



Regional Wildland Fire Networks:
North America – Mesoamerica – South America – Caribbean – Mediterranean – Southeast Europe / Caucasus – Euro-Alpine – Near East – Sub-Saharan Africa – Southeast Asia – South Asia – Southeast Asia – Australasia – Northeast Asia – Central Asia – Eurasia



Sub-Regional Euro-Alpine Wildland Fire Network



Wildland Fire Issues in the Alpine region

Wildfires are an emerging issue in the Alpine region that can lead to high damages in protection forests, increasing natural hazards and resulting in high costs up to millions of euros for fire suppression and restoration measures. The expected increasing intensity of drought periods, foehn periods and heat waves together with the increasing hazard resulting from rural abandonment and more recreational activities will increase forest fire activity in the Alpine region in the near future. Current efforts to manage forest fires are unable to prevent the occurrence of extreme forest fire events. The implementation of a foresighted and integrated forest fire management for the Alpine region is highly needed. In context of the EUSALP - EU Strategy for the Alpine Region Action Group 8 is aiming to improve risk management and adapting governance mechanisms by enhancing and valorizing existing cooperation structures. The initiative "Forest fires in the Alps: State of knowledge and future challenges" of the members of Action Group 8 and the Sub-Regional Euro-Alpine Wildland Fire Network contributes to this aim.

Forest Fires in the Alps: State of Knowledge and Future Challenges

Forest Fires Situation in the Alps:

- Increased temperature (double than worldwide)
- Protection function of mountain forests
- Main socioeconomic driving factors:
 - Rural abandonment
 - Recreational activities
- Investment in prevention, suppression, and post-fire management needed
- Differences in fire regime between Southern and Northern Alps (Fig. 1)

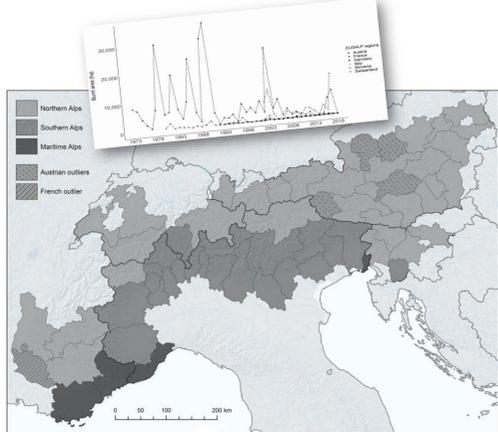


Figure 1. Geographic distribution of the Alpine fire regime clusters (Conedera et al., 2018)

1. Multi-lingual online survey for fire experts from all Alpine countries (Fig. 2) – 80 answers
2. Forest fire workshop in Vienna (Fig. 3) – discussion of the survey results, identification of main challenges, and sharing of success stories on fire management (Fig. 4)
3. White paper for policy makers (Fig. 5) – framework for an integrated fire management (Fig. 6)

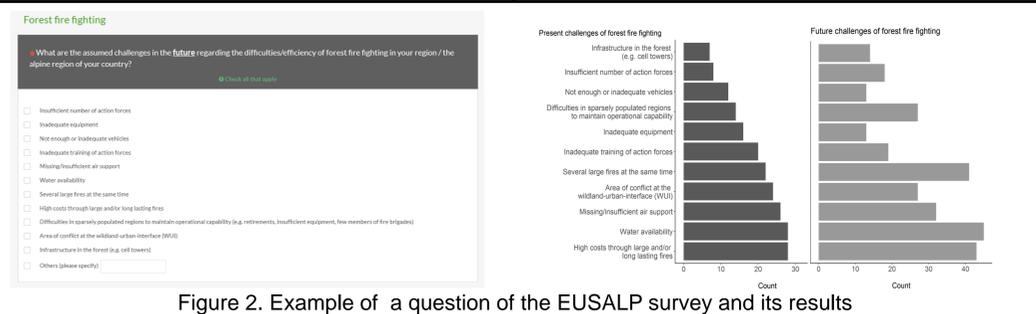


Figure 2. Example of a question of the EUSALP survey and its results

Multi-stakeholder roundtable after extreme fires

Country: Italy
Scale: Regional (Piemonte)

Problem description

- Simultaneous large forest fires as a result of an exceptional drought (2017).
- Disturbed areas include forests for wood provision, biodiversity conservation, recreation, and slope stability.
- Challenge deciding priorities for restoration with limited resources and stakeholders with contrasting interests.

Solution

- Establish a multi-stakeholder roundtable to discuss restoration options based on best available science, interests, and resource constraints.
- Develop guidelines for post-fire restoration, available for private forest owners. Meet local population to explain causes, solutions, and actions being undertaken.
- Slope stabilization was given the highest priority, especially along recreational roads.

Best practices

- Roundtable helped deciding the most urgent actions for post-fire restoration.
- Forest owners were helped with an easy-to-read guideline for restoration decisions.
- Public money was channeled to the most effective solutions.
- Public opinion was given special attention with public hearings and newspaper articles.

Training of aircraft operators for fire suppression in Alpine regions

Country: Austria
Scale: Regional (Tyrol)

Problem description

- Lack of preparedness of aircraft operators and helicopter crews for firefighting in mountainous areas.
- Inadequately collaboration between air support and firefighters on the ground.
- Inefficient use of equipment and tactics available.

Solution

- Specific trainings for aircraft operators and helicopter crews regarding firefighting in Alpine areas together with firefighters and other action forces (e.g., mountain rescue units).

Best practices

- Well trained aircraft operators and helicopter crews.
- Numerous exercises lead to an effectively use of the equipment and tactics available.
- Increased safety for aircraft operators and ground personnel.

Figure 4. Examples of success stories on fire management in the Alpine region



Figure 3. Participants of the forest fire workshop held in Vienna, Austria (June 2019)



Figure 5. White paper for policy makers.

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Website of the Regional Euro-Alpine Wildland Fire Network: <http://gfmcc.online/GlobalNetworks/EuroAlpine/EuroAlpine.htm>

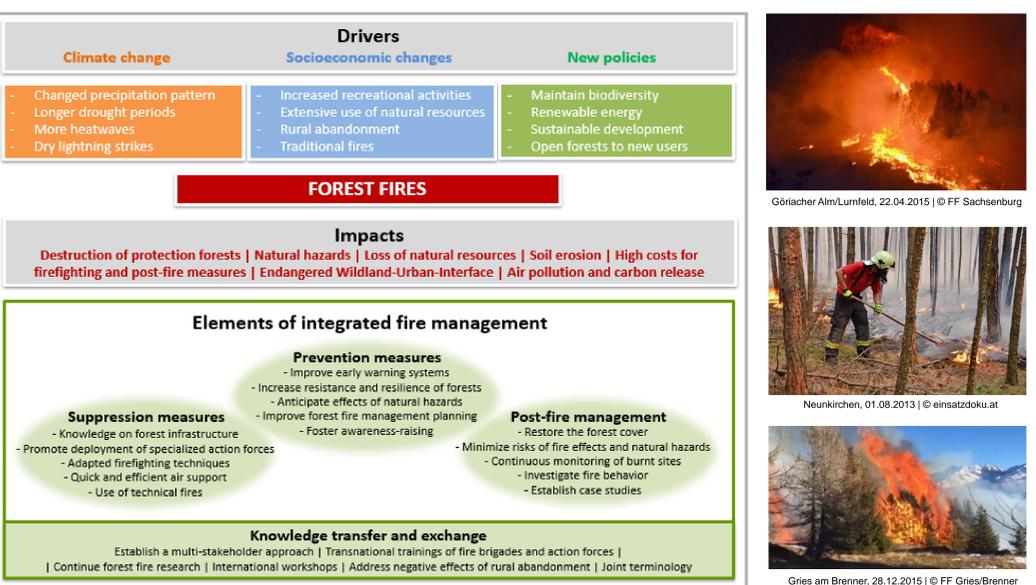


Figure 6. Drivers and impacts of forest fires and elements of an integrated fire management for the Alpine region

Key Options for Integrated Forest Fire Management in the Alpine Region

1. Enhance or establish **knowledge transfer** and a **multi-stakeholder approach** on a transnational and collaborative basis, including widespread exchange activities.
2. Improve the **training of fire brigades** and specialized action forces, including scenarios with several large fires at the same time in difficult terrain and with the participation of helicopters.
3. Minimize the risks of **natural hazards** after forest fires and improve **post-fire restoration** activities.
4. Address and minimize negative effects of **rural abandonment** and **recreational activities**.
5. Adapt **forest management**, including prescribed burning, and establish protection measures at the WUI.
6. Improve education and **awareness-raising activities** for stakeholders and the population.



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