

Factsheet

Climate change mitigation and adaptation

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Purpose

This Factsheet sets out the background and approach used by the climate change mitigation and adaptation Thematic Strand (TS) to develop a common understanding across working groups, of climate change policies in Europe that are potentially linked with wildfire risk management (WFRM). This TS aims to review main European policies related to climate change to explore and discuss potential synergies and conflicts across WFRM phases and stakeholders. Furthermore, we present some key principles for good adaptation that can be considered for designing/studying innovative measures for WFRM (e.g. IAs case studies) to ensure that issues related to climate change are not neglected and making the measures potentially more consistent and fruitful in the mid and long term avoiding negative effects with other sectors.

Climate change policies are understood as plans, programs, rules, strategies and all set of measures aiming to fight climate change. Climate change policies cover both mitigation actions, i.e., aimed at reducing emissions, and adaptation, i.e., actions to prevent or minimise the impacts of climate change.

Why are climate change mitigation and adaptation important in the context of WFRM?

Anthropogenic greenhouse gases emissions are unequivocally related to global warming and alterations of precipitation patterns¹. Furthermore, human-induced climate change is affecting the frequency and magnitude of extreme weather events such as heat waves and droughts [1]. As consequence, fire danger is increasing worldwide, and especially in some European regions [2], [3]. Rising temperatures and intense droughts are leads to greater fuel dryness making landscapes more prone to burn [4]. Furthermore, land use change (e.g., rural abandonment) is exacerbating the risk of extreme fire events because a generalized decrease in landscape management ultimately leading to an increase in fuel loads [5], [6].

EU policies to face climate change and their link with WFRM

To face climate change in the European Union (EU), the European Green Deal sets the strategy to reach climate neutrality by 2050 aiming also to make Europe fully adapted to climate change impacts without leaving behind any person and place [7]. The European Green Deal includes a set of policies and measures to achieve the green transformation. Some already approved initiatives that cover the challenges posed by climate change are the “European climate law”, “the new EU Strategy on Adaptation to Climate Change”, “the new EU forest strategy for 2030”, the “farm to fork strategy” or the “EU biodiversity strategy for 2030”.

All these initiatives recognise the central role of forests in adapting and mitigate climate change underlining their main contribution to achieve a sustainable and climate neutral economy while protecting the services provided by ecosystems [8]. Thus, WFRM might benefit from these initiatives since most of them are directly related to forest management (linked with reducing fuel loads) and disaster risk reduction to meet their objectives. For instance, the new EU forest strategy for 2030 promotes forest-based bio-economies (e.g., wood and non-wood products, bioenergy, ecotourism...) stimulating forest management and potentially reversing trends associated to fire risk such as land abandonment (with new jobs and growth opportunities). Thus, these activities might help, for instance, to reduce fuel loads and vertical continuity making forests more fire resilient and fires easier to suppress [9]. Indeed, the new EU forest strategy for 2030 explicitly promotes “closer-to-nature forest management” [10] and a voluntary certification scheme for guiding adaption. Furthermore, the strategy underlines the need of financial drivers to increase forest resilience similarly to the Common Agricultural Policy which already provides economic support for preventing wildfires.

In line with the forest strategy, the new EU Strategy on Adaptation to Climate Change also aims to ensure resilience but under the perspectives of both ecosystems and societies reducing the adverse consequences of climate change impacts. The strategy expects adaptation to be smart (robust data and tools), fast (providing resources for speed up the process) and systemic (covering all economic sectors and levels in the society). The strategy pursues resilient landscapes by adopting, among others, nature based solutions (e.g., silvo-arable agroforestry for wildfire protection [11]). Furthermore, this EU policy aims to empower citizens for direct actions to adapt by taking advantage of existing initiatives, e.g., the EU Covenant of Majors, and underlines the need to invest in climate-resilient infrastructures (see Technical guidance on the climate proofing of infrastructure in the period 2021-2027 [12]). Also the new EU Strategy on Adaptation to Climate Change highlights the need to create and promote new insurance products as a risk transfer mechanism to reduce disaster costs to taxpayers or governments. Thus, different themes important for WFRM are covered by the EU policies related to climate change.

The European Commission (EC) is also actively encouraging the development and implementation of national adaptation strategies (NAS) and plans (NAP) aiming to face climate change vulnerabilities and address medium and long term needs for adaptation across countries. Currently, country members are at different stages over this process with key information reported in the European Climate Adaptation Platform ([Climate-ADAPT](#); Note that Climate-ADAPT is the European authoritative platform for adaptation containing information about EU policies, tools and case studies). To achieve the expected goals when designing and implementing NAS, the EC suggests to follow a set of key principles [13]. It suggests that adaptation should be sustainable (i.e., not compromising other parts of the earth system), holistic (i.e., covering multiple stressors and affected sectors), tailored across geographical scales and sectors, flexible (i.e., potentially adjusted if climate trends change) and science-based. Furthermore, adaptation should be transparent, engage different actors and be reviewed continuously for potential improvements. In addition, it was underlined the importance of considering the complementarity between adaptation actions and mitigation policies, avoiding potential trade-offs and ensuring coherence between both aspects [14].

Conclusions & implications for WG discussions: What can we deduce for future WFRM?

Awareness about EU policies and measures potentially related to wildfires might be of great importance for WFRM across sectors and stakeholders. The identification of potential synergies, conflicts, injustices and gaps between policies and target groups might be of great interest for discussion within/across WGs which aim to shape EU policies under principles of just transition (see deliverable D4.1).

Furthermore, the key principles suggested by the EC for guiding adaptation can go beyond the NAS and be assimilated also for designing/studying innovative measures for WFRM. Indeed, the measures developed within the Innovation Actions funded by the EU might benefit of following these principles to ensure that climate change related issues are not neglected and making the measures more consistent and fruitful in the mid and long term. Discussing these measures under those principles within the WGs might help to set a picture of the status of current WFRM initiatives under the perspective of climate change.

Table 1: TS discussion topics proposed for WG exchange

	Topic 1 Awareness, perception, limitations, conflicts and synergies in CC related EU policies	Topic 2 Ways to speed up objectives in CC related EU policies	Topic 3 IAs measures under the perspective of climate change (flexibility, scalability, sustainability, systematic)
Environmental & Ecology WG	How do WG members perceive EU policies influence (e.g., forest-based bioeconomy) on WFRM?	Which mechanisms might speed up the transition to fire resilient landscapes?	Identification and discussion of potential win-win measures
Societal WG	Which opportunities/limitations the Societal WG members envision across EU mechanisms for local adaptation?		Inclusion of climate change perspective in citizen involvement strategies

Infrastructure WG	How to make that Infrastructure managers play a role in (and take advantage of) the EU objectives of building (fire) resilient landscapes and promote forest-based bioeconomy?	How to speed up investments in climate resilient infrastructures?	Are long term planning/measures considering climate change effects on risk?
Insurance WG	Do Insurance WG members identify limitations and opportunities in the EU strategy to close the climate protection gap?		Should insurance products consider mid/long term climate change scenarios?
Civil Protection WG	Potential drawbacks observed by civil protection WG members in EU measures for boosting economy in forested rural areas.	How to make that civil protection play a role in (and take advantage of) the EU objectives of building (fire) resilient landscapes and promote forest-based bioeconomy?	Are operational capabilities across EU regions (e.g. northern countries) threatened under climate change?

Key references and sources for further information

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