

Potential for new insurance and risk policies

Throughout the project, one of the main conclusions reached by the MSPs was that they operate well in their current form, but only up to a certain level. When dealing with very large wildfire situations that surpass the medium risk layer (Mechler et al, 2014), local MSPs can no longer offer sufficient support in risk management. In such a case, the extreme losses become greater than the capacity of the local MSP to offer financial support in post-fire recovery, limiting risk reduction. This emphasises the need to expand to a regional, national or even international level.

In addition to scaling up, it is important to promote resilience by **reducing the risk directly** (e.g. more efficient fire-fighting in extreme conditions), and by **providing ex-post compensation**. To facilitate increased resilience, a review of possible economic instruments was made for the Santarém MSP (Table 8.3). In the schemes shown in Table 8.3, the partnership would be part of the risk-sharing agreement, where costs and burden are shared between state/district authorities and private owners.

An economic instrument that is already used by the MSP, is the *Permanent Forest Fund* (Portaria nº 77/2015 de 16 de Março), which supports the Forestry Technical Offices and the forest sappers' teams. The PDR2020 (Portaria nº 134/2015, de 18 de Maio), has several policies, which could be interesting for the MSP. However, participants of the workshops mentioned that several applications of these funds were not considered by the evaluators, as they were not in line with the requisites of the National Plan for Forest Fire Defence. Regarding the *European Solidarity Fund* (EC, 2016), the perception is that there are

many resources available after a major disaster, but without the objective of preventing future disasters.

The effectiveness of the funding of the *EEA Grants* (2015) was also discussed for stimulating DRR action in some areas. However, it was indicated that this funding is not applied in the district. Furthermore, The *Portuguese Carbon Fund* (APA, 2015) was not considered to be currently relevant to the Portuguese forest sector.

Insurance schemes covering risks related to wildfire also exist, and were presented. However, they have a very low market penetration and were not considered to be a short-term solution by the workshop participants. Nationwide, only two insurance schemes are in use, but they both have a very small coverage.

Table 8.3.

Potential economic instruments for the Santarém Case Study.

Economic Instrument / Manager	Objective
Rural Development Program PDR2020 / IFAP	<ul style="list-style-type: none"> • Improving resilience and environmental value of forests • Forest prevention against abiotic agents • Forest recovery due to biotic and abiotic agents or by catastrophic events
EEA Grants / National Management Unit	<ul style="list-style-type: none"> • Climate Change and Renewable Energy • Reduced human and ecosystem vulnerability to climate change
PORTUGUESE CARBON FUND – FPC / Portuguese Environment Agency	<ul style="list-style-type: none"> • To contribute to the goals defined by the Portuguese Government in order to achieve the political commitments related to climate change
FOREST PERMANENT FUND – FFP / National Forest Authority	<ul style="list-style-type: none"> • To promote and ensure the continuing investment in the forest management and planning, promoting the ecological, social and cultural functions of forests • To support actions which prevent forest fires • To ensure additional support tools that contribute to the protection and sustainability of Portuguese forests
The European Union Solidarity Fund – EUSF	<ul style="list-style-type: none"> • Set up to respond to major natural disasters and express European solidarity to disaster-stricken regions within Europe
Forest Insurance / Insurance companies	<ul style="list-style-type: none"> • Risk sharing

Recommendations

The MSPs assessed for the Portugal wildfire case study have a good level of response to the different events. However, when dealing with extreme conditions and very large wildfire situations, **risk management is not adequate. In such cases, risk management should be coordinated at regional, national or even international levels.** This premise also applies to the different economic instruments.

Key to enhance resilience with respect to forest fire risk is **risk reduction.** Risk reduction can be stimulated through prevention measures and pre-disaster management incentives, or directly with more efficient fire-fighting in extreme conditions or with more post-disaster financing.

On a local level, the municipalities can apply for the available national or international financial programs. However, it seems that the MSP members are not always fully aware of these funding opportunities. On a local level, the degree of freedom of the municipality to apply for different economic instruments is very low. The Municipal and Intermunicipal Commissions have to follow the national guidelines and documents. Moreover, the final approval of their local plans has to be done at the national level by the National Forest Authority.

For increasing the resilience to wildfires in a local level, we consider it of importance to **involve the national and European institutions.** Together, the MSPs and the national and European institutions can evaluate the effect from different economic instruments to support disaster risk reduction (DRR) efforts by the MSP.

Among the various economical instruments presented, we identified **forest insurance schemes** as an instrument with great potential to establish the linkage between extreme meteorological conditions (as those measured by the Daily Severity Rating - DSR), and the losses caused by wildfires under these extreme conditions. This setup is similar to what is done in the agricultural sector.

As mentioned by some of the stakeholders, the support given by the Government to recover from the direct losses, plus a contribution from the Forest Permanent Fund and from the Portuguese Carbon Fund could contribute to diminish the insurance premiums. Furthermore, they could encourage adequate forest and fuel management and therefore maximise risk reduction.

Finally, together with several stakeholders, we advocate that **a new level of wildfire risk alert (critical level) should be created.** This wildfire risk alert needs to be disseminated to the members of the National Forest Fire Defence System. In response to this wildfire risk alert, the surveillance and dissuasion teams can strive to minimise the number of fires on those critical days. The operational planning for this critical alert level could be expressed in documents written and approved by the Municipal and Intermunicipal Commissions.

Acknowledgements

CMDFCI Mação; CIMDFCI Chamusca, Alpiarça and Almeirim; Stakeholders panel (ICNF; IPMA; OPF; FPC; APS; AFOCELCA). Marta Rocha for the maps.