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Advancing rural advisory services in Arab countries

to promote market orientation and inclusive
transformation

A regional study

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Acronyms and abbreviations

| | |
|--------------|---|
| AEC | agricultural extension centres |
| AES | agricultural extension sector |
| AKDN | Agha Khan Development Network |
| AVFA | Agricultural Training and Extension Agency |
| ARC | Agricultural Research Centre |
| BL | Better Life |
| BP | Better Production |
| CAAC | Central Administration of Agricultural Cooperatives |
| CAAEE | Central Administration for Agricultural Extension and Environment |
| CARDA | Regional Commissaries for Agricultural Development |
| CCIA | Chamber of Commerce, Industry and Agriculture - (Lebanon) |
| CDC | community development centres |
| COSPE | Cooperation for the Development of Emerging Countries |
| CWB | Cooperation Without Borders |
| DSCC | Development Support and Communication Centers |
| FAODA | Fayoum Agro-Organic Development Association |
| FBS | farm business school |
| FFS | farmer field school |
| FGD | focus group discussion |
| GDP | gross domestic product |
| GFRAS | Global Forum for Rural Advisory Services |
| HEIA | Horticultural Exporting Improvement Association |
| ICT | information and communication technology |
| INGC | National Institute of Crops |

| | |
|----------------|---|
| IRESA | Institution of Research and Higher Education in Agriculture |
| LARI | Lebanese Agricultural Research Institute |
| JAEA | Jordan Agricultural Engineers Association |
| JOHUD | Jordanian Hashemite Fund for Human Development |
| MAHRP | Ministry of Agriculture, Fisheries and Water Resources |
| MALR | Ministry of Agriculture and Land Reclamation of Egypt |
| MENA | Middle East and North Africa |
| M&E | monitoring and evaluation |
| MPED | Ministry of Planning and Economic Development of Egypt |
| MWI | Ministry of Water and Irrigation |
| NARC | National Agricultural Research Centre |
| NENA | North Africa and Near East |
| NGOs | non-government organizations |
| OFA | Omani Farmers' Association |
| POs | producer organizations |
| RAS | rural advisory services |
| RDC | Rural Development Centres |
| RI-SSFF | Regional Initiative on Small Scale Family Farming |
| RNE | near east region |
| SADS | Sustainable Agriculture Development Strategy (Egypt) |
| SARD | sustainable agricultural and rural development |
| SDGs | Sustainable Development Goals |
| SMSA | Mutual Agricultural Services Societies in Tunisia |
| SYNAGRI | Tunisian Farmers' Union |
| VEW | village extension worker |
| UTAP | Tunisian Union of Agriculture and Fisheries |
| WAJ | Jordan Valley Authority |

Executive summary

Small-scale family farmers¹ are the backbone of rural communities in the Near East and North Africa (NENA) region. Despite their extensive participation in the agricultural sector, these types of farmers and their farms are disproportionately affected by poverty, ultimately constituting about 70 percent of the poor living in the region.²

Apart from adverse agroclimatic conditions, small-scale farmers experience several challenges that stem from their limited assets, land fragmentation and weak capacities, with negative impacts on their productivity, profitability and income. Specific constraints include low volume and quality of produce, high transaction costs, high costs of inputs, low prices and weak access to market information and postharvest facilities – all of which adds up to a limited ability to reach and compete in markets. Small-scale farmers need services that enable them to make informed decisions and facilitate their access to quality inputs, post-harvest facilities and more profitable markets. They also need to reinforce their capacities to act collectively and develop effective organizations that can articulate their demands, amplify their voice, and facilitate their access to services and markets. As a result of persisting gender-based social norms, women typically face more challenges than men in terms of owning assets, accessing quality inputs and services, reaching markets and achieving fair prices. Women are also under-represented in producer organizations (POs), in rural institutions and on the staff of advisory service providers. The COVID-19 pandemic has exacerbated the above challenges and affected the income of millions of small-scale farmers and agricultural workers, increasing the already high unemployment levels.

To overcome these challenges and transform their livelihoods, small-scale farmers need access to a wide range of rural advisory services (RAS)³ that enable them to increase productivity in a sustainable way and enhance profitability and income. This entails a range of services that support market-orientation, empowering farmers to make informed decisions, manage their farm businesses, mitigate risks, improve quality and competitiveness (postharvest, branding, certification), and act collectively to link to profitable markets. Evidence shows that access to this broad scope of services is greatly facilitated by engaging multiple service providers from the public and private sectors, POs and civil-society groups in what are known as pluralistic service systems. The institutional landscape for RAS provision therefore represents a growing diversity of service providers with private actors, civil society and POs playing an increasingly active role alongside public sector extension services.⁴

The importance of strengthening and modernizing RAS from a pluralistic and market oriented perspective – covering productivity, business and market support – has been identified as a priority for the FAO programme on rural transformation in the NENA region.⁵ Moreover, equitable access to rural services is an integral part of FAO programmatic approach to inclusive rural transformation and reducing rural poverty, reaffirmed in the FAO Strategic Framework 2022 – 2031, aspiring for *transformation to more efficient, inclusive, resilient and sustainable agrifood systems, leaving no one behind*.⁶ Specifically, in working towards *Better Production* (BP) and towards *Better Life* (BL), through several Programme Priority Areas, including BP4: *Small-scale producers' equitable access to resources*; BL1 *Gender equality and*

¹ While the majority of small-scale farmers are family farmers, not all family farmers are necessarily small scale. In the context of this study we use small-scale family farmers or smallscale farmers rather interchangeably.

² FAO. 2017a. Proceedings from Technical Meeting on Social Protection as a Tool for Poverty Reduction in the Near East and North Africa. 29th and 30th March. Beirut, Lebanon (also available at <https://www.fao.org/3/i7651e/i7651e.pdf>).

³ Rural advisory services (RAS) refer to all the different activities that provide the information and services needed and demanded by farmers and other actors in rural settings, to assist them in improving their livelihoods by developing their technical, organizational and management skills and practices (Christoplos, 2010; Sulaiman & Blum, 2015). See Section 2.1 on the use of terms in the context of this paper.

⁴ Bitzer, V., Wongtschowski, M., Hani, M., Blum, M. & Flink, I., 2016. Towards Inclusive Pluralistic Service Systems. Rome, FAO. (Also available at <http://www.fao.org/3/a-i6104e.pdf>).

⁵ FAO. 2021a. "Rural transformation for youth employment and income". FAO Regional Conference for the Near East – Thirty-sixth-Session. NERC/22/4. Baghdad, Republic of Iraq, 10–13 January 2022 and 7–8 February 2022. <https://www.fao.org/3/nh921en/nh921en.pdf>

⁶ FAO. 2021b. *FAO Strategic Framework 2022–2031*. Rome, FAO. <https://www.fao.org/3/cb7099en/cb7099en.pdf>

rural women's empowerment; and BL2 *Inclusive rural transformation*.

In this context, FAO has conducted a regional study entitled “Rural advisory systems in the Near East and North Africa (NENA) region: Making rural services work for small-scale producers and family farmers” in the framework of the Regional Initiative on Small Scale Family Farming. The objective of the study was to generate evidence and to identify gaps and entry points to inform policy recommendations and strategic planning to make RAS more responsive to smallholders’ livelihood needs, with due attention to women, youth and the most vulnerable producers. Its overall purpose is to catalyze regional dialogue and inform policymaking on means for the advancement of RAS as pluralistic and market oriented systems that are responsive to the needs and demands of farmers, especially smallholders. The study explored the status of RAS from a pluralistic and market oriented system perspective, considering the three dimensions of service demand, service supply and the enabling environment. It draws on in-country assessments carried out in Jordan, Lebanon and Egypt in 2021, which follow FAO methodological guidelines for appraisal of pluralistic and market oriented advisory services.⁷ Both similar studies previously conducted by FAO in Oman and Tunisia and a wider literature review provided further insights into the status of RAS in the NENA region.

As revealed by the study, despite the plurality of service providers and the prominent role of public extension services, existing advisory services are still deficient on aspects of access to markets, agribusiness, value addition and facilitation of collective action for enabling farmers to overcome the aforementioned challenges. Notably, RAS are not effectively reaching all smallholder and disadvantaged farmers, and even when they do, they fall short of addressing gender and age specific needs and constraints.

Moreover, the public extension workforce remains inadequate, as seen in Jordan and Lebanon, while in Egypt, it has considerably eroded over time, primarily due to staff reaching retirement age and with an absence of clear plans for new hires. Most of the public extension staff in all the countries including Oman and Tunisia are involved in implementing several advisory, administrative and regulatory roles, with little time or few resources to reach all the farmers they are meant to serve. Public extension services tend to focus on crop

production and protection aspects; limited attention is given to pressing marketing challenges and delivery of related services.

While private sector, especially the input dealers, do provide information on new inputs and machinery, farmers in general do not fully trust their advice as impartial because of the input dealers’ business interests. However, these dealers remain the main source of information for small-scale farmers on new crop varieties, fertilizers and pesticides. Non-governmental organizations and international agencies implement several projects that target small farmers, but these are often limited in time and scale.

POs and/or cooperatives currently support small farmers with access to market and value addition to varying degrees in the countries studied: Lebanon, Jordan, Egypt, Oman and Tunisia. These POs and cooperatives need to be capacitated to serve farmers better and to reach their potential. A number of initiatives are being implemented in collaboration with international development partners, providing good lessons and insights for scaling up capacities of the cooperative sector. Still, concerted efforts are needed to reform/upgrade the cooperative laws and regulations, develop the technical, managerial and business capacities of cooperatives, and restore their image as crucial actors in service provision and market access for small-scale farmers.

The overall investment in and support for agriculture is either declining or remains stagnant across these countries, even though national policies and strategies often articulate the importance of strengthening the sector. While the importance of RAS for promoting sustainable agricultural growth is generally recognized, there is no clear vision or roadmap to strengthen the public extension services, promote better coordination among the different service providers, and guide policy and investments in the sector.

The quality and performance of RAS is also affected by weak research–extension linkages and limited mechanisms for mobilizing tailored problem-solving support from the research system or capitalizing on existing research findings. The research agenda appears predominantly focused on production aspects, with limited support for understanding markets, analyzing value chains and trade potentials or strengthening agribusiness management, especially for small-scale

⁷ FAO. (forthcoming). *Promoting Pluralistic and Market-Oriented Services (PMOS): Conceptual and Methodological Guidelines for Analysis and Programming*.

farmers. Mechanisms for networking and sharing knowledge and experiences among the plurality of RAS providers are also lacking at local and national as well as at regional level.

The study suggests the following recommendations to inform policymaking and development interventions at national and regional level.

i. Create an enabling environment for advancing RAS within a broader context of inclusive rural transformation:

- Develop a national vision and implementation framework for advancing pluralistic RAS, addressing inclusivity, market orientation and better livelihoods in the spirit of the SDGs;
- Broaden the scope of RAS to explicitly include supporting farming as a business and linking farmers to markets in partnership with other service providers;
- Revisit the role and comparative strength of public extension vs other service providers to facilitate linkages and nurture public-private-PO partnerships for improved service delivery;
- Set up coordination mechanisms for pluralistic stakeholder engagement in priority setting and development of programmes;
- Facilitate networking and learning among RAS providers, creating platforms for exchanging knowledge, sharing good practices and identifying collaborative opportunities;
- Enhance downward accountability through participatory monitoring, evaluation and learning, especially through engaging farmers and their organizations through feedback channels and grievance mechanisms for farmers to influence service provision; and
- Mobilize research to develop and promote innovative solutions in response to challenges faced by farmers and streamline linkages with public and private RAS to reinforce capacities and access to evidence-based knowledge, including digital means for large-scale outreach.

ii. Leverage public investments in RAS and mobilize resources to provide relevant and effective market oriented support to small farmers at decentralized level. This includes:

- Funding public services, with due attention to gender diversity in human resources, staffing at decentralized level and operational budgets for RAS activities;
- Investing in capacity development programmes that promote market orientation of extension and RAS;
- Investments in infrastructure and facilities, including agribusiness advisory centres, postharvest, certification, quality assurance, market facilities and information systems;
- Investments in digitalization and connectivity, ensuring access and affordability; and
- Public-private PO partnerships and innovative funding mechanisms to leverage capacities of various service providers.

iii. Stimulate broad-based capacity development that enables RAS transition to support “farming as a business”. This would necessitate:

- In-service and on-the-job training for existing extension staff and other RAS providers;
- Revisiting academic and vocational education curricula and programmes for future graduates/ professionals;
- Incentivizing staff for continuing education and lifelong learning, and making learning resources available in attractive and accessible ways;
- Creating joint learning and exchange events for research and extension staff as well as POs to enhance exposure, relevance and problem solving, including through internships, secondments and coed placements;
- Diversifying and upgrading skills for extension staff and RAS providers, which should include:
 - » Knowledge and skills for business and market-orientation, including farm management, sustainable agribusiness, market analysis and sustainable agrifood value chain concepts;
 - » Organizational development and group dynamics to strengthen POs and promote collective economic action among smallscale farmers;
 - » Tools and approaches to ensure inclusivity,

diversity and gender-sensitivity in RAS provision, to ensure responsiveness, relevance and better targeting of the services, particularly towards those who are often underserved;

- » Communication, participation and networking;
- » Digital skills and ICT applications in RAS.

iv. Strengthen the development of farmer organizations and cooperatives as central players in pluralistic service systems, providing services and mobilizing farmers for collective economic operations. This necessitates:

- Revisiting/updating cooperative laws and regulations to create an enabling environment;
- Organizational development for POs to improve management and business skills as well as the capacity to deliver business services and link to markets;
- Support to POs and other farmer collectives to establish a more inclusive and age- and gender-responsive governance, which allows women and youth to participate equally and access leadership roles in rural institutions;
- Support investments in cooperatives and POs infrastructure, facilities and technologies for improved postharvest handling, including food loss and waste reduction, and improving the quality of marketable produce; and
- Linking cooperatives/POs to extension services and other RAS providers to enhance outreach on one hand and PO capacity for service delivery on the other.

v. Mainstream inclusivity and gender equality in RAS policies and programmes to enhance the provision of inclusive, age- and gender-responsive services. This includes:

- Raising awareness and building the capacities of public, private and PO service providers to provide inclusive, age- and gender-responsive RAS;
- Ensuring diversity in extension and RAS staff, including the recruitment of women extensionists, the representation of women

in leadership roles within public services, and supporting service providers in recruiting and retaining more female staff;

- Mainstreaming inclusivity and gender in agricultural education curricula, in-service training and in research and extension programmes;
- Fostering the design and implementation of inclusive RAS programmes that give due attention to women, youth and disadvantaged population groups, addressing their specific needs and demands for services; and
- Providing targeted support to women-led POs and cooperatives to strengthen their roles in service provision and policy advocacy as well as their linkages with other actors in agrifood value chains.

vi. Strengthen regional cooperation:

- Foster the establishment of a regional forum for RAS in the region affiliated to the Global Forum for Rural Advisory Services (GFRAS) for advancing RAS in Arab countries through networking, knowledge sharing and policy advocacy;
- Leverage the role of ICT and digital technologies in the provision of RAS, paying specific attention to aspects of inclusivity, accessibility and gender equality, including digital literacy, through the sharing of practices, approaches and lessons learned across countries in the region;
- Enhance the image of POs and cooperatives and their role in the inclusive provision of market oriented services by promoting exchange of knowledge and good practices across the region;
- Develop regional programmes for modernizing RAS, to support policy dialogue, enhance capacities of RAS providers, strengthen cooperatives in service provision and market access, and generate knowledge, digital tools, learning material and good practices; and
- Facilitate cooperation and learning through academic exchange and joint research programmes.



1. Introduction

Spanning the southern Mediterranean and southwestern Asia, the Near East and North Africa (NENA)¹ region includes a diversity of agroecological zones. Predominantly arid and semi-arid areas alternate with humid areas, rivers and marshes. The region, with its rich environmental, cultural and historical endowment is the place of origin of several major cereal and legume crops and the place where crops and small ruminants were first domesticated. For several centuries, the region boasted innovation in agriculture with the development of agricultural technologies and introduction of new crops from other regions, including the Far East. River valleys in the region witnessed the early development of irrigated agriculture, which laid the foundation for the intensive agricultural systems still in use today. The flourishing of agriculture in ancient times, featuring endogenous technologies and innovative practices, widely contributed to shaping the economies of the region.

Today, agriculture contributes significantly to the regional gross domestic product (GDP) although to a lesser extent than other sectors such as industries and services, which have steadily grown over the last decades (FAO, 2018a). Large variations exist across and within the region's countries due to varying natural resources endowment, agroecological zones and the relative importance of non-agricultural income to the economy. Agriculture provides jobs and incomes for about 38 percent of the economically active population. On average, it contributes 14 percent of GDP, ranging from more than 5 percent in Algeria, Iraq, Tunisia and Yemen to more than 20 percent in Sudan and the Syrian Arab Republic (FAO, 2020a).

Notably, the region is characterized by low growth in agrifood production, declining farm productivity, and increasingly scarce and fragile natural resources (soil and water) reflected in terms of high levels of water scarcity and aridity. High levels of population growth, coupled with climate change, political instability and

refugee crises in some countries, also contribute to declining food production and overall productivity.²

The population that lives and works in rural areas varies from 15 to 65 percent of the total depending on the country. Deep inequalities persist between rural and urban areas and between smallholders and large agricultural producers (Marzin *et al.*, 2017). Climate change represents a threat to the livelihoods and the food and nutrition security of rural and urban communities, but the rural poor face stronger vulnerability due to their high dependence on fragile natural resources, limited resilience and protection against risks and shocks (FAO, 2020b).

Small-scale family farmers represent the backbone of rural communities in the region, producing more than 80 percent of some annual and perennial crops as well as livestock species. In addition, 75 to 85 percent of the agricultural landholdings across a variety of farming systems (irrigated, highland mixed, rainfed mixed, dryland mixed, pastoral and arid) (FAO, 2020c) belongs to family farmers (FAO, CIRAD and CIHEAM, 2016). Despite their extensive participation in the agricultural sector, small-scale family farmers are disproportionately affected by poverty, eventually comprising about 70 percent of the poor living in the Region (FAO, 2017a). Apart from adverse agro-climatic conditions, small-scale farmers experience multiple constraints that emanate from their limited assets, land fragmentation and low capacities that impact negatively on their productivity, profitability and income. Specific constraints faced by small-scale farmers include the low volume quality of produce, high transaction costs, weak access to inputs, market information and postharvest facilities, adding up to their limited ability to reach and compete in markets. The COVID-19 pandemic has exacerbated the above challenges affecting the income of millions of small-scale farmers and agricultural producers, and contributed to increasing the already high unemployment levels. Women and youth are at a

¹ According to FAO regional groups, the Near East and North Africa Region (RNE) includes Algeria, Bahrain, Egypt, Iraq, Jordan, Kuwait, Lebanon, Libya, Yemen, Mauritania, Morocco, Palestinian Authority, Oman, Qatar, Saudi Arabia, Sudan, Syrian Arab Republic, Tunisia, and the United Arab Emirates

² The North Africa and Near East Region is home to only 5.4 percent of the global population, yet it accounts for more than a quarter of the internally displaced people by conflict and violence globally and more than one third of the global refugee population (IDMC, 2020).

particular disadvantage given their more limited access to resources, capital, information, services and markets (FAO, 2022a).

To overcome these challenges and transform their livelihoods, small-scale farmers need access to a wide range of rural advisory services (RAS)³ that enable them to increase productivity, profitability and income. This entails a range of services that support market-orientation, empowering farmers to make informed decisions, manage their farm business, mitigate risks, improve quality and competitiveness (postharvest, branding, certification), and act collectively to link to profitable markets. Evidence shows that access to this broad scope of services is greatly facilitated by engaging multiple service providers from the public and private sectors, producer organizations and civil-society groups in what are known as pluralistic service systems. The institutional landscape for RAS provision therefore represents a growing diversity of service providers with private actors, civil society and producer organisations playing an increasingly active role alongside public sector extension services (Bitzer *et al.*, 2016).

The importance of strengthening and modernizing RAS from a pluralistic and market oriented perspective – covering production, business and market support – has been identified as a priority for FAO programme on rural transformation in the Region (FAO, 2021a). Moreover, equitable access to rural services is an integral part of FAO programmatic approach to inclusive rural transformation and reducing rural poverty, reaffirmed in FAO Strategic Framework 2022–2031, aspiring for *transformation to more efficient, inclusive, resilient and sustainable agri-food systems, leaving no one behind*. Specifically, in working towards *Better Production (BP)* and towards *Better Life (BL)*, through several Programme Priority Areas, including BP4: *Small-scale producers' equitable access to resources*; BL1 *Gender equality and rural women's empowerment*; and BL2 *Inclusive rural transformation*.

In this context, FAO has conducted a regional study entitled “Rural advisory systems in Arab countries:

Making rural services work for small-scale producers and family farmers” under the framework of the Regional Initiative on Small Scale Family Farming (RI-SSFF). The objective of the study was to generate evidence and to identify gaps and entry points to inform policy recommendations and strategic planning to make RAS more responsive to smallholders' livelihood needs, with due attention to women, youth and the most vulnerable producers. It explored the status of RAS from a pluralistic and market oriented system perspective, considering the three dimensions of service demand, service supply and the enabling environment. The regional study draws on in-country assessments carried out in Jordan, Lebanon and Egypt in 2021, following FAO methodological guidelines for appraisal of pluralistic and market oriented advisory services (FAO, forthcoming). Both similar studies conducted by FAO in Oman and Tunisia in 2019 and a wider literature review provided further insights into the status of RAS in Arab countries.

The country-based enquiry was based on: i) a desk-review of policy and regulatory frameworks affecting the overall environment for RAS; ii) the gathering of primary qualitative information from different respondent groups including policymakers (enabling environment), small-scale farmers and POs (service demand) and service providers from different sectors (service supply), by means of focus group discussions (FGD), semi-structure interviews and stakeholder consultations; and iii) analysis based on triangulations of findings related to the above three dimensions, identification of key gaps and elaboration of recommendations to address them. The aforementioned country-based assessments are the main source of data, findings and conclusions presented in this report, when not explicitly cited otherwise.⁴ Key findings and policy highlights from the regional study are synthesized in this report.

Notably, this study was not intended to capture the complexity of extension systems in all domains and all countries in the region. It aimed instead at highlighting common constraints, generating evidence and offering recommendations for policy and programming at

³ Rural advisory services (RAS) refer to all the different activities that provide the information and services needed and demanded by farmers and other actors in rural settings, to assist them in improving their livelihoods by developing their technical, organizational and management skills and practices (Sulaiman & Blum, 2015; Christoplos, 2010). See 2.1 on the use of terms in the context of this paper.

⁴ FAO internal documents: country reports on the assessment of pluralistic and market oriented rural advisory services in Lebanon, Jordan and Egypt; report on the appraisal of extension and related support services in Al-Batinah, Sultanate of Oman; and the assessment of extension and advisory services in Tunisia.

regional level. The overall purpose is to catalyze regional dialogue and inform policy-making on means for the advancement of RAS as pluralistic and market oriented systems that are responsive to the needs of farmers, especially smallholders. By focusing on market oriented RAS the study aimed to signal the importance of giving due attention to smallholder income, profitability and market access when assessing and developing solutions and services to address national priorities in sustainable agriculture and rural transformation.

This does not mean overlooking the immense tasks and challenges that extension and RAS are confronted with in increasing productivity, promoting better natural resource management practices, addressing climate change adaptation and mitigation for increased resilience (including soil restoration and regenerative agriculture), and promoting nutrition sensitive agriculture. These areas already need tremendous

efforts in policy and capacity development (training of extension, advisory and research staff, strengthening of specialized institutions, policy development), with significant implications for RAS and related institutions that merit a dedicated study to give it justice.

The report is organized in 6 sections. This section introduces the background and rationale for the study. Section 2 describes the conceptual framework that guided the assessment and the approaches and tools used to collect data. Section 3 presents an overview of the agricultural and rural development context in the region including the socioeconomic situation and RAS specificities. Section 4 gives key insights from the demand side exploration in the countries under study. Section 5 presents the findings from the supply side analysis. Section 6 elaborates the enabling environment. And Section 7 outlines conclusions and recommendations for the way forward.



2. Framing the complexity of the service system

This section presents the conceptual framework that guided the elaboration of the in-country studies undertaken in Egypt, Jordan, Lebanon and Oman and which provided the theoretical lenses framing the literature review at a regional level. Developed by FAO, the conceptual framework on pluralistic and market oriented service systems (FAO, 2017b) and its methodological guidelines (FAO, forthcoming) allow for a comprehensive situation analysis of the institutional landscape for service provision with a focus on inclusivity and responsiveness to the specific challenges faced by smallholders.

2.1 A word on the use of terms

The terms “extension services”, “advisory services” and “rural advisory services” may often appear interchangeably in different contexts, yet a nuanced difference inevitably remains in their practical application. Clarification on how these terms is used in the context of this paper is therefore essential.

Rural advisory services (RAS) refer to “all the different activities that provide the information and services needed and demanded by farmers and other actors in rural settings to assist them in improving their livelihoods by developing their technical, organizational and management skills and practices” (Christoplos, 2010; Sulaiman & Blum, 2015).

Traditionally, public agricultural extension services have focused on delivering information on production techniques, new crop varieties and pest management, ‘extending’ the knowledge developed by agricultural research to farmers. While RAS eventually encompass a broader scope of services providing support to farmers to improve market access, mitigate and cope with risks, and acquire knowledge on environmental protection, among others. The term RAS therefore reflects a wider range of demand-driven services that agricultural

advisory bodies are increasingly called upon to provide (FAO, 2014a).

The broader RAS support goes beyond technology and information sharing, to include advice related to farm, organizational and business management, as well as facilitation and brokerage in rural development and value chains. RAS further implies the diversity of actors in extension and advisory service provision from public, private and civil society organizations, as well as the need for broadened support to POs and rural communities (Sulaiman & Blum, 2015). This diverse institutional landscape for RAS eventually represents a pluralistic service system, where private actors, civil society and POs play an increasingly active role alongside public sector extension services (Bitzer *et al.*, 2016).

In the context of this paper, we use the term “extension” in reference to public extension services and maintain the term “RAS” for the broader spectrum of advisory service providers, which may include public and non-public sectors. The diverse range of RAS that are concerned with increasing farmer productivity and profitability, addressing their organizational, business and farm management capacities and links to markets are referred to as “market oriented services” (FAO, 2017b). See Box 1 for examples of the range of services entailed for market orientation.

“Inclusivity” in service provision is another important term underpinning the study. “Inclusivity” is understood as an approach to ensure that everyone, regardless of their economic, political and social status or identity (such as race, age, geographical location, gender and ethnicity) is actively and fully involved in and benefit from development processes (FAO, 2022b). Factors such as unequal power relations, poor governance, discriminatory laws, norms and behaviours concur creating patterns of exclusion that may result in lack of access to goods, services, resources, institutions as well as income insecurity and poverty. Advisory services

are considered inclusive when they are: responsive to resource-poor and vulnerable farmers, especially women and smallholders; tailored to the diverse capacities, needs and demands of farmers; nurture continuous dialogue and learning between farmers and service providers; and are based on complementary services by different actors to make services accessible and beneficial to those who need them most (Bitzer *et al.*, 2016). Therefore, recognizing the heterogeneity of the farming communities and their different challenges across contexts while considering factors as diverse as gender, age, assets, natural resource base, farm size, expertise, technology use, proximity to markets and agricultural services is the point of departure to promote inclusivity in service systems.

2.2 Conceptual framework

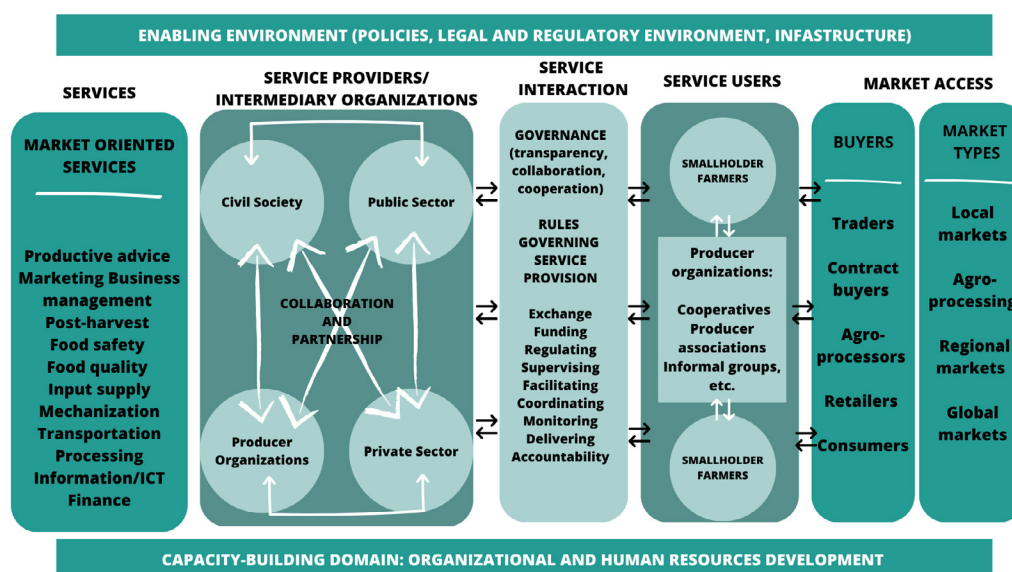
The FAO conceptual framework on pluralistic and market oriented services applied in this study aims to guide policy and programme formulation for leveraging the role of rural services in reducing rural poverty, while favouring the effective engagement of service providers and small-scale farmers in the service system (FAO, 2017b). This vision places the diverse needs and experience of such farmers at the core of the analysis in order to examine the structural factors affecting their access to and utility of services. It further recognizes the diversity of service providers from public, private and civil society organizations that increasingly engage in service delivery. Enhancing this plurality of service

providers opens the possibility for new partnerships and institutional arrangements for more inclusive and responsive service provision. The framework covers the broader set of market oriented services (Box 1) required to enable farmers access to markets, thereby improving their profitability and income. The focus on market oriented services reflects the urge to enhance smallholder livelihoods by addressing productivity, resilience and profitability, organizational and business management capacities, and access to markets.

The conceptual framework on pluralistic and market oriented services, presented in (Figure 1), allows the complexity of a service system to be unpacked by capturing its key elements, namely:

- i. the various actors in the service system – from the demand and supply side;
- ii. the type and scope of services, covering production, business and market support;
- iii. the service interaction reflected in functional relationships within the system, including coordination and partnership among service providers and linkages with service users; and
- iv. the enabling environment, including institutions, policies and regulatory frameworks governing service provision, with a focus on inclusivity and downward accountability.

Figure 1. Conceptual framework on pluralistic and market oriented services (FAO, 2017b)



Box 1. Examples of market oriented services

- » Technical expertise aimed at generating value by increasing the volume and quality of production and the timing of the supply of raw materials;
- » Economics, marketing and business management expertise (e.g. farm enterprise analysis, marketing information and business planning);
- » Postproduction expertise aimed at creating value along the value chain through improved post-harvest handling, packaging, storage and distribution, while meeting food safety and quality requirements;
- » Support in strengthening producer and other value chain stakeholder groups through improved collective marketing, organizational development, business management, financial management, leadership, negotiation skills and linkages with research institutions and other innovation actors;
- » Support in facilitating value chain development and strengthening through improved coordination of production, negotiation of contracts, brand development, linking producers to buyers as well as providing advice on legal, regulatory and certification issues;
- » Facilitating institutional development – forming POs, clusters, networks and linkages among different actors along value chains (e.g. convening multi-stakeholder forums to understand market opportunities and constraints along value chains, develop contractual and trust relations).

Information and communication technologies (ICT) and recent advancements in digital solutions offer powerful instruments for exchange of information and transactions amongst smallholder farmers, service providers and market actors more broadly and at scale.

Source: FAO. 2017b. *Pluralistic Service Systems: Market-oriented services for reducing rural poverty - conceptual framework*. Rome, FAO. <https://www.fao.org/3/i7249e/i7249e.pdf>.

Guided by the above framework, the in-country assessments concentrated on the following dimensions:

- **Service demand side.** This dimension is concerned with the service users, with a focus on small-scale family farmers across different gender and age groups. It explores the diverse challenges they face and their needs and demands for services. It analyses farmers' access to services, the type and affordability of available services, and their satisfaction with and overall perception of service effectiveness. It also looks at how farmers articulate their demands (priority needs), considering their capacities and ability to influence service provision. Emphasis is given to POs owing to their role in amplifying the voice of smallholder farmers, articulating their demands, and mediating with other actors.
- **Service supply side.** This dimension explores the range of service providers and intermediary actors operating in the service system within the public sector, the private sector, cooperatives and POs, and/or NGOs. Notably,

this dimension also takes into account forms of service provision delivered in the realm of informality that are often invisible, yet more likely accessed by smallholders such as peer groups or farmer leaders. The supply side dimension considers aspects such as linkages, collaboration and partnership, complementarities and synergies, inclusive outreach, delivery modality, accountability, monitoring and evaluation (M&E) and funding. Particular attention is given to the clientele/user—supplier relationship and the dynamics and rules that govern their interaction.

- **Enabling environment.** This dimension looks at policy and regulatory frameworks, as well as national and local institutional settings, including their main capacities and adaptability to changing service needs, that greatly influence the efficiency and effectiveness of rural service provision, and how they favour or disfavour small-scale farmers. The enabling environment dimension also considers the broader framing conditions such as agroecology, socioeconomic factors and relevant infrastructure.

2.3 Approach and process

The in-country assessments were carried out as a rapid appraisal of qualitative nature that paid particular attention to inclusivity and gender equality, with data differentiated by gender whenever available, as well as to capturing the structural challenges and constraints affecting smallholders. The elaboration of the in-country assessments followed a step-wise approach as outlined below.

- i. **Orientation and training:** a training and orientation workshop was organized at regional level to introduce the basic concepts and framework guiding the study and train the national teams on the methodology⁵. The workshop engaged government extension officials, national consultants and staff from FAO offices in Egypt, Jordan and Lebanon. A team of FAO professionals from headquarters and the regional office delivered the training and facilitated the discussions.
- ii. **Stakeholder engagement:** a small group of active stakeholders/champions from the public and private sector as well as academia and development organizations were identified in each country to provide strategic support, facilitate access to key informants and contribute to initiating policy dialogue. This was followed by a stakeholder meeting organized at national level to launch the assessment and gauge the interest and views of policymakers and pertinent stakeholders.
- iii. **Defining the scope:** the geographical and sectoral scope of implementation was defined by the national consultants in consultation with the Ministry of Agriculture and the FAO Representation in the respective country. Relevant criteria included selecting a region that has (i) enough diversity to represent the different agricultural, socioeconomic and agroecological features of the country; (ii) a high concentration of smallholders; and (iii) a low concentration of services with untapped potential for smallholder farming.

⁵ Based on the approach outlined in the conceptual and methodological guidelines for Promoting pluralistic and market oriented services (FAO, forthcoming).

- iv. **Identification of key informants:** the assessments took a predominantly qualitative approach, based on focus group discussions (FGD), semi-structured interviews, and online questionnaires. As such, a purposively selected group of key informants was identified in the different locations targeted by the studies, including: (i) small-scale farmers – men, women and youth – (ii) service providers from different sectors (public; private; NGOs; cooperatives and POs); and (iii) policymakers.
 - v. **Review of secondary data:** this included gathering and review of relevant documentation including academic articles, policy documents and grey literature as well as information on socioeconomic aspects, sociocultural and gender norms-, agroecology, macro and micro economic situation and status of infrastructure and ICTs.
 - vi. **Demand side:** gathering of primary data on the demand side relied mainly on focus group discussions organized in person or online engaging smallscale farmers grouped by gender, age and location. Respondents were purposively selected based on their ability to bring in a well-informed point of view and/or their engagement in local dynamics, cooperatives and POs.
 - vii. **Supply side:** primary data gathering to inform the supply side was based on online questionnaires and follow up bilateral meetings with respondents when needed. A general mapping of service providers was first undertaken to identify key actors operating in the target areas of the study and at national level. The mapping served to identify a group of 15 to 30 respondents based on the relevance of their services for small-scale farming and their availability to participate in the study. Respondents from the supply side filled in an online questionnaire structured around the following topics: (i) inclusive targeting; (ii) coordination, collaboration, partnerships and linkages; (iii) capacities and workforce; (iv) accountability, monitoring and evaluation; and (v) financing. Bilateral meetings with respondents were also organized to gather additional information as needed.
 - viii. **Policymakers and expert views:** this included data gathering with policymakers and selected experts through semi-structured interviews. Respondents included public sector officials responsible for extension services and experts from the academia. Interviews aimed to gather and verify information related to the policy and regulatory environment as well as the required institutional settings to reach policy objectives.
 - ix. **Analysis and synthesis of findings:** this step involved the analysis of the secondary and primary data gathered, and triangulation of findings related to the enabling environment, the demand side and the supply side dimensions. The analysis shed light on key gaps that need to be addressed, as well as opportunities and success factors that can be leveraged to make the service system more effective, inclusive, and responsive to smallholders.
 - x. **Stakeholder consultation:** The process concluded with the organization of a stakeholder consultation meeting to present the findings, discuss the recommendations, and initiate a policy debate with key stakeholders at national level.
- Findings of the country studies were fully documented in the country reports that informed this regional synthesis. FAO internal documents: country reports on the assessment of pluralistic and market oriented rural advisory services in Lebanon, Jordan and Egypt; report on the appraisal of extension and related support services in Al-Batinah, Sultanate of Oman; and the assessment of extension and advisory services in Tunisia.



3. Regional overview

This chapter offers insights into the regional context for small-scale family farming and provision of RAS, highlighting key environmental and socioeconomic factors. It sets the stage for the following chapters which analyze the demand for services, the supply of services, and the policy landscape framing provision of and access to market oriented RAS.

3.1 Predominance of small-scale agriculture

Agriculture in the NENA region is characterized by the contrast between the commercial production of a small number of medium to large farms and a larger number of small-scale farms that produce mainly for consumption and for local - urban and rural - markets.

Small-scale agriculture provides more than 80 percent of some annual and perennial crops and livestock produce in the region, (FAO, 2020c) but a number of connected constraints impede its productivity, profitability, and contribution to economic growth. These include limited access to productive assets (land, water and capital), limited farm-business skills, poor links to markets, and the absence of an enabling environment and supportive policies. Moreover, increasingly scarce and fragile natural resources, the impact of climate change and protracted crises are affecting food production in the region.

The average size of a family farm in the region is less than two hectares and is steadily decreasing as a result of population growth and the division of farms on inheritance. About 70 percent of the region's poor currently live in rural areas and are largely dependent on agriculture for their livelihoods; many of these are small-scale family farmers (Impiglia and Lewis, 2019). Insecure land tenure, conflict, water scarcity, soil degradation, decline in rural service delivery and lack of sufficient market infrastructure are some of the contextual elements that affect these farmers. In most countries, more than 75 percent of the agricultural produce is transacted through the traditional marketing

systems where the number of intermediaries is large and the power relations between farmers and the intermediaries are unequal. In Egypt, only large-scale producers in the horticultural sector (vegetable, fruits, cut flowers and medicinal and aromatic plants) use modern methods of production and post-harvest handling. Food quality and safety are also a concern. For instance, in countries like Lebanon, there are very few laboratories to test quality. Facilities for sorting, grading and cold storage are not accessible for small farmers, who are forced to sell at lower prices where there is an oversupply.

3.2 Water, land and climate change

The NENA region is home to diverse agroclimatic zones and agricultural systems – ranging from fertile deltas and river valleys to terraced slopes, arid rangelands and deserts. Yet, water scarcity and soil degradation, coupled with the impacts of climate change, represent a particular challenge of the region with immediate implications for food security and resilience of agrifood systems. Inefficiency in water usage is likely to emerge as an increasingly large threat to regional inhabitants, as 15 countries already face extremely high levels of baseline water stress. Failure to incentivize more efficient water management and use may bring dire economic and environmental consequences (IFPRI and FAO, 2018).

The region's soils suffer from severe, ongoing degradation; threequarters of its 30 million hectares of rainfed cropland is estimated to be degraded while water erosion is predominant in areas with sloping lands. Wind erosion represents another important threat (ESCWA, 2017). This land degradation is being accelerated by a lack of proper land records, and tenure issues associated with land fragmentation. For instance, the Lebanese land market is constrained with large registration and transaction costs as well as debilitating rental terms. The lack of clarity on roles and responsibilities hinders proper management of

common lands, which leads to overexploitation for grazing, quarrying and agriculture (FAO, 2021c). Most of the land in Jordan belongs to the state or treasury, limiting the access to land for agriculture (World Bank, 2018). Agricultural holdings in Egypt have become increasingly smaller over the years, starting with the agrarian reforms that put a cap on individual land holding and the subsequent divisions according to inheritance laws. The average landholding in Egypt is now between 0.8 and 0.9 feddans (1 feddan = 0.42 ha).

3.3 Conflicts and protracted crises

Several countries in the region – Iraq, Lebanon, Libya, Palestine, Somalia, Sudan, Syria and Yemen – endure conflict and protracted crises that are major drivers of food insecurity... These crises have caused food insecurity to increase by 17.3 percent since 2014 (FAO, 2021d). In these countries affected by conflict, the level of undernourishment is six times higher, while the level of severe food insecurity is almost twice as high as in other countries in the region (FAO, 2021d). By end of 2020, the prevalence of food insecurity in conflict affected countries was about 60 percent in Syria, 38 percent in Palestine and 12 percent in Iraq, while 45 percent of the population in Yemen were in humanitarian crisis (FSIN, 2021).

Displacements and forced migration are a widespread outcome of the protracted crises in the region, especially among the growing youth population segment (FAO *et al.*, 2020). Syria and Yemen had some of the highest numbers of internally displaced people (IDPs), with both countries facing two of the world's worst food crises. By end of 2020, there were an estimated over 7 million Syrian refugees mostly living in the neighbouring countries, while 6.7 million were internally displaced (IDP).

Conflict and displacement have detrimental impacts on livelihoods, including through the disruption of productive activities, markets, and trade and the interruption of farmers' access to their lands and pastures. While conflict erodes infrastructure, services and agricultural land, displacement robs millions of their livelihoods. Those returning to their lands face numerous challenges in resuming their production, not least in relation to inputs, services and infrastructure (FSIN, 2021).

Conflict has especially harsh effects on youths, disrupting them at a moment when they are transitioning to social and economic independence. In the absence of viable pathways to support themselves, young people are forced to wait, to migrate in search of better opportunities or to join the fight, either willingly or unwillingly (through conscription IFAD, 2019).

3.4 Women in agriculture and their access to resources and services

The agriculture sector in the NENA region represents an important source of livelihood for women. It caters for almost a quarter of employed women (FAO, 2022c) in the region, with significant variations across countries. In Lebanon, 43 percent of the agricultural labour force is made up of women, engaged predominantly in food processing, weeding, harvesting and postharvest. In Jordan, the majority of labor in agriculture falls within the informal sector, including refugees and a good portion of poor and marginalized segments of the population. While women formally represent 4.36 percent of all those employed in agriculture, forestry and fishing (FAO, 2019a), a large portion also work in the realm of informality (UN Women, 2018). In countries like Egypt, Mauritania and Yemen, agriculture employs more than 40 percent of economically active women (FAO, 2018b). However, much of the work carried out by women is unpaid and/or informal, and therefore it is not recognized or valued in national economic accounts. Operating in the realm of informality prevents women from accessing legal protection and social security (FAO, 2022c).

In the region, women land ownership is limited by gender inequitable laws and traditions. Although regional data are hard to find on land ownership, it is estimated that women own less than 10 percent of agricultural holdings. Of the total landholders in Egypt, women represent only 5.72 percent. In Oman, only 10 percent of farms and less than 3 percent of total farmland is owned by women. Despite the progress achieved in the past decades in closing the gender gap in education, illiteracy rates are still higher among women, especially in rural areas, making it more difficult for them to defend their property rights (Badr, 2010). Added to this, a lack of land ownership limits

women's opportunities to access credit and join rural organizations as members and recipients of relevant services.

Gender inequitable social norms along with gender-blind policies and institutional frameworks that fail to recognize women's needs and constraints translate into limited access for women to productive resources (land, water and inputs), capital, services (productive and business advisory), markets, technology and rural infrastructure (FAO, 2014b; FAO, 2018b). Women's mobility constraints and time poverty (resulting from their disproportionate share of household and care work) add to the challenges they face in seeking support from specialized service providers. The absence of women extensionists can also represent an added obstacle, where social norms prevent women from interacting with men outside the family network. For instance, in Sudan, women farmers suffer from marginalization, which is manifested in poor access to productive resources and services. They are generally limited to the practice of traditional, small-scale production, primarily for subsistence and local consumption (FAO, 2021d).

3.5 ICT infrastructure

Information and communication technology (ICT) infrastructure and logistics in most countries in the

NENA region are improving, even if they remain mostly average when compared to other countries worldwide. Gulf countries generally have more advanced roads and ports at their disposal, as well as welldeveloped ICT infrastructures, compared to other countries (Gehem *et al.*, 2015). Internet use is variably spread in the region. For example in 2018, individuals using the internet in Jordan, Egypt and Lebanon constituted about 66.8, 71.91 and 84.1 percent of the population, respectively (ITU, 2020). Notably, the cost of internet subscription remains reportedly prohibitive for a large portion of farmers in various countries such as Lebanon.

Indeed, the significantly young population and their increasing access to mobile technologies offer an interesting potential for digital agriculture transformation. Experiences of digitized advisory service are emerging from countries like Egypt, Jordan and Iraq, where governments are showing increasing interest towards the potential of digital agriculture and extension services. Nevertheless, for a broad-based adoption of digital agriculture and agricultural services, the digital skills of the population, especially women, youth and rural populations need to be addressed. To reap the potential of digital tools for market oriented farming, investments are needed – not only in terms of digital skills and capacities but also in rural ICT infrastructure.



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4. Demand side

The previous chapters inferred the need of farmers, especially small-scale farmers, for a wide range of services to enhance their capacity to deal with constraints and increase their production and income from agriculture. The needs of farmers for services vary depending on the agroclimatic conditions (e.g. rainfed vs irrigated); size of farm and resource endowment, cultivated crops (e.g. cereals vs horticultural crops), gender (men vs women), and how the different challenges and current crises affect their livelihood. Understanding the perspectives of service users is critical for designing policies and better programmes with tailored services in this regard.

In an attempt to capture farmer voices and needs, this section offers insights into the experience of farmers who participated in focus group discussions (FDGs) conducted in Egypt, Jordan and Lebanon. These discussions were carried out with homogeneous groups of male small-scale farmers, women farmers, and young farmers from selected areas diverse in agroclimatic conditions and socioeconomic aspects.

4.1 Main challenges faced by farmers

Lebanon

In Lebanon, the impact of the current financial crisis has affected all interviewed farmers. The high cost of inputs and lack of access to these inputs have impacted farm profitability and were considered among the most important challenges. Small profit margins and lack of access to savings and finance leave small-scale farmers with little possibility to deploy more capital or labour. Due to the depreciation of the Lebanese pound (LBP) by 83 percent (as of July 2020) and cash flow problems, the import of several agricultural inputs has stopped. The cost of basic agricultural inputs has risen by 400

percent, and the cost of production has generally increased by more than 50 percent across various agricultural systems (ESCWA, 2020).

Egypt

In both Upper and Lower Egypt, the main challenge faced by small-scale farmers (including men, women and youth) is the low profitability of agriculture, which is an outcome of low production, small landholdings, high cost of inputs, high cost of labour to harvest crops, lack of access to high quality inputs and low prices of agricultural produce. Marketing remains a key challenge for smallholders along with lack of market information from agricultural extension. In Lower Egypt, the small farmers face an additional challenge of insufficient and irregular access to irrigation water. Access to markets was also indicated as central challenge.

Jordan

In Jordan Valley and Irbid, FDGs revealed that the main challenge for small-scale farmers is related to access to markets. Buyers – brokers especially – set low prices, and farmers have no access to external markets. Water shortages, water quality, and high costs of production are additional challenges faced by farmers in Jordan. Farmers are confronted with high costs of agricultural inputs (especially fertilizers and pesticides), electricity (for water pumps), land rents, transportation, and the costs involved in labelling and packaging, in addition to deteriorating infrastructure and shortage of modern technology and agroprocessing equipment. These constraints are disproportionately affecting women given their lower access to finance, limited mobility and often power asymmetry in their interaction with providers of information, inputs and technology. The absence of effective extension and RAS further aggravate these challenges.

Oman

Similarly, the main challenge that farmers face in Oman is **marketing**. A dip in prices due to oversupply of seasonal vegetables is common and results in low prices and low income. High production and transportation costs, higher pesticide residues, increasing water salinity and lack of postharvest facilities undermine farmers' ability to compete in domestic and export markets, especially as they lack support services and market information.

4.2 Access to services

In **Lebanon**, farmers generally indicated that **advice and support** on production practices is more accessible than advice and support on input or output markets, entrepreneurship and farm and business management, marketing, post-harvest, financial and legal aspects. On top of this, current services are yet to reach the majority of small-scale farmers, particularly women, who still face additional constraints in accessing RAS such as limited time and mobility restrictions.

The majority of the interviewed smallholder farmers rely on their own knowledge and experiences and on technical advice from fellow farmers. However, large farmers depend to a large extent on **input supply** companies for both technical and other advice. Fruit farmers, greenhouse farmers and beekeepers are supported by POs and cooperatives for **technical and other market oriented services**. Both the women and men smallholders interviewed confirmed that farmer associations, cooperatives and POs do represent an important source of advice, especially related to marketing.

In Upper **Egypt**, small and large-scale farmers noted their dependence on their own experience and traditional practices due to lack of **advisory services**. In Lower Egypt, farmers noted that they depend mainly on the village extension workers (VEW) of the public extension services for advice. Respondents noted that advisory services are generally limited in scope to farming aspects, including cultivation practices and pest management and in some cases market information. They also get advice from **input supply** dealers and agricultural cooperatives on these aspects. **Awareness seminars** organized by VEWs were

considered by farmers in Lower Egypt as an important mechanism for accessing services.

In **Jordan**, farmers do refer to the extension offices of the MoA as their preferred source of information. At the same time, they experience low outreach of extension agents, whose work is constrained by understaffing and limited access to transport and ICT (laptops and mobile phones). This affects extension worker capacity to cover all areas and to provide adequate and regular fieldbased support as required by farmers, women in particular. Around 50 percent of respondents appreciated or benefitted from the role of farmer field school⁶ (FFS) as an effective capacity development approach. However, access to essential information on business aspects and market prices is often absent. Other sources of information include private sector, input suppliers and POs. Men and youth groups indicated that sometimes the information provided by the private sector contradicts the knowledge from the public sector; as such they tend to rely on public services, which they trust more. Most farmers trust other farmers' experiences (especially bigger farmers) and benefit from them.

Producer cooperatives, where they exist (e.g. the Guava Cooperative in Jordan), serve as a mechanism for articulating the demands of farmers and in providing **advisory support**, especially on technical aspects related to good agricultural practices, pest management and postharvest handling. Women cooperatives also provide advisory services on food processing, good practices in food preservation, making jams, and packaging of processed products in both Jordan and Lebanon.

In **Oman**, public extension staff reach farmers through workshops and field visits, but their focus is entirely on addressing **technical aspects** related to production, including plant protection, whereas the major problems farmers currently face are related to marketing. Farmers consider input suppliers as the main source of advice on new inputs (seeds, fertilizers) and market preferences. While large farmers are better connected to different types of service providers, small farmers often have less access and limited connections. This is due to their dispersed production, lack of capacities to invest in better technologies, and the means to advocate for their demands. Successful cases of collective action in Oman include the Omani Farmers' Association (OFA)

⁶ Developed by FAO in 1989, the farmer field school (FFS) is a farmer-centric and non-conventional education approach which focuses on creating a collaborative platform for hands-on group learning engaging 20±30 farmers from the same locality, supported by a trained facilitator.

for horticultural producers in Al-Batinah, and the Aflaj water user associations for collective management of ground water systems in the Sultanate. In both cases, services are limited to members of the respective association – mostly large-scale farmers in the case of OFA and customary water source shareholders in the case of Aflaj.

In **Tunisia**, the majority of farmers who participated in the FGDs reported use of at least one type of RAS, with **public extension** the most prevalent. Farmers, however, also noted that insufficient numbers of extension agents and their limited visits to farms and fewer trainings affect the quality of advice, which is often poorly adapted to farmers' needs and changing challenges. Farmers also depend on **input suppliers** for advice related to input use when they buy these inputs. However, many farmers do not consider the advice of these suppliers as impartial, given the business interest of the provider. Family members, neighbours and lead farmers are other potential sources of information.

4.3 Demand for services

In **Lebanon**, the majority of small farmers who participated in the FGDs would like to receive support on **good agronomic and plant protection practices** as well as advice related to quality and food safety. Beyond technical support, the most urgent aspect was support on **marketing**. More specifically, the farmers need support on collective marketing, brand development, negotiation of contracts, food safety and quality aspects. The second priority of farmers is to upgrade their skills related to farm **business management** (farm enterprise analysis, market information and business planning).

In **Egypt**, the need for services is similar among small farmers consulted in both regions (Upper and Lower Egypt). Priorities include **access to market information**, advice on **inputs** (quality, sources and prices) and advice on **good agronomic practices**. In addition to these demands, women farmers in Upper Egypt expressed the need for specific training in food processing and modern handicrafts. In Upper Egypt, farmers noted that they do not have any mechanisms to articulate their demands and influence the design and delivery of needed services as public extension services are all but absent, whereas in Lower Egypt, farmers indicated

that they can articulate their demands through VEWs. The question remains whether these demands reach decision-makers or influence RAS programmes.

In **Jordan**, the services needed the most by men farmers include advice on **pest management** and on-farm advisory support. The majority of **women** farmers interviewed demand training on plant protection, modern agricultural practices, home garden cultivation, food processing, labelling and packaging of produce. In addition, support for diversification and new rural income-generating activities targeting women farmers is also needed. However, services providing **training** that responds to these needs are often not available. Also, public advisory services do not regularly consult farmers on design of extension services; however, farmer feedback is generally considered to improve service quality.

In **Oman**, farmers are keen to get an integrated package of services that include **technical, economic and marketing solutions**. Currently, they have to approach different service providers to address the multiple problems they face. They also need support to enable them to make **informed business decisions** that can enhance farm profitability.

4.4 Takeaways

To sum up, based on the insights from the respondents, farmers in the region, especially smallscale farmers, face challenges on multiple fronts related to **production** (cultivation practices to plant protection), **post-harvest** (handling to storage) and **marketing** (market information to collective marketing in high value markets). Yet, they generally receive very limited support to address these challenges. While **public services** exist, their reach is limited and are mostly related to advice on production aspects, whereas most farmers face considerable challenges related to market aspects, including accessing quality inputs at a reasonable price and securing profitable prices for their farm produce.

Private sector input suppliers do provide useful services by introducing seeds of new varieties, fertilizers and pesticides, though farmers do not view their advice as impartial, as they suspect it to be more aligned to the business interests of the dealers. Increasingly **producer associations** are coming forward to provide

services on production, post-harvest and marketing to their members, as seen in Lebanon, Oman, Tunisia and Jordan. While many of them are successful in promoting collective action to address farmer challenges, the scale of such initiatives is still limited. Some of the more promising initiatives are discussed in the next chapter.

Notably, the involvement of small-scale farmers in planning or improving service delivery through systematic feedback channels and grievance mechanisms is limited, as emerged from respondents' accounts in the focus countries. This has implications for the effectiveness of the service system in terms of ensuring accountability, inclusivity and responsiveness to the needs and demands of farmers. Power asymmetry in client–user relationships pose additional challenges, particularly for small-scale farmers and women. Smallholder participation in farmer associations is limited, hence **their capacity to advocate and influence service provision** remains also limited.

Farmers need a wide range of advice and support that goes beyond the prevalent technical areas of natural resource management, crop production and plant protection services. They require services that facilitate **access to quality** inputs and post-harvest facilities, links to **more efficient markets** where they can get fair prices, and **empowerment** to make informed decision and operate their farms more profitably. Considering the significant challenges faced by small farmers, not least in accessing services and markets, attention is needed to promoting farmer organization and enhancing their capacities for collective economic action.

In conclusion, modernizing RAS from a **pluralistic and market oriented perspective** calls for a holistic, integrated approach to address the diverse priority needs of smallscale farmers for technical, business and marketing support, while fostering institutional strengthening and collective action among producers and service providers from different sectors.



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5. Supply side

The importance of agricultural and rural development in the NENA region has long been recognized. National governments, through their respective ministries of agriculture, have invested in both research and extension services mainly to enhance development and promotion of new technologies that could help farmers enhance the productivity and income from agriculture. Over decades, public extension services have experienced declining resources and reduced staffing due to low expenditures and investments in the sector. With farmers facing increasing challenges requiring more diverse services, the private sector, cooperatives, farmer groups and NGOs have all come forward to varying extents to provide their services, including in the areas of natural resource management, postharvest, farmer organization, farm business, and access to markets. This section discusses the contributions of the diverse service providers, the type of services they provide, and the current challenges they face in providing effective services to farmers.

5.1 Pluralism in rural advisory service provision

Extension services delivered by the public sector agencies in the region are primarily technical with varying levels of reach and efficiency as discussed earlier in the section on demand for services. On the other hand, there has been an increasing role for non-state service providers reflecting pluralism in the delivery of RAS and diversity in the type of services provided to farmers.

5.1.1 Public sector

Every country in the region has a government-run mechanism for provision of extension services to help farmers adopt new knowledge about improved technologies and practices. These agencies are mostly part of the national ministries of agriculture. For example, in Egypt the agricultural extension sector is under the Ministry of Agriculture and Land Reclamation (MALR); in Lebanon, the General Directorate of Agriculture under the Ministry of Agriculture is responsible for public agricultural extension; in Oman, the General Directorate of Agriculture and Livestock under the Ministry of Agriculture and Fisheries is responsible for the provision of extension services; while in Tunisia, the Agricultural Training and Extension Agency (AVFA) under the Ministry of Agriculture, Fisheries and Water Resources (MAHRP) is responsible for supporting extension.

Apart from these organizations primarily responsible for public extension services, there are also other organizations under the public sector that are involved in the delivery of extension and RAS. For instance, public agricultural research institutions also engage in the provision of extension advice to a varying extent depending on the country. Additionally, agricultural research institutions have an important mandate to train the extensionists on new agricultural technologies. Box 2 provides examples of public sector institutions involved in the provision of RAS in selected countries in the region.

Box 2. Public sector institutions involved in the provision of rural advisory services

- » In Egypt, the agricultural extension sector (AES) is a lead unit under MALR, with the Central Administration for Agricultural Extension and Environment (CAAEE) mainly responsible for agricultural extension work. While CAAEE operates at the central level, the extension services at the governorate level are led by the Directorate of Agriculture which oversees the extension agents at both district and village levels in respective governorates. To support extension communication and media production, MALR established four development support communication centers (DSCCs) that produce extension teaching and training material and organize extension events inside DSCC facilities or in the villages in the surrounding governorates. At the village level, extension activities are coordinated through the network of more than 210 agricultural extension centres (AECs) and 60 Rural Development Centres (RDCs) established by the CAAEE. The Agricultural Research Centre (ARC) which is primarily responsible for agricultural research also supports extension delivery through introducing new technologies to the farming community, monitoring their adoption by end users; and technical training of extension staff.
- » In Jordan, the Extension Department of the Ministry of Agriculture is the main provider of extension services alongside the Ministry of Water and Irrigation (MWI), the Jordan Valley Authority (WJ), and the faculties of agriculture in public universities. The Ministry of Agriculture is the most accessible and utilized source of advisory services for smallholders, supported by the National Agricultural Research Centre (NARC). NARC consists of eight research centres and fifteen research stations distributed to cover most of the Jordanian regions.
- » In Lebanon, RAS are provided through 32 agricultural service centres operating at district level under the General Directorate of Agriculture. Additionally, 7 agricultural vocational schools provide for technical skills development for youth in rural areas. The Lebanese Agricultural Research Institute (LARI) which is mainly mandated to conduct basic and applied research on agriculture also provides advisory services through its eight research stations. More recently, LARI has developed a smart phone application called LARI-LEB to provide technical advice to farmers.
- » In Tunisia, AVFA supports the extension field programmes developed by the 24 Regional Commissaries for Agricultural Development (CARDAs). In addition, there are 181 functional territorial extension centres at the field level. Apart from these, the National Institute of Crops (INGC) also organizes extension and training activities in Tunisia. INGC has an agreement with AVFA to train CARDA extension staff. The Institution of Research and Higher Education in Agriculture (IRESA), the main agency responsible for organizing agricultural research in Tunisia, is also involved in organizing limited extension activities.

Generally, a Rural Women's unit exists within ministries of agriculture, offering advisory services to women. These units often promote women's economic empowerment leveraging women's engagement in processing, value addition and collective action.

The advisory services provided by the majority of public organizations discussed so far are mostly technical in nature, addressing plant production and protection practices, as well as advisory services on irrigation/water use efficiency offered by relevant sections of the ministries of water resources and irrigation. Notably, the above-mentioned agricultural institutions provide limited support to farmers on aspects related to farm business, marketing support, postharvest handling and

access to inputs and outputs markets (market oriented services). However, there are several other public agencies that directly or indirectly support access to market oriented services in these countries. These include the public agencies involved in promotion and development of small and medium enterprises, public sector banks and credit organizations, and vocational training institutions under the ministries of education and ministries of social development, for instance.

5.1.2 Private sector

Generally, the most dominant form of private sector delivery of advisory services is happening through the input suppliers and agrodealers who sell inputs such as seeds, fertilizers, pesticides and agromachinery. In Lebanon, the private sector is the main source of such information to farmers given the decline of public sector extension services during the past decades. Jordan has around 460 small, medium and large companies involved in different forms of agribusiness. Many of them sell farm inputs and machinery while others are engaged in landscaping and import and export of agricultural products. In Egypt, private companies that are engaged in the export of specific commodities (e.g. grapes, potatoes, medicinal and aromatic plants) provide producers with an integrated and comprehensive technological package for crop production (Dhebibi *et al.*, 2018). In 2011, there were 1865 private companies engaged in the provision of agricultural advisory services in Egypt, with a total issued capital of USD 448 640 (El-Shafie *et al.*, 2011; Dhebibi *et al.*, 2018). In Oman, Tunisia and Yemen, input suppliers, local traders and exporters of agricultural products advise farmers on input use and desired quality parameters of products that can help achieve better prices. In all these cases, the services are provided free of charge as part of the transactional relation of sale of inputs or purchase of products (embedded services). While this type of advice is often provided remotely without field visits, some input suppliers do organize practical demonstrations and field days to inform farmers on the use of new products; this though is more relevant for high value agriculture and better-off producers. As valuable as these services are, they are often driven by the supplier's interest in favouring the sale of specific inputs and products, potentially risking the partiality of advice. For instance, in Lebanon, there is a prevalent perception that aggressive promotion of chemical fertilizers and pesticides has led to the disproportionate use of agrochemicals resulting in high chemical residues and low marketability of products.

In **Tunisia**, private advisors, both retirees from the public sector and fresh agricultural graduates, offer paid agricultural advisory services. There are 366 certified agricultural advisers in Tunisia as of 2019. In **Lebanon**, there is a private sector company in the cherry and apple value chains that advises farmers on best

farming practices and provides pruning, grafting and spraying services on payment of fees. The Agriculture Department at the Chamber of Commerce, Industry and Agriculture (CCIA) in Beirut and Mount Lebanon initiates and coordinates actions that are associated with the development and promotion of Lebanese agricultural activity. The USAID has supported the CCIA in Tripoli to develop value chains for honey, olive oil and dried fruits, and the chamber's services are used by entrepreneurs for testing and storing products. In **Oman**, the Oman Chamber of Commerce and Industry organizes feasibility studies to explore the potential of products in the international markets, albeit this is of immediate interest and benefit to only large-scale farmers who can compete in the international markets.

5.1.3 Non-governmental organizations (NGOs)

International organizations and NGOs are active in promoting enterprise development especially for women farmers, including agriculture market analysis and advanced project financial management. For instance, the Aga Khan Development Networks' (AKDN) Agriculture and Food security programme in **Egypt** established in 2007 through Om Habibeh Foundation in Aswan in South Egypt promotes environmentally sound agricultural practices and supports the creation of an enabling environment for agricultural economic activities within the local villages where it operates. The programme has also contributed significantly to the inclusion of Egyptian women farmers in the agricultural industry. The Fayoum Agro Organic Development Association (FAODA) promotes organic farming through organizing workshops, seminars and awareness campaigns. It also promotes eco-tourism along with the production and marketing of handicrafts (FAO, 2018c). Other NGOs working in the agricultural sector, such as the Cooperation for the Development of Emerging Countries (COSPE Egypt), support establishing of marketing linkages for smallscale farmers, provide advisory services, promote food processing activities, promote organic agriculture, organize food trade markets, and support the development of handicrafts to enhance the income of farmers.

In **Jordan**, NGOs like Eco-consult and the Jordanian Hashemite Fund for Human Development (JOHUD) bring on board advisors with capacities and skills in business management, project feasibility studies, and marketing. They provide diverse market oriented services through introducing new farming practices (e.g. hydroponics), relevant technologies, capacity development and on-site technical support; this creates market and value chain linkages, improves, postharvest handling; and links farmers with financial services. JOHUD has established community development centres (CDCs) and committees to implement and reach their developmental activities among vulnerable communities (JOHUD, 2021). In support to farmers and rural people, JOHUD facilitates marketing produce through CDCs implementing rural market programmes. In addition, the professional Jordan Agricultural Engineers Association facilitates capacity development to empower agricultural engineering graduates and improve their competence in research, extension and education through dedicated vocational training programmes (JMoEv, 2020; JAEA, 2021).

In **Lebanon**, NGOs such as Green Orient, Michel Daher Social Foundation, Rene Moawad Foundation and Lebanese Association for Development (Al Majmoua), Cooperation without Borders for Tailored Development (CWB), Safadi Foundation, and Fair Trade Lebanon are some of the major non-government actors supporting related RAS interventions.

5.1.4 Farmer collectives

Farmer collectives in the form of cooperatives, water user associations, POs and women groups are engaged in providing both technical and market oriented services to farmers.

Agricultural cooperatives in **Egypt** are among the largest in the world, grouping over 7000 organizations and 18 million members. However, their image has considerably eroded over the years due to their weak performance. In most cases, cooperatives were used only as a venue for distributing fertilizers. In **Jordan**, the Guava Producers' Organization is playing a key role in providing members with technical advice related to good agricultural practices and post-harvest handling. The association provides technical advisory services and trains its women members on preparing value-added products from guava. Also in **Jordan**, women

cooperatives organize capacity development through skills-oriented training on paper-making, weaving, ceramics, food processing, quality control, and packaging, as well as knowledge-oriented trainings on use of ICT tools and advanced technologies. Iraq Al-Amir Women cooperative society (Alzyoud, 2016) and Ikhilia Women Cooperative (ActionAid Palestine, 2021) are examples of such cooperatives.

In **Lebanon**, Cooperatives des Coteaux d'Heliopolis in the Bekaa Valley constructed a 23 000 cubicmeter artificial lake with a distribution and irrigation network to its members' vineyards. This cooperative provides advisory and training services on production, monitoring of vineyards and water management, and it helps members identify and enter new markets. It also facilitates member links with financial and legal services and access to government-subsidized inputs (equipment or tools, seeds, seedlings, or other agricultural inputs and veterinary medicines). The cooperative supports its members to sell their grapes in export markets. Darb-Echtar Cooperative works permanently with 15 olive farmers and purchases olive oil from an additional 50 to 100 farmers including smallholders. This cooperative provides non-member farmers with production advisory services at a fee which is 25 percent lower than what private companies charge and offers an additional discount for members. More than 100 farmers benefit from the cooperative's tilling, spraying, mechanical harvesters and olive oil milling services.

In **Oman**, the Omani Farmers Association (OFA) accounts for almost 155 members, all of whom are family farmers. It facilitates member access to inputs, credit facilities and marketing services within and outside the country and encourages farmers to adopt modern agricultural technologies and apply good agricultural practices in farming. It purchases inputs in bulk to reduce the costs and provides its members with technical advice, training and export-oriented services including packaging and labeling.

The Omani Women's Association offers capacity development programmes for the socioeconomic empowerment of women. However, the association's efforts in extension and advisory services are not much evident. There is scope to establish linkages with other stakeholders in the service system and to support the development of a comprehensive plan for gender-sensitive services in the agrifood sector (MOSD, 2021).

In **Tunisia**, the Tunisian Union of Agriculture and Fisheries (UTAP) is a national trade union and developmental organization providing technical support to farmers through its support and extension unit that operates directly in the field. The Tunisian Farmers Union (SYNAGRI) is another farmer collective which has recently completed a project on supporting rural women.

5.1.5 International cooperation

International agencies, including the Food and Agriculture Organization of the United Nations

(FAO) and the International Fund for Agricultural Development (IFAD), are implementing agricultural development programmes in partnership with national governments, bilateral donors and resource partners. A number of these initiatives are aimed at: **strengthening the functional capacities of POs** (FAO, 2020d), **promoting and strengthening agricultural value chains and enhancing access to rural finance** (Akroush, 2018), and **promoting climate-resilient livelihoods and integrated nutrition-sensitive investments** (IFAD, 2021). An example of these initiatives is described in Box 3.

Box 3. the Sustainable Agriculture Investments Livelihoods (SAIL) Project funded by IFAD

- » In Egypt, the IFAD funded Sustainable Agriculture Investments Livelihoods (SAIL) Project (2015 to 2023) implemented in Upper, Middle, and Lower Egypt targeted, among others, building farmer capacities in production and water harvesting techniques through farmer field school (FFS) led by FAO. In total 172 FFS are targeted during the project lifecycle. To better link farmers to market, the project has also created five marketing associations (MAs) and trained the boards members on topics related to marketing, contracts negotiation, financial literacy, budget management, etc. Currently the MAs are working closely with farmers either directly or through agricultural cooperatives (ACs). The MAs are facilitating contacts between producers and potential buyers, and receive a small percentage when deals are signed. The MAs also in some cases directly buy farmers' produce and sell it to traders located in other regions.
- » The noted ongoing success/achievements of the MAs in terms of market connections and collaborations/agreements with producers is mainly due to the fact that these MAs were able to count on the collaboration and the logistical and financial support of the ACs. The latter provided in some cases storage facilities to aggregate the produce to be sold and also provided funding in terms of loans (three to four months term) with very low interest rates (around 3 percent) to the MAs, which were then able to provide working capital to the producers and secure the agreed upon traded productions. The fact that members of the MA boards are also members of the ACs boards was a positive factor in the facilitation and collaboration process.

In 2019, FAO successfully introduced the **farm business schools (FBS)** approach in Lebanon, developing and adapting the FBS training package in Arabic and rolling out the approach for the first time in the region. These schools constitute a curriculum-based participatory

approach developed by FAO to strengthen the capacities of service providers and farmers in transitioning towards market-orientation and "farming as a business". Box 4 describes this case as a relevant experience that offers valuable learning and insights in this respect.

Box 4. farm business school in Lebanon

- » Farm business schools represents a curriculum-based and participatory extension approach, which aims to promote market orientation and “farming as a business” through expanding the scope from increasing productivity to improving farm management and profitability. In 2019, FAO, in collaboration with the Lebanese Ministry of Agriculture (MoA), successfully launched FBS in Lebanon – and for the first time in Arab countries – within the “Promotion of Agricultural Livelihoods and Employment through Investment in Land Reclamation and Water Reservoirs” project funded by the Kingdom of the Netherlands. In this context, it adapted and contextualized the FBS training package and developed the Arabic version to fit the context and needs of farmers in Lebanon and other Arab countries. Operating at village level, the farm business school applies a “learning-by-doing” participatory and experiential approach introducing business and management concepts in simple language format that is accessible to people with basic literacy and numeracy skills.
- » Through this programme, 91 farmers, including 25 women, were able to improve their knowledge in topics like farm records, costs and profitability, simple farm investment analysis, market appraisal and farm business planning. Male. Men and women participants were engaged in theoretical and practical group exercises and case studies and worked on their own farm businesses over a period extending from 12 to 15 weeks covering the production cycle from planning to marketing. Each FBS group consisted of 8 to 14 farmers guided by a facilitator who was often an extension agent or a lead farmer from the same region.

Source: FAO.2022c. *Farm Business Schools: the Lebanese experience*. In: FAO. <https://www.fao.org/lebanon/programmes-and-projects/success-stories/fbs/ru/>.

5.2 Coordination mechanisms, networking and knowledge sharing

In an increasingly pluralistic institutional landscape for service provision, coordination is needed among the varied actors and service providers. However, as emerged from the review of country studies, coordination is very low among the public, private, NGOs and farmer collectives, as each actor designs and implements their interventions independently. Research–extension linkages also remain problematic in most countries despite attempts made to establish functional linkages, including to bring both agencies under one organization (e.g.: NCARE in Jordan and CAAEE within the Agricultural Research Centre in Egypt). Such mergers are not necessarily desirable, as both institutions have different organizational dynamics and management needs. What is required are joint objectives and programmes and open communication channels that facilitate effective linkages and collaboration.

Roles and relations between government and non-state actors are often unclear and collaboration modalities are usually unstructured and not formalized. Examples of effective public–private partnerships in service provision are generally lacking in the countries under study – Egypt, Jordan and Lebanon.

Nevertheless, there are exceptions led by the private sector to promote coordination. In Egypt, examples include the AGRIMISR e-platform strengthening private sector partnerships in agriculture and the Horticultural Exporting Improvement Association (HEIA) that serves commercial export-oriented farmers. These are good examples, albeit ones that do not necessarily benefit smallscale farmers. In Lebanon, there is no mechanism within the government to either facilitate or regulate the activities of other stakeholders in the delivery of RAS. However, the Chamber of Commerce, Industry and Agriculture serves as an informal coordination platform with farmers and the industry, and they also conceive memorandums of understanding with the different ministries. There are also a few coordination platforms related to the provision of RAS promoted by the private

and non-profit sector – such as the Basatine Consortium promoting innovative digital solutions for small-scale farmers and the QOOT cluster of business initiated by Berytech catering the efforts of agribusinesses for innovation in the agrifood sector. Jordan, like Egypt and Lebanon has no policies or regulations in place that articulate the importance of collaboration, clarify the role of state versus non-state actors or elaborate modalities for collaboration, including public-private partnerships in strengthening RAS delivery.

Although the importance of promoting RAS networks at all levels (local, national and regional) has been

long discussed in various fora, to date there are no platforms that can bring the pluralistic actors together to improve RAS in these countries. Experiences across the globe indicate the value of such country level platforms of RAS providers in ensuring collaboration, learning and coordination among providers. The Global Forum for Rural Advisory Services (GFRAS), and its regional, subregional and country fora is a point of reference here (Box 4). The importance of having such local, national and regional platforms in the region was articulated by the varied stakeholders in each of the countries studied.

Box 5. The Global Forum for Rural Advisory Services (GFRAS)

The Global Forum for Rural Advisory Services (GFRAS) was established in 2010 to provide advocacy and leadership for a pluralistic and demand-driven RAS for sustainable development. GFRAS aims at enhancing the performance of RAS to better serve farming families and rural producers, thus contributing to improved livelihoods in rural areas, and working towards the sustainable reduction of hunger and poverty, and achieving UN Sustainable Development Goals (SDGs).

GFRAS works to improve services for smallholder farmers via its 18 regional networks and more than 40 country fora. The regional networks engage in regional advocacy and knowledge management and provide financial and mentoring support to national platforms. The national platforms or the country fora include actors from all sectors active in RAS that work directly with smallholders. National platforms help prioritize national-level issues and formulate demands to be taken to the regional and global levels. Through this programme, 91 farmers, including 25 women, were able to improve their knowledge in topics like farm records, costs and profitability, simple farm investment analysis, market appraisal and farm business planning. Male. Men and women participants were engaged in theoretical and practical group exercises and case studies and worked on their own farm businesses over a period extending from 12 to 15 weeks covering the production cycle from planning to marketing. Each FBS group consisted of 8 to 14 farmers guided by a facilitator who was often an extension agent or a lead farmer from the same region.

The GFRAS focuses on four strategic fields of action:

- » Policy: advocacy and support for an enabling policy environment and appropriate investment in RAS
- » Professionalization: improving the quality and standards of RAS in order to meet changing stakeholder demands
- » Knowledge: facilitation and enhancement of effective and continuous knowledge generation and exchange.
- » Network strengthening: providing targeted support for the various regional and subregional networks to develop skills and strengthen capacity to advance the mission and vision of GFRAS.

Source: <https://www.g-fras.org/en/>

5.3 Capacities

In general, public extension focuses on a limited set of subjects related to sustainable crop production and pest management. In most cases, it does not adequately address other urgent concerns experienced by farmers, especially those related to access to markets and improving marketability of their products. A critical concern of small-scale farmers relates to the high cost of production and low prices of produce resulting from poor farm management, inadequate postharvest practices and value addition, and/or limited access to markets. Yet, there are relatively few programmes that support farmers in these areas, mostly implemented by cooperatives, NGOs and international organizations.

The absence of market orientation in the public sector extension programmes can be attributed to their mostly production-focused mandate and limited expertise in these areas, with the majority of staff specialized in production aspects. Moreover, public extension staff at the local level are often tasked with other administrative and regulatory duties mandated by the local authorities leaving little time for advisory and development functions.

On the other hand, input suppliers and market intermediaries (most often local traders/commission agents) provide information on availability and use of inputs, new varieties, market demand and quality requirements. Yet, their mandate and expertise are not geared to support capacity development and enabling farmers to engage with markets.

Capacity development programmes to help extension staff understand the markets and support farmers on business aspects is therefore essential to facilitate access to these services. Some successful experiences exist in the region, such as the introduction of the FBS approach in Lebanon (described earlier in Box 3), which offers valuable insights and lessons in this respect. Both FBS and similar emerging approaches have contributed to closing the knowledge gap in market orientation. Efforts towards their institutionalization not only as part of public extension services but also as a service delivery modality for established international NGOs are ongoing. More efforts are needed though in assessing the outcomes of the FBS approach and opportunities for scaling it across the region.

While a large number of farmer collectives exist, their performance in service provision is weak in general, albeit with a few exceptions. In most cases, only the better-off farmers are able to benefit fully from these arrangements. Empowering farmers to engage with markets implies promoting farmers' collective economic action, i.e. mobilizing them as groups, cooperatives or producer companies and strengthening their organizational and professional competence. There is a dire need for developing capacity of support institutions and service providers in the region to undertake these tasks. Lessons can be drawn from a number of programmes supported by international agencies in the region (Box 5).

Box 6. Strengthening capacities of producer organizations

- » In Egypt, FAO implemented the project “Support to the reform of the law governing the agricultural cooperatives in Egypt” from May 2016 to December 2017. The project mapped the main features of agricultural cooperatives in Egypt, assessed the performance of different cooperatives, developed an action plan to support reforms and the implementation of laws to activate the work of cooperatives. A national programme was also formulated to ensure that the desired reforms would be implemented as per the suggested plan of action. To ensure the sustainability of the project activities, a capacity development programme was implemented that included training of trainers programmes for staff members from the Central Administration of Agricultural Cooperatives (CAAC) of the Ministry of Agriculture and Land Reclamation and strengthening the capacities of agricultural cooperative members and CAAC staff (FAO, 2019b).
- » In Oman, Lebanon and Sudan, FAO implemented the project “Strengthening National Capacities of Producer Organizations in the NENA region” from April 2017 to December 2019. In Oman, as part of this project three pilots were implemented to support collective forms of action in the country. The results of the mapping, participatory profiling and of the three pilots with the Omani Farmer Association, the Aflaj (traditional water users) and coastal women’s associations (CWA) suggested that new commercially-oriented farmers’ associations are evolving and aiming for good performance, despite the legal limitations to functioning as profit-seeking associations. There is a clear possibility to improve the existing associations (including Aflaj and CWA) through the development of a national programme on the basis of lessons learned from better performing associations in Oman, as well as by reshaping and contextualizing international experiences. FAO is engaging with the relevant stakeholders in the country to develop follow-up projects to address some of the important needs that emerged during the project.

Source: FAO. 2019. *Support to the reform of the law governing the agricultural cooperatives in Egypt*. Project TCP/EGY/3503. Project sheet. <https://www.fao.org/3/ca4525en/CA4525EN.pdf>

FAO. 2020 d. *Strengthening National Capacities of Producer Organizations in the NENA Region*. TCP/RAB/3603. <https://www.fao.org/3/ca8795en/CA8795EN.pdf>

5.4 Digital advisory services

There is an increasing appetite for using digital tools for RAS in the region, and the COVID-19 pandemic seems to have accelerated the trend. While **Egypt** has a long history of initiating electronic extension initiatives such as VERCON and RADCON (FAO, 2010), the increasing availability of mobile phones has opened opportunities for the development and promotion of new mobile applications to support digital knowledge and information facilities. These include, ELMufeed providing information on production of citrus, date-palm, household poultry and healthy nutrition, the IRWI-Phone App providing information on irrigation water use, and Hodhod App providing information on pest management. Farmer feedback indicated that the use of new digital and web-based forms of extension is

still limited mainly due to lack of sufficient digital skills, weak ICT infrastructure in the remote regions and the high cost of internet subscriptions.

In **Lebanon** the Ministry of Agriculture is using digital platforms like WhatsApp, Zoom and YouTube for reaching farmers with agricultural information. The Chamber of Commerce, Industry and Agriculture in Zahle and Bekaa has introduced AGVISOR mobile application to share market information on fruits and vegetables. Facebook pages of “Izraa”, “Biyadi Asnad”; “Gixai”, “the Smallholder Producer Programme”, and “Shetleh w Herfe” are some of the popular social media platforms that provide farmers with advice and best practices on agriculture. As information shared through these platforms is not verified, there needs to be caution about the credibility of some of the information shared.

In **Tunisia**, AVFA and other advisory service providers use ICT tools to expand their outreach. For example, the National Institute of Crops (INGC), active in 16 governorates, has been communicating via text message (SMS) with producers since 2012. It has a database of 8000 members and uses SMS to send technical messages, alerts regarding diseases or regarding irrigation in target areas. The institute has also developed two decision support applications for smartphones, one for irrigation management and the other for yield estimation. However, the use of ICTs by farmers is limited due to illiteracy, which is still widespread, the ageing of farmers and the non-availability of necessary tools and resources.

Notably, the uptake of such technologies in different areas depends on the level of digital literacy, which may vary across rural communities, and in turn depends on factors such as age, education and exposure to communication technology. The high cost of internet subscriptions and limited ICT infrastructure continue to represent a hindrance for a broad-based access to digital advisory services.

5.5 Takeaways

The pluralistic landscape of RAS is evident in the range of actors from public, private and civil society engaged in the delivery of services. However, **coordination and networking mechanisms to leverage complementarities and synergies** among them is **generally lacking**. Input dealers are often a key source of information related to new varieties, fertilizers and pesticides, as public extension agents are not often available to be consulted on time at nearby locations. While the NGOs and international cooperation projects are more active in the provision of market oriented services to small-scale farmers, continuity of their initiatives remains subject to the availability of donorfunds and project timeframe.

Despite the prominent role of public extension services, their **reach and coverage remain limited**, especially for the small-scale farmers who constitute the majority of agricultural holdings in all countries. Oftentimes farmers tend to resort to peer learning for addressing their immediate productivity and profitability challenges.


The ability of different service providers to effectively reach out to customers with an inclusive approach

remains a major constraint. Women, although widely engaged in agricultural operations, still have limited access to RAS. Their limited advisory capacities in market-orientation coupled with limited capacities to operate with an age and gender responsive approach put female smallscale farmers at a particular disadvantage in gaining relevant expertise.

Capacities and resources for inclusive service provision are missing within the public and private sector. While producer cooperatives are providing some services related to procurement of inputs and marketing of agricultural products, **weak organizational capacities and lack of support structures** constrain their functioning. NGOs and international cooperation projects do target more closely small-scale farmers, women, youth and vulnerable producers; however, the scope of their work is insufficient to meet the needs and demands on a large scale. Overall, there are no systematic efforts by the public sector RAS providers to **identify and prioritize the specific demands of varied clienteles for the better targeting and tailoring of services. There are also no clear mechanisms to bring stakeholders together for concerted action, to define joined objectives and programmes, and to orchestrate various service providers within an overall RAS system to achieve efficiency and effectiveness.**

The review highlighted the predominance of production-related expertise and focus particularly in the public sector at the expenses of the much-needed market-orientation and delivery of related services. In addition to technical advice, extension services need to take up a new approach whereby **advisory services become the catalyst for empowering farmers to produce better and more but also to produce for the market.** It is a shift in perspective towards an empowerment process where farmers know what they need and where they can seek good and trusted advice from different actors to make informed decision and improve their farm businesses.

Collectives tend to provide weak, but more comprehensive services to their members given that they can assess their demands on a continuous basis. There is scope to **strengthen the role of farmer collectives (POs and cooperatives)** in service provision that is responsive to specific farmer needs across gender and age, as well as in articulating smallholder demands and elevating their voice in relevant policy debates. Successful examples have been witnessed



in Lebanon and Jordan of cooperatives favouring smallholder access to markets, hence addressing some of the key challenges highlighted in this section. **Engaging small-scale farmers in collective economic operation** is often promoted by NGOs and international cooperation projects, but merits more institutional attention to foster an enabling environment, resources and capacities to generate sustainable and broad-based impact.

Generally, accountability in service provision is constrained by insufficient feedback channels and grievance mechanisms, as noted in Section 4 on the demand side. In the public sector, accountability of extension staff is to the public authority which finances the service and assesses individual staff performance.

The same can be said regarding other service providers, where upward accountability to managers and funding partners remains the norm. Overall, **monitoring and evaluation mechanisms of RAS based on clear assessment indicators** of performance and impact of services are generally missing – specifically in the public ones. Projects implemented by NGOs and international organizations often engage in the regular collection of data to monitor the performance of their services, maintaining a close interaction with farmers. However, these initiatives are project based, time-bound, limited in scope and often not institutionalized in the long-term by local partners. Therefore, the knowledge derived remains generally fragmented and is rarely capitalized on in order to inform systemic action.



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6. Enabling environment

The political and regulatory frameworks governing the agricultural and rural sector influence rural services provision in each country. Moreover, policies and investments and the pertinent institutions affect the diversity and quality of RAS, the plurality of service providers, and the degree of market-orientation and responsiveness to farmer needs and realities. This section provides an overview of the policy and institutional environment in the area of agriculture and rural development in the region, and its implications for effective service provision, engagement of various actors and market-orientation for small-scale family farmers.

6.1 Agriculture in national policies

The majority of countries in the region recognize the importance of agriculture for economic growth and food security, as evident in their policies related to agriculture and sustainable development. Examples include: the National Strategy for Agricultural Development (2020–2025) and the Green Growth National Action Plan (2021–2025) for the Agricultural Sector in **Jordan**; Sustainable Agricultural Development Strategy towards 2030 in **Egypt**; National Agricultural Strategy (2021–2025) in **Lebanon**; **Oman's** Sustainable Agricultural and Rural Development Strategy towards 2040; Green Morocco Plan (2008) of **Morocco**; the National Agriculture Sector Strategy - Resilience and Development (2014–2016) of **Palestine**; and **Sudan's** National Agriculture Investment Plan 2016–2020. However, **national policies are not always accompanied by an investment strategy and action plan that secure the institutional and human capacities and resources for implementation**. Also, potential complementarities and synergies with other relevant national policies are rarely taken advantage of, hence limiting opportunities for broad-based impact that can be derived from adopting a multisectoral approach in addressing complexity in rural contexts. This eventually undermines the capacity to implement the ambitious policies aimed at achieving the national

goals in sustainable agricultural and rural development (SARD), food and nutrition security and/or reducing poverty.

6.2 RAS in the policy framework

While RAS are often implicitly or explicitly addressed to varying degrees in the national policy and strategy documents related to SARD, dedicated strategies on RAS and/or coordinated provision of services are generally missing. Out of all countries, only Palestine has a National Agricultural Extension Strategy (2016). For instance, in **Lebanon**, several policies concerning different ministries are pertinent to the agriculture and rural development sectors. However, their implementation has been inadequately coordinated, missing opportunities for leveraging complementarities in visions and service provision. In **Egypt**, a comprehensive policy dedicated to extension and RAS is missing and would be needed to favour the effective mobilization of institutional and financial resources for the adequate and sustainable functioning of the system, and for regulating the interaction between extension and research, as well as other RAS providers for efficient and effective provision of services. In **Jordan**, relevant policy documents do not indicate clear measures to overcome the shortcomings and weaknesses in the provision of services, overlooking regional differences, socio-economic and demographic characteristics of the farmers and rural areas.

6.3 Policies supporting collective action

Another policy related factor affecting pluralistic services provision is the legal framework regulating the establishment and work of farmer collectives such as agricultural cooperatives and POs. Generally outdated or ineffective legislative frameworks for cooperatives constrain their establishment and consequently

restrain the economic benefits that farmers can derive from collective economic operations. The lack of reform in this area has led to poor performance and decrease in farmer enrolment and participation in these farmer collectives. As such, the actual **role of POs in the service system does not reflect the potential that these institutions hold to effectively support farmers, particularly small-scale ones, in accessing services and markets.**

Recognizing this potential, **Tunisia** developed a law in 2005 that created Mutual Agricultural Services Societies (SMSA). SMSA are companies that can provide a number of services to its member farmers, including purchase of inputs; preservation, storage, transport and sale of produce; acquisition of farm machinery; storage and sale of fuel; and provision of advisory services. The SMSA model has spread since then in all parts of the country. Furthermore, in collaboration with the GIZ, Tunisia is implementing a project to strengthen and promote collaborative and cooperative business models between producers and small and medium-sized enterprises (SMEs) in the processing and retail sectors (GIZ, 2021). Whereas in **Jordan**, the Jordan Cooperative Corporation (JCC), with the support of the International Labour Organization (ILO), has launched the national strategy for the Jordanian cooperative movement 2021–2025, which seeks to strengthen the role of cooperatives in enhancing decent work and productivity in different economic sectors in the country (Jordan Cooperative Corporation and ILO, 2022). In **Egypt**, the Ministry of Agriculture and Land Reclamation (MALR) has been working with FAO to reform the country's cooperatives law. Similar programmes are needed in other countries to restore the image of cooperatives and redress their role in offering effective services and enabling market-orientation for their members and communities.

6.4 Public investments in RAS

Overall support for agriculture is either declining or remaining stagnant across countries in the region. For instance, public spending on agriculture has been very low in comparison to capital flows to other sectors in both Jordan and Lebanon (World Bank, 2018). In **Lebanon**, the Ministry of Agriculture's budget has remained well below 1 percent of total government expenditure since 1994. About 97 percent of this

allocation covers recurrent expenditures and salaries, leaving just 3 percent for operational expenditures and facilitating advisory services to farmers. Meanwhile national public spending on research and development as a percentage of agricultural GDP remains less than 1 percent (IFPRI, 2014). In **Egypt**, the state's support to the agricultural sector has declined in terms of investments and subsidies for agricultural production over the years. Overall, the sector was allocated 4.68 percent of the public investment budget during 2020–2021, compared to 9.35 percent during 2002–2003 (MPED, 2021).

With the weak support for agricultural development in general and RAS in particular, **public sector RAS, which are mainly part of the central ministries of agriculture, suffer from low investments and depleting workforce.** This is also reflected in the lack of in-service training programmes and incentive schemes for RAS staff. For example, in **Lebanon, Jordan** and **Egypt** the number of public extension staff at field level has declined over time, with no fresh recruitments in recent years to replace those who move on or retire. Furthermore, the number of staff working in extension service under the ministries of agriculture in Lebanon and Jordan is limited to 100 and 114, respectively, while, in Egypt, the total number of agricultural extension staff decreased from 9658 in 2007 to 1975 in 2019, indicating that the public extension system lost about 79.5 percent of its workforce within only 11 years (CAEAE, 2019). Public extension centres also lack sufficient operational budgets for extension staff to visit farmers, conduct training and maintain demonstration plots. With limited human and financial resources, the public sector extension in these countries face the challenge of providing effective services and responding to the diverse needs of the large number of small-scale farmers.

6.5 Gender mainstreaming in RAS-related policies

There continues to be a pressing need to improve gender equality in rural institutions, economic systems and value chains in the region. Women participation in and benefit from the agriculture and rural development sector is constrained by several factors including limited access to, control over, and ownership of agricultural assets and resources – such as access to land and financial resources, limited access to knowledge, and

advisory services and markets as well as limited voice and decisionmaking and limited participation in farmer collectives.

FAO and other development agencies continue to support governments in the region and raise awareness on effective tools and methods relating to gender issues in rural development and agriculture (FAO, 2018b). Despite significant progress made, gender mainstreaming and the capacity for gender analysis remains relatively weak across governments, civil society and the private sector. Gender- and age-disaggregated agriculture statistics are scarce. This affects the formulation of policies and strategies that are responsive to the diverse needs of women and men across age, location and farming systems. Generally, ministries of agriculture include rural women development departments dedicated to implementing programmes and interventions specifically for promoting rural women empowerment. However, more efforts are needed to develop broad based capacities to promote systematic mainstreaming of gender in policy and practice with a comprehensive, multisectoral approach and in the delivery of gender-responsive advisory services, especially in rural areas.

In **Egypt**, the Sustainable Agriculture Development Strategy (SADS) recognized the importance of strengthening the role of women in agricultural development through public campaigns, consolidating relevant entities, and stimulating institutional support (MALR, 2009). However, women continue to face lower access to education, employment and productive resources. In addition, women are more vulnerable to poverty and food insecurity. In Lebanon, there are still too few measures addressing the specific needs of women in agriculture or of rural women in general, underscoring the necessity of developing gender-sensitive agriculture policies. Still, important achievements have been noticed in terms of access to education, with no significant differences in enrolment rates for boys and girls (CAS and ILO, 2020). International stakeholders are supporting women from a human rights perspective. Nevertheless, more should be done in supporting women in accessing markets and providing decent jobs opportunities (FAO, 2021d). In recent years, the Government of **Jordan** has strengthened its commitment to gender equality and women's social and economic empowerment through Jordan's Renaissance Plan 2019–2020 and more recently through the preparation of the Women's Economic

Empowerment Action Plan under the Mashreq Gender Facility. The Jordan National Commission for Women is coordinating the development of the National Women's Strategy, encompassing the government's vision of women empowerment and the national plans that address different areas of gender equality.

To further support plans for gender sensitive service provision, it is crucial to recognize the specific challenges and service needs of rural women in the agrifood sector.

6.6 Takeaways

The performance of RAS systems and their **capacity to promote inclusivity and market orientation** largely depend on the enabling environment for agricultural and rural development in the respective country. While there is no dearth of policies articulating the importance of agricultural and rural development, overall support to agriculture is either declining or remaining stagnant across countries in the region. **Also, national agricultural policies are not always accompanied by an investment strategy and action plan that secure the institutional and human capacities and resources for implementation, while ensuring linkages and collaboration at national and local level.**

Low human and financial investment in public sector extension and the way it is administered centrally leave the service system with little flexibility to respond to subnational demands. Moreover, public sector extension in the countries studied still have a relatively small workforce and limited operational budget, both of which are insufficient to meet the diverse needs of large number of women and men smallholder farmers.

Most countries lack a national policy and clear directions for extension and/or RAS from a territorial perspective to leverage their transformative role for rural livelihoods and agrifood systems. Consequently, most of the programmes implemented by the respective ministries of agriculture do not adequately take into account the wide regional and local diversity within the respective country. Public sector extension programmes are often centrally organized across the country, overlooking the different needs and prevalent disparities impacted by gender, status, education, extent of poverty and the varied challenges faced by smallholder farmers across and within regions.

While the importance of modernizing rural extension services and engaging public, private and civil society providers to promote agricultural growth is generally accepted, there is **no clear roadmap to strengthen the public extension or institutionalize coordination and partnerships among the plurality of RAS providers**. Consequently, mechanisms and opportunities for the division of roles based on comparative advantages of the various RAS services and other knowledge institutions are also lacking. A lack of policies or specific strategies to modernize RAS as a pluralistic system and enhance its responsiveness to farmers' needs and demands has resulted in a situation wherein men and women small-scale farmers have very limited access to relevant services.

Notably, targeted public investments will remain crucial even where services are carried out by non-public providers to ensure inclusivity, quality, accountability and impartiality. Innovative delivery mechanisms, including **public-private-PO partnerships and strengthening farmer collectives, are called for to improve targeting and outreach of RAS**. The potential of cooperatives and POs in service provision is greatly hindered by outdated or ineffective legislative frameworks. The lack of reform and investments in

this sector has further weakened these institutions' performance and capacities to support farmers in accessing services and markets and benefitting from them. Attention is therefore needed to reform measures and programmes to restore the image of cooperatives and redress their role in offering effective services and enabling market-orientation for their members and communities.

There continues to be a pressing need to improve gender equality in the policy framework, rural institutions, economic systems and value chains in the region. Recognizing the specific challenges and needs of rural women in the agrifood sector is crucial for effective planning and delivery of gender-responsive RAS. Yet, the capacity for gender analysis remains relatively weak across governments, civil society and the private sector. And the lack of sex-disaggregated data further hinders the formulation of informed gender-responsive policies and strategies. **Promoting systematic mainstreaming of gender in RAS policy and practice** therefore requires broad-based capacities and a multisectoral approach capturing the diverse needs of women and men across age, location and farming system.



7. Conclusions and recommendations

Farmers in NENA region, especially both men and women smallscale ones, face several challenges which require a wide range of knowledge, support and services to enable them to run their farms as profitable businesses and enhance their income from agriculture. Low returns from agriculture, especially due to the high cost of inputs and low prices of produce, is an overarching challenge faced by such farmers. In addition to sound technical advice to enhance sustainable production and protect their crops in an increasingly climate change impacted environment, smallscale farmers need services that enable them to make informed decisions and facilitate their access to quality inputs, post-harvest facilities and more efficient markets where they can get fair prices. They also need to reinforce their capacities to act collectively and develop effective organizations that can articulate their demands, amplify their voice, and facilitate their access to services and markets. Women face more challenges than men in accessing varied inputs, services and finance, and reaching markets. Women are also under-represented in POs and on the staff of advisory service providers.

Despite the plurality of service providers, existing advisory services are still deficient on aspects of access to markets, agribusiness, value addition and facilitation of collective action to enable smallholders to overcome these challenges. Notably, RAS are not effectively and widely reaching smallholder farmers and even when they do, they fall short of addressing gender and age specific considerations.

Moreover, the public extension workforce remains inadequate, as seen in Jordan and Lebanon, while in Egypt it has considerably eroded over time primarily due to staff retirements and lack of recruitment. Most of the public extension staff in all the countries, including Oman and Tunisia, are involved in implementing several advisory, administrative and regulatory roles, with very little time and resources to reach all the smallholder farmers they are meant to serve. Public extension remains mostly focused on crop production and protection aspects. Its services are, however, not sufficiently equipped for the huge challenges which climate change poses.

While private sector, especially the input dealers, do provide information on new inputs and machinery, farmers in general do not perceive their advice as impartial, considering the input dealers' business interests. However, input suppliers remain the main source of information for small farmers on new crop varieties, fertilizers and pesticides. Non-governmental organizations and international agencies implement several projects that target small farmers, but these are often limited in time and scale.

POs and/or cooperatives are currently supporting small-scale farmers with access to market and value addition to varying degrees in Lebanon, Jordan, Egypt, Oman and Tunisia. These POs and cooperatives need to be capacitated to serve farmers better and reach their potential. A number of initiatives are being implemented in collaboration with international development partners, providing good lessons and insights for scaling up capacities of this crucial sector. Still, concerted efforts are needed to reform/upgrade the cooperatives laws and regulations, develop cooperatives' technical, managerial and business capacities, and restore their image as crucial actors in service provision and market access for small-scale farmers.

The overall investments and support to agriculture is either declining or remaining stagnant across the countries, though national policies and strategies often articulate the importance of strengthening the sector. While the importance of RAS to promote agricultural growth is generally recognized, there is no clear vision and/or roadmap to strengthen the public extension services, promote better coordination among the plurality of service providers or guide investments in the sector.

The quality and performance of RAS is also affected by the weak research-extension linkages and limited mechanisms for mobilizing problem-solving support from the research system. The research agenda appears predominantly focused on production aspects, with limited support to understanding markets, analyzing value chains or strengthening agribusiness management, especially for small-scale

farmers. Moreover, the study team did not come across systematic efforts to involve farmers and RAS providers in designing the research agenda or setting priorities. Mechanisms for networking and sharing knowledge and experiences among the plurality of RAS providers are also lacking at the local and country levels as well as at the regional level.

Drawing on the findings of the country-based assessments, and of insights related to other countries considered in this study, the following recommendations were formulated to address interventions at the national and regional level.

i. Create an enabling environment for advancing RAS within a broader context of inclusive rural transformation:

- Develop a national vision and implementation framework for advancing pluralistic RAS, addressing inclusivity, market orientation and better livelihoods in the spirit of the SDGs;
- Broaden the scope of RAS to explicitly include supporting farming as a business and linking farmers to markets in partnership with other service providers;
- Revisit the role and comparative strength of public extension vs other service providers to facilitate linkages and nurture public-private-PO partnerships for improved service delivery;
- Set up coordination mechanisms for pluralistic stakeholder engagement in priority setting and development of programmes;
- Facilitate networking and learning among RAS providers, creating platforms for exchanging knowledge, sharing good practices and identifying collaborative opportunities;
- Enhance downward accountability through participatory monitoring, evaluation and learning, especially through engaging farmers and their organizations through feedback channels and grievance mechanisms for farmers to influence service provision;

- Mobilize research to develop and promote innovative solutions in response to challenges faced by farmers and streamline linkages with public and private RAS to reinforce capacities and access to evidence-based knowledge, including digital means for large-scale outreach.

ii. Leverage public investments in RAS and mobilize resources to provide relevant and effective market oriented support to small farmers at decentralized level. This includes:

- Funding public services, with due attention to gender diversity in human resources, staffing at decentralized level and operational budgets for RAS activities;
- Investing in capacity development programmes that promote market orientation of extension and RAS;
- Investments in infrastructure and facilities, including agribusiness advisory centres, postharvest, certification, quality assurance, market facilities and information systems;
- Investments in digitalization and connectivity, ensuring access and affordability; and
- Public-private PO partnerships and innovative funding mechanisms to leverage capacities of various service providers.

iii. Stimulate broad-based capacity development that enables RAS transition to support “farming as a business”. This would necessitate:

- In-service and on-the-job training for existing extension staff and other RAS providers;
- Revisiting academic and vocational education curricula and programmes for future graduates/professionals;
- Incentivizing staff for continuing education and lifelong learning, and making learning resources available in attractive and accessible ways;

→ Creating joint learning and exchange events for research and extension staff as well as POs to enhance exposure, relevance and problem solving, including through internships, secondments and coed placements; and

→ Diversifying and upgrading skills for extension staff and RAS providers, which should include:

- » Knowledge and skills for business and market-orientation, including farm management, sustainable agribusiness, market analysis and sustainable agrifood value chain concepts;
- » Organizational development and group dynamics to strengthen POs and promote collective economic action among smallscale farmers;
- » Tools and approaches to ensure inclusivity, diversity and gender-sensitivity in RAS provision, to ensure responsiveness, relevance and better targeting of the services, particularly towards those who are often underserved;
- » Communication, participation and networking;
- » Digital skills and ICT applications in RAS.

iv. Strengthen the development of farmer organizations and cooperatives as central players in pluralistic service systems, providing services and mobilizing farmers for collective economic operations. This necessitates:

- Revisiting/updating cooperative laws and regulations to create an enabling environment;
- Organizational development for POs to improve management and business skills as well as the capacity to deliver business services and link to markets;
- Support to POs and other farmer collectives to establish a more inclusive and age- and gender-responsive governance, which allows women and youth to participate equally and access leadership roles in rural institutions;

→ Support investments in cooperatives and POs infrastructure, facilities and technologies for improved postharvest handling, including food loss and waste reduction, and improving the quality of marketable produce; and

→ Linking cooperatives/POs to extension services and other RAS providers to enhance outreach on one hand and PO capacity for service delivery on the other.

v. Mainstream inclusivity and gender equality in RAS policies and programmes to enhance the provision of inclusive, age- and gender-responsive services.

This includes:

- Raising awareness and building the capacities of public, private and PO service providers to provide inclusive, age- and gender-responsive RAS;
- Ensuring diversity in extension and RAS staff, including the recruitment of women extensionists, the representation of women in leadership roles within public services, and supporting service providers in recruiting and retaining more female staff;
- Mainstreaming inclusivity and gender in agricultural education curricula, in-service training and in research and extension programmes;
- Fostering the design and implementation of inclusive RAS programmes that give due attention to women, youth and disadvantaged population groups, addressing their specific needs and demands for services; and
- Providing targeted support to women-led POs and cooperatives to strengthen their roles in service provision and policy advocacy as well as their linkages with other actors in agrifood value chains.

vi. Strengthen regional cooperation:

- Foster the establishment of a regional forum for RAS in the region affiliated to the Global Forum for Rural Advisory Services (GFRAS) for advancing RAS in Arab countries through networking, knowledge sharing and policy advocacy;
- Leverage the role of ICT and digital technologies in the provision of RAS, paying specific attention to aspects of inclusivity, accessibility and gender equality, including digital literacy, through the sharing of practices, approaches and lessons learned across countries in the region;
- Enhance the image of POs and cooperatives and their role in the inclusive provision of market oriented services by promoting exchange of knowledge and good practices across the region;
- Develop regional programmes for modernizing RAS, to support policy dialogue, enhance capacities of RAS providers, strengthen cooperatives in service provision and market access, and generate knowledge, digital tools, learning material and good practices; and
- Facilitate cooperation and learning through academic exchange and joint research programmes.

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