).

**Programme 3.4: Support agricultural exports and access to new markets.** Priority interventions include: developing export infrastructure and setting export mechanisms (including subsidies, participation in international expo) to access new markets according to international food standards; facilitating access to market information on the agrifood value chains (via market studies, intelligence, client prospection, identify windows of opportunities). This programme will reduce information asymmetries along the agrifood value chain because of better market information, facilitating access to new markets and identifying windows of opportunities for selected values chains and high added value crops such as cherries, grapes, apples, avocado, citrus, and high added value niche and traditional products such as thyme and other aromatic plants, and honey... etc) to export Lebanese products.

**Programme 3.5: Promote and organize cooperative work and farmers' associations and groups at the level of the value chains (targeting smallholders producers).** By stimulating cooperative work, farmer groupings, this programme will increase farmers' participation in agrifood value chains. This will allow benefitting value chain player's negotiation capacity including as policy influencers, and more equal generation of value addition throughout the value chain. Benefits will come from the removal of constraints to participation (transaction costs, risk, lack of market information), and better horizontal and vertical integration (especially for producers). This Programme will closely work with **Pillar 5** to ensure enhancing the enabling legal framework (e.g., by simplified procedures, revision of business , legal and financial measures for cooperatives and strengthening of contract farming, improving access to information, and developing mechanisms to facilitate access to agricultural inputs by farmers' associations/ cooperatives and agricultural unions).

Figure 8. ToC of Pillar 3



## **Pillar 4. Improving climate change adaptation and sustainable management of agrifood systems and natural resources**

**Objective:** By 2025, adaptation to climate change and sustainable management of natural resources is enhanced and use of low carbon technologies and practices is increased

The technical inefficiency of Lebanese farms and agribusinesses results also into unsustainable practices and reduced resilience to environmental shocks and stressors. This requires specific interventions throughout the agrifood system (promoted also throughout Pillar 2 and 3 of the NAS) aiming to responsible production and consumption practices, and to enhance production and protection of ecosystem services. Substantial efforts will also be on reverting land, soil, water and other natural resources degradation, reducing pollution, and adopting more energy efficient techniques, hence increasing adaptation and mitigation to climate change including carbon sequestration in forests and wooded lands (see ToC in Figure 9). Additional opportunities arising from the implementation of this Pillar are related to the linkage existing between sustainable agriculture and preservation of ecosystem services and or eco-tourism (responsible rural tourism), emerging in Lebanon also as fruit of the highly valued cultural and culinary heritage, and the increasing awareness for healthy and organic food.

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*Stakeholders priorities for Pillar 4: Sustainability of use of natural resources, protection of the ecosystem services, including sustainable management of marine resources and respect of the international conventions on climate and environment (Rio conventions) came out as priorities. On the agricultural production side, increased efficiency of water resources use was also highlighted as priorities, and reduction of use of chemicals.*

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Interventions under this pillar include four programmes:

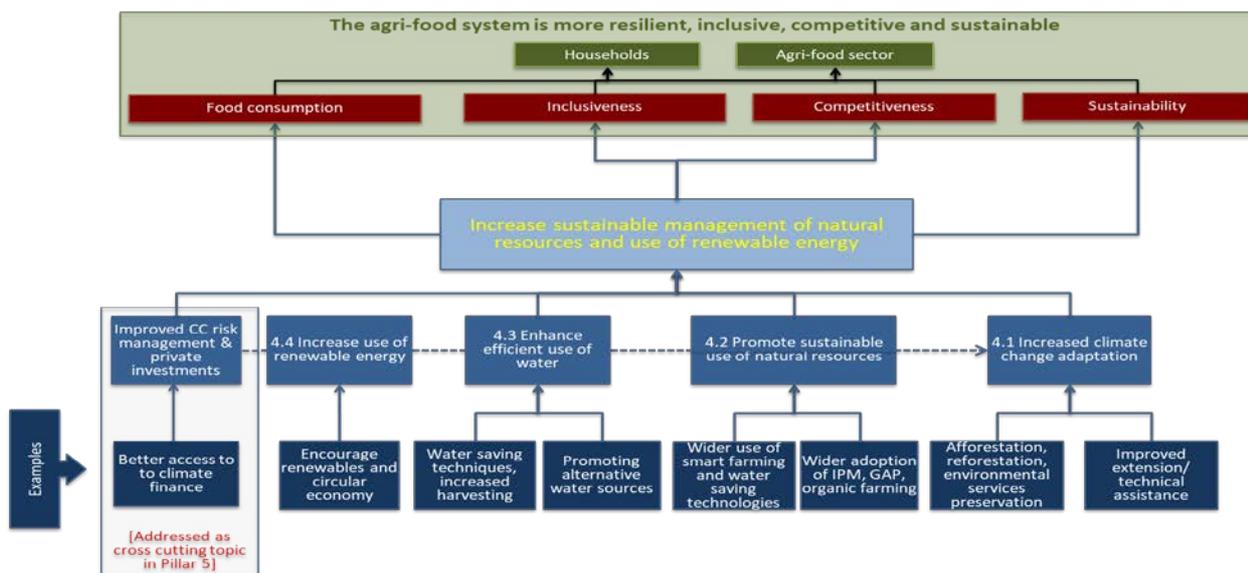
**Programme 4.1: Increase climate change adaptation and encourage related private investment along the agrifood value chains.** Proposed activities require adoption of innovative technical solutions, improved access to climate finance and insurance, and better extension/technical assistance, in order to promote climate smart agriculture techniques such as conservation agriculture, smart planting, afforestation and reforestation (including continuing the implementation of the Forty Million Trees Programme), and regulating and enforcing the management of forests, pest management and common forest property and developing fire prevention and early warning systems.

**Programme 4.2: Promote sustainable use of natural resources (soil, pastures, forests and fisheries),** reducing environmental and natural resource degradation because of more sustainable farming, food processing and logistics practices (e.g. smart agriculture, organic farming), better skilled and more aware operators. Interventions will foster sustainable forest management allowing timber and wood production, valorisation of non-timber forest products such as aromatic and medicinal plants, sustainable rangeland management, protecting forests from pests and fires, developing marine fishing, encouraging related opportunities for agro- and eco-tourism.

**Programme 4.3: Enhance the efficient use of irrigation water and expand the supply of water resources for irrigation,** including management of water harvesting and storage of irrigation water, enhanced efficiency of distribution and governance, construction of hill lakes and water tanks for better water efficiency, and promoting the adoption of modern irrigation techniques.

**Programme 4.4: Encourage and support the use of renewable energy in the agricultural sector.** Priority interventions include promotion of low carbon emission technologies, reduction of agricultural pollution (at farm level), encouraging the re-use of agricultural waste, production of compost from animal farms and agricultural products including via setting related regulatory framework, and via more effective awareness and communication campaigns on responsible food consumption.

Figure 9. ToC of Pillar 4



## Pillar 5. Strengthening the enabling institutional environment

**Objective:** By 2025, the Ministry of Agriculture and its affiliated institutions will become more conducive to the development and transformation of the agricultural and food sector

Any of the interventions under the above pillars need to have an enabling institutional environment and the legal frameworks conducive to the achievement of intervention objectives. Equally important, this is the pillar that guarantees the inclusion of vulnerable people, as well as unlocks the potential of participation in the adoption in the sector for women and youth, ensuring a widespread mainstreaming of a gender-sensitive and inclusive approach. Therefore, transforming the current institutional set-up is of paramount importance to enhance efficiency and effectiveness of designed interventions (see ToC in Figure 10).

**Stakeholders priorities for Pillar 5:** Support access to credits, develop the enabling environment for investments, develop PPP, update the legal framework for agriculture, listen and include farmers group priorities, and ensure accountability in the implementation of the strategy were amongst the main requests. The importance of evidence in planning was also highlighted, including the definition of priorities according to comparative advantages and agro-ecological vocation of the territories. Improving agricultural statistics, data collection and processing and establishing a farmers' registry were also mentioned (including use of remote sensing / georeferenced monitoring).

The pillar includes five Programmes aiming at:

**Programme 5.1: Enhance the effectiveness of MoA services and affiliated institutions and developing staff capacities.** Priority interventions include: developing and modernizing extension capacities through a farmer – focused service orientation, with emphasis on field demonstrations, E-extension to ensure disseminating knowledge (optimizing the available resources at the Ministry of Agriculture and affiliated institutions), veterinary services, capacities, rules and procedures of the Green Plan and of the General Directorate of Cooperatives; enhancing the quality of agricultural technical and vocational teaching and training; introducing digital learning (curriculum and teaching); introducing specialized training programs for staff; modernizing the structure of MoA and affiliated institutions in light of the priorities of NAS, reviewing regulatory frameworks and procedures accordingly, and elaborating new mechanisms for support programmes.

**Programme 5.2: Strengthen the efficiency and effectiveness of the agricultural and knowledge information system (AKIS),** build capacity at institutional level based on user needs and participatory planning; enhance the effectiveness of the agricultural knowledge and innovation system (AKIS) through improved R&D (including opportunities for use of digital technologies). Priority interventions include: establishing agricultural data systems and statistics and enhancing research; establishing and organizing a Farmers' Registry; promote adoption of ICT within MoA, promoting preparedness to deal with crises and disasters; developing research and networking with LARI-LEB smart app and extension services with the universities; establishing new stations and labs for LARI and connecting them with the extension centres.

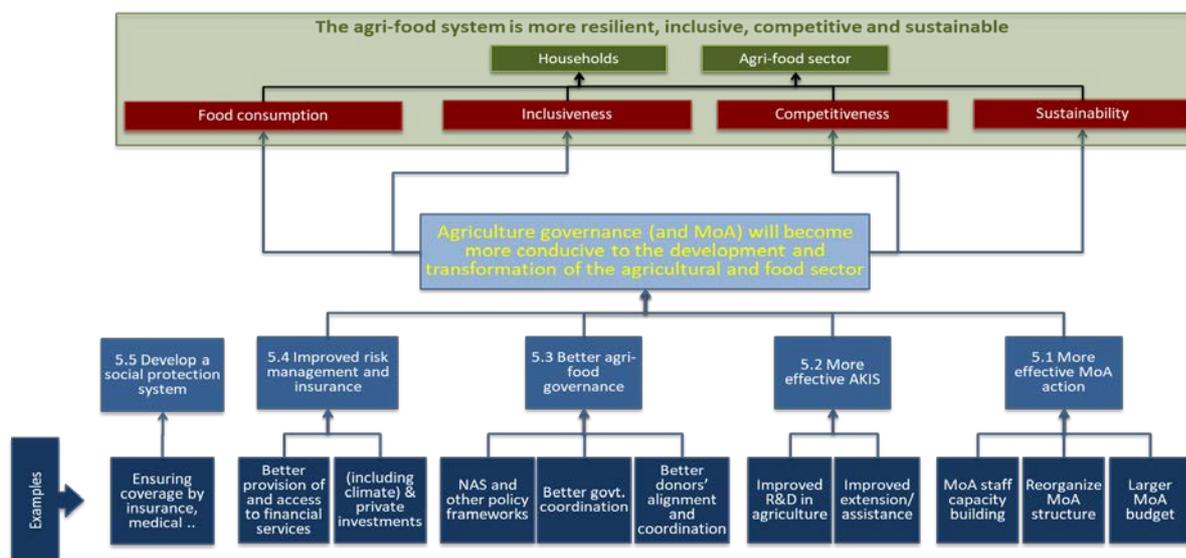
**Programme 5.3: Enhance sectoral governance to maximize public and private development financing and encourage agricultural investment** (including public budget to agriculture). Priority interventions include: developing policy frameworks and assist the policy reform process; overcome the governance fragmentation in the agrifood sector through more effective inter-ministerial coordination mechanisms, coordination mechanisms with donors, etc. Such mechanisms would enhance donor coordination and alignment and play an advocacy role for investment in the agrifood sector, enhance policy dialogue among stakeholders, and improve agrifood data and statistics, stimulate collaborations with the agrifood industry and financial institutions to ensure provision of and access to financial services adapted to the agrifood sector. Interventions under this pillar will also include the development of a platform to attract funding in cooperation with associations, funding parties and donors (directly between funding parties, farmers and producers...).

**Programme 5.4: Create enabling conditions for the development of agricultural insurance also to mitigate the impacts of natural disasters.** This programme serves the need for improved risk management of all agriculture and agrifood stakeholders. The specific aim comprise (a) improving risk management capacity providing insurance schemes for farmers and facilitating access to insurance thus improving private investments in agriculture along the value chains; (b) increase credit worthiness of agribusinesses to increase access to finance (e.g., under loan guarantee provided by commercials banks); and (c) facilitate adaptation to climate change through the adoption of innovative technical solutions, improved access to climate finance and insurance, better extension/technical assistance and strengthened early-warning systems.

**Programme 5.5: Develop a social protection system for vulnerable farmers, farm workers, producers and fishers.** In particular, interventions will aim at ensuring the coverage of all concerned actors by the Social Insurance system, including medical

insurance, in addition to ensuring the coverage of eligible farmers by the National Poverty Targeting Programme (NPTP); and fostering combatting child labour in agriculture.

Figure 10. ToC of Pillar 5



## 6. Elements of the NAS Governance

### 6.1 The issue at stake

In order to effectively enable NAS interventions, the development of a comprehensive national approach is required. This should aim to eliminate the current incoherence between the macro policies and sector policies as well as across sector policies, ensure a clear national approach to agrifood sector development, strengthen institutional structure and improve the management of the sector.

This new approach should be based on an integrated system of interventions targeting agrifood production, agrifood trade, consumer protection, social protection, environmental sustainability, adaptation and mitigation to climate change, rural development. These interventions should aim at supporting farmers – especially the smallholders and vulnerable groups such as the youth and women – providing them with supporting services and funds with special focus on rural communities.

In order to ensure a better governance of the agrifood sector and effectively enable NAS interventions, three important issues deserve high priority, namely:

- a) clarifying the role of other Ministries identifying their specific interventions, in support of NAS implementation;
- b) identifying and implementing more effective and efficient mechanisms of coordination within the agrifood sector;
- c) filling the gaps in terms of human and financial resources within the administration.

Specifically, the first two options do not require financial disbursement and could be implemented even in a context of limited fiscal space. However, processes of legal reform are frequently controversial and highly vulnerable to political or institutional changes.

Therefore, a strong political will and support by all involved stakeholders are needed to lead this process and achieve the intended institutional changes.

## 6.2 Implementation arrangements

In order to pursue the NAS objectives, essential actions need to be taken both within and outside the MoA. Internally, this calls for significant investments in developing human capacities (more and better trained staff) in key areas (planning, management, statistics, information and communication) and streamlining responsibilities deriving from the NAS mandate (and possibly changing the internal structure of MoA). Externally, engagement in policy dialogue with stakeholders having widely recognized political visibility and a mandate in the national context (e.g., international organizations, civil society organizations...) is key.

Furthermore, **the creation of an effective coordination body is required.** In fact, the NAS is a strategy that, given the current Lebanese institutional setting, extends beyond the mandate of the sole Ministry of Agriculture. Its implementation requires the strong involvement of a large number of Ministries and other public institutions. Hence, identifying effective coordination mechanisms is a key issue for successfully achieving NAS objectives.

In principle, several mechanisms for coordination exist within the agrifood sector (detailed in section 0).

However, there is clearly the need for an organism within the Lebanese administration to support MoA in planning and supervising NAS implementation and streamlining, coordinating public investments, stimulating related private investments and Public-Private Partnerships (PPPs), coordinating with other key stakeholders and advocating other institutions to plan and implement interventions.

A good option would be to:

- re-activate the Higher Council for Agriculture, originally established in 1954 but dropped later on, to provide advice to the Minister of Agriculture, prepare action plans and their budgets and create ad hoc sub-committees. In the new institutional architecture,<sup>52</sup> it will be a multi-stakeholders counselling body, including notable private sector, academia and civil society representatives for key selected investment areas (e.g., irrigation); and
- establish a Higher Inter-ministerial Committee presided by the Minister of Agriculture and involving other concerned ministries, which has the power to make policy decisions on agrifood matters.

In this framework, the NAS governance could be envisaged as follows:

- a) the **Ministry of Agriculture** will: (i) be responsible for initiating and convening inter-institutional coordination and policy dialogue on the different subjects to be addressed by the NAS, (ii) play the technical role of monitoring NAS interventions, and (iii) possibly producing the first technical analyses for higher-level validations;
- b) the **Higher Council for Agriculture** is the body where: (i) private sector, NGOs, donors, and other stakeholders coordinate with the concerned ministries and other public institutions (ii) evaluation of NAS interventions are carried out, and (iii)

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<sup>52</sup> In the original Decree it was presided by the Minister of Agriculture and included members representing the Chambers of commerce, industry and agriculture, bodies and institutions involved in agriculture and farmers from different agricultural areas of Lebanon.

proposals and other services (e.g. dossier preparation) to the higher political decision-making level are formulated; and

- c) the **Higher Inter-ministerial Committee** will: (i) be responsible for coordinating NAS interventions at inter-ministerial level, (ii) oversee the NAS implementation and achievement of results, and (iii) advocate for policy change as well as for resource mobilization to the higher political level deliberative body (PMO and the Council of Ministers).

### 6.3 Communication

As part of its M&E functions (see Section 7), the MoA is responsible for collecting information and coordinating the communication for advocacy on food and nutrition security and sustainable agriculture. A reporting exercise on the NAS progress will be carried out on annual basis, as opportunity to take stock of progress, communicate results and foster evidence based dialogue around sector's priorities, achievements and challenges. Even though the reporting and communication is on annual basis, the analysis of the results is a continuous exercise that will be carried out by MoA.

In line with the inclusiveness, accountability and transparency principles, relevant stakeholders (public and private), civil society organization and other institutions are invited to the reporting and communication meeting and/or policy dialogue events in order to maximize advocacy impact and foster alignment. These meetings represent opportunities for improvements in the decision making process of MoA and to advocate for financial contributions when required, and they seek to strengthen the existing partnership between MoA and other public institutions and private sector or other stakeholders of the NAS.

The monitoring and evaluation mechanism will include all required functions related to data production and availability on the NAS results framework (i.e., collection, verification, assessment, comment, review, analysis, and track of the RF indicators), as well as communication. This has a double advantage for the stakeholders, first as reviewers of the monitoring report, they ensure accountability and engagement to resource mobilization and, second as a visibility tool, by aligning their agenda with the Government vision under the NAS, and feeding data into the RF.

In addition, the M&E mechanism will include a dashboard, to keep track all of the strategy's results, that helps the reporting and communication functions. This presents a form of a transparency proof that fosters collaboration between MoA and other public institutions, private sector, NGO's, IFIs, donors, farmers and consumers as well.

The reporting and communication will build on three main sources:

- a) Information and data from the NAS 2020-2025 results framework, obtained from existing statistics from relevant ministries or institutions (e.g., Ministry of Agriculture, CAS) as well as M&E findings from donors, annual reports, and data from the ongoing or future projects and programs.
- b) Technical and analytical findings from relevant studies and surveys (by local and international players; web-based, phone-based or on the ground surveys), on different NAS relevant topics are discussed in an open multi-stakeholders dialogue, addressed to public institutions and their regional offices/directorates, private sector representatives, financial institutions, donors, research.

- c) Any other additional element that can facilitate the dialogue around relevant topics that can ultimately facilitate the decision-making process for resource mobilization or agriculture related investments.

## 6.4 Advocacy and resource mobilization

Currently, the NAS 2020-2025 is serving as an additional instrument to promote national priorities in the agriculture sector. Building on strategic partnerships, and fostering development partners and financial institutions' alignment and harmonization towards the set national priorities and objectives, thus maximizing their impact within a context of limited resources. The evidence generated by the M&E system will allow to generate and keep a momentum, but the NAS will need to integrate an active resource mobilization strategy, reaching out international sources (ODA, soft-loans from IFIs), climate finance funds, public financial and quasi-public, and private banking sector.

Including via the NAS monitoring and communication functions (see section 7), this will be done through:

- (a) continuing the assessment of available and potential financing sources, from government and other sources (development partners);
- (b) promoting public-private dialogues to scale up public investment, and encourage private lending (including the possible establishment of an agro-food Investment Platform, match-making demand and offer of financial services); and
- (c) promoting alignment and harmonization via inter institutional dialogue to enhance the effectiveness of development assistance and facilitating a nationally owned process and improve delivery of development support.

## 7. NAS 2020-2025 Implementation, Monitoring, Evaluation, and Reporting

### 7.1 Implementation: Budget Allocation and Flagship Programmes

#### 7.1.1 Budget of NAS programmes

The NAS is a results oriented document provided with a results oriented budget, arranged by Pillars and Programmes. This section presents a preliminary estimate of the budget required to achieve the NAS' objectives.

The NAS 2020-2025 budget identified the total resources requirements for its implementation to around 710.5 million USD with an estimated Government contribution of around 14 percent, matched by an equivalent amount from ongoing and projected pipeline of donors, and a 73 percent financial gap to be covered by systematic resource mobilization:

Table 1. Preliminary NAS results oriented budget

NAS	TOTAL BUDGET (in million USD)	710.5
Pillar 1	Restoring the livelihoods and productive capacities of farmers and producers	75.0
Pillar 2	Increasing agricultural production and productivity	355.0
Pillar 3	Enhancing efficiency and competitiveness of agrifood value chains	132.0
Pillar 4	Improving climate change adaptation and sustainable management of agrifoodsystems and NR	105.0
Pillar 5	Strengthening the enabling institutional environment	43.5

The NAS budget was developed based on the Ministry of Agriculture indicative estimates and the preliminary results from an ongoing mapping of development projects in the agrifood sector.<sup>53</sup>

Annex VI- I- Preliminary NAS results oriented budget, presents the tentative budget allocation by Pillars, Programmes and an indicative allocation by year, complemented by the charts below. The charts below (Figures 11, 12 and 13) present a snapshot of the allocation of budget by NAS Pillars.

Figure 11. NAS budget allocation per Pillar by source of financing

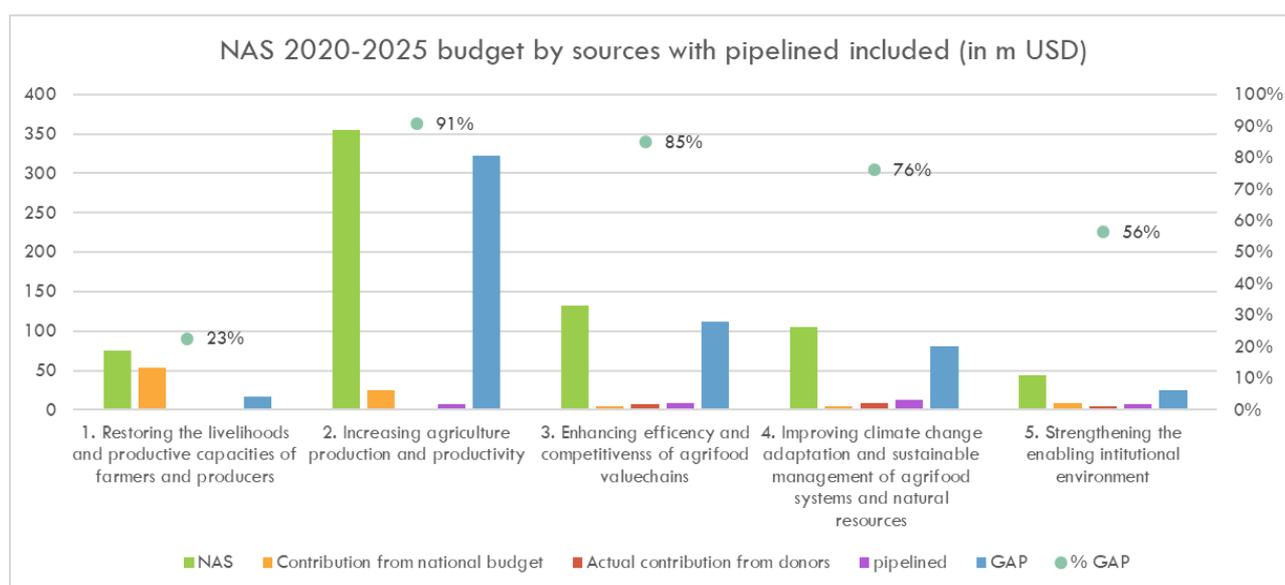
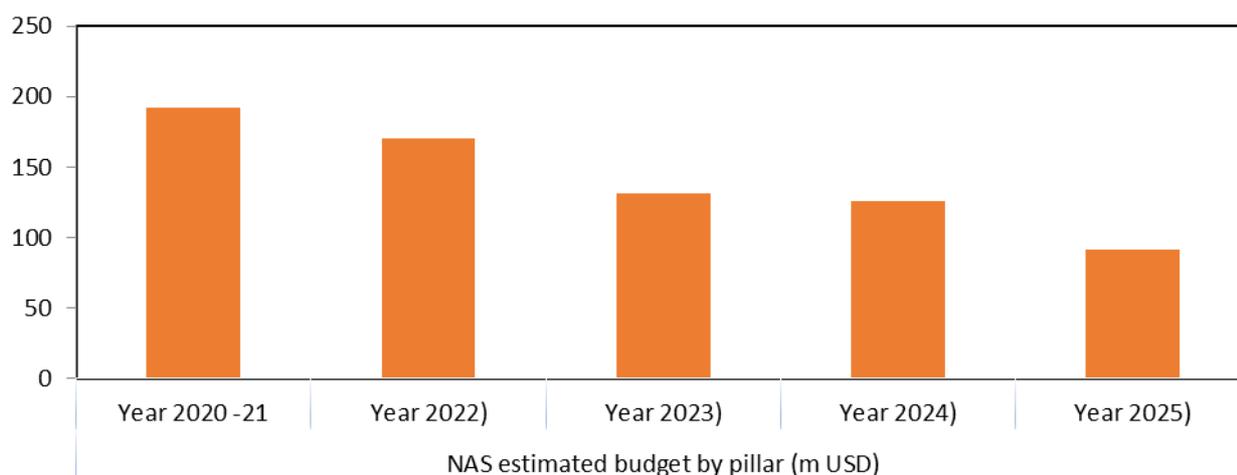
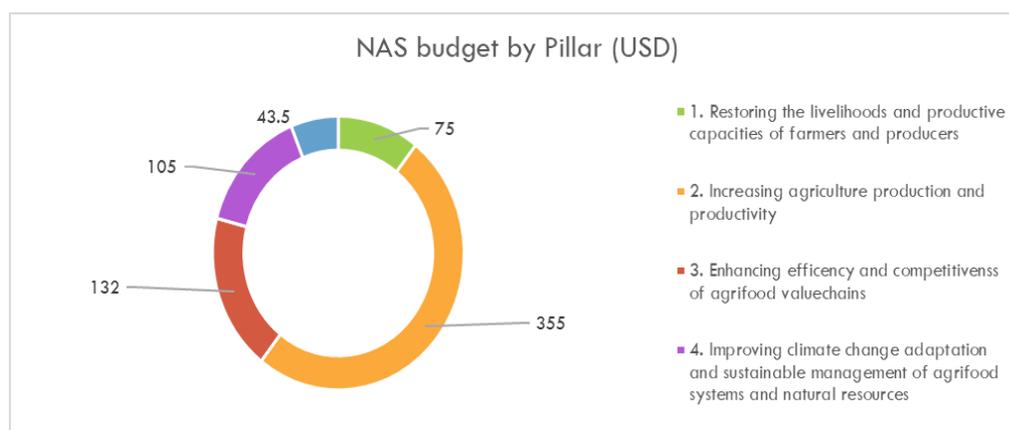


Figure 12. NAS estimated annual budget



<sup>53</sup> As of June 2020, respondents to the survey comprise: 4 development agencies, 1 embassy, 1 multilateral funded project, 11 NGOs, 2 public institutions, 7 research and development institutions, and 5 UN organizations (shortlist: EU, USAID, Belgium, the Netherlands, Germany, Italy, Korean Republic, UK, Norway, Switzerland, Sweden, WB, KFW, IFAD, AFD, GEF, CGIAR, Adaptation Fund, ESCWA, UNICEF, WFP, FAO, IAEA, AFESD (Arab fund for economic and social development), AUB (American university in Beirut), JL, GAC, CCFD-Terre solidaire, CEDRAR, CEPF-Society for the protection in Lebanon).

Figure 13. NAS budget by Pillar



Main findings of the donors mapping indicate that for the NAS life cycle (2020-2025), the development partners in the agrifood sector have allocated about 93.3m USD (about half of it among ongoing projects and the rest as future projects, currently in pipeline waiting for inception). The Main findings of the mapping are presented in Annex VI- II (Preliminary findings of Donors Mapping in the Agrifood Sector).

### 7.1.2 Flagship programmes

The policy space for NAS implementation, at least in the short run, is by the major constraints defining the country's operational conditions. The two most severe constraints are represented by:

- a) the limited fiscal space as a result of the macroeconomic structural problems exacerbated by the effects of the twin crises (cf. sections 3.1. and 3.3), and
- b) the disruption of governance at various levels, which is again partly due to a dysfunctional institutional setting exacerbated by the effects of the twin crises (cf. section 6.1).

This makes the policy-maker's room of mobility extremely limited and requires a good dose of realism in identifying a number of flagship programmes to be implemented in the short run.

On the other hand, it should be acknowledged that the most important asset for NAS implementation is the entrepreneurial attitude of Lebanese farmers and agribusiness actors that makes them quick-responding to incentives. In other words, removing some of the constraints limiting the actors' operational environment would guarantee a prompt supply response.

Therefore, the proposed criteria for prioritizing flagship programmes, i.e. programmes to be implemented first, are the following:

- **feasibility:** considering that the most severe constraint in the short run is the public budget constraint, programmes that are low cost – or whose budget can be mobilized outside the public budget (e.g. using donors' financial resources) – should be prioritized;

- **impact:** the NAS programmes have different expected impact breath. Interventions having highest/largest expected impact should be prioritized to maximize the potential effect on the agrifood sector and more broadly on Lebanese society and economy;
- **constraint-removal:** there are some factors that crucially hinder the performance of the agrifood sector. Addressing these issues will free the socio-economic potential of the sector and flagship programmes need to be identified considering this;
- **inclusiveness:** farmers and agribusiness actors in Lebanon are highly heterogeneous. Acknowledging that some groups are more vulnerable than others, especially during and in the aftermath of the twin crises is crucial not only for reducing the risk of poverty and food insecurity, but also to keep alive the actors of change in the agrifood sector when the crises will be over.

According to these criteria, a first selection of flagship programmes can be clustered as follows (Table 2)

Table 2. Proposed Flagship Programmes

Flagship interventions	Criteria (+++ very high; ++ high; + medium)			
	Feasibility	Impact	Constraint-removal	Inclusiveness
<b>Inclusive access to inputs and credit for agricultural recovery</b> <i>Joining priorities under Programme 1.1 (access to inputs) and Programme 1.2 (access to credit)</i>	++	+++	+++	++
<b>Enhancing governance of the agriculture sector</b> <i>Prioritizing Programme 5.3 within the Pillar 5</i>	+++	+++	+++	++
<b>Agrifood production and export via investing in smart technologies, markets and efficient organizations</b> <i>Merging priorities of Programme 3.5. (horizontal and vertical value chain networking – such as coops, sub-sector associations) and Programme 3.2 (support to value chain modernization) coupled with enhanced access to finance.</i>	++	++	++	++
<b>Improved and modernized digital services to farmers</b> <i>Joining Programme 5.1 (effectiveness of MoA services, and Programme 5.2 (AKIS efficiency/effectiveness)</i>	+	++	++	+

## 7.2 NAS Results Framework

The result framework that accompanies the NAS 2020-2025, serves as a guide for the Government, stakeholders and development partners to track the progress towards the achievement of the agreed targets. The monitoring of the NAS 2020-2025 performance is done through a set of performance indicators selected amongst national and sectoral statistics also related to SDG2 (see detailed RF in Annex V).

**The NAS results architecture.** The NAS 2020-2025 results framework follows a two-layered results chain articulated into five pillars (see Figure 1, in Chapter 2). Under each

pillar, programmes and their priority interventions are identified along with respective expected results indicators. Impact and outcomes are referred to as *results*. Related intermediate outcomes and outputs and interventions will be defined and detailed in the envisaged NAS Action Plan.

Selected indicators are defined and measured for each level of results, with a baseline and a 2025 target value reflecting the way to measure the progress of the NAS 2020-2025, the frequency by which the indicators would be reported, the key institution and the means of verification.

**NAS 2020-2025 impact.** The Vision of the NAS 2020-2025 is to make the agrifood system a main contributor to the achievement of food security and a key driver of resilience and transformation of the Lebanese economy into a productive economy. It defines the impact as achieving a more resilient, inclusive, competitive and sustainable agrifood system (section 4). The impact level result of the NAS is composed of four dimensions, related to food consumption, inclusiveness, competitiveness and sustainability.

**The NAS key performance indicators (KPI)** are a measurement tool that will assist the MoA and all relevant stakeholders in the agriculture sector to define and measure progress towards the defined goals and objectives, and within the context of NAS:

- **Consumption** of safe and nutritious food is ensured and improved
- **Inclusiveness** of the agrifood sector is enhanced
- **Competitiveness** of the agrifood sector is increased
- **Sustainability** of natural resources management is maintained

**NAS 2020-25 outcomes.** The results at outcome level are defined for each pillar, and are measured by selected indicators to be monitored by MoA and other relevant national institutions.<sup>54</sup> Intermediate outcomes will be detailed in the NAS Action Plan.

### 7.3 NAS Monitoring, evaluation and learning functions

The same principles guiding the RF are used to establish the M&E and learning system for the NAS 2020-2025, with specific emphasis on:

- (i) **accountability** of the involved stakeholders/institutions, through the mechanisms of knowledge sharing and communication as emphasized in the governance section,
- (ii) **participation and inclusiveness** of stakeholders at all levels, through regular meetings for planning, monitoring and reporting and related thematic discussions,
- (iii) **consistency** with the existing M&E national systems, including by preferring SMART indicators<sup>55</sup> already monitored by the relevant institutions (within the mandates of different institutions);

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<sup>54</sup> The full list of relevant source of information is provided in the Annexed Results Framework. The main ones include: MoA, MoE, CAS, IDAL, LARI, GP, CNRS, the DRM unit, PMO, PMO office for SDGs, Lebanese customs...

<sup>55</sup> **SMART** is an acronym usually utilized in results-based management to indicate the five feature of the indicators: **Specific** - related to the results the interventions intend to achieve; **Measurable** - stated in quantifiable terms; **Achievable** - realistic in what is to be achieved; **Relevant** - useful for management information purposes; **Time-bound** - stated with target dates.

- (iv) **transparency** during the strategy implementation and its M&E reporting, including by using georeferencing tools and remote sensing to complement the source of information.

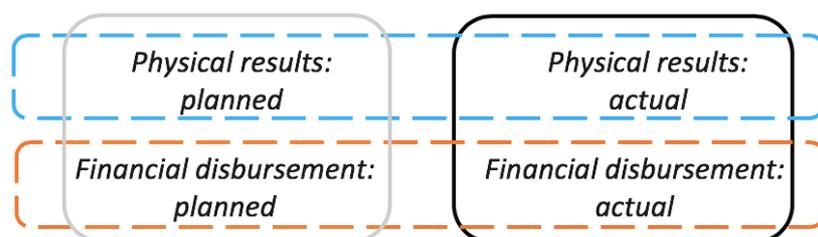
The M&E system of the NAS aims at:

- a. **Consistently collecting of relevant information** which will provide the basis for lessons learning, priority reviewing, and ultimately, evaluation
- b. **Tracking implementation progress and regularly informing stakeholders**, by thus guiding the implementation of the NAS 2020-2025 and optimizing resource allocation and mobilization; and
- c. **Providing the basis for advocacy, knowledge dissemination and sharing**, through regular reporting and publications.

**Monitoring physical and financial progress.** With its two dimensions (physical and financial) the M&E of the NAS aims to routinely collect and analyse data to establish on annual basis, the physical and financial progress towards the achievement of the intended results. Thus, the M&E system will allow to keep track of the current state of results through resource mobilization and implementation, compared to the planned one. It will also keep track of the actual physical results and their matching allocated or disbursed resources (Figure 14).

The set of indicators shown on the NAS results framework are monitoring the physical progress, while the mapping of government and development partners' interventions relevant to the NAS 2020-2025 represents the financial dimension.

Figure 14. Comparing the physical/financial dimensions, actual/planned targets



**Operationalization of the M&E system.** The MoA is the Government lead institution on the agriculture sector, giving it the *chef d'orchestre* position of managing the NAS 2020-2025 M&E and learning system. The MoA will coordinate the M&E system,<sup>56</sup> collecting, reviewing and analysing information on both physical and financial dimensions. It is crucial that the relevant NAS stakeholders are conversant and able to contribute throughout the M&E process according to the NAS governance mechanisms (see Governance section 6).

A specific monitoring and reporting plan, including the outline of the Monitoring Report will be developed by the MoA within the first six months of NAS implementation. Such plan will include specific actions, responsibilities and a time frame for reporting and communication. The plan will also help fill the existing gap in baseline information and streamline the planning for recurrent M&E activities.

<sup>56</sup> MoA will set internally the responsibility.

## 8. Risks and mitigation measures

The current economic situation in Lebanon is highly affected by the compounded effects of the economic and financial crisis with the covid-19 related impact, adding to a very vulnerable geopolitical situation due to the bordering Syrian conflict. The country is highly vulnerable to regional and national downturns and resilience of the population in Lebanon is at stake. However, the importance given to the agrifood sector by the Government in the recent crises responses is an asset.

The section below summarizes the major risks related to the agrifood sector, and the potential mitigating factors that an effective NAS can deploy.

<b>Risk factor 1. Regional and national political and economic stability worsens</b>		
Category	Probability	Impact on the NAS implementation
Socio-economic	Medium	High
Risk elements		Mitigation measure
<p>The country is currently passing an acute crisis. Thousands of jobs have been lost as compounded effect of the financial and covid-19 crises and the purchasing power has been eroded. Poverty has been increasing and there is evidence of an increased difficulty of accessing the basic needs, and food and nutrition are at stake. Development priorities are critical but if the effects of the crises increase, public resources (from Government as well as development partners) may have to be redirected to humanitarian support (including unprecedented need to support access to food).</p>		<p>The NAS was developed in a period where the crises had already started to impact the population and the first effects were starting to be visible. The developmental priorities take into account the need to be flexible and provide services tailored to the needs of the various segments of the stakeholders. The presence of a 'recovery' pillar among the five is a reflection of that consideration. The implementation of the NAS, as a living document, will need to be flexible to adjust to the changing needs, and monitoring and evidence generation will be critical to this end.</p>

<b>Risk factor 2. Institutional obstacles to embrace an inclusive governance of the agrifood sector</b>		
Category	Probability	Impact on the NAS implementation
Institutional	Medium	Medium
Risk elements		Mitigation measure
<p>Institutional barriers exist in Lebanon that obstacle the collaboration between ministries and between institutions of different nature. The agrifood sector is not an exception and the fragmentation of responsibilities risk to generate an <i>impasse</i> in the modernization of the sector. While the agrifood sector is recognized as a priority, the lack of a legitimized championship in the government able to bridge between ministries and institutions risk to vanish the potential of transformation and contribution to the economic development.</p>		<p>The agreement on a consistent strategy, inclusive in the definition of its priority, and endowed with a proposal for a transparent and effective governance and monitoring mechanism is an important occasion not only to overcoming institutional barriers, but also to attract additional resources from development partners. Monitoring the physical and financial progress of the NAS implementation will play not only the role of providing evidence for better decision making, but also the opportunity to show solid commitment. To this end, it is critical for MoA to take a proactive role in the sector.</p>

<b>Risk factor 3. Reduction of financial capacity of the Government to support the NAS</b>		
Category	Probability	Impact on the NAS implementation
Institutional	Medium	Medium
Risk elements		Mitigation measure
<p>The Government is facing unprecedented challenges under budget point of view. The already limited resources for development spending may be further reduced, creating an additional difficulty in the potential to support recovery and transformation of the sector.</p>		<p>The Government has however recognized agrifood sector as an important driver of economic recovery. The NAS is endowed with a mechanism for resource mobilization, which includes evidence based dialogue and advocacy, within the public institutions and with external stakeholders. The monitoring will play a substantial role in showing results and areas of financial deficit. The participatory and inclusive approach of the NAS will ensure that stakeholders priorities will be taken into account throughout the NAS implementation.</p>

<b>Risk factor 4. Climate change (slow and fast onset) further threatens the sector</b>		
Category	Probability	Impact on the NAS implementation
Technical / environmental	Medium	Medium
Risk elements		Mitigation measure
<p>The agriculture sector in Lebanon is facing challenges both on the slow onset of climate change (increased average temperatures and reduced rainfall) and fast onset (floods, storms, cold waves and heat waves...) affecting plant and animal production and natural resources. The cost of these effects is important and preventive measures, as well as disaster preparedness are increasingly important. Lebanese agriculture will likely be exposed to higher production costs for access to fuel, fertilizers, irrigation, and other actions required to adapt to such challenges.</p>		<p>Sustainability of natural resources use is a critical priority of the NAS. The NAS mainstreams climate change adaptation in its approach, not only in the dedicated interventions in Pillar 4, but also as a preparedness (data generation, remote sensing...) in Pillar 5. The availability of climate finance would be an opportunity to tackle and implement agricultural activities that respond to climate change adaptation. Moreover, the innovations under the technological point of view (pillar 2 and 3) and research (Pillar 5) are also addressing the effects of climate change.</p>

## 9. Next steps

### 9.1 NAS and Action Plan Design Process

Once the strategy is endorsed, the MoA will act to ensure keeping the momentum around the NAS priorities. As highlighted in various sections of the strategy (from lessons learned, to governance), setting the ground for open, transparent and evidence based dialogue is critical.

Specific actions to keep momentum include:

1. On the very short term, MoA will present the NAS to the wider audience, to further assess priorities for implementation – also in view of the preparation of a results oriented Action Plan.
2. Define a Monitoring and Evaluation plan, identifying roles and responsibilities of the actors (including other public administrations and institutions, development partners, private sector and civil society organizations).
3. Develop an Action Plan. During the design of the action plan, it will be possible to streamline and prioritize the Programmes of the NAS and develop bankable priority programmes (prioritization criteria summarized in Annex IV).
4. Define a strategy for resource mobilization, engaging development partners, financial institutions and private sector and their representatives.

**Keeping momentum and ensuring relevance.** In order to ensure leadership on the sector, MoA will maintain the proactive attitude paved during the design of the NAS, and reach out stakeholders in the next steps (Action Plan, Resource Mobilization, M&E and Reporting, and Advocacy).

# ANNEXES

## I. Participatory NAS design process and priority identification

**Internal process within the MoA:** In May 2020, the Minister of Agriculture launched the work of the formed adhoc Steering Committee under his presidency; comprised of DGs of Agriculture, Cooperatives, and IRAL; Directors and Head of Services and Departments of Green Plan and MoA with the participation of FAO Representation in Lebanon. In addition, a Core Team - senior advisor and 2 senior staff of the SC were assigned the responsibility of NAS formulation in collaboration with a team of FAO's international and national experts. Moreover, the Core Team worked closely with MoA's affiliated institutions and technical Services to reflect MoA's priority programmes and projects<sup>57</sup>.

**Setting the scene.** With the ambition of a game changer for the agrifood sector, the design of the NAS started in September 2019, in line with an increased attention in-country on the agrifood sector as a driver for economic transformation, and in a timely fashion responding to the need to update the Ministry of Agriculture Strategy 2015-2019. Following such momentum, the Ministry of Agriculture, jointly with other institutions organized a series of open and informed multiple stakeholders discussions to pave the road for an inclusive sector strategy.

Key discussions took place as follows:

- i) 24 September 2019: Lebanon Agriculture Development Conference 2019, organized by the Ministry of Agriculture, the Economic Office at the Council of Ministers, the Union of Agricultural Syndicates and the Federation of Chambers of Commerce, Industry and Agriculture in Lebanon, in cooperation with Al-Iktissad Wal-Aamal, at the Phoenicia Hotel.
- ii) 4 October 2019: "Transforming Lebanon's Agriculture: Challenges and opportunities", held on October 4<sup>th</sup>, hosted by the Prime Minister Office and MoA, with support from the FAO and the World Bank. The workshop integrated five sessions facilitated by representatives from MoA, MoET, and CNRS, and covered presentations from: academia and research, private and public sector innovators and agri-food companies, and international organizations.

In addition; two technical workshops were planned and organized with support from ESCWA on i) "Context-based technologies to enhance the efficiency and resilience of agri-food Systems in Lebanon"; and ii) "Food security monitoring and analysis at national level". Those two workshops held in August and October 2019 provided policy recommendations that informed the NAS.

All the participatory workshops carried out during Summer and Fall 2019 allowed to depict challenges and opportunities, and generated a preliminary consensus around the main priorities in the process of the agrifood sector transformation. The areas considered as initial priorities included the following:

- (i) Increase the competitiveness of the agricultural sector;
- (ii) Promote natural resource management;
- (iii) Improve efficiency of support institutions in service delivery to farmers and agri-food actors; and
- (iv) Enhance women and youth's inclusion in the development of the agri-food sector.

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<sup>57</sup> 80 projects formulated by MoA affiliated institutions and technical services that constituted an upstream contribution to the NAS main pillars and programmes

**Embedding focus on recovery.** The subsequent financial and economic crisis started in Autumn 2019 led to a review of the priorities, also supported by additional evidence of the impact of the crisis on the sector, and complementary data following the compounded effect of the COVID-19 related crisis (see NAS section 3.3).

More specifically, the priorities were fine-tuned through:

- i) The evidence summarized in the ASR, which encompassed among other topics, lessons learned from previous agriculture strategy, and recent reports describing the impact of the dual economic and COVID-19 crisis on the agriculture sector.
- ii) The logic elaborated and agreed upon within MoA for the theory of change of the NAS; Root-cause analysis identified key challenges for the agriculture sector. Those challenges fed the process of the development of the theory of change, which defined the five pillars of intervention.
- iii) MoA internal consultations, carried out to define the programmes and priorities under each pillar, the priorities emerged to support the sector in responding to the COVID-19 related emergency.
- iv) The demand from stakeholders which encompassed and finally the consultative meetings organized by the MoA with national stakeholders.

### **Validation of priorities.**

After the preparatory internal consultation process within the MoA, the Minister of Agriculture called three consultative meetings in June 2020, to discuss the agriculture strategy framework. The three consultations included:

- i) **Public institutions.** The consultation involved line ministries, including Economy and Trade (MoET), Industry (MoI), Energy and Water (MoEW), Public Works and Transport (MoPWT), Interior and Municipalities (MoIM), Foreign Affairs (MoFA), etc.), as well as the Parliament agriculture committee, the Investment Development Authority of Lebanon (IDAL).
- ii) **Research and academia,** involving Universities and research institutes from both public and private sector. Key participants included the Lebanese University (LU), the American University of Beirut (AUB), University Saint Joseph (USJ), University Saint Esprit in Kaslik (USEK), Notre Dame University (NDU), University of Balamand (UOB), Islamic University (IU), National Council for Scientific Research (CNRS), International Centre for Agricultural Research in the Dry Areas (ICARDA), Berytech, Lebanese Agriculture Research Institute (LARI), *Centre de Recherche et d'Etudes Agricole Libanais* (CREAL).
- iii) **Private sector and industry.** A critical consultation involving farmers and member based organizations including associations and cooperatives, agrifood industry players and traders, syndicates, the order of engineers, and the representative of chambers of commerce and industry.

## II. Opportunities for Agrifood Value chain or development of selected Value Chains

[Source: Agriculture Sector Review, FAO, 2020]

### *Apple*

To create a more competitive apple value chain, four main opportunities have been identified (USAID, 2014). First, benefit from the domestic and regional demands by increasing production of improved quality apples of the right varieties. This increase in production should be based on improvements in the production and post-harvest systems. Second, respond to the growing regional markets by facilitating new contacts and linkages with regional food buyers (through study tours, trade show participation and buyer visits) and supporting Lebanese exporters to develop the analytical capacity to react to export market opportunities. Third, enhance investments in new orchards to lower production costs by improving fruit tree production and plant protection practices to raise margins at the farm-level. Lastly, support, develop, and improve processing operations to diversify sales channels for farmers and rural processors (e.g. incentivizing grading and sorting and a supply of low-priced apples), hence minimizing the risk to producers of having unsold low quality apples, and risk to processors of not securing a consistent supply to low price apples for processing.

### *Cherry*

There are two major opportunities for the development of a more competitive cherry value chain (USAID, 2014). On one hand, the potential for increasing market share in both domestic and export markets exists: cherries offer great potential for increasing exports to non-traditional regional markets, with exporters suggesting that Lebanese prices are competitive in Europe and Russia; there is also a possible opportunity to capture Syrian market share in the MENA region (especially GCC) and Iranian market share in the UAE in the short to medium term; finally, domestically, there is an opportunity to develop small-scale processing to outgrowth demand. On the other hand, Lebanese cherry production practices are rudimentary, and application of modern practices will increase yields and product quality, as well as extend the harvest season. If production is better-organized cherry growers will have the opportunity to sell more cherries at higher prices for a longer time.

### *Citrus*

Opportunities to develop and upgrade the Lebanese citrus value chain include improving market intelligence on key export markets (in terms of seasonality and pricing), upgrading production practices, investing in improved post-harvest practices, organizing citrus producers and making key improvements in the regulatory environment, and supporting expanded end markets for lower-quality oranges such as juice processing (USAID, 2014).

### *Grapes*

Major opportunities for the grape value chain include improving market linkages and technical practices that will increase grape exports to high value GCC and EU markets (Maddock, 2019; USAID, 2014). New export markets for high-quality grapes are emerging in the GCC and in Europe. The first is the expansion of table grape exports to Europe, with the necessary documentation on farming practices and pesticide residues within maximum limits required by European countries. The second is the expansion of sales of high-quality grapes to the Arab Gulf countries (USAID, 2014).

To improve the grape value chain, Lebanon should enhance the participation of small and medium scale farmers in export markets by vertically integrating the value chain and providing access to finance and technical support for new production methods. In terms of vertical integration in the domestic value chain, for example, under the guidance of a large farmer or exporter and/or better organized within specialized cooperatives and with use of modern pre- and postharvest methods, small and medium scale farmers may increase their participation in export market channels.

### *Olive Oil*

There are two main opportunities to improve the olive oil value chain in Lebanon. The first opportunity is to export the highest quality extra virgin oil to specialty markets, making the most of improved production practices and new modern mills. Private sector investments in milling and storage should lead to an increase in volumes of high-quality extra virgin olive oil (which has a potential export market). There is also an opportunity to profit from donor processing and storage investments in the cooperative sector that may be underutilized. The second opportunity relates to increase the income of small and medium scale farmers through improving direct sales of olive oil for household consumption.

### *Potato*

An opportunity for development of the potato value chain is to invest in post-harvest facilities and quality systems to allow farmers to release product into the market when prices are right. In addition, facilities that included equipment for proper cleaning and packing would open export market opportunities and potentially improve pricing. Another opportunity for development is improving access to finance to facilitate access to higher quality inputs. For farmers, for example, it may help to increase productivity and, also allow them to invest in modern irrigation systems. For processors, similarly, it would allow them to compete with higher value-added products. Furthermore, promoting cooperation and building the capacity of existing producer organizations is important to develop a more sustainable value chain (Farole & Konishi, 2017)<sup>58</sup>.

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<sup>58</sup> Farole, T & Konishi, Y. (2017). "Jobs in North Lebanon: Assessment of the Potato Value Chain." World Bank, Washington, DC. Retrieved from: <http://documents.worldbank.org/curated/en/425381511946041218/pdf/28-11-2017-9-53-30-LBNVCPotatofinalSK.pdf>

### III. Summary of institutions serving the food security and sustainable agriculture

Summary list of institutions with a mandate relevant to the implementation of the NAS:

- **Ministry of Economy and Trade (MoET)**, which is responsible for providing subsidies for wheat (and previously sugar beet) to farmers, trade agreements, geographical indication of agriculture and food products, monitoring of silos and mills, retail price controls of selected products (e.g. bread), and consumer protection. Furthermore, the MoET oversees the four Chambers of commerce, industry and agriculture (CCIA) established in Lebanon;
- **Ministry of Industry (MoI)**, whose mandate covers all industries including food industries, issuing licenses and providing the legal framework to the sector. The Lebanese Standards Institution (LIBNOR) is a public institution attached to the MoI that is responsible for technical regulations and quality standards for agriculture inputs and outputs as well as for food and feed;
- **Ministry of Finance (MoF)**, that is responsible for the public budget (e.g. allocation to the agrifood sector) and for all land-related issues for both private land (e.g. land properties, tenure, inheritance) and public lands (e.g. permission of use). Two other public bodies related to the MoF are relevant for the agrifood sector: the *Regie Libanaise de Tabacs et Tombacs* manages the cultivation, manufacturing, distribution and sale of tobacco and tombac in Lebanon, and the Lebanese Customs Administration (LCA) that is responsible for tariffs and taxes on import-export;
- **Ministry of Interior and Municipalities (MoIM)**, which is responsible for territorial planning (at regional, municipal and rural level) and management of communal lands, supervises non-governmental associations including farmers' associations (but not cooperatives, that are under the MoA), and oversees the wholesale markets and slaughterhouses;
- **Ministry of Public Works and Transport (MoPWT)**, which is responsible for all transport-related issues (e.g. licensing and registration of vehicles and fisherfolksvessels, seaports, cargo, transit, airport, etc.) as well as delivering permits for the establishment of markets, industries, abattoirs and other facilities related to agriculture;
- **Ministry of Energy and Water (MoEW)**, whose mandate is to regulate the management of energy and water sector in Lebanon, including water for irrigation. The Litani River Authority (LRA) is an autonomous public institution responsible over the water resources monitoring and management of the Litani River basin, including irrigation;
- **Ministry of Environment (MoE)**, whose mandate is to ensure the protection of the environment, biodiversity and natural resources. It also acts as focal point for climate change;
- **Ministry of Labor (MoL)**, which supervises the functioning of the labor market and is responsible for agricultural workers' unions;
- **Ministry of Social Affairs (MoSA)**, which is responsible for social protection interventions for the Lebanese poor mostly through direct support to households and other related programs;
- **Ministry of Public Health (MoH)**, which is responsible for ensuring public health and, with specific reference to agriculture and food, plays a key role in food safety and nutrition, and nutrition risk assessment ;
- **Ministry of Education and Higher Education (MoEHE)**, which is responsible for the accreditation of the diplomas delivered by the agriculture technical schools, and assist the MoA in the development of vocational curricula. Some university programs are of direct relevance to the agrifood sector.
- **Ministry of Foreign Affairs and Emigrants (MoFA)**, especially in relation to its responsibility for export promotion through the diplomatic channels /Economic Counsellors, as well as in international trade agreements (jointly with MoET).

#### IV. Guiding criteria to prioritize interventions

In view of the development of an Action Plan for the operationalization of the NAS 2020-2025, the prioritization of potential investments is critical to ensure streamlining the proposals, especially in a context of limited resources.

Key criteria to guide the selection of most impactful and feasible interventions include the following:

- **Feasibility:** What are feasible interventions within 5 years timeframe (under current human resources and budget constraints)
- **Impact:** What interventions have highest expected impact to maximize potential for the agrifood system / based on territorial comparative advantages
- **Inclusiveness:** how to maximize social targeting and focus on target groups (women , youth and vulnerable farmers)
- **Effectiveness:** focusing on the entry points to address the issues, i.e. addressing the most important conduit mechanisms, at both levels:
  - (a) **Farm level:** eliminating blocking factors at production level:
    - Access to inputs
    - Working capital provision
    - Water and energy (nexus)
  - (b) **Value chain level:** favouring import substitution and/or export, linking production and post-harvest segments:
    - Market information/transparency
    - Wholesale market and post-harvest facilities and infrastructure.

## V. NAS Results Framework

Result level	Expected Results	Indicators	Baseline 2020 (or when available)	Target 2025	Responsible institution	Frequency	Source of verification
<b>Impact</b>	<b>The agrifood system is more resilient, inclusive, competitive and sustainable</b>						
	<b>I.1</b>	Percent Contribution of the agriculture and agrifood sector to GDP (disaggregated by agriculture and agrifood)	7	10	CAS	Annual	National accounts
	<b>I.2</b>	Percent of labour force in agriculture and agrifood sector (disaggregated by gender) from total labour force	6	8	CAS	Annual	HH/labor survey
	<b>I.3</b>	Employment in agrifood sector (disaggregated by gender, age)	25 percent (FAO) - 5255 (2015 Associate of Leb industrialists)	TBD	CAS	TBD	HH/ labor survey
	<b>I.4</b>	Increase in value of agricultural production (in billion USD)	1.3	1.56	MoA	Annual	Annual statistics/reports
	<b>I.5</b>	Proportion of agricultural area under production from total agriculture area	70	75	MoA	Annual	Annual statistics/reports
	<b>I.6</b>	Prevalence of undernourishment (percent) (3-year average) (disaggregated by gender) (SDG 2.1.1)	11% (2016-2018)	TBD		3 years	FAO Stat
<b>Pillar 1:</b>	<b>1. Restore the livelihoods and productive capacities of farmers and producers</b>						
	<b>Outcome :</b> By 2025, the livelihoods and productive capacity of the agriculture and agrifood sector and value chain players (including farmers, herders, fisher folks, and small and medium producers) are restored to at least the 2019 level						
	<b>O1.1</b>	Average income of farmers and producers (in thousands USD /per hectare/ year)	-	3000	MoA/CAS	Annual	Annual Statistics/ HH/labor survey
	<b>O1.2</b>	Direct support to restore livelihoods in the agri-food sector (in million USD)	-	90	MoA/ MoF	Annual	Budget law/ legislative texts/ Donors reports
<b>1.1</b>	<b>1.1 Ensure farmers and producers' access to inputs to maintain agricultural production capacity</b>						
	<b>1.1.1</b>	Number of subsidized agricultural inputs schemes implemented (disaggregated by subsectors)	1	2	MoA/MoET/BDL	Annual	Progress reports/ related decisions
	<b>1.1.2</b>	Number of farmers/producers/farmers groups/cooperatives and SMEs in the agri-food sector benefiting from cash-based and in-kind assistance (material, equipment,...) (disaggregated by subsectors and geographical regions)	-	50,000	MoA/MoSA/MoIM	Annual	Progress reports/ related decisions/donors reports
	<b>1.1.3</b>	Number of farmers benefiting from the rehabilitated agricultural infrastructure and/or communal assets disaggregated by gender (female & male).	2500		Green Plan	Annual	Green plan annual reports/ Food Security Sector reports
<b>1.2</b>	<b>1.2 Facilitate access to subsidized agri-loans for farmers and small and medium enterprises (SMEs) working in the agri-food sector</b>						
	<b>1.2.1</b>	Government budget allocations to subsidized agri-loans (in million USD)	-	80	MoA/ MoF	Annual	legislative texts
	<b>1.2.2</b>	Number of farmers and SMEs in agri-food sector benefiting from subsidized agri-loans	-	10,000	MoA	Annual	Progress reports
<b>1.3</b>	<b>1.3 Reduce risk of worsening levels of food and nutrition insecurity</b>						
	<b>1.3.1</b>	TBD (Triggered depending on deepening of food insecurity crisis)					
<b>Pillar 2:</b>	<b>2. Increase agricultural production and productivity</b>						
	<b>Outcome :</b> By 2025, agricultural production in Lebanon is more productive and profitable and increased production will contribute to reduce the agrifood imports bill						

Result level	Expected Results	Indicators	Baseline 2020 (or when available)	Target 2025	Responsible institution	Frequency	Source of verification
	<b>02.1</b>	Decrease of value of major agriculture and food product import (in billion USD)	1.34	0.94	Customs administration	Annual	Trade statistics
	<b>02.2</b>	Contribution of the agriculture activity to GDP (Plant, Livestock and livestock products, forestry & fishing)	LBP billion 2,661 (2019)		CAS	Annual	CAS National Accounts
	<b>02.3</b>	Number of agro food industries by size value of turnover (USD)	Number of agrifood-industries (2016) 0 to 1 Million: 53% 1-5 Million: 30% 5 - 20 Million: 12% above 20 Million: 5%	TBD	MOI/ Association of Lebanese Agri food industrialists	Annual	MoA/ MoI reports/ Association of Lebanese Agrifood industrialists
	<b>02.4</b>	Food exports rejections due to safety and quality of food		TBD	Customs / MoA (Plant and Animal resources)	Annual	MoA reports
<b>2.1</b>	<b>2.1 Increase the total agricultural production capacity (crop, livestock, fisheries) and productivity</b>						
	<b>2.1.1</b>	Volume of agricultural production, disaggregated by main products: cereals, legumes, fruits and vegetables, olive oil, milk and dairy products, red and poultry meat, fisheries products, fodder crops (in 1000 tons)	2 800 (plant products)	2900 (plant products)	MoA	Annual	Annual statistics/ reports
	<b>2.1.2</b>	Agricultural area rehabilitated (1000 ha)		10	Green Plan/ MoA	Annual	Progress reports
	<b>2.1.3</b>	Percent increase of agriculture productivity of main products (wheat, legumes, ...)		20	MoA	Annual	Annual statistics/ reports
	<b>2.1.4</b>	Increase in the dairy herd size (n. of dairy cattle, n. of small ruminants)	50,000 (Dairy Cattle)	100,000 (Dairy Cattle)	MoA	Annual	Annual Statistics&ARD progress reports
<b>2.2</b>	<b>2.2 Support the adoption of good agricultural practices and good livestock management</b>						
	<b>2.2.1</b>	Reduction in the quantity of fertilizers usage	(69249,Tons)	60000 tons	MoA/LARI	Annual	PRD &LARI progress reports
	<b>2.2.2</b>	Percent reduction in the use of pesticides	-	20	MoA/LARI	Annual	PRD &LARI progress reports
	<b>2.2.3</b>	Number of farmers benefiting from trainings on GAP, Farm management practices		50,000	MoA/LARI/LRA	Annual	ARD &LARI /LRA progress reports
	<b>2.2.4</b>	Percent reduction in the use of veterinary medicine		20	MoA/LARI	Annual	ARD &LARI progress reports
<b>2.3</b>	<b>2.3 Encourage adoption of innovative and modern technologies</b>						
	<b>2.3.1</b>	Number of farmers benefiting from subsidized loans for agrifood innovative projects disaggregated by gender and agegroup	-	100	BdL/ Kafalat	Annual	Annual reports
	<b>2.3.2</b>	Creation of information sharing platforms (farmers, producers, research centers...)	-	2	MoA/LARI	Annual	Annual reports
<b>2.4</b>	<b>2.4 Improve the quality and safety of agri-food products</b>						
	<b>2.4.1</b>	Establishment of a traceability system for agricultural products	-	1	MoA/MoET/IDAL	Annual	Annual reports
	<b>2.4.2</b>	Develop/ implement a risk-based food inspection program	-	3	MoA/LARI	Annual	Annual reports
	<b>2.4.3</b>	Increase in the number of tests related to food safety conducted per year		TBD	LARI / IRI	Annual	LARI/IRI reports
<b>Pillar 3:</b>	<b>3. Enhance efficiency and competitiveness of agrifood value chains</b>						
	<b>Outcome:</b> By 2025, the value of agricultural and agrifood products sold in local markets is enhanced and export revenues from agri-food products increased						

Result level	Expected Results	Indicators	Baseline 2020 (or when available)	Target 2025	Responsible institution	Frequency	Source of verification
	03.1	Increase in export revenues of major agriculture and food products (in billion USD)	0.66(2019)	0.70	Customs	Annual	Trade statistics
	03.2	Annual deficit in the trade balance between exports and imports of agricultural and food products	2.45 Billion USD (2019)		Customs	Annual	Customs reports
	03.3	Value of Agricultural exports (HS 1-5, 6-12, 15, 16-24): HS 1-5: Live animals, animal products; HS 6-12: Vegetable products; HS 15 Animal or vegetable fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes; HS 16-24: Prepared foodstuffs; beverages, spirits and vinegar; tobacco and manufactured tobacco substitutes	thousands USD 662,006 (2019) Tons Net 534,577 (2019)	TBD	Customs	Annual	Customs reports
3.1	<b>3.1 Support the modernization of value chain infrastructure and post-harvest handling systems, wholesale and local markets</b>						
	3.1.1	Number of new local farmers' markets supported	-	4	MoA/MoIM/PACM	Annual	Annual reports
	3.1.2	Number of business support systems / clusters created	-	4	MoA	Annual	Annual reports
3.2	<b>3.2 Encourage private investments along the agrifood value chains</b>						
	3.2.1	Percent increase of the value of new investment projects approved by IDAL in the agri-food sector disaggregated by subsector	(2018) Agriculture projects: 12% Agro-industry projects: 10%	25	IDAL	Annual	Annual reports
	3.2.2	Value of loans portfolio in the agrifood sector (in million USD)	-	100	BDL/Kafalat	Annual	Annual reports
	3.2.3	Number of small farmers, youth and women benefiting from soft loans	Kafalat Number: 248 Amount USD: 25'038'913	TBD	Kafalat	Annual	Kafalat reports
3.3	<b>3.3 Promote agricultural and agrifood industries by encouraging the use of local agricultural raw materials in the manufacturing process</b>						
	3.3.1	Percent reduction in the import of raw material for major agri-food industries	-	10	Customs	Annual	Annual reports
	3.3.2	Percent increase in contracts between farmers/ industrialists for local raw material	-		CCIA's/MoA/Mol	Biennial	Reports MoA/Mol
	3.3.3	Number of initiatives to promote consumption of healthy food	-	1	MoA/MoH	Annual	Annual reports
	3.3.4	Number of fairs organized to promote local production	-	20	MoA/GDC	Annual	Annual reports
3.4	<b>3.4 Support agricultural exports and accessing new markets</b>						
	3.4.1	Number of new exports markets for agrifood products	-	5	Customs	Annual	Annual reports
	3.4.2	An export information system established	-	1	MoA	Annual	Annual reports
	3.4.3	Number of SMEs and large companies within the agri-food cluster	Agritech Qoot (2020): 26 <sup>59</sup>		Service of agriculture industries, MOI / CCI		Service of agriculture industries - MOI / CCI
3.5	<b>3.5 Promote and organize cooperative work and farmers' groups and associations at the level of the value chains (targeting smallholders producers)</b>						
	3.5.1	Increase in the percentage of active agricultural cooperatives	654 agri; 150 food processing; 89 farming; 62 beekeeping; 50 fisheries (2019)		Directorate General of Cooperatives		MoA/ GDC reports
	3.5.2	Percent increase in government allocations to support agricultural cooperatives	-	50	Directorate General of Cooperatives	Annual	MoA/ GDC Annual Report
	3.5.3	Number of newly established specialized cooperatives in value chains/marketing	-	100	Directorate General of Cooperatives	Annual	MoA/ GDC reports

<sup>59</sup> Baseline value to define whether it is for SMEs or Large.

Result level	Expected Results	Indicators	Baseline 2020 (or when available)	Target 2025	Responsible institution	Frequency	Source of verification
	3.5.4	Percent of farmers adhering to cooperatives and farmers groups (disaggregated by gender)	5% (2010)	10	Directorate General of Cooperatives	Annual	MoA/ GDC reports
<b>Pillar 4</b>	<b>4. Improve climate change adaptation and sustainable management of agrifood systems and natural resources</b>						
	<b>Outcome :</b> By 2025, sustainable management of natural resources is enhanced and use of renewable resources is increased						
	04.1	Proportion of agricultural area under sustainable agriculture	-	20	MoA	Annual	Annual statistics/ reports
	04.2	Percent of land under forest area and other wooded land	23%in 2019	25	MoA	Annual	MoA/Annual reports
	04.3	Percent greenhouse gas emission from agriculture (disaggregated by sub-sector: crop, livestock, forestry,...)	3(2015)	3	MoE	Biennial	National communication report
	04.4	Total forest area (in ha)	13% in 2005	TBD	MoA/CNRS	Annual	MoA/ CNRS reports
	04.5	Total Other wooded lands (in ha)	12% in 2005	TBD	MoA/CNRS	Annual	MoA/ CNRS reports
	04.6	CO2 emission per agrifood output (disaggregated by sub-sector: crop, livestock, forestry, agro industry...)	(2015): 879 Gg CO2e without forests - 2,431.43 Gg CO2 with forests Animal Production emissions: 67% of agri emissions and 33% for plant production	1100Gg CO2 equivalent	MOE		National Communications on climate changes
4.1	<b>4.1 Increase climate change adaptation and encourage related private investment along the agrifood value chains</b>						
	4.1.1	Number of farmers benefitting from Green plan activities (disaggregated by service)	2019: Land reclamation (763)	TBD	Green Plan	Annual	Green Plan reports
	4.1.2	Percent increase of certified organic operators	152 operators (2019) (producers, processors, traders, cooperatives, etc...).	30 %	Plant Resources	Annual	MOA reports
4.2	<b>4.2 Promote sustainable use of natural resources (soil, pastures, forests and forests, fisheries)</b>						
	4.2.1	Area under improved pasture management	-	TBD	MoA/MoE	Annual	RDNRD and MoE annual reports
	4.2.2	Access to climate finance and insurance(in MUSD)	(AgriCal 2018 - 2020): USD 9,282,720 (FAO / OSRO Project - 2016-2019): USD 8,250,000 WFP(2018-2019):USD272,000 SALMA(2016-2021):USD7,145,635 FLRM(2018-2020):USD900,000	40	MOE / climate unit/DRM Unit-PCM Office	Annual	National Communications on climate changes/DRM Unit Reports
	4.2.3	DRM plans prepared			MoE / climate unit	Annual	National Communications on climate changes
4.3	<b>4.3 Enhance the efficient use of irrigation water and expand the supply for irrigation</b>						
	4.3.1	Volume of water harvested for irrigation (in thousands m3)		800	Green Plan/LRA/MOEW	Annual	Annual reports
	4.3.2	Percent increase in total irrigated area under modern irrigation system	40	60	MoA/GP/LRA	Annual	Annual reports
	4.3.3	Percent decrease in incidence of forest fires		30 % yearly	MoA/ DRM Unit / CNRS / University of Balamand	Annual	MoA/ CNRS / University of Balamand reports
	4.3.5	Surface water quality index		TBD	MOEW	Annual	MOEW reports
	4.3.6	Increase in the fish and aquatic stock over a period of 10 years		TBD	MOA / CNRS	Annual	MoA / CNRS reports
	4.3.7	Groundwater quality index		TBD	MOEW	Annual	MOEW reports
4.4	<b>4.4 Encourage and support the use of renewable energy in the agricultural sector</b>						
	4.4.1	Regulatory framework for production/use of compost in place	-	1	MoA/MoE	Annual	Annual reports
	4.4.2	Share of production of renewable energy resources	(MOE , 2015) Hydro: 134 MW		MOEW / LPEC / MOE	Annual	National Communications on climate change

Result level	Expected Results	Indicators	Baseline 2020 (or when available)	Target 2025	Responsible institution	Frequency	Source of verification
5	<b>Pillar 5: Strengthen the enabling institutional environment</b>						
	<b>Outcome :</b> By 2025, the Ministry of Agriculture and its affiliated institutions will become more conducive to the development and transformation of the agricultural and food sector						
	05.1	Percent increase in government expenditures in agriculture including R&D (in million USD )	-	100	MoA/MoF	Annual	Budget law/ annual reports
	05.2	Endorsement of the NAS and its Action Plan					MoA / PMO
	05.3	Percent increase of the value of investments (foreign and domestic) in agri-food sector	-	30	IDAL	Annual	Annual reports
5.1	<b>5.1 Enhance the effectiveness of MoA services and affiliated institutions and building staff capacities</b>						
	5.1.1	New extension system in place (new extension tools and techniques, e-extension, digitized extension services)	-	1	MoA/LARI	Annual	DSC and LARI annual reports
	5.1.2	Number of farmers benefitting from extension services disaggregated by gender	-	15,000	MoA/LARI/GP/LRA/GDC	Annual	DSC and LARI annual reports
	5.1.3	An updated system for technical agricultural education is developed (e-platform, innovation programs, updated curriculum, digital education, ...)	-	1	MoA/ Ministry technical & vocational education/ NGOs/ OMSAR	Annual	Reports of the Studies and Coordination Directorate
	5.1.4	Number of legislations/ operational decrees/ ministerial decisions / new organizational structures issued in support of modernizing/ improving service delivery by MoA/ GP/ LARI/ GDC , ...)		10	MoA/ GP/ LARI/ GDC	Year 5	Legal texts
5.2	<b>5.2 Strengthen the efficiency and effectiveness of the agricultural and knowledge information system (AKIS)</b>						
	5.2.1	A farmers registry established and operational	-	1	MoA	Annual	Annual reports
	5.2.2	Number of farmers registered by gender	-	100,000	MoA	Annual	Annual reports
	5.2.3	An Information and statistical system created (nb of surveys undertaken )	-	1	MoA	Annual	Annual reports
	5.2.4	Agricultural e- services operational	-	1	MoA/ OMSAR	Annual	Annual reports
5.3	<b>5.3 Enhance sectoral governance to maximize public and private development financing and encourage agricultural investment (including public budget to agriculture)</b>						
	5.3.1	Number of financing mechanisms established (creation of an AGRI-FUND, pooled funding...)	-	2	MoA/MoF/CCIA's	Annual	legislative texts
	5.3.2	Annual Monitoring Report of NAS developments regularly produced and discussed among stakeholders	-	1	MoA /stakeholders	Annual	MoA reports
	5.3.3	Donors total support to agri- food sector (in million USD)	90	120	MoA/MoF	Annual	Annual reports
5.4	<b>5.4. Create enabling conditions for the development of agricultural insurance also to mitigate the impacts of natural disasters</b>						
	5.4.1	A modern EWVS in place	-	1	LARI/CNRS	Annual	Annual reports
	5.4.2	Number of contingency plans developed/ implemented	-	2	MoA/CNRS	Annual	Annual reports
5.5	<b>5.5 Develop a social protection system for vulnerable farmers, farm workers, producers and fishers</b>						
	5.5.1	Social protection system for vulnerable farmers, farm workers, producers and fisher folks is in place	-	1	MoA/ National Social security fund/ MoSA	Annual	MoA/ National Social Security fund/ MOSA annual reports
	5.5.2	Percent reduction in child labour in agrifood sector		50%	MoL/MoA/Regie	Biennial	Study reports MoL/MoA/ILO/FAO

## VI. Budget of NAS programmes

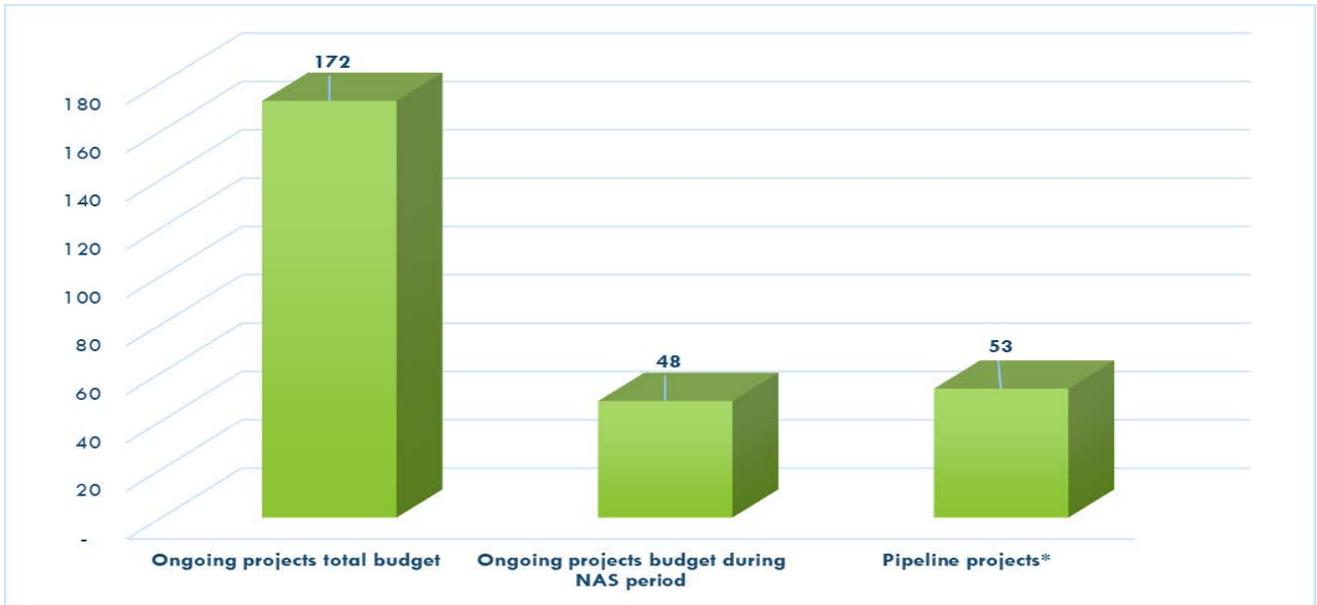
This Annex presents a preliminary estimate of the results-oriented budget required to achieve the NAS objectives.

Annex VI-I Preliminary NAS results oriented budget

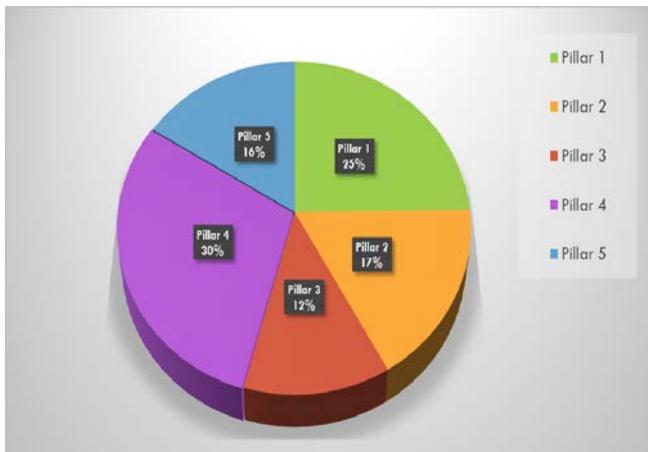
ID	Pillars	NAS Estimated Budget (m USD)	Year 1 (5 months of 2020 and 2021)	Year 2 (2022)	Year 3 (2023)	Year 4 (2024)	Year 5 (2025)	TOTAL
<b>NAS</b>	<b>TOTALBUDGET</b>	<b>710.5</b>	<b>191.8</b>	<b>170.3</b>	<b>131.3</b>	<b>126.1</b>	<b>91.0</b>	<b>710.5</b>
1	1. Restoring the livelihoods and productive capacities of farmers and producers	75.0	40.0	35.0	-	-	-	75.0
2	2. Increasing agricultural production and productivity	355.0	95.0	71.5	71.5	70.0	47.0	355.0
3	3. Enhancing efficiency and competitiveness of agrifood value chains	132.0	24.0	32.5	30.5	27.5	17.5	132.0
4	4. Improving climate change adaptation and sustainable NRM	105.0	23.0	22.0	20.0	20.0	20.0	105.0
5	5. Strengthening the enabling institutional environment	43.5	9.8	9.3	9.3	8.6	6.5	43.5
1	1. Restoring the livelihoods and productive capacities of farmers and producers	75.0	40.0	35.0	-	-	-	75.0
1.1	1.1 Ensure access to inputs to maintain agricultural production capacity	30.0	15.0	15.0	-	-	-	30.0
1.2	1.2 Facilitate access to subsidized agri-loans for farmers and small and medium enterprises (SMEs) working in the agrifood industries to revive the sector	45.0	25.0	20.0	-	-	-	45.0
1.3	1.3 Reduce risk of worsening levels of food and nutrition insecurity (Emergency programme - triggered as necessary)	-	-	-	-	-	-	-
2	2. Increasing agricultural production and productivity	355.0	95.0	71.5	71.5	70.0	47.0	355.0
2.1	2.1 Increase the total agricultural production basis (crop, livestock, fisheries) and productivity	300.0	80.0	60.0	60.0	60.0	40.0	300.0
2.2	2.2 Support the adoption of good agricultural practices and good livestock management	25.0	7.0	5.0	5.0	5.0	3.0	25.0
2.3	2.3 Encourage and support the adoption of innovative and modern technologies	15.0	4.0	3.0	3.0	3.0	2.0	15.0
2.4	2.4 Improve the quality and safety of agricultural and food products	15.0	4.0	3.5	3.5	2.0	2.0	15.0

ID	Pillars	NAS Estimated Budget (m USD)	Year 1 (5 months of 2020 and 2021)	Year 2 (2022)	Year 3 (2023)	Year 4 (2024)	Year 5 (2025)	TOTAL
<b>3</b>	<b>3. Enhancing efficiency and competitiveness of agrifood value chains</b>	<b>132.0</b>	<b>24.0</b>	<b>32.5</b>	<b>30.5</b>	<b>27.5</b>	<b>17.5</b>	<b>132.0</b>
3.1	3.1 Support the modernization of value chain infrastructure and post-harvest handling systems, wholesale and local markets	55.0	10.0	17.5	12.5	10.0	5.0	55.0
3.2	3.2 Encourage private investment along the agrifood value chains	10.0	1.5	2.5	2.5	2.0	1.5	10.0
3.3	3.3 Promote agricultural and food industries including by encouraging the use of local agricultural raw materials in the manufacturing process	30.0	6.0	6.0	6.0	6.0	6.0	30.0
3.4	3.4 Support agricultural exports and access to new markets	30.0	5.0	5.0	8.0	8.0	4.0	30.0
3.5	3.5 Promote and organize cooperative work and farmers' groups and associations at the level of the value chains (targeting smallholders producers)	7.0	1.5	1.5	1.5	1.5	1.0	7.0
<b>4</b>	<b>4. Improving climate change adaptation and sustainable management of agrifood systems and natural resources</b>	<b>105.0</b>	<b>23.0</b>	<b>22.0</b>	<b>20.0</b>	<b>20.0</b>	<b>20.0</b>	<b>105.0</b>
4.1	4.1 Increase climate change adaptation and encourage related private investment along the agrifood value chains	50.0	10.0	10.0	10.0	10.0	10.0	50.0
4.2	4.2 Promote sustainable use of natural resources (soil, pastures, forests and forests, fisheries)	20.0	4.0	4.0	4.0	4.0	4.0	20.0
4.3	4.3 Enhance the efficient use of irrigation water and expand the supply of non-traditional water resources for irrigation	30.0	8.0	7.0	5.0	5.0	5.0	30.0
4.4	4.4 Encourage and support the use of renewable energy in the agricultural sector	5.0	1.0	1.0	1.0	1.0	1.0	5.0
<b>5</b>	<b>5. Strengthening the enabling institutional environment</b>	<b>43.5</b>	<b>9.8</b>	<b>9.3</b>	<b>9.3</b>	<b>8.6</b>	<b>6.5</b>	<b>43.5</b>
5.1	5.1 Enhancing the effectiveness of MoA services and affiliated institutions and developing staff capacities	20.0	5.0	4.0	4.0	4.0	3.0	20.0
5.2	5.2 Strengthen the efficiency and effectiveness of the agricultural and knowledge information system (AKIS)	15.0	3.0	3.5	3.5	3.0	2.0	15.0
5.3	5.3 Enhance sectoral governance to maximize public and private development financing and encourage agricultural investment	2.0	0.5	0.5	0.5	0.3	0.2	2.0
5.4	5.4 Create enabling conditions for the development of agricultural insurance also to mitigate the impacts of natural disasters	5.0	1.0	1.0	1.0	1.0	1.0	5.0
5.5	5.5 Develop a social protection system for vulnerable farmers, farm workers, producers and fishers	1.5	0.3	0.3	0.3	0.3	0.3	1.5

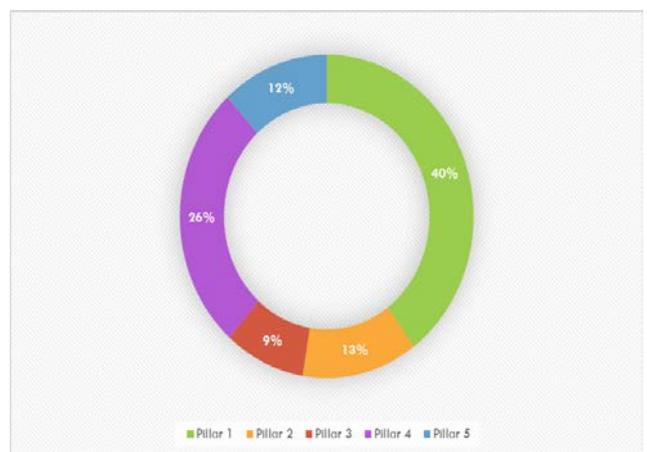
Projects budget (in m USD) by implementation period



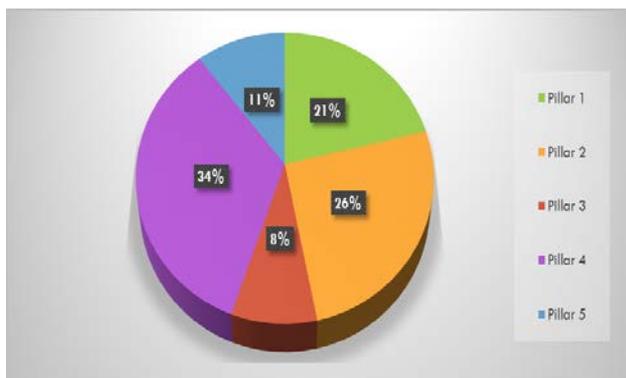
Ongoing projects distribution by pillar



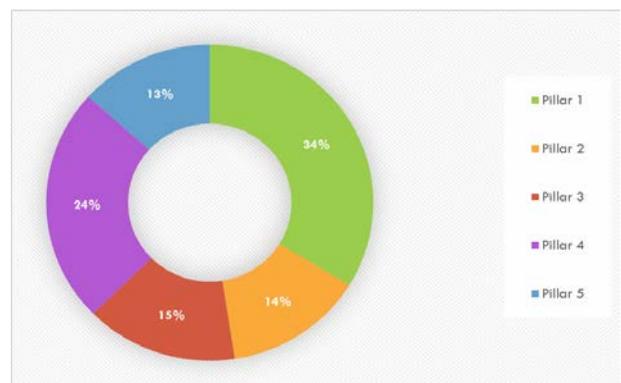
Ongoing projects budget distribution by pillar



Pipelined projects distribution by pillar



Pipelined projects (2020-2025) budget by pillar





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