



NEAR EAST FORESTRY AND RANGE COMMISSION

TWENTY-FIFTH SESSION

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NEAR EAST AND NORTH AFRICA FORESTS AND CLIMATE CHANGE: CLIMATE INDUCED FOREST DISTURBANCES, BUILDING RESILIENCE AND BOOSTING IMPLEMENTATION OF COUNTRIES NATIONALLY DETERMINED CONTRIBUTIONS (N)DCS

Executive Summary

The Near East and North Africa (NENA) region is dry, hot and scarce in water and arable land resources, with arid, semi-arid to desert conditions and limited tree cover. Yet the 74.7 million hectares of forest and other wooded land, together with rangelands, produce a range of goods and ecosystem services that are essential to rural livelihoods. The region is extremely vulnerable to climate change through heat and drought, and national adaptation priorities focus on crops, forests and water resources.

This document describes key challenges related to forests and climate change in the region, and how FAO is working with Members to address them. These include:

- Forest and wildland fires, and FAO support for the NENA Regional Forest Wildland Fire Network (NENFIRE)
- Forest pests and diseases, and support for the Near East Network on Forest Health and Invasive Species (NENFHIS)
- Capacity needs for tracking climate change mitigation and adaptation progress, and support through the FAO/GEF project “Building global capacity to increase transparency in the forest sector”

Tackling these interlinked challenges related to climate change is a prerequisite for strengthening the resilience of the forest ecosystems and the communities that depend on them.

Suggested action by the Commission

The Commission may wish to:

- Encourage Members to further implement the activities of the NENA Regional Forest Wildland Fire Network (NENFIRE) and Near East Network on Forest Health and Invasive Species (NENFHIS), and to strengthen regional collaboration on forest protection;
- Encourage Members to further include Agriculture Forestry and Other Land Use (AFOLU) targets and activities in the context of their Nationally Determined Contributions (NDCs) to the Paris Agreement, and to seek partnerships to harness international climate finance to this end;
- Encourage Members to bring their forest related climate concerns to the attention of the 36th session of the FAO Regional Conference for the Near East and request that it recognise the role of forests and rangelands in policies and programmes that combat climate change;

Request FAO to:

- Continue supporting the implementation of NENFIRE and NENFHIS activities, upon request by Members, especially the Review and Analysis and Risk Reduction for forest fires and community based fire management, as well as phytosanitary measures in forestry;
- Continue providing technical assistance, upon request by Members, to improve institutional capacity to combat biotic and abiotic factors affecting health and vitality of forests, including fires, pests and diseases, in support of the development of resilient forests in the context of climate change;
- Continue providing technical assistance, upon request by Members, to bolster national forest monitoring and climate risk and vulnerability assessments to achieve mitigation and adaptation targets, including through leveraging innovative monitoring tools and platforms, including Open Foris and the Framework for Ecosystem Restoration Monitoring (FERM).

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I. INTRODUCTION

1. The Near East and North Africa (NENA) region is dry, hot and scarce in water and arable land resources, with arid, semi-arid to desert conditions and limited tree cover. The combined area of forest and other wooded land (OWL) in the region is estimated at 74.7 million hectares, of which forest cover is about 41.5 million hectares (FAO, 2020). Together with rangelands, these ecosystems produce a range of goods, such as fuelwood, fodder, food, medicines, and other non-wood forest products, which are vital to rural livelihoods. They also provide essential ecosystem services, including soil and water protection, biodiversity conservation, halting desertification, and climate change adaptation/mitigation.

2. Climate change – due to the burning of fossil fuels, unsustainable land use and other sources – has already contributed to observed changes in weather and climate extremes globally (IPCC 2021¹). In this context, NENA is predicted to become hotter and drier, with higher temperatures and reduced precipitation increasing droughts and pressure on water resources. Projections show that agricultural areas dedicated to rainfed and irrigated crops or livestock production will suffer moderate to high vulnerability to climate change and that the region will be at the forefront of global economic losses resulting from climate-related water scarcity (FAO, 2021²).

3. While precipitation is expected to decrease in most places in the region by up to 40 percent, there will be an increase in intensity and frequency of extreme events like floods and drought. Flooding, which is already occurring more frequently over the past few decades, will further threaten coastal cities and low-lying regions, along rivers and seasonal water courses such as the Nile Delta. Annual economic losses from flood events in the region have been estimated at USD 200 million. Countries more affected by extreme flood events include Sudan, Somalia, and Yemen that are already experiencing protracted conflict. Recently Jordan was affected by floods, which led to losses in human lives and their assets.

4. In addition, natural forests and rangelands in the NENA region are negatively impacted by unsustainable forest use, including overgrazing and illegal harvest of fuelwood and forage, as well by agriculture and urban encroachment. In recent years, there have been many cases of forest fires and pest and disease outbreaks, which have accelerated the associated tree dieback and decline in natural and planted forest cover. Sand and Dust Storms are also a major issue in the region, which are exacerbated by climate change and negatively affect human health, agriculture, and water and air quality. Tackling these issues is a prerequisite for strengthening the resilience of the forest ecosystems and the communities that depend on them.

5. The Committee on Forestry's Working Group on Dryland Forests and Agrosilvopastoral Systems³ aims to address these challenges in the NENA region and globally. The aim of the Working Group is to develop a comprehensive understanding of dryland forests and agrosilvopastoral systems, and to promote the scaling and adoption of good practices for their protection, sustainable management and restoration, while enhancing and contributing to environmental and socio-economic resilience and sustainable livelihoods. More information is found in document FO:NEFRC/2021/2.

II. KEY FORESTRY CONCERNS UNDER CLIMATE CHANGE IN THE NENA REGION AND FAO ACTIVITIES

¹ <https://www.ipcc.ch/assessment-report/ar6/>

² FAO. 2021. Regional Analysis of Nationally-Determined Contributions in the Near East and North Africa: Gaps and Opportunities in the Agriculture, Water and Land Use Sectors
FAO Regional Office for the Near East, Cairo. Under publication.

³ <http://www.fao.org/dryland-forestry/working-group/en/>

FOREST AND WILDLAND FIRES

6. The years 2019, 2020 and 2021 have seen large wildfires causing havoc across the world. While people cause ~90 percent of fires globally, climate change has resulted in more fires becoming “wildfires” causing damage and loss as a result of the weather, drier and longer fire seasons⁴.

7. In the NENA region, damaging fires have occurred in Jordan and Lebanon (2019), Jordan (2020), Algeria (2020), and Syria (2020) with damage and loss due to fires occurring in other countries in the region, and again in 2021 where Algeria, Lebanon and Turkey have been heavily affected.

8. FAO developed a global fire management strategy in 2019 that sets out its approach to fire management in support of its Members. This systematic approach to fire management first seeks to understand the context, situation and actors, then analyse options to reduce risk and identify capacity requirements. Importantly, past fire management activities and related efforts already undertaken in a country offer a good starting point and potential access to stakeholders. Integrated Fire Management (IFM) implies a holistic approach to addressing fire issues that considers biological, environmental, cultural, social, economic and political interactions. FAO champions integrated approaches to fire management re-balancing emphasis on underlying causes and seeking long-term, sustainable solutions using five elements (the 5Rs): Review and Analysis; Risk Reduction; Readiness; Response; and Recovery.

9. Countries in the NENA region have varying experiences in managing forest fires. Persistent fire management gaps have been noted, specifically on: data accuracy, data management, review and analysis to generate information and knowledge; legislation on forest user rights in relation to fires; strategic planning; risk analysis; and improvement in fire investigations. Notably, in the NENA region, there are some very strong examples of analysis, planning and fire recording and reporting systems (e.g., Algeria) that create the basis for effective south-south cooperation.

10. A regional network on Forest and Wildland Fires (NENFIRE) was created in 2009 and has had further recent support from FAO, including through the establishment of a NENFIRE website and e-mail discussion group or exchanging information and experience. FAO has also provided response to a request from Syria, input to a project in Jordan, continued inputs to the fire management strategies of Algeria and Morocco, and support to Sudan to elaborate its fire management strategy in 2021.

11. Due to the increasing frequency and intensity of fires in the region, there is an opportunity to revive and strengthen traditional community-based fire management practices and initiatives to support national efforts on fire prevention and management.

PESTS AND DISEASES

12. Over the last two decades, forests and woodlands in the NENA region have been subjected to the introduction of many forest insect pests, pathogens and invasive plant species, which has led to decline and dieback of forest trees. These impacts are accentuated by the impacts of climate change and other human activities.

13. Most of the countries in the NENA region lack primary institutions and departments in charge of forest health and related issues. One Health is an integrated approach that ensures that specialists in multiple sectors work together to tackle health threats to animals, humans, plants, and the environment. FAO supports Members to build and implement effective collaborative One Health strategies and to design and implement programmes, policies and legislation simultaneously

⁴ <https://www.iufro.org/news/article/2019/01/23/occasional-paper-32-global-fire-challenges-in-a-warming-world/>

addressing the health of people, animals, plants and the environment. It is important that forest health issues be adequately represented within One Health strategies.

14. To ensure early detection and early action to prevent introduction and spread of invasive species, it is essential to collect sound, reliable, comparable and up-to-date information on pests and diseases. In most countries in the region, such monitoring is not well developed. FAO supported the establishment of a national pest surveillance system in Morocco, which could be used for standardisation of a pest monitoring network through regional cooperation. A regional monitoring network would allow countries to protect their forests from transboundary insect pests, pathogens and invasive plant species, and to maximise the use of their limited resources.

15. Currently the region has no consistent approach for the implementation of sustainable forest management practices that involve practices to prevent or minimise the occurrence and spread of pests and disease. There is an urgent need to implement effective phytosanitary systems in forestry, especially pest risk assessments and quarantine measures to prevent the introduction and spread of transboundary invasive species.

16. Due to the transboundary nature of forest invasive species, it is necessary for NENA countries to take a coordinated approach to pest management and monitoring activities. The Near East Network on Forest Health and Invasive Species (NENFHIS), which was established in 2007, represents a regional platform for countries to coordinate their efforts in addressing the transboundary aspects of emerging invasive species. It aims to foster integrated and dynamic forest pest management in the region and provide decision-makers with baseline data for making informed decisions. FAO has supported this network, while also providing assistance to Algeria, Lebanon, Iran and Morocco to combat forest invasive species; conducted a regional assessment on the spread of cochineal in cactus, and developed a guide and two e-learning courses for the implementation of phytosanitary standards to prevent the introduction and spread of transboundary invasive species.

SAND AND DUST STORMS

17. The UNGA resolution 72/225 (Jan 2018) calls for a global response to Sand and Dust Storms (SDS). The SDS Coalition formally launched in the side event of UNCCD 14th Conference of Parties, New Delhi, India, 6 Sept 2019. More than 15 UN entities, intergovernmental organizations and affiliated members joined the coalition. The work on SDS is related to two substantial UNCCD decisions: decision 31/COP 13 (2017) and decision 25/COP 14 (2019), which guide the secretariat in working on SDS across various areas.

18. The Coalition was initially led by UNEP for two years, and its leadership was transferred to FAO in 2020. By leading the Coalition, FAO intends to highlight that the agriculture sector has a paramount role in addressing both the source of SDS and the mitigation of impacts, and therefore needs to continue to play a key role in contributing to SDS prevention and management. FAO is also co-leading, with UNDP, the work of the Coalition Working Group #1 on adaptation and mitigation.

19. Mitigating SDS hazards for disaster risk reduction requires action at national, regional and interregional levels. In this regards, FAO approved in interregional Technical Cooperation Programme (TCP) project: ‘Catalysing investments and actions to enhance resilience against SDS in agriculture’. Considering the importance of SDS for NEFRC Members, four countries –Algeria, Iraq, Iran and Kuwait–are participating in the project. More details on the project are found in FO:NEFRC/2021/2.

CLIMATE CHANGE MITIGATION AND ADAPTATION

20. In their Nationally Determined Contributions (NDCs) to the Paris Agreement, less than half of all NENA countries communicate a mitigation contribution in the Agriculture, Forestry and Other Land Use (AFOLU) sector, with most focusing on enhancing carbon sinks through afforestation and reforestation and sustainable forest management measures⁵. There is an opportunity to further enhance carbon sinks in biomass and in soils through sustainable land management (e.g., agro-silvopastoral systems), conservation, and restoration measures, which also provide adaptation benefits.

21. Adaptation is the main climate action priority for countries in the NENA region. As communicated in their NDCs, adaptation measures focus on crops, forest and water resources. Sudan and Kuwait are the first countries in the region to submit National Adaptation Plans (NAP) to the UNFCCC⁶. Convergence between the NDCs in the region and the four Sendai Framework for Disaster Risk Reduction (SFDRR) priorities for action is strong and promotes adaptation and disaster risk reduction and management coherence. The degree of alignment varies by SFDRR priority, with investments in disaster risk reduction for resilience (SFDRR Priority III) receiving by far the most attention. While more frequently referred to in relation to other sectors or cross-sectoral actions, the understanding of disaster risk (SFDRR Priority I), improved disaster preparedness and recovery (SFDRR Priority IV), and improved disaster risk governance (SFDRR Priority II) are less apparent in the AFOLU sector.

22. There is an urgent need to tackle climate-related water scarcity, which will continue to affect the adaptive capacity and resilience of people and ecosystems in the NENA region. FAO's new publication 'A Guide to Forest-Water Management'⁷ provides the latest information on the role of forests and trees for water security, along with guidance and recommendations on how to manage forests for their water ecosystem services.

23. NENA countries identified major climate finance needs in their NDCs, with a shortfall of 341 billion USD for implementation. Climate finance currently flows towards the energy, transport, and other sectors despite the critical role of natural resources in sustaining food security and livelihoods. Given the importance of adaptation measures in the AFOLU and water and sanitation sectors in the region, there are opportunities for countries to attract finance for adaptation projects that drive climate resilient sustainable development and mitigation co-benefits. Opportunities include developing cross-cutting adaptation and mitigation projects with the Green Climate Fund, and leveraging FAO's recent accreditation with the Adaptation Fund.

24. The effectiveness of NDC implementation depends on the ability to track mitigation and adaptation progress, however, less than 10 percent of the region's NDC targets are associated with quantifiable indicators. Seven countries in the NENA region report the need to either establish a new, or improve an existing, MRV system to track mitigation actions and progress. Only one country (the United Arab Emirates) references an existing MRV system. Sudan, with support from FAO under the country's REDD+ readiness programme, has just developed a robust MRV/NFM system and NFM action plan that has yet to be operationalized. Achieving mitigation and adaptation goals in the region will require filling the persistent technology and capacity gaps around national GHG inventory management and MRV systems, as well as climate risk and vulnerability assessments.

25. The FAO/GEF project "Building global capacity to increase transparency in the forest sector, CBIT-Forest"⁸ aims to build institutional and technical capacities in developing countries in data collection, analysis and dissemination processes related to forests to meet enhanced transparency requirements and track progress towards achieving the NDCs. Overall, CBIT-Forest has contributed to

⁵ FAO. 2021. Regional Analysis of Nationally-Determined Contributions in the Near East and North Africa: Gaps and Opportunities in the Agriculture, Water and Land Use Sectors. FAO Regional Office for the Near East, Cairo. Under publication.

⁶ [National adaptation plans \(unfccc.int\)](http://www.unfccc.int)

⁷ <http://www.fao.org/documents/card/en/c/cb6473en>

⁸ <http://www.fao.org/in-action/boosting-transparency-forest-data/en/>

an upgraded Global Forest Resources Assessment (FRA) reporting and dissemination platform in 6 UN languages⁹; developed knowledge training material, including a self-paced course on “Forests and transparency under the Paris Agreement”¹⁰ and a national forest monitoring assessment tool¹¹; implemented massive open online courses on forests and transparency in English, French and Spanish¹²; and promoted knowledge exchange through global webinars in 2020¹³ and 2021^{14,15} where several countries in the NENA region have shared their experiences and case studies¹⁶ were launched.

26. FAO has also developed innovative tools and platforms, which can support Members in their national forest monitoring and management and reporting to UNFCCC, such as Open Foris¹⁷ with its System for earth observation, data access, processing, analysis for land monitoring (SEPAL)¹⁸, the Framework for Ecosystem Restoration Monitoring (FERM)¹⁹, and The Drylands Restoration Initiatives Platform (DRIP)²⁰.

27. In conclusion, while there is progress in combatting climate change, more attention should be paid to integrate the forest-related responses to the broader national agendas and programmes on sustainable development and climate change. It would also be advisable to consider potential and ways to strengthen forest-related ambition level in the NDCs, including in developing National Adaptation Plans²¹. There is a need to further raise the attention to the forest-related climate change concerns and solutions in the region, including at the FAO Regional Conference and in the context of the development of FAO’s new strategy on climate change, as well as in global negotiations.

⁹ <https://sdg.iisd.org/commentary/guest-articles/innovative-platform-makes-forest-data-available-in-all-6-un-languages/>

¹⁰ English: <https://elearning.fao.org/course/view.php?id=587>; French: <https://elearning.fao.org/course/view.php?id=616>

¹¹ EN : <http://www.fao.org/3/cb0988en/CB0988EN.pdf>

FR: <http://www.fao.org/3/cb0988fr/CB0988fr.pdf>

¹² <http://www.fao.org/in-action/boosting-transparency-forest-data/news/detail/en/c/1415880/>

¹³ <http://www.fao.org/in-action/boosting-transparency-forest-data/news/detail/en/c/1330887/>

¹⁴ <https://www.un-redd.org/post/strengthening-the-legal-basis-for-sustainable-national-forest-monitoring-systems>

¹⁵ <http://www.fao.org/national-forest-monitoring/news/detail/en/c/1415464/>

¹⁶ <http://www.fao.org/in-action/boosting-transparency-forest-data/news/detail/en/c/1415104/>

¹⁷ <http://www.openforis.org/>

¹⁸ <http://www.openforis.org/tools/sepal/>

¹⁹ <http://www.fao.org/national-forest-monitoring/ferm/en/>

²⁰ [Dryland Restoration Initiative Platform \(DRIP\) |](#)

²¹ <http://www.fao.org/documents/card/en/c/cb1203en/>