

# REDUCING WILDFIRE RISK IN EUROPE THROUGH SUSTAINABLE FOREST MANAGEMENT

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## Unprecedented threats to European forests

Across Europe, a growing number of large and uncontrolled wildfires are threatening values such as forest ecosystems, essential ecosystem services, populations and infrastructure. Devastating economic, social and environmental consequences of wildfires are no longer limited to the Mediterranean region but are part of the new reality in central and northern European forests which have until now been less fire prone.

While fire is an important part of many forest ecosystems, it can also be a major disturbance, and overly frequent and severe fires are threatening to convert forests from carbon sinks to sources.

Climate change is affecting the resilience of pan-European forests and is particularly responsible for the increasing frequency of forest disturbances like storms, droughts, fires and diseases. Adaptation is necessary to fulfil and maintain the multiple functions for healthy forests. Climate change and land-use change are projected to make wildfires more frequent and intense, with a global increase of extreme fires of up to 14 per cent by 2030, 30 per cent by the end of 2050 and 50 per cent by the end of the century, according to a new report by the UN Environment Programme (UNEP) and GRID-Arendal.

## Governments urged to act on wildfire risk

Governments are called on to radically shift their investments in wildfires to focus on prevention and preparedness especially since wildfires and climate change are mutually exacerbating and impeding progress towards the UN Sustainable Development Goals.

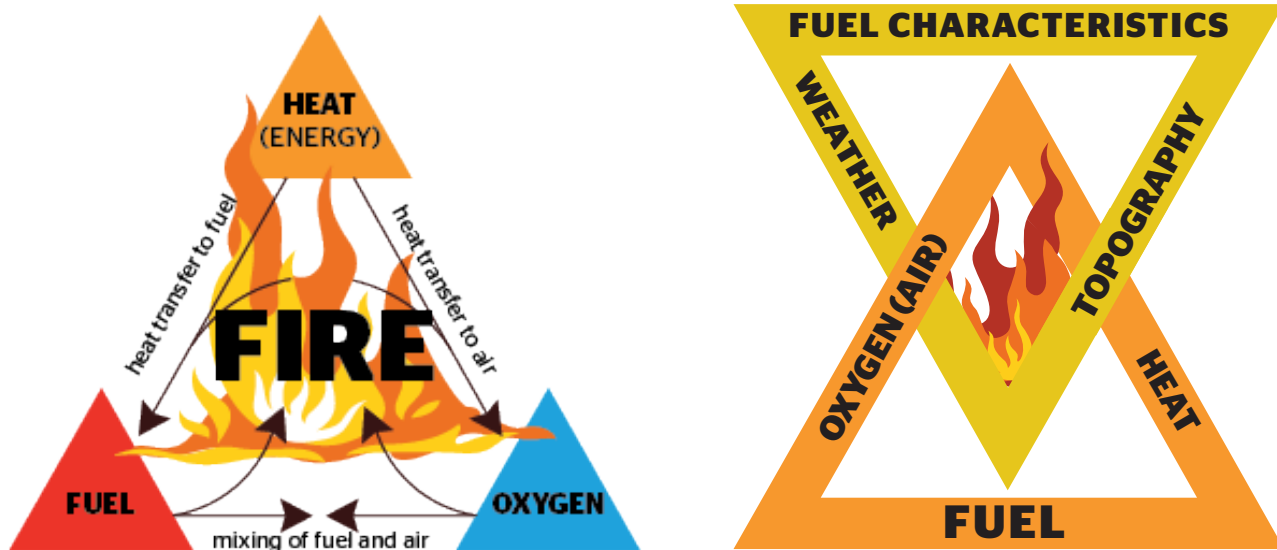
[Statements, Position Papers of the International Wildfire Community and Associations and Expert groups.](#)

### Need for action on sustainable forest management

Healthy and sustainably managed forests are key for providing multiple benefits for the environment, economic and social development, livelihoods and help to mitigate the effects of climate change. Climate smart sustainable forest management (SFM) also safeguards biodiversity, facilitates the development of a circular bioeconomy and promotes green jobs and employment in the forestry sector.

Concretely, SFM shall adapt practical expertise as well as science-based recommendations. For example, where appropriate, to promote mixed, structured, continuous cover forestry approaches to reduce wildfire risk by improved interior forest microclimate with less direct exposure to sunshine, lower temperatures, less wind, higher humidity and improved water storage capacity.

Climate smart SFM, particularly managing vegetation density, structure, and species type is key for mitigating multiple, intersecting challenges and feedbacks of climate change, storm, bark beetle, drought, invasive species, pest and disease and wildfires. In future, more diverse risk reduction measures must be integrated into forest management to achieve greater landscape resilience to future expected disturbances.



*Fire management and SFM is closely linked. Fuel, i.e., biomass, is the common component needed for fire to occur (the fire triangle) and also dictates fire behavior. Weather and topography cannot be controlled, however foresters CAN influence fuel type, structure and density (fire behavior triangle).*

**Climate smart SFM can contribute to fire prevention**, reducing fire intensity and severity, and promote faster and more effective post-fire regeneration of forest landscapes by implementing the following near and longer-term strategies:

- **near-term technical approaches** including fire breaks, fuel breaks, fuel load reduction, risk reduction in the Wildland-Urban Interface, grazing schemes, community engagement, etc....
- **longer-term conceptual approaches** which apply the principles of sustainable forest management to improve vegetation characteristics, such as density, structure, and species composition over time; additionally, risk governance strategies should be integrated into resource management plans, landscape planning, social and cross-sectoral engagement.

## Near and longer-term measures to reduce losses from wildfires

Using SFM practices across Europe to reduce wildfire risk and to reduce level of damage as well as improving post-fire management restoration, will help creating landscapes that are more resilient to future disturbances and can thus safeguard essential values. Fortunately, there are many mutually beneficial ways to manage increasing wildfire risk in forests that build on existing good practices while supporting the multiple objectives of sustainable forest management.

Implementing the suggested near-term technical measures are relatively straightforward and achievable particularly with the engagement of concerned stakeholders in fire-prone communities. The longer-term approach must be cross-sectoral, inclusive, and supported at policy level and emphasizes silviculture and landscape planning aimed at influencing landscapes to become less flammable and more resilient to disturbances, especially wildfires.

## Climate smart SFM & integrated fire management mutually beneficial

A sustainably managed forest is also more resilient to disturbances like wildfires; on the other hand good practices in wildfire risk reduction measures also promote more resilient forest landscapes and diminish the threat of damages and losses to forests and the communities that depend on them.

Educating, empowering and equipping forestry agencies and land custodians to leverage planning, forest and land management strategies and risk governance is mutually beneficial for wildfire risk reduction and, eventually, emergency response. Additionally, cross-sector collaboration can greatly benefit timber production, nature conservation, stimulate local economies, strengthen and promote incentives and implementation of inclusive management strategies which increase forest adaptiveness and resilience to wildfires and other disturbances.

Importantly, sustainable forest management and integrated fire management (IFM) must be people-centered (including honoring



diversity, different demographics, indigenous knowledge and practices, etc..) and locally adapted; therefore, policies must be inclusive and governance participatory.

Locally adapted strategies must address wildfire risk across all phases of the management cycle: prevention and mitigation, preparedness, response, recovery and monitoring. As a people-centric approach, communication among management stakeholders, with the public, and to decision makers must also reflect the wider socio-cultural-economic context of SFM and wildfire risk reduction in the phases mentioned above.

## Policy recommendations

**Apply the near and longer-term strategies** outlined in this policy brief;

**Support a forest's microclimate through continuous cover forestry** and regeneration with targeted tree species;

**Allow accumulation of large deadwood** (where appropriate and with a deadwood-concept) to increase water storage capacity, improve soil quality and reduce temperature through evaporation;

**Promote agroforestry, silviculture, and mixed grazing regimes** to meet multiple objectives;

**Reduce the number of skidding lanes where appropriate;** adapt or develop roads for emergency access in higher-risk areas;

**Integrate pre-defined fire control lines and buffer zones** (reduction of vegetation density, structure and type) and other protective measures, especially near communities, critical infrastructure, or other values;

**Use prescribed burning to achieve ecological balance** or for vegetation management where appropriate and as a training, confidence building and educational tool for first responders, forest and land managers and other relevant stakeholders (e.g., nature conservation);

**Enable collaboration, communication, and capacity building in climate smart SFM and IFM** across sectors and promote inclusive risk governance which supports diversity and dialogue.

**Acknowledge that even the best managed forest might burn under extreme weather conditions,** but note that SFM is offering a wide range of mitigation measures pre- during- and postfire.

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## Acknowledgements

Students from the Pyrolife PhD program contributed to the development of this policy brief.

## Further information

- [FOREST EUROPE](#)
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- [FIRE-RES](#)

