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The FOREST@RISK project: climate-driven risks and adaptation measures for European forests

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European forests provide a set of fundamental services that contribute to climate mitigation and human well-being. On the other hand, forests are vulnerable systems because the long life-span of trees limits the possibility of a rapid adaptation to drastic environmental changes. Climate-driven hazards on forests, such as drought, wildfire and insect outbreaks, are expected to rise drastically in view of global warming. As a result, key forest services, such as carbon sequestration and supply of wood products, could be seriously affected in the near future. Despite the relevance and urgency of the issue, little is known about the upcoming risks of multiple climate-related hazards on European forests. To fill this knowledge gap we aim to investigate the evolution of forest disturbances under various climate scenarios. For this scope we will model the long-term changes in species composition, whereas forest vulnerability will be assessed with satellite observations and records of disturbances. The integration of these elements will produce a range of plausible risk estimates to support the definition of effective adaptation strategies, with the goal of increasing the resilience and long-term stability of these fundamental elements of the European landscape.