

>> SYNTHESIZE MOUNTAINS OF KNOWLEDGE <<

Submitted Abstract

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Abstract

Sustainability of the ecosystem services provided by mountain forests has been the center of discourse in the European Alpine Space. Evaluating alternative tree species such as the non-native tree (NNTs) has been discussed as a nature-based adaptation strategy when native forests might be vulnerable to climate change. Such nature-based solutions, however, entail risks that need to be studied. We aimed to examine the perceptions of different stakeholders on the risks and benefits of NNTs in the Alpine Space. Further, we also analyzed the existing forest legislation to understand the status of NNTs in the framework of national and regional legislative processes. We conducted a stakeholder survey across the 6 countries (Austria, Germany, Switzerland, France, Slovenia and Italy) of the Alpine Space which gathered 457 responses. This was followed by personal interviews with 30 forest policy experts. The survey revealed that except Slovenia, where the stakeholders perceived NNTs as potential risks rather than beneficial, the majority of the respondents from Austria, Germany, Switzerland, France and Italy think that the risks and benefits of NNTs depend on the site conditions and legal status of forests such as commercial forest or protected areas. This notion of stakeholders for NNTs is also reflected in the policy analysis where regional and national forest legislations mostly talks of NNTs in the context of invasiveness and phytosanitation. Each country has a different set of forest regulations concerning the NNTs which compound the challenges in harmonizing policies for management and utilization of the NNTs in the Alpine Space. However, experts were positive about including the benefits of NNTs into existing legislations especially for climate change adaptation. They unanimously stressed large-scale scientific evaluation and monitoring of the risks of NNTs. Therefore despite the immense potential of NNTs as nature-based solutions, the current legislative framework restricts their use for promoting forest resilience in the European Alpine Space.