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NEAR EAST FORESTRY AND RANGE COMMISSION

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Good Governance of Forests and Rangelands : Pillar of Food Security

ADAPTATION IN THE FOREST SECTOR AND SUSTAINABLE DEVELOPMENT

Summary

The aim of this note is to facilitate discussion of policy issues and regional cooperation in the Near East region related to climate change adaptation in support of sustainable development. The paper discusses climate change risk, vulnerability and impacts on the region's forests and range resources, adaptation measures, related international policy developments, and opportunities for regional co-operation on adaptation in the forest and range sectors. A list of questions is provided to facilitate discussion.

INTRODUCTION

1. Climate change has emerged as one of the crucial challenges facing countries today and in the foreseeable future. Climate change is expected to have major impacts on many sectors and aspects of life, including on agricultural productivity and food security, household economies and environmental sustainability. The effects of climate change are expected to be most acutely felt where vulnerabilities are greatest due to poverty, environmental fragility and/or institutional weaknesses. Climate change puts recent and future development gains at risk, but also offers the possibility of rethinking paths of development and of strengthening efforts to institutionalize sustainability. Heightened political awareness and emerging sources of financing for climate change adaptation and mitigation could offer critical support to sustainable development in the Near East region, including for sustainable forest and range management.

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VULNERABILITIES TO AND IMPACTS OF CLIMATE CHANGE ON THE NATURAL RESOURCE BASE AND PEOPLE'S LIVELIHOODS

2. Climate change and climate variability put the countries in the Near East region at significant risk. The Intergovernmental Panel on Climate Change (IPCC, 2007) predicts increases in 1-40 C over the short term and up to 90 C in the summer months in the Near East region by the end of the twenty-first century. Mean annual rainfall could decrease by 20 percent along the Mediterranean coast over the long term. The region is likely to experience increased variability in rainfall patterns, which could exacerbate drought and flooding. Climate change is also expected to lead to sea level rise and increased coastal erosion and flooding along coastlines and in the Nile Delta and to intensify extreme weather events.

3. The Near East region is highly vulnerable to climate change because of existing conditions of water scarcity and recurrent drought. Water resources are particularly at risk; climate change is expected to increase water stress and alter river flows. The region's natural vulnerability to climate change is exacerbated by widespread poverty, particularly in the rural areas where 34 percent of the population lives below the poverty line (IFAD, 2010).

4. Climate change and climate variability threaten the sustainability of forest and range resources, which are already under intensive human pressure in many areas. Climate change could result in further deforestation and forest and range degradation, thus undermining forest and range ecosystem services that are essential to livelihoods and food security in the region. Climate change is predicted to increase the risk of wildfires; cause shifts in species' ranges and increase the risk of extinctions; heighten the risk of pests, diseases and forest dieback; and, through sea level rise, negatively affect mangroves and other coastal ecosystems.

5. Forest resources that are considered to be the most vulnerable to the combined impacts of climate change and socio-economic changes in the Near East region include the following:

- Conifer and mixed relic forests in high mountain ranges – including in Lebanon, Syria, Cyprus, Turkey, Iran and Afghanistan; and the southern part of the Arabian Peninsula in Oman, Saudi Arabia and Yemen.
- Threatened relic forests and tree and shrub species.
- Wetland forests – including freshwater forest ecosystems in North Africa
- Coastal forests including forests in south-west Turkey, coastal dune systems in the Mediterranean coast, and mangrove forests in the Red Sea and Persian coasts. (AFED, 2009; FAO 2010a).

FORESTRY AND RANGE MEASURES TO ADAPT TO CLIMATE CHANGE AND CLIMATE VARIABILITY

6. Adapting forest and range management to climate change will entail making adjustments at every level, from local to national. It will require changes not only in management practices on the ground, but also in policies, institutions and other governance arrangements. Public awareness needs to be raised, new research will be required, climate change vulnerability assessments and cost-benefit analyses of mitigation and adaptation measures will be needed, and human and institutional capacities to deal with the emerging challenges will have to be strengthened. In its Strategic Framework for Forests and Climate Change¹, the Collaborative Partnership on Forests recognized sustainable forest management (SFM) as an effective framework for forest-based climate change mitigation and adaptation. Applying the principles of SFM will help maintain healthy and resilient forest ecosystems and forest ecosystem services essential to reduce risks of climate change to vulnerable people.

¹ CPF Strategic Framework on Climate Change <http://www.fao.org/forestry/cpf/climatechange/en/>

7. Reversing unsustainable forest and range management practices (e.g. excessive livestock numbers, overgrazing, illegal logging, overharvesting of fuelwood) and applying best practices are fundamental for restoring ecosystem health and resilience. Installing adaptive institutional arrangements and co-management systems will also enhance resilience. Various adaptation measures in the Near East (FAO, 2010a) and in Eastern Europe and Central Asia (FAO, 2010b) include implementing landscape adaptation measures, building fire-smart forest landscapes, undergoing post-fire restoration, adjusting watershed management practices to account for increased risk of erosion and flooding, and practicing adaptive forest management, including through altering silvicultural practices, undertaking forest restoration, and reinforcing forest conservation and forest protection.

8. A review of the National Communications (NCs) and National Adaptation Programmes of Action (NAPAs) submitted to the United Nations Framework Convention on Climate Change (UNFCCC)² by the member countries of the Near East Forest and Range Commission provides a good indication of the types of adaptation measures the countries identify as most important. Several countries identified the following actions in the forest and range sectors: restoration of degraded forests, afforestation and reforestation, use of drought tolerant species and varieties, watershed management, measures to reduce soil erosion and salinization, fire management, mangrove restoration and rangeland rehabilitation. Community-based management of natural resources and policy reform to increase peoples' access to natural resources were listed by some. Many countries listed improved forest/range monitoring, awareness raising, education, research, and institutional and policy reform as needed actions.

9. While the National Communications of Near East countries put greater emphasis on adaptation than mitigation, many of the adaptation measures cited – in particular, forest and range restoration, afforestation and reforestation, soil conservation/improvement, and fire management - are also mentioned as important mitigation actions. There is ample potential to enhance climate change mitigation through adaptation measures and *vice versa*.

RELEVANT INTERNATIONAL DEVELOPMENTS

10. The need for scaling up adaptation actions and associated funding to assist developing countries is now widely recognized. Attention in UNFCCC on climate change adaptation has increased over the past few years.

11. The Cancun Agreement, adopted by UNFCCC in December 2010, agrees that adaptation is a challenge faced by all Parties, and calls for Parties to UNFCCC to take various actions in adaptation and established the Cancun Adaptation Framework to enhance action on adaptation.

12. Parties to UNFCCC, recognizing the importance of strengthening regional cooperation on climate change adaptation, included the following call for action in the Cancun Agreement:

“Invites Parties to strengthen and, where necessary, establish regional centres and networks, in particular in developing countries, with support from developed country Parties and relevant organizations, as appropriate, and to facilitate and enhance national and regional adaptation actions, in a manner that is country-driven, encourages cooperation and coordination between regional stakeholders and improves the flow of information between the Convention process and national and regional activities”³

13. Parties to UNFCCC also recognize that additional financial support will be required to enable developing countries take needed adaptation actions. New international sources of

² Available on the UNFCCC website: http://unfccc.int/national_reports/items/1408.php

³ Paragraph 30 of the Cancun Agreement. See: <http://unfccc.int/resource/docs/2010/cop16/eng/07a01.pdf#page=2>

financing have been developed by UNFCCC to support climate change adaptation in developing countries. These include the Special Climate Change Fund (SCCF), the Least Developed Countries Fund (LDCF) and the Adaptation Fund administered by the Global Environment Facility. The Green Climate Fund, now under development in UNFCCC, is expected to be a major source of funding for adaptation projects in the future.

OPPORTUNITIES FOR REGIONAL COOPERATION

14. FAO has taken action to initiate a process to encourage regional Near East cooperation on forests, range and climate change adaptation. In 2010, FAO prepared two regional analyses on forests and climate change of relevance to the members of the Near East Regional Commission: one for the Near East region (FAO, 2010a) and other for Eastern Europe and Central Asia, which includes information on some NEFRC members (Kyrgyzstan, Turkey and Uzbekistan) (FAO, 2010b). The analyses highlight needs and opportunities for regional cooperation on forests and climate change.

15. Building on these, FAO, with support from the FAO-Finland programme, “Sustainable forest management in a changing climate” and in partnership with the German-funded GIZ forestry project for the Mediterranean (Projet Régional *Silva Mediterranea*), organized a regional workshop from 20-22 September 2011 in Cairo. Nineteen members of the NEFRC attended the workshop. The purpose was to explore shared country needs and interest in developing regional/sub-regional project(s) to support forests, range and climate change adaptation actions in the Near East region.⁴ Countries expressed strong interest in participating in regional/sub-regional climate change project(s), developed preliminary logical frameworks for projects, and asked FAO assistance to develop the project proposal(s) and secure funding. FAO is working with countries in the region to draft project documents and exploring the most promising sources of financing, including through a proposed donor roundtable held in conjunction with the twentieth session of the NEFRC. If a regional project or sub-regional projects on climate change adaptation in the forest and range sectors materialize(s) from this effort, the NEFRC could play a key role in reviewing progress, facilitating the sharing experiences, disseminating knowledge and furthering the use of the outcomes of the project(s).

16. A similar process is underway for support for forests and climate change actions in Eastern Europe and Central Asia countries, building on the results of the workshop on Climate Change Impacts on Forest Management in Eastern Europe and Central Asia, held in Sopron, Hungary in April 2010. The resulting publication provides information on progress of the countries on forest and climate change activities, identified shared needs of these countries and proposed areas for regional cooperation (FAO, 2010b).

17. Among the needs expressed by countries participating in the Cairo meeting was the amendment of forest policies, laws and institutions to mainstream climate change into the forest sector and capacity strengthening to take climate change adaptation actions in the field. FAO’s Forestry Department is developing two tools for voluntary guidance to help them integrate climate change into the forestry sector. These are offered for country use and adaptation, as appropriate. One is for use by policy makers to assist with incorporating climate change into national forest programmes, and the other is for use by forest managers to help them identify and undertake adaptation and mitigation actions. The policy level tool is available on the FAO website (<http://www.fao.org/forestry/climatechange/64862/en/>). These will be available for use in 2012 by interested countries. FAO could provide assistance to countries in the use of these tools as a component of regional/sub-regional project(s), or could assist countries bilaterally in their use. More information on these guidelines is available on FAO’s website (www.fao.org/forestry/climatechange/en/).

⁴ The report and other information on the meeting is available on <http://www.fao.org/forestry/climatechange/72759/en/>.

ISSUES FOR CONSIDERATION OF THE COMMISSION

18. What actions would NEFRC members like FAO to take to support countries' efforts (nationally, regionally or internationally) on forests, rangelands and climate change?
19. What actions could members of NEFRC take in their own countries to increase commitment for national action and regional cooperation on climate change adaptation in the forest and range sectors?
20. What role for the NEFRC do members envisage regarding support for the development, approval, implementation and sharing of experiences of regional or sub-regional cooperation projects on forests, range and climate change adaptation?

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