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BIODIVERSITY MAINSTREAMING ACROSS AGRICULTURAL SECTORS IN THE NENA REGION

I. INTRODUCTION

1. Biodiversity mainstreaming across the agricultural sectors is the process of embedding biodiversity considerations into all policies, strategies and practices that are adopted by public and private actors who either depend on biodiversity or whose actions have an impact on biodiversity. The purpose of mainstreaming biodiversity in the agriculture sectors is to ensure that biodiversity is conserved and used sustainably .
2. In 2019, FAO adopted a global strategy on mainstreaming biodiversity across agricultural sectors with the main objective to ensure that biodiversity is effectively integrated into national, regional and international development programs. The expected outcome of the application of the Strategy is to reduce the negative impacts of agricultural practices on biodiversity, to promote sustainable agricultural practices and to conserve, enhance, preserve and restore biodiversity as a whole.
3. The Strategy was deliberated at regional multi-stakeholders dialogues held across regions, including in NENA, to build global consensus around the its goal, objectives and expected results. Participants to the Near East and North Africa (NENA) multi-stakeholders dialogue held in Amman, Jordan in November 2019, requested FAO to undertake stocktaking exercise on the status of biodiversity mainstreaming across agricultural sectors in the region to identify strengths, weaknesses and gaps in policy, legal and institutional frameworks and in technical capacities to inform national and regional planning and advocacy for biodiversity mainstreaming across agricultural sectors.
4. In line with the foregoing, FAO commissioned in 2020 a regional assessment on the status of biodiversity mainstreaming across agricultural sectors in the NENA region. The assessments also examined the effects of the COVID-19 pandemic on biodiversity with a view to assess the impact of post-pandemic recovery measures on biodiversity mainstreaming across/within agricultural sectors.
5. Considering COVID-19 lockdown situation, the assessment was based on a literature review , online surveys and virtual interview of key informants, webinars and virtual focus group discussions (whenever possible). This note aims to inform the Commission session on the

FAO biodiversity mainstreaming platform. <http://www.fao.org/3/CA2403EN/ca2403en.pdf>

2 The review covered relevant global reports and a range of national reports, strategies, legislations, programmes and action plans including through the VNR on achieving the SDGs, NDCs, NAP, NBSAP, NAPCD, country reports submitted for the Commission on Genetic Resources for Food and Agriculture (CGRFA) and others.

regional assessment, its outcomes and the actions it proposed to be taken for mainstreaming biodiversity across agricultural sectors in the region.

II. Main findings of the assessment

6. During the last ten years, a number of projects have dealt with biodiversity mainstreaming across economic sectors. The impact of these projects on biodiversity protection while improving the livelihood of local communities and territories have been the subject of a number of scientific reviews. These reviews have shown that mainstreaming is a very complex process defined by a number of determinants including governance, public policy, regulation, voluntary standards and norms, availability and quality of scientific data, traditional knowledge, economic instruments, markets, inclusiveness, gender, awareness, education, training, communication, monitoring and reporting.
7. The results of the regional assessment on the status of mainstreaming biodiversity across agriculture in the NENA region showed that NENA countries have made good progress on biodiversity mainstreaming in governance and policy, and to a lesser degree in the areas of inclusiveness and partnership. At the same time, little progress has been made so far on data and knowledge; gender and social equity; and monitoring, reporting and awareness. However, governance models adopted were mainly based on a top-down approach, with national programs often relying on international support and funds. National programmes still lack capacity building, decision-making powers, and sometimes legal support.
8. Good progress was achieved during the last two decades (2001-2021) in NENA countries in integrating the diversity of biological resources at the species level (e.g. in situ and ex situ conservation, and afforestation). However, there is slow progress made so far at the genetic and ecosystem levels. The assessment also showed that the integration of soil biodiversity into national action plans (NBSAP, NDCs, NAPDCs) is still lacking, a matter that requires more attention from countries if the status of biodiversity for food and agriculture in the region is to be improved.
9. Examples of biodiversity mainstreaming actions targeting the species and ecosystem levels were stated in several national reports submitted under the National Programmes for Combating Desertification (NPCDs), the National Biodiversity Strategies and Action Plans (NBSAPs) and the Voluntary National Reports (VNRs) on the progress in achieving the SDGs.
10. Some projects implemented to combat desertification in different desert areas in the region, such as the Green Dam in Algeria and the Green Wall in Mauritania, have adopted holistic approaches to combat desertification through afforestation, reforestation and rehabilitation of drought-sensitive habitats, thus strengthening the restoration and protection of biodiversity at gene, species and ecosystem levels.
11. Other reported projects that took holistic approach on mainstreaming biodiversity in agriculture were reported in Jordan (Mainstreaming Biodiversity in the Silvopastoral and Rangeland Landscapes in Pockets of Poverty in Jordan), Lebanon (Mainstreaming biodiversity with the sector of medicinal and aromatic plants in Lebanon), and Morocco (Forest and fishery). However, in most cases, these projects have short to medium term duration (3 to 5 years), are managed by ad-hoc steering committees that were established purposely for the project and which have limited decision-powers and depend largely on the projects funding. There is uncertainty on sustaining the results achieved by these projects when the funding will end and the steering committees complete their mandates.
12. Institutional barriers are the major concern in mainstreaming biodiversity across/within agricultural sectors in the NENA region. Efforts to overcome these barriers have been

³ FAO. 2021. Regional assessment on the status of mainstreaming biodiversity across agricultural sectors. FAO Regional Office for the Near East. Cairo, Egypt (unpublished).

underway for many years but focusing mainly on vertical governance that often favours a top-down approach with interactions between different levels along national decision-making chains. The vertical governance, alone can weaken or limit the horizontal governance, which instead emphasizes interactions between public services and non-governmental partners such as private sector and professional associations. In this regard, governance models based on territorial-oriented public policies entrusted to specialized agencies implemented in Morocco (National Agency for the Development of Oasis and Argan Zones - ANDZOA), seem to be a way to ensure a better balance between vertical and horizontal governance.

13. In terms of regulations, biodiversity is often regulated by a range of laws (e.g. on land, soil, pasture, forest, fish, marine and aquatic resources), but biodiversity issues are still not yet integrated into broader national legal and policy regimes; nor is the value of biodiversity always fully accounted for. In most countries for example, efforts to implement NBSAPs rely on national sectoral policies and legislation.
14. Analysing NENA countries NBSAPs, submitted to Secretariat of the Convention of Biological Diversity, there are 1593 actions referring to agricultural sectors and/or biodiversity mainstreaming determinants. Thirty six percent of these actions refer to agricultural sectors (Crops, livestock, forestry, rangeland, fishery and aquaculture), while 43 percent refer to biodiversity mainstreaming determinants (e.g. governance/policies, regulation/standards, inclusiveness, research/innovation, data/knowledge, gender/social equity, management, economics/market, awareness/education and communication, monitoring/reporting). The remaining 21 percent refer to other crosscutting sectors (Energy, industry, tourism, eco/agri-tourism, climate change, desertification, pollution, wastewater, etc.).
15. Conservation practices (through in situ and ex situ conservation) have been the focus of biological resource conservation policies in the NENA region for many years. However, the regional assessment showed clear transition towards strategies that are based on a landscape/seascape approach. Out of 1929 biodiversity related-actions and/or programmes currently implemented, 75% deal with mainstreaming actions against 25% focusing on conservation practices. The leading countries in transitioning toward landscape approach are Jordan, Morocco, Saudi Arabia and Mauritania.
16. Private sector involvement in issues related to biodiversity such as the management and conservation of genetic resources, is still very low in most NENA countries, although during the study some success stories have been reported by countries. It was also noted that the scientific community is not often involved in mainstreaming biodiversity although its role in providing scientifically based advice for decision-makers, managers and local communities is considered critical.
17. Several NENA countries are actually improving the collection of biological data in order to strengthen the scientific-based approach. However, one urgent issue raised by the study is the need for improving not only the collection but also the processing and sharing of data. In this context, the use of new technologies and biotechnologies, big-data analysis, artificial intelligence and remote sensing are proving to be an essential way to support the adoption of biodiversity integration approaches based on reliable biophysical and socio-economic data.
18. Research, education and training was highlighted by the online questionnaire respondents as critical for biodiversity mainstreaming, but the lack of financial resources and qualified trainers is often cited as the main obstacles. In terms of priorities, respondents agreed on giving collaborative research a high priority to make local communities and biodiversity managers not only beneficiaries but partners. Additional priority areas in research and innovation include climate change, taxonomy, survey/assessment, molecular biology and digital mapping. Biodiversity farmers' school, as initiated by FAO in other areas, was mentioned as an area that could be very useful in strengthening the link between research and biodiversity management.

⁴ <http://www.fao.org/3/nd678en/nd678en.pdf>

19. As for traditional knowledge, and except for few projects initiated within the framework of the FAO Globally Important Agricultural Heritage Systems (GIAHS), no significant progresses have been made so far to document and make use of the traditional knowledge, nor concrete proposals being made on the matter in the national policy documents including in the NBSAPs.
20. Gender issues have been addressed in a number of NENA countries, and the involvement of women has also been reported in the study. Although commendable efforts to extend women contribution to the entire agroforestry related value chains including processing, valuing and marketing field products are underway in several countries, their intervention still remain restricted to production and/or collection of agricultural and or non-wood forest products.
21. The assessment showed critical capacity gaps that need to be addressed in areas such as payments for biodiversity services, surveying and mapping, communication, development of biodiversity business models and management practices.
22. The assessment of the impact of COVID-19 crisis indicates that while there were early reports showing negative impacts of the pandemic crisis on biodiversity, the economic packages and social protection measures taken by several NENA countries to curb down the effects of COVID-19 pandemic are likely to impact positively the biodiversity mainstreaming process. For instance, the improved use of Information Technology (IT), that took place in several NENA countries during the pandemic crisis, could be used to overcome some of the obstacles to biodiversity mainstreaming such as biodiversity mapping, trading, e-commerce and certification.
23. Although the issue of biodiversity protection is not addressed per se in post COVID-19 recovery plans, some of the actions currently being implemented are likely to affect conservation, restoration and sustainable use of biodiversity. For instance, the dynamics of digitalization of the agricultural sector through the creation of online and mobile platforms for delivering of extension services, social protection delivery, trading, e-commerce, government services, and farmer registration may all have positive impact on biodiversity. Digitalizing for biodiversity mapping has already gained ground in some countries in the region. Countries such as Egypt has elaborated a comprehensive COVID-19 recovery plan build upon five pillars with explicit reference to biodiversity and protected area.

III. Conclusions and recommendations

24. Over the past two decades (2001-2021), NENA countries have made continuous and considerable efforts to integrate biodiversity into/within agricultural sectors. Several initiatives have been launched as part of national strategies or as part global policy processes, including NBSAP, NDC, CGRFA, VNR and NAPCD. Further efforts have also been launched as post-COVID 19 recovery measures.
25. Although NENA countries have made good progress in integrating the diversity of biological resources at the species level (e.g. in situ and ex situ conservation, and afforestation). More effort should be made in strengthening the landscape/seascape approach especially in the framework of the NDCs plans that should draw the attention of decision-makers when reviewing their national contributions.
26. Research and innovation is another area that requires more attention in the mainstreaming process of biodiversity. There is a need to give collaborative research a high priority to make local communities and biodiversity managers not only beneficiaries but partners. Biodiversity farmers' school could be very useful in strengthening the link between research and biodiversity management.

³ FAO. 2021. Regional assessment on the status of mainstreaming biodiversity across agricultural sectors. FAO Regional Office for the Near East. Cairo, Egypt (unpublished).

27. Regarding data and knowledge, efforts have been undertaken to improve data collection, processing and sharing also due to the pandemic crisis. However, the use of modern IT tools, which is still weak and limited to few countries needs to be strengthened and promoted across the region.
28. The use of traditional knowledge should be strengthened and supported. FAO's experience gained through the Globally Important Agricultural Heritage Systems (GIAHS) programme should be transferred to improve biodiversity mainstreaming within traditional agricultural sites that host rich agro-biodiversity as the case with the “Hima” systems found in a number of NENA countries.
29. The role of women in the protection and enhancement of biodiversity is well recognized throughout the NENA region. However, the majority of projects that involve women limit their role to the production and/or collection of biodiversity related products. There is a need to involve women in the entire biodiversity related activities at upstream and downstream value chains.
30. Addressing governance and coordination at national, regional and international levels and capacity building is essential to better strengthen biodiversity mainstreaming in agricultural sectors. There is also a need for comprehensive regulatory framework and incentives to enhance women, tribes and local communities involvement and to boost as well biodiversity business, research and innovation and value-chain based approaches.
31. The use of new technologies and biotechnologies, big-data analysis, artificial intelligence and remote sensing are considered crucial to support the adoption of biodiversity integration approaches based on reliable biophysical and socio-economic data. However, they require strong economic effort and technical and scientific support.
32. FAO's GIAHS programme should be strengthened in the NENA region to improve biodiversity mainstreaming within traditional agricultural sites that host rich agro-biodiversity.

⁴ <http://www.fao.org/3/nd678en/nd678en.pdf>