



D2.1 Next generation European forest disturbance map

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Key takeaway messages

- Up-to-date forest disturbance maps at a spatial resolution of 30 m from 1985 onwards
- All maps are freely accessible at the country level
- Summary maps are further distributed through a fully accessible web-mapping application

Summary

This deliverable presents the Next Generation European Forest Disturbance Map. The document includes a summary of the data layers and details on how to access them. A full technical description is provided in Deliverable 2.5.

1 Next generation European forest disturbance maps

In this data deliverable we provide the data underlying the next generation forest disturbance map produced in Work Package 2. This deliverable provides the data products and a full report with all technical details is available in Deliverable 2.5. We thus refer the reader to Deliverable 2.5 for any information on the methods underlying the data products. The European forests disturbance maps are deposited on Zenodo and can be accessed under following link: <https://doi.org/10.5281/zenodo.13333034>. The data is split by countries and each country contains a raster stack of individual binary disturbance maps, a forest land use mask and a series of summary layers (see Table 1 for details). The resolution of all layers is 30-m. The current version (v2.11) contains information from 1985 to 2023. The data is distributed using the ETRS89 coordinate reference system and the Lambert Azimuthal Equal-Area projection (ETRS89-extended / LAEA Europe; EPSG:3035).

Table 1. Summary layers of the next-generation forest disturbance map

Dataset	Name	Valid range	Description
Forest land use mask	forest_mask_{country}	1	Forest land use mask
Annual disturbance	annual_disturbances_1985_2023_{country}	(0, 1)	Stack of annual disturbances indicating undisturbed (0) and disturbed (1)
Disturbance probability	disturbance_probability_1985_2023_{country}	(0, 100)	Stack of annual disturbance probabilities within forest areas
Latest disturbance	latest_disturbance_{country}	(1985, 2023)	Indicates the year of the most recent disturbance
Greatest disturbance	greatest_disturbance_{country}	(1985, 2023)	Indicates the year of the highest disturbance severity (greatest spectral change)
Number of disturbances	number_disturbances_{country}	Categorical (1, 2, 3, 4)	Indicates the number of disturbance events within the time-series (1, 2, 3, or more than 3 events, i.e. 4)
Disturbance severity	disturbance_severity_1985_2023_{country}	(-10,000, 10,000)	Stack of spectral change in NBR for disturbance patches ($t - t_i$).
Disturbance agent	disturbance_agent_1985_2023_{country}	Categorical (1, 2, 3)	Annual classification of disturbance agents (1- wind/bark beetle, 2- fire, 3- harvest) implemented in Seidl and Senf, (2024) following Seidl et al. (2021) and Senf and Seidl (2021b)
Aggregated disturbance agent	disturbance_agent_aggregated_{country}	Categorical (1, 2, 3, 4)	Aggregated layer of agents that summarises the dominant agent within the time-series. In those cases where a pixel has been disturbed more than once and by multiple agents, the class mixed (4) is assigned.

To visualize and explore the maps, a web-mapping application has been developed that can be accessed here: <https://albaviana.users.earthengine.app/view/european-forest-disturbance-map>