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**LOCAL POLICIES, CLIMATE
CHANGE AND FOREST
MANAGEMENT IN
PERI-URBAN FORESTS:
A NECESSARY INTEGRATION**

*Executive summary for municipal
environmental technicians*

April 2021

The project LIFE MixForChange



The LIFE MixForChange project (2016-2022) is coordinated by CTFC and has as other beneficiaries the Catalan Forest Ownership Center (CPF), the Forest Owners Association (FOA) Montnegre - Corredor and FOA Bellmunt - Collsacabra. The Barcelona Provincial Council is also a collaborating entity. The main objective of this project is to contribute to the adaptation and resilience to climate change of sub-humid Mediterranean mixed forests, favouring their conservation and maintaining their productive, environmental and social functions.

The project includes the development, implementation and monitoring of forest management for adapting to climate change in 164 forest hectares of Montnegre-Corredor, Montseny, Bellmunt-Collsacabra and the south of Ripollès, in the provinces of Barcelona and Girona.

A series of communication, dissemination and transfer actions have also been carried out, including the "Guide to local policies, climate change and forest management in peri-urban forests: a necessary integration", summarized in this document.

The objective of this guide is to explain to the public the characteristics, interests and threats of peri-urban forests in the context of climate change as well as the importance of sustainable forest management and adaptation criteria necessary to face these threats.

What are peri-urban forests?

Peri-urban forests are forests located in the immediate surroundings of a city or town, they are considered forest land and share space or limits with facilities, industrial zones, urbanizations and residual agriculture zones.

They are forests where forest and urban characteristics are mixed, and are of great importance at the social, recreational and ecological levels. The particularities of these forests make it necessary to consider criteria and management objectives that are different from those of forests in rural conditions.

Peri-urban forests improve quality of life and promote the bioeconomy

Peri-urban forests improve the environment and the quality of life of the surrounding cities and towns by providing ecosystem services (see table), that is, improvements that society receives due to the functioning of ecosystems. All forests provide ecosystem services. The particularity of peri-urban forests is their proximity to the population, which increases the demand for these services.

Forests play a key role in the development of the bioeconomy because they generate a large variety of renewable biological resources (wood, cork, wood chips, pine nuts, game and livestock meat...), generate jobs and host leisure and educational activities.

Service type	Basis	Examples
Support	Basic processes for the rest of the services	Biodiversity, soil formation, photosynthesis, water and nutrient cycles, ecological connectivity
Provision	Renewable, biological, raw materials or goods	Wood for furniture, construction and energy; mushrooms, game meat, medicinal plants, cork, pine nuts, fresh water, among others.
Regulation	To help reduce impacts	Climate regulation, soil protection (avoid erosion and landslides), filter of pollutants and noise, protection against floods, carbon fixation
Socio-cultural	Aesthetics, leisure and culture	Landscape, leisure activities, sport, tourism, environmental education

Climate change and forest management

Today's forests are the result of millennia of interaction with societies that have used them with multiple, sometimes simultaneous, demands. In peri-urban areas the interaction is especially intense because the forest is very accessible to the local population.

Sustainable and multifunctional forest management emphasizes the need to consider the maximum number of ecosystem services that a forest generates. Forest management can achieve multifunctionality by prioritizing the provision of some ecosystem services over others in each area of the forest, seeking to generate all of them on the surface as a whole. This forest management is developed through the **Forest Management Instruments (FMI)**, in which silviculture is planned, that is, the type and intensity of suitable interventions to avoid situations of excessive density and its associated problems of mortality and fire risk.

The main objective of **sustainable forest management adaptive to climate change** is to increase the resistance (ability to maintain its integrity - low vulnerability) and resilience (ability to recover spontaneously) of forests to the main disturbances: drought, fires, pests and diseases. The three **basic principles of Mediterranean adaptive silviculture** are:

- a) **Regulate the density**, applying clearings to reduce the number of trees as they grow and compete with each other, favouring the most vital specimens and maintaining all species.
- b) **Promote mixed forests with complex structures**: maintain trees and shrubs of all species present and with different sizes and ages.
- c) **Break the continuity of the fuel** (vertical continuity between the understory and tree vegetation) so that the fire cannot pass from the scrub to the tree crowns.

Forest governance: regulations and policies

In Spain and Catalonia the forest area is mostly privately owned (73% in both cases), often in small properties. The remaining public ownership includes municipally owned land. Spanish **Law 43/2003 on Forestry** and its subsequent amendments focuses on the competences of **local entities in their capacity as owners of forest lands**.

The municipal urban planning competence is materialized through the **General Urban Management Plan (POUM)**, or the **urban planning regulations**, which supplement or complement the POUM. Local entities also have derived urban plans such as partial plans, special urban plans and urban improvement plans, among others.

The **Global Covenant of Mayors for Climate & Energy** is an opportunity for local authorities to become involved in aspects related to climate change. This Covenant brings together thousands of local and regional authorities with the voluntary commitment to apply in their territories the EU climate and energy objectives for mitigating and adapting to climate change. This pact is articulated through the **Sustainable Energy and Climate Action Plans (SECAP)**.

Proposals for integrating local policy and forest management adaptive to climate change

The local municipal administration has extensive knowledge of the territory it manages and the actors present in it. In addition, it has direct access to citizens and can effectively determine their demands and thus define the direction that the town wants to take on the economic, ecological and social levels. Despite the fact that **municipalities do not have direct competence** in planning or implementing forest management (apart from those that derive from their status as owners of forest lands), they do have numerous powers that allow them to give a decisive boost to adaptive forest management in their territory. Local administrations can promote a wide variety of measures in this line, defined and implemented in a coordinated manner and in accordance with a development plan with an associated calendar and budget.



Changes in the peri-urban landscape. The area surrounding Gavà (Barcelona) in 1956 (above) and 2020 (below). A large part of the old farmland has become homes, industrial areas or forests. In 1956 the fields separated the forests from the houses, but now they are intimately mixed. Source: ICGC.

On the other hand, **supra-municipal administrations** (county councils, metropolitan areas, etc.) can also provide an important boost for the success of these measures through coordination and coherence between the measures implemented by municipalities and also logistical and technical support for these.

Below are some of the main measures that municipalities can adopt, detailed in the guide.

Actions to promote forest sustainability

- **Promote sustainable management of peri-urban environments:** promote the sustainable primary sector; provide infrastructure; promote the creation of habitat mosaics; control improper uses; and regulate accesses and potentially dangerous uses.

- **Promote forest planning and management:** promote the drafting of FMIs for municipal forests and joint or municipal FMIs for private forests; inform private owners about forest management development options.

- **Promote fire prevention:** auxiliary maintenance of the basic network of forest roads; subsidiary execution of opening and maintaining protection strips for urbanizations.

- **Encourage extensive animal farming:** facilitate logistics for herds to be established; make agreements for grazing municipal forests or fire prevention strips; recover undeveloped land; facilitate spaces for the creation of demand for livestock.

Interaction actions with other actors: coordinate work with other public entities; promote the association of forest owners (public and private); mediate and promote participatory processes; encourage custody arrangements.

Economic support actions

- **Promote the consumption and commercialization of forest products** (wood and non-wood, livestock, etc.): promote local forest products; increase the demand for the supply of municipal equipment (ex: wood chip boilers); facilitate the implementation of auxiliary infrastructures for forestry and livestock activities in urban planning and in the processing of licenses; promote sales spaces or contacts with producers.

- **Mobilize direct and indirect economic resources:** involve companies in sponsoring forest improvement activities and environmental volunteering, allocate part of the municipal taxes to improving peri-urban forests; look for sources of external funding.

Training, dissemination and awareness actions:

periodic dissemination to the public of the actions carried out; promote the training of technical personnel and political positions in the local administration; accompany environmental volunteer activities; accompany the incorporation of concepts on adaptive forest management in pedagogical programmes; promote and disseminate research, transfer and citizen science projects; develop an annual programme of environmental education activities in municipal spaces.

The complete document can be consulted at: <http://www.mixforchange.eu/en/publications/>



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