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Policy Brief | December 2016



- **“The fires are always initiated by pyromaniacs and arsonist”:** While in some cases pyromaniacs start fires, many fires are started because of negligence by the public, by sparks from machinery or power lines, or through traditional agricultural practices.
- **“The objective of must be to have not a single forest fire”:** The idea is not to completely eliminate fire, as low intensity fires can be beneficial to the ecosystem, with many types of vegetation being able to with stand these kind of fires. What is necessary is to reduce high intensity, catastrophic fires by managing the vegetation structure inside forests and at the landscape level using, when appropriate, prescribed burning.
- **“The administration is solely responsible to protect myself and my goods and services, because I already pay my public taxes”:** This is not true. Forest fires effect all stakeholders, therefore, they all share responsibility of the forest fires. Measures should be taken by all to prevent forest fires. Through integrated forest fire management, all the stakeholders become co-responsible for forest fire prevention.



Toolkit of communication to journalists and media.



Toolkit of communication to children, youth and their teachers.



Toolkit of communication to communities and municipalities.

Photos: CTFC

#### Project consortium:

Forest Sciences Centre of Catalonia - CTFC, Spain; Fire Ecology and Management Foundation Pau Costa Alcubierre – PCF, Spain; European Forest Institute Mediterranean Regional Office – EFIMED, Spain; EEIG FORESPIR, France; Direction Générale des Forêts de Tunisie, Tunisia; and Université Hadj Lakhdar Batna, Algeria.



Co-financed by the EU-Union  
Civil Protection Mechanism

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# FOREST FIRES: Creating a resilient society

## NEED FOR A NEW PARADIGM

Fires are a natural phenomenon in the Mediterranean region, however it becomes a serious threat when half a million hectares burn per year. The population is largely unaware of the risks and how to act in case of fire, and in turn, the need to protect people and infrastructures may compromise the resources available for fire prevention and suppression, especially near houses situated close by forested areas. Therefore, it is essential to raise individual awareness on the risk exposure and individual self-protection capacity, in order to reduce the social, economic and environmental costs of wildfire.

## WHY FORESTS BURN

Forest fires in the Mediterranean are 95% human-induced, mainly through negligence and accidents, such as agricultural fire escapes, machinery sparks, camp fires and smokers.

2.6% of the wildfires are classified as large wildfires, however these are responsible for 80% of the total area burned every year. The ignition, combined with ideal weather conditions (temperature above 30°C; wind speed greater than 30km/h; relative humidity below 30%) and a high quantity and continuity of combustible vegetation cause the fire to spread quickly, which can be disastrous.

Coupled with these factors, future climate predictions will favour more frequent, high intensity forest fires.



## BUT WHY IS THE MEDITERRANEAN VEGETATION BURNING MORE TODAY THAN IN THE PAST?

During the last decades we accumulated more vegetation. The processes of land abandoned, rural depopulation and reduction of traditional forest use have resulted in forest ecosystems that are denser and combustible, thus increasing the associated fire hazard and risk. In the past it was common to have grazing animals in the forest, consequently maintaining a low quantity of combustible material on the ground. The same goes with the use of wood as raw material, such as fire wood.

The consequence of these actions are forests with vertical and horizontal fuel layer continuity, with high presence of burning material; leading to a much higher possibility of a catastrophic forest fire than in the past decades.

### COMMUNITIES AT RISK

The Mediterranean countries use suppression as the main way to fight wild fires, but high intensity fires exceed the capacity of extinction, even in countries with well-prepared human resources and latest technologies.

Moreover, the urban sprawl of cities and municipalities favoured the growth of the Wildland-Urban Interface areas, leading to a close contact between forests and houses. This consequently leads to increased ignitions and compromises the safety of the population, fire-fighting services and infrastructures. Municipalities and communities need to be alert and aware of the high risk of forest fires, therefore they need to be prepared with prevention and, if necessary, emergency plans.

## WHAT CAN WE DO?

1

### A focus on prevention

Fire prevention may be the most cost-effective and efficient mitigation programme an agency or community can implement.

A lot of resources are allocated towards fire suppression every year, but equal priority should be given to prevention efforts; when the fuel is reduced the fires will be reduced. Prevention needs to be done on the landscape level; to maintain safe levels of forest vegetation, reduce the vertical and horizontal structural continuity, reduce fuel availability next to settlements, educating forest management on how to reduce its risk levels and use fire as an opportunity to reduce fuel (in a controlled environment in not ideal weather conditions).

It is of the utmost importance to consider fire risk in landscape planning and to promote fire prevention education by running campaigns in order to raise awareness among all the different members of the population.

2

### Self-protection

The residents of wild-land urban interfaces can also do prevention actions to protect their residential area. As an example:

- Keeping a buffering zone, in which removing dead plants, grass and weeds in a perimeter of 35m around the house is important.
- Use fire resistant materials during the house construction.
- Choosing plants that are fire resistant or less combustible for the gardens.

However, in case of an emergency it is recommended that each family knows what to do, taking into consideration:

- Community communication plans.
- Meeting points outside of the risky areas.
- Safe evacuation routes from the dangerous area.
- Safe behaviour and the list of personal protection items that should be taken during an evacuation.

3

### Better informed society

Many different channels of communication discuss forest fires, and there is some information that is wrongly assumed by population (which can have very dire consequences). Here we list some of these assumptions that people make along with the facts behind them:

- **“Cutting down of any trees is bad for the environment”**: Many people view the cutting of trees for any reason as bad, however the public is sometimes unaware of the services that forest management provides to them, especially in protection against high intensity forest fires. Through creation of forest structures that have lower fuel loads, we can reduce fire intensity, making the fire easier to combat and causing less damage to the ecosystem.
- **“Fire is the cause of the problem, not the consequence”**: In reality, this is the opposite, fires are the consequence of a variety of political decisions, rural and urban planning that created improperly managed forests, put people in close contact with forest and enticed people to ignite forests.
- **“All fires, with no exception, are bad and catastrophic”**: This is not true, fire is an essential ecosystem disturbance for many regions of the world, which is necessary for the rejuvenation of the forest.
- **“The best way to avoid and combat the fires is by the technical way, so, the most effective should provide less fires”**: More often, practitioners, members of the fire service and researchers are all indicating that we have reached our capacity to fight wildfires through technical means. They state that the key to preventing future catastrophic forest fires is through proper forest management that is geared towards fire prevention.

