NEAR EAST FORESTRY AND RANGE COMMISSION

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URBAN & PERIURBAN FORESTY

I.   Introduction

1.   The Near East and North Africa Region is one of the most urbanized areas of the world. In the Maghreb, in particular, the urbanization process is expected to continue over the coming decades, with over 82 percent of the population living in urban areas by 2050 (UN-Habitat, 2012). The same goes for the Gulf Cooperation Council, where in 2010 urban areas were already housing 75.4 percent of the total population (UN-Habitat, 2012). Generally speaking however, the urban population growth in the Region is concentrated in small- and medium-size cities, and is driven by an intense migration process from rural to urban areas. In fact, according to the most recent estimates (UN 2016), only one of the 30 biggest megacities of the world is found in the Region Cairo, with some 19.1 million inhabitants ranks 9th in the world. Several medium-size cities have become large metropolitan regions with some developing as mega-urban regions.

2.   This urbanization process creates a number of challenges for city administrators: increasing poverty, decreased food security, extreme climatic events, air and soil pollution, difficult access to energy sources, unemployment and increasing human disease incidence. In the Region, these are exacerbated by the severe water shortage affecting the area (which holds only 1.4 percent of the world's accessible fresh water), the increasing lack of resources (linked to environmental degradation and natural resources depletion), and the high vulnerability to natural disasters (exacerbated by drought). Faced with these challenges, several cities in the Region have started drafting strategic plans towards a more sustainable urban development.

3.   The United Nations clearly recognizes sustainable urban development as a key challenge to be addressed through more sustainable and equitable development. The Sustainable Development Goal (SDG) 11 of the 2030 Agenda for Sustainable Development calls for *Making cities and human settlements inclusive, safe, resilient and sustainable*, while the New Urban Agenda, approved at the Habitat III Conference in 2016 in Quito (Ecuador), encourages urban actors to develop more sustainable and resilient urban models, including through special attention to green public spaces.

4.   FAO has been supporting member countries on urban forestry issues for a number of years. In addition to providing technical support through field projects, the Organization has also played an active role in raising awareness on the importance of the sound management of forests and trees in and around cities for increased sustainability of urban development. In this framework, in 2016 FAO published the *Guidelines on Urban and Peri-urban Forestry*, a document aimed at providing guidance to national and local authorities on the planning, design and management of urban and peri-urban forests and trees. The document, launched at the occasion of the Habitat III Conference, has been widely disseminated.

II.   The benefits of urban and peri-urban forests

5.   Well-managed urban and peri-urban forests (UPFs) provide ecosystem goods and services that can help local administrations better respond to the needs of growing urban populations. These benefits can be divided into provisioning, supporting, regulating, cultural and socio-economic benefits.

Provisioning benefits

6.   Growing urban populations require food and basic services, posing major infrastructural, social, environmental and economic challenges. In several cities around the world, urban forestry practices such as collection of wild edible plants, planting of fruit-bearing street trees or establishment of multifunctional public parks, can contribute to the availability of food within cities. In Abu Dhabi and in the Sultanate of Oman, for example, palm trees are specifically bred, planted along the streets and managed to produce dates for public consumption as "sadaqua", which means charity. What is left after collection by the people, is then harvested by municipalities. Similar practices are also common in Sudan.

7.   Green public spaces can provide ideal settings for recreational and sport activities, thus helping improve urban dwellers' health and well-being (both physical and mental).

8.   Urban and periurban forests can play a key role in increasing water quality by intercepting air pollutants, reducing sediment and filtering rainwater.

Supporting benefits

9.   UPFs provide habitat for plant and animal species, playing a critical role in supporting the conservation of biodiversity and natural landscapes inside and beyond city boundaries. Natural and semi-natural areas can help to preserve local biodiversity and increase ecological connectivity, thus reducing environmental fragmentation and increasing the resilience of natural ecosystems to human pressure. If properly planned and managed, urban green spaces can host surprising levels of biodiversity. Many cities, such as Ouarzazate, Morocco, use UPFs to prevent land and soil degradation, and to recover their stability and quality. In fact, trees contribute to soil formation, increase soil productivity and improve its permeability. By blocking winds and stabilizing the soils, they can also prevent erosion and reduce soil compaction.

Regulating benefits

10.   UPFs have a decisive role in regulating ecosystem processes and in increasing the resilience of the urban environment. By shading and cooling the air, UPFs help to mitigate the urban heat island effect and support adaptation to climate change. Research in Dubai has shown that trees in urban areas can reduce temperatures of up to 8°Celsius, greatly improving the thermal comfort of urban dwellers (Taleb et al., 2014). Similarly, studies conducted in Amman have shown that trees can reduce the cooling load of building by up to 35 percent (Abdel-Aziz et al, 2014). Urban forests, trees and soils can also potentially increase carbon sequestration in and around urban areas. Such potential depends on a number of variables, including the species and size of the trees. Water flow and stormwater regulation is also closely dependent on healthy urban and peri-urban forests. Peri-urban trees increase the protection aspects and quality of watersheds and water reservoirs by combating erosion, limiting

evapotranspiration and filtering pollution. In addition, by absorbing excess water and increasing soil infiltration and stability, urban and peri-urban trees can mitigate the occurrence and impact of flooding events.

11.   Trees are excellent filters as they intercept gaseous pollutants and particulates from urban activities and vehicular traffic, thus contributing to improved air quality. While there are proposals to use trees to reduce air pollution in Cairo, it would appear that no attempt has yet been made in this direction. Useful lessons could be learned from Beijing where, in 2002, the 2.4 million trees in the centre of the city removed 1261.4 tonnes of pollutants from the air (Yang et al., 2005).

Cultural benefits

12.   UPFs contribute to increase social equity, promote a sense of community among urban dwellers and ensure the preservation of local spiritual and cultural values, which are essential components of place-making – the process of creating high-quality spaces (e.g. parks, squares and waterfronts) that people want to visit and enjoy. In Tunis, for example, the Ennahli park attracts up to 300 000 visitors per year. UPFs are also ideal settings for environmental programmes to raise urban dwellers' awareness on the importance of nature conservation. By beautifying central and suburban areas, urban forests and trees help to reduce social, environmental and housing inequities. Urban and peri-urban parks also provide urban communities with open-air settings for implementing local activities and events, thus increasing social cohesion.

13.   Urban and peri-urban forests and trees are often associated with strong cultural, social and religious values. For example, the National Programme for Centennial Trees launched in Tunisia in 1993 aimed at preserving the oldest trees of the country which are considered as national heritage from the historical, cultural, biological and ecological points of view.

Additional socio-economic benefits

14.   In addition to ecosystem services, UPFs also provide direct and indirect socio-economic benefits and make significant contributions to the creation of a local model of green economy. UPFs generate jobs related to the establishment, management and maintenance of the green areas and their products, thus contributing to boosting a green economy model for the city. Urban greening also increases property and land values and rental prices, with direct revenues for the government in terms of taxes. Urban greening also contributes to the branding of a city, attracting investment, business and tourism.

15.   The wood and non-wood forest products (e.g. timber, fruits, nuts, berries, mushrooms, medicinal plants and woodfuel) provided by urban forests contribute to local incomes and improve communities' economic resilience. UPFs also provide many indirect economic benefits through savings on public costs. By sheltering buildings, they allow savings in heating and cooling costs. By improving physical and mental health, cooling the environment and reducing pollution, they attenuate the frequency of some non-communicable diseases, thus indirectly reducing public health costs.

III.   Towards improved governance of urban and peri-urban forests and trees

16.   Rapidly-growing cities often have little time to adjust to the changing circumstances and to the increasing pressure on land and resources generated by uncontrolled urbanization. To ensure that UPFs can indeed provide the above benefits, adequate governance of green public spaces and of urban forests is required through policies, clear norms and sound planning. For example, in Tunisia, the National Programme for Urban Parks, launched in 1996, has made it possible to establish 36 parks to date. In Morocco, the High Commissary of Water and Forests developed a 10-year programme (2005-2014) consisting of the implementation of a number of action programmes aimed to combat desertification in the country. Among others, the Strategy envisaged the creation of green belts around the cities acting as barriers in contrasting the increase of desertification and aridity induced by climate

change in urban and peri-urban area. The proper implementation of these tools is, however, often hindered by a number of factors, as described below.

17.   The governance of urban green spaces requires that planning departments have adequate mechanisms to acquire the technical skills and knowledge needed to include urban forestry aspects in the overall planning processes and to mobilize support from national forest services to provide the necessary technical inputs.

18.   It is also essential to reduce the fragmentation of responsibilities for the development of policy and planning documents across levels of government. The planning of urban forest resources is rarely considered as an integral part of the urban planning agenda, but when this is the case, they can play a central role in encouraging proper planning and in making cities more livable. Efficient governance is also the result of the involvement of various stakeholders such as national forest services, municipalities, government offices, community organizations and urban residents in different phases of the governance and in the development of efficient coordination mechanisms.

19.   Policies related to urban forests are often sectoral, leading to conflicts between sectors over the use of open spaces. In addition, while forests within the city limits are normally managed by municipal authorities, peri-urban forests may frequently be managed by other entities, e.g. national forest services. Thus, effective governance of UPFs requires policies and/or legislation aimed at harmonizing the range of interests at the level of the entire city region, and work to strengthen urban-rural linkages through adequate investments in infrastructure, particularly transportation, to improve rural productivity while allowing access to markets, jobs and public services.

20.   Increased awareness of the goods and services provided by UPFs could also help to address the lack of specific public funds allocated to green infrastructure that affects many public administrations. Both national and municipal budgets are often insufficient to fund adequate urban greening programmes. Therefore, funding may rely heavily on local volunteers and innovation, not only to raise funds, but also to provide programme leadership and physical labour. Wherever possible, funding strategies might attempt a mix of public and private funding. Income-generating activities linked to recreation and/or goods and ecosystem services derived from the urban forest could also contribute to funding the maintenance of UPFs. Of course, whenever fees or other forms of service payments are introduced, it is always important to give due consideration to social equity aspects.

21.   The active participation of local communities in the governance process of urban landscapes is also an important success factor. In fact, the involvement of citizens in UPFs planning, design and management processes can bring many positive benefits such as public support for planning decisions, the avoidance of protracted conflicts and costly delays, an increased trust among institutions and the public, and a reservoir of goodwill that can carry forward to future decisions. For example, the forests close to Beirut and other urban areas in Lebanon are threatened by urbanization and forest fire. A number of local initiatives are now addressing protection and sustainable management of Beirut peri-urban forests. Among those, the Baabda forest, Harissa, and Beirut River initiatives.

22.   Finally, research will continue to play an important role in the development of well-adapted UPFs and in their management. Priority topics include species selection, impacts on air pollution, adaptation to climate change, as well as studies of public preferences and evolving demands for urban forestry services, among others.

IV.   Points for consideration

23.   Taking into consideration the commitments to the achievement of the SDGs, and the implementation of the New Urban Agenda, the Commission may wish to:

a) Recognize that the sustainable management of UPFs and their integration in urban planning is essential for achieving the SDGs, ensuring people's health and well-being and tackling climate change.

b) Invite countries to:

- Improve coordination among the various levels of governments (national, regional, local) on the development of policies and norms for the development of urban forestry;
- Promote integrated urban planning as a strategic tool for managing the challenge of maintaining an optimal balance between the natural and the built environment; and
- Use adequate policy instruments and boost investments to encourage the development and sustainable management of urban and peri-urban forests and support research.

c) Request FAO to support countries to:

- Raise awareness and promote the role of urban forestry as an essential element of sustainable cities and in the implementation of SDG11;
- Develop tools that can assist relevant government authorities in the planning, design and management of sustainable urban and peri-urban forests that can provide a wide range of goods and services to growing urban populations; and
- Support regional collaboration through the development of regional networks for knowledge transfer and exchange, such as the *Silva Mediterrranea Working Group on Urban and Peri-urban Forestry*.