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Economic and Social Commission for Western Asia (ESCWA)

Expert Group Meeting on “Context-based Technologies to Enhance the Efficiency and Resilience of Agri-food Systems in Lebanon”

Beirut, Lebanon 26-27 Aug 2019

Information note

I. Background of agriculture sector in Lebanon

Agriculture, the main economic sector in Lebanese rural areas, contributes to around 11% of the total active labor force (formal and informal) and generates 3% of Gross Domestic Products. The role in the economy is higher when parallel dependent sectors such as the food processing industry are considered. Lebanon is self-sufficient in the production of fruits, vegetables, and eggs and the sector plays a significant role in trade. In 2018, live animals, vegetable products, edible fats and oil, and prepared foodstuffs represented 18% of total imports and 22% of total exports (Lebanese Customs 2019). Trade was facilitated by various regional and bilateral agreements. Post 1990-civil war policies neglected the agriculture sector that did not receive, on average, more than 2% of public expenditures till 2015. In fact, the sector is undermined by structural barriers limiting productivity and competitiveness. Small holdings¹ and part-time farming are widespread among producers. Around 70% of holdings cultivate less than 1 Ha Useful Agriculture Surface (UAS) and represent only 18% of the total UAS. On the opposite side, only around 1.8% of holdings cultivate more than 10 Ha UAS and represent 33% of the total UAS. This has labelled agriculture as a secondary source of income where around 50% of producers have an income from another primary job. The sector is not attractive for youth. Only 11% of producers are aged below 34 years old while around 41% of them have more than 55 years old and cultivate 43% of total UAS. In term of water use, the sector consumes 60% of available water resources to irrigate 48% of total UAS. Only 25% of UAS are using drip irrigation compared to 49% of UAS that are still relying on flood irrigation. Deep wells are the main source of irrigation for 49% of UAS while streams and rivers supply water to 39% of UAS. Water use efficiency does not surpass 60% due to lack of knowledge in irrigation management and networks inefficiency. Water productivity is also low due to lack of knowledge, market access challenges, and modest post-harvest practices. Public extension services and agriculture research have limited coverage and efficiency due to low government budget. All these limitations increased the vulnerability of agriculture systems to climate change variations and extremes. In term of financial assets, small farmers are challenged by low formal access to credits characterized by a high interest rate. This pushes them to basically rely on high interest informal credit sources from wholesale dealers and input suppliers. Producers' cooperatives did not play a significant role in offsetting these structural constraints.

¹ Economic units with single management including all livestock kept and all land used with minimum production thresholds of a value of 0.1 ha open field, 0.05 ha greenhouses, 7 goats, and 1 cow.

The majority lacks autonomy and independence and rarely offers feasible services or products to members. Overall, cooperatives did not succeed in applying the economy of scale principle and increase members' access to markets. The influx of refugees exacerbated the situation by further adding pressure on scarce natural resources. Lebanon hosts the largest number of refugees per capita in the world.

II. Technology use in agriculture in Lebanon

Whether in the downstream or upstream side of production, new technology (ICT, water saving, soilless, etc.) transfer and adaptation in the agriculture sector are still at an early stage in Lebanon. Individual initiatives are limited to few commercial large-scale farmers and usually require high investment. Their impacts on productivity and reduction of post-harvest losses were not empirically documented. The private sector is leading this field in addition to modest trials conducted by non-profit and public research institutions. Donors and development agencies identified technology transfer and adaptation in agriculture as a top priority to overcome main productivity (land and water) and climate vulnerability challenges. Scaling up is blocked by lack of access to finance and high start-up cost. Education and age of farmers are also considered limiting factors. Moreover, conventional and commercial extension service systems are not conducive for new technology transfer and adaptation. The lack of collaboration between research and extension services in addition to low public finance are restricting small farmers' technology adaptation and use. Think tanks are targeting the sector with promising results that require a supportive enabling environment to ensure horizontal and vertical growth.

The government role in promoting enabling policies for technology transfer, adaptation, and use in Lebanon needs to be strengthened and informed by context-based challenges. Bringing youth back to agriculture would not be possible unless appropriate technologies (low and high tech) are adapted to increase productivity and efficiency. Making a progress in achieving SDGs related to agriculture and food security is very difficult without relying on proper technology in the context of Lebanese agriculture.

III. OBJECTIVES

In this context, ESCWA and the Ministry of Agriculture in Lebanon, in partnership with the Food and Agriculture Organizations (FAO) of the United Nations, are organizing a meeting on **“Context-based Technologies to Enhance the Efficiency and Resilience of Agri-food Systems in Lebanon”**. The aim of the meeting is to understand the status of technology transfer, adaptation, and use in agriculture in Lebanon including constraints for scaling-up and opportunities available to reach small farmers. The meeting will discuss how different stakeholders can play complementary roles to effectively facilitate technology transfer, adaptation, and scale-up in the agriculture sector in Lebanon.

Deliberations during the two-day meeting will produce a set of policy recommendations, key messages, lessons learned, and basic principle to inform the new agriculture strategy for 2020-2025 that the Ministry is currently preparing in coordination with FAO and ESCWA. Outputs of the meeting will help ESCWA deliver key results to achieve several resolutions under the Beirut Consensus on technology for sustainable development in particular those related to “facilitating the use and transfer of technology associated with natural resources management where a potential exists for efficiency improvement, especially in water and energy efficiency leading to food security and environmental sustainability”.

The meeting's specific objectives are to:

- Discuss the status of technology transfer and adaptation in agriculture in Lebanon
- Exchange cases of current initiatives that have positive returns on natural resource management and productivity of food systems
- Address barriers for scaling-up successful initiatives
- Deliberate on current policies and enabling environment to accelerate transfer, adaptation, and scaling-up
- Analyze the potential role that context-based agriculture technologies can play to make a progress under SDG2 and SDG15

IV. PARTICIPANTS

The meeting will bring together experts from the Ministry of Agriculture – Lebanon , UN organizations (FAO, WFP, etc), agriculture universities (AUB, LU, USJ, etc), research institutions (CNRS, LARI, etc), private sector, accelerators (Agrytech, etc), NGOs, farmers' organizations, farmers, and key experts in the sector of agriculture technology in Lebanon

V. ORGANIZATION OF THE MEETING

The meeting will be held at the UN House in downtown Beirut, Lebanon, on 26-27 August 2019. Participants are kindly requested to arrive at 9:00 am to register for the meeting, which will promptly start at 9:30 am.

VI. LOGISTICAL CORRESPONDENCE

Participants are kindly requested to return completed registration form to ESCWA no later than 16 August 2019 together with a scanned passport photograph so an access ID could be issued well ahead of time.

VII. CORRESPONDENCE

Correspondence and inquiries concerning the meeting should be addressed to:

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