Forest type	Name	Code	BD Forêt CODE_TFV	Area (Mha)	% of forest	Definition
Pure deciduous	Deciduous oak	1	FF1G01-01	2.65	15.3	Closed forest dominated by deciduous oaks (pedunculate, sessile, pubescent, red oak, etc.).
Pure deciduous	Beech	9	FF1-09-09	0.71	4.1	Closed forest dominated by beech.
Pure deciduous	Evergreen oak‡	6	FF1G06-06	0.48	2.8	Closed forest dominated by evergreen oaks (holm oak, cork oak, etc.).
Pure deciduous	Chestnut‡	10	FF1-10-10	0.29	1.6	Closed forest dominated by chestnut.
Pure deciduous	Poplar‡	19	FP	0.20	1.1	Cultivated poplar stands (peupleraie).
Pure deciduous	Other deciduous	49	FF1-49-49	0.17	1.0	Closed forest dominated by a single other deciduous species (ash, maple, birch, alder, hornbeam, etc.).
Pure deciduous	Black locust‡	14	FF1-14-14	0.05	0.3	Closed forest dominated by black locust (Robinia).
Mixed deciduous	Mixed deciduous	100	FF1-00-00	5.89	33.9	Closed mixed deciduous forest (≥2 species, none ≥75% of canopy).
Mixed deciduous	Mainly deciduous†	310	FF31	1.13	6.5	Closed mixed forest with deciduous canopy share of 50–75%.
Mixed deciduous	Mixed deciduous in island†‡	111	FF1-00	0.39	2.2	Small closed deciduous stands (0.5–2 ha islands); species not assigned.
Mixed deciduous	Open deciduous†‡	401	FO1	0.55	3.2	Open deciduous forest.
Mixed deciduous	Open mixed†‡	403	FO3	0.19	1.1	Open mixed deciduous–conifer forest.
Pure conifers	Fir/spruce‡	61	FF2G61-61	0.91	5.2	Closed forest dominated by fir and/or spruce (excluding Douglas fir).
Pure conifers	Maritime pine‡	51	FF2-51-51	0.79	4.6	Closed forest dominated by maritime pine.
Pure conifers	Scotch pine	52	FF2-52-52	0.54	3.1	Closed forest dominated by Scotch pine.
Pure conifers	Douglas fir‡	64	FF2-64-64	0.28	1.6	Closed forest dominated by Douglas fir.
Pure conifers	Austrian pine‡	53	FF2G53-53	0.25	1.4	Closed forest dominated by Corsican or Austrian black pine.

Pure conifers	Aleppo pine‡	57	FF2-57-57	0.16	0.9	Closed forest dominated by Aleppo pine.
Pure conifers	Larch‡	63	FF2-63-63	0.10	0.6	Closed forest dominated by larch.
Pure conifers	Mountain/stone pines†‡	58	FF2G58-58	0.05	0.3	Closed forest dominated by mountain pine and/or Swiss stone pine.
Pure conifers	Other non pine‡	91	FF2-91-91	0.02	0.1	Closed forest dominated by another non-pine conifer (e.g. cedar, hemlock, sequoia).
Pure conifers	Other pines‡	81	FF2-81-81	0.01	0.1	Closed forest dominated by another single Pinus species (e.g. stone pine, exotic pines).
Mixed conifers	Mainly conifers†	320	FF32	0.92	5.3	Closed mixed forest with conifer canopy share of 50–75%.
Mixed conifers	Mixed conifers	200	FF2-00-00	0.21	1.2	Closed mix of pines and other conifers (none ≥75% of canopy).
Mixed conifers	Open conifers†‡	402	FO2	0.21	1.2	Open conifer forest.
Mixed conifers	Mixed non pine‡	90	FF2-90-90	0.10	0.6	Closed mix of non-pine conifers (≥2 species; no pines; not fir–spruce only).
Mixed conifers	Mixed pines	80	FF2-80-80	0.09	0.5	Closed mixed pine forest (≥2 pine species, none ≥75% of canopy).
Mixed conifers	Mixed conifers in island†‡	222	FF2-00	0.02	0.1	Small closed conifer stands (0.5–2 ha islands); species not assigned.

Table S1. **BD Forêt forest types used in this study.** Numeric codes are those used in the data files. Following IGN BD Forêt v2, closed forest has tree cover ≥40%, open forest 10–40%, a type is pure when it accounts for ≥75% of relative canopy cover, and "mainly" denotes a 50–75% share. Poplar corresponds to the cultivated poplars class. Areas are derived from the national 30 m map (pixel area 0.09 ha) and expressed as Mha and % of the 28 forest types combined (17.35 Mha).

† Rotation period gap-filled from a related NFI-matched type.

‡ RS growth curve not available in every GRECO region reflecting a restricted geographic range.

Growth curves

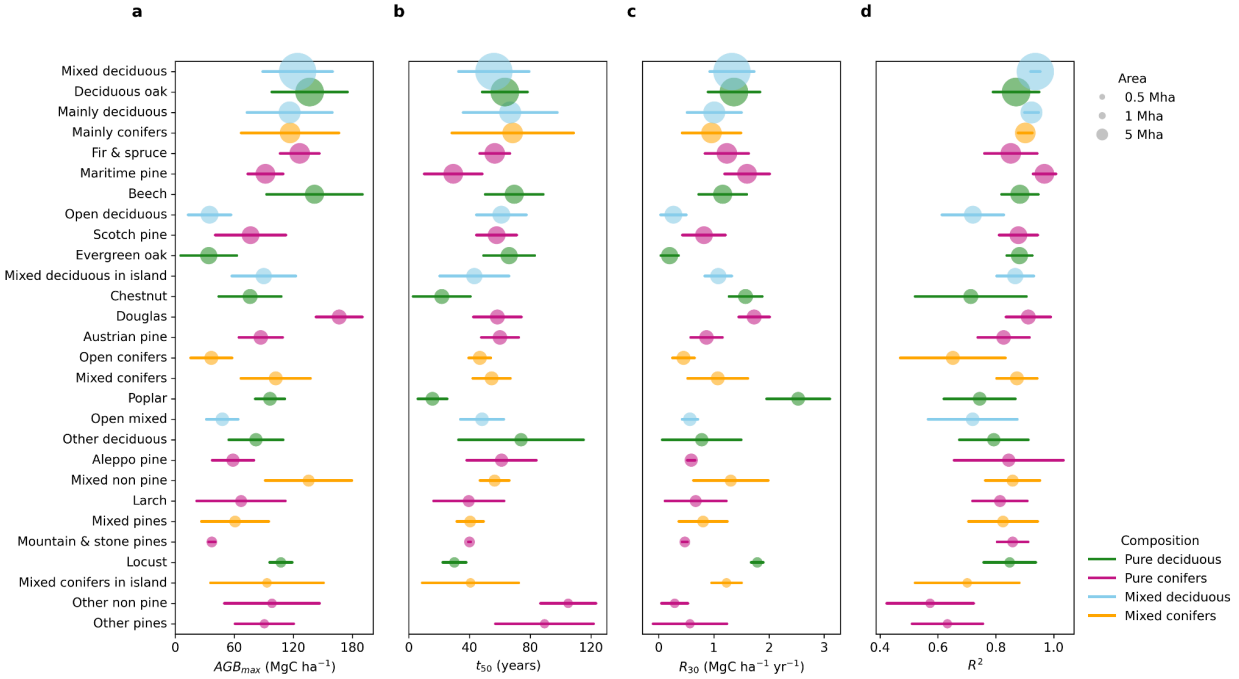

Figure S1. Area-weighted mean growth-curve metrics per species class (AGB_{max}, t_{50}, R_{30}, and R^2). Bars show the area-weighted SD across ecological regions within each species class. Marker size scales with forest area; colour denotes composition class. AGB is expressed per hectare of forested area.

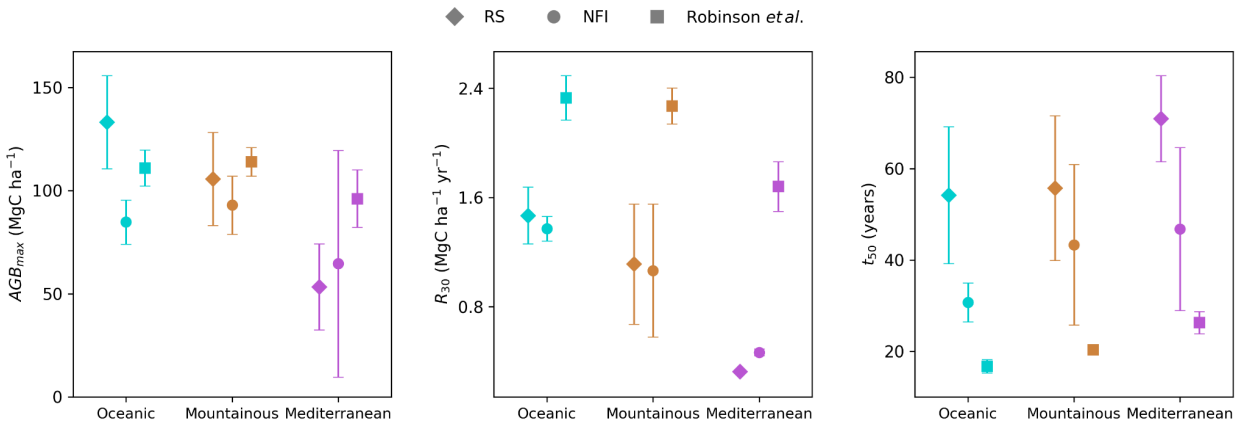

Figure S2. **Growth-curve metrics by large ecological region.** Area-weighted remote-sensing species×regional fits (RS; diamonds), NFI regional fits (circles), and Robinson *et al.* regional fits (squares), summarized as weighted mean±1 SD across large ecological regions. AGB is expressed per hectare of forested area.

Age map

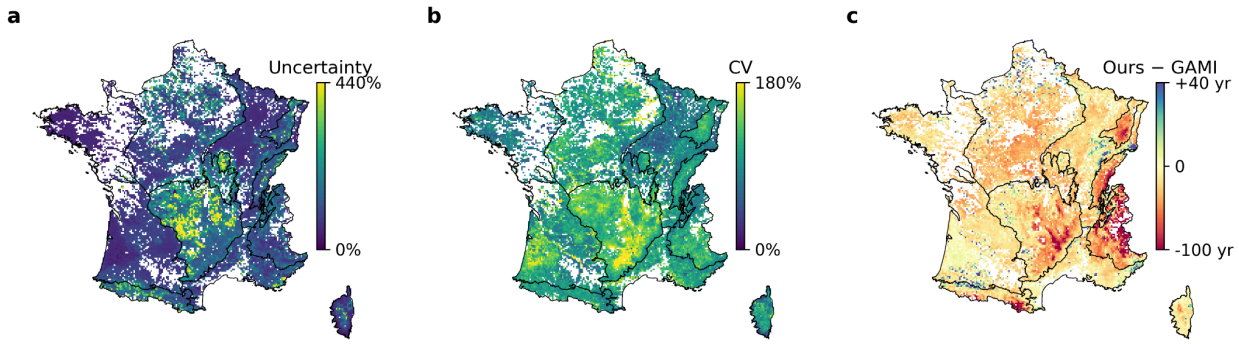

Figure S3. (a) Relative uncertainty |(p75 − p25) / p50| on the age map, aggregated at 5 km. (b) Coefficient of variation of the age map, at 5km resolution. (c) Map of the age difference of our map minus GAMI, aggregated at 5 km. Pixels with a forest cover smaller than 10% were excluded.

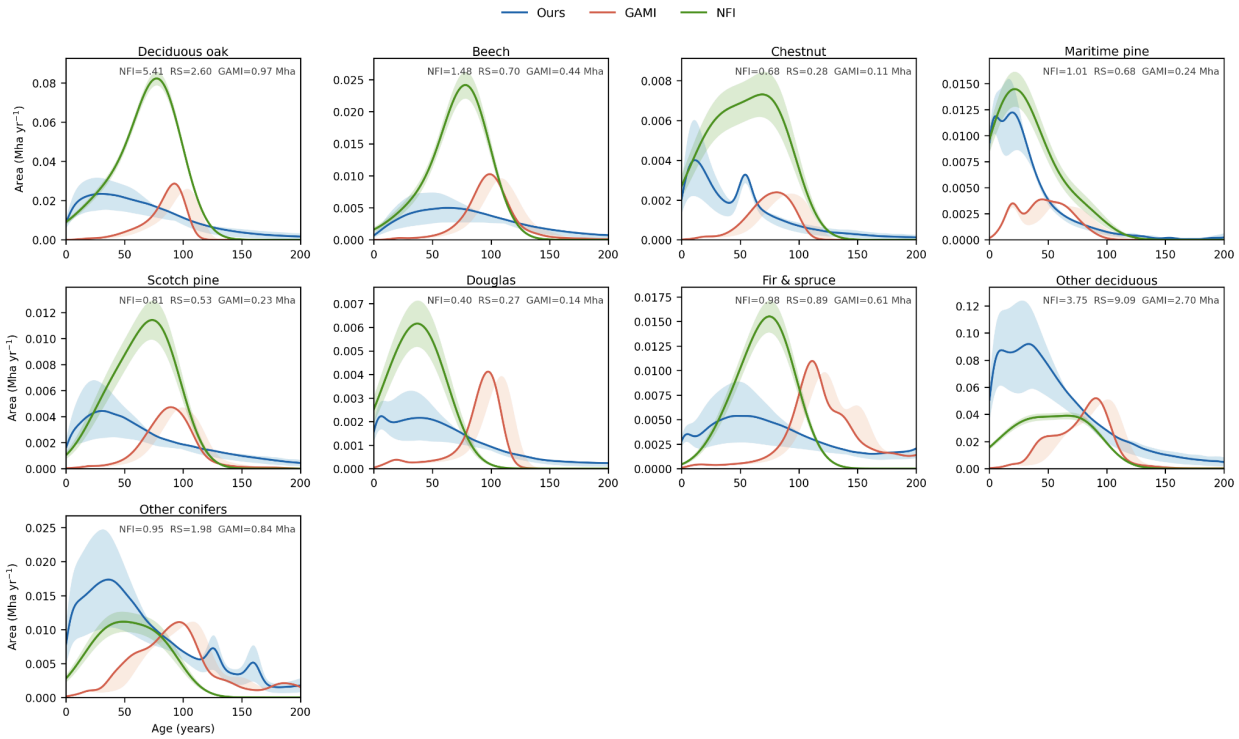

Figure S4. Age distributions from remote sensing, NFI, and GAMI per species. Note that GAMI's smaller mapped area reflects the 100 m forest mask, and NFI covers production forest only. In addition NFI reports the main species while the BDForest species map reports pure or mixed stands. We chose to match the pure stands of BDForest with the main NFI species and the mixed stands with the “Other deciduous” and “Other conifers” classes.

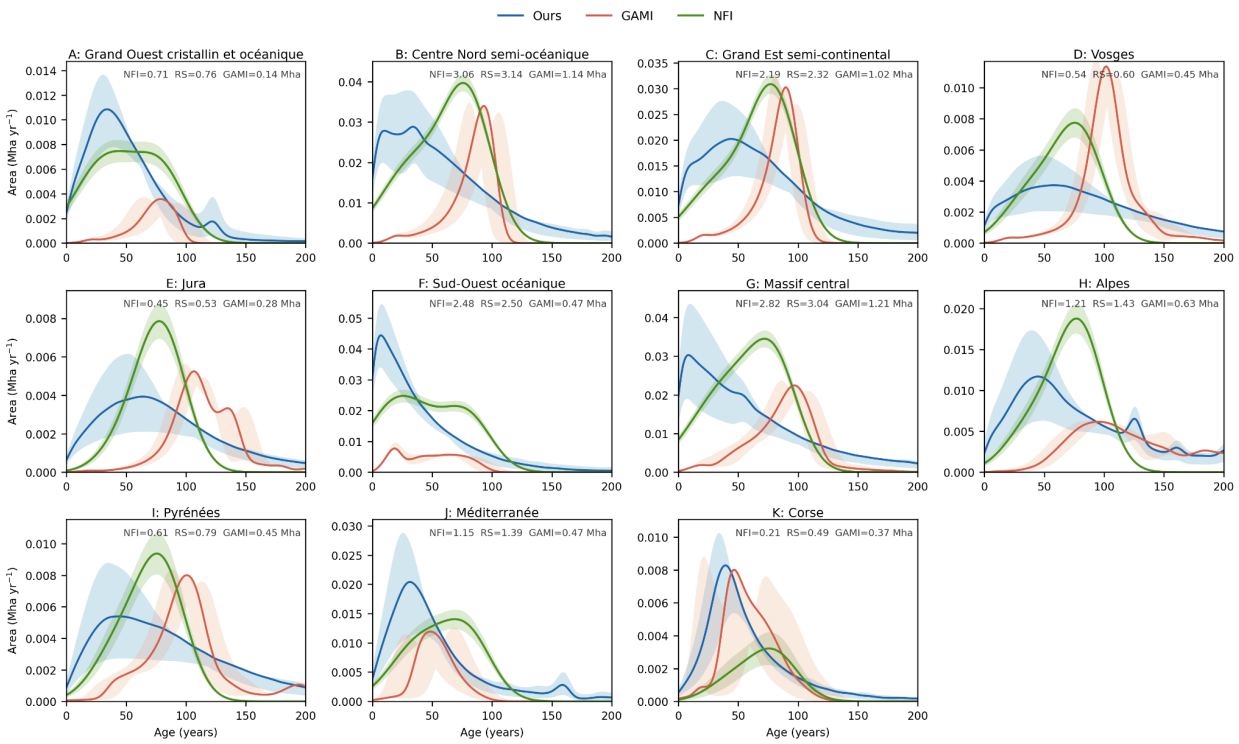

Figure S5. Age distributions from remote sensing, NFI, and GAMI per large ecological region. Note that GAMI's smaller mapped area reflects the 100 m forest mask, and NFI covers production forest only.

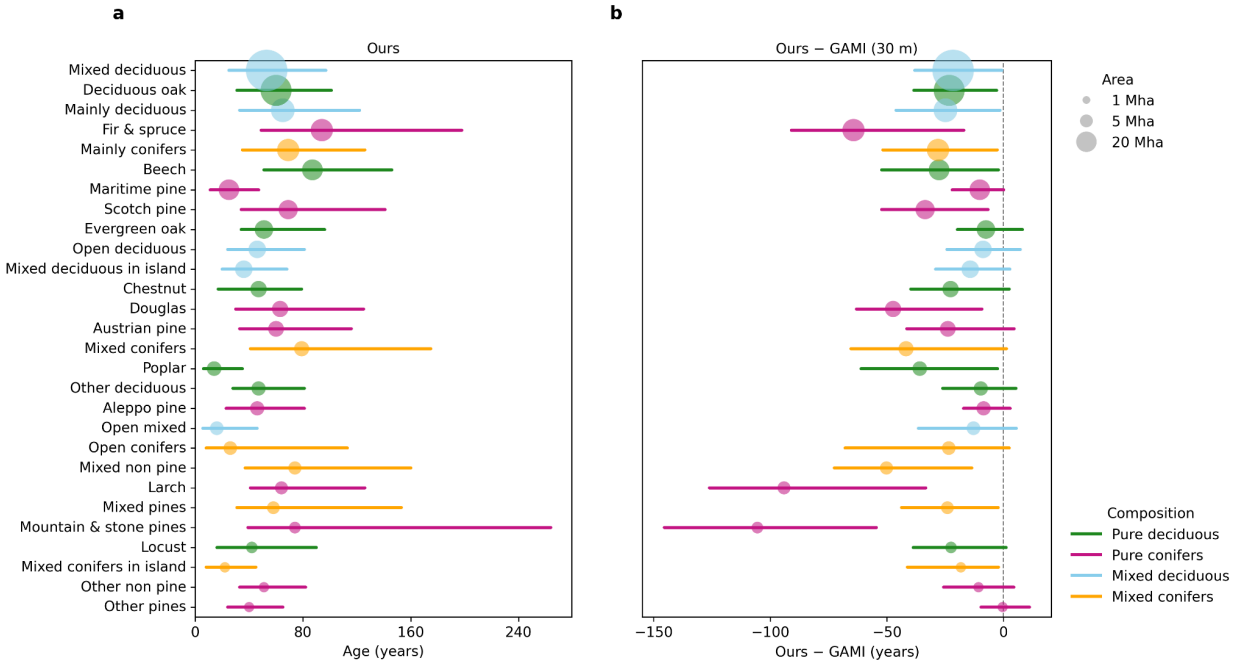

Figure S6. (a) Age distribution by tree species for our age map. (b) Distribution of the age difference of our map minus GAMI. Dots show the median age and bars are the pixel-level [Q1–Q3] within each

species class (age in a; Ours−GAMI in b), with bubble size giving the mapped area and colour the composition.

Disturbances

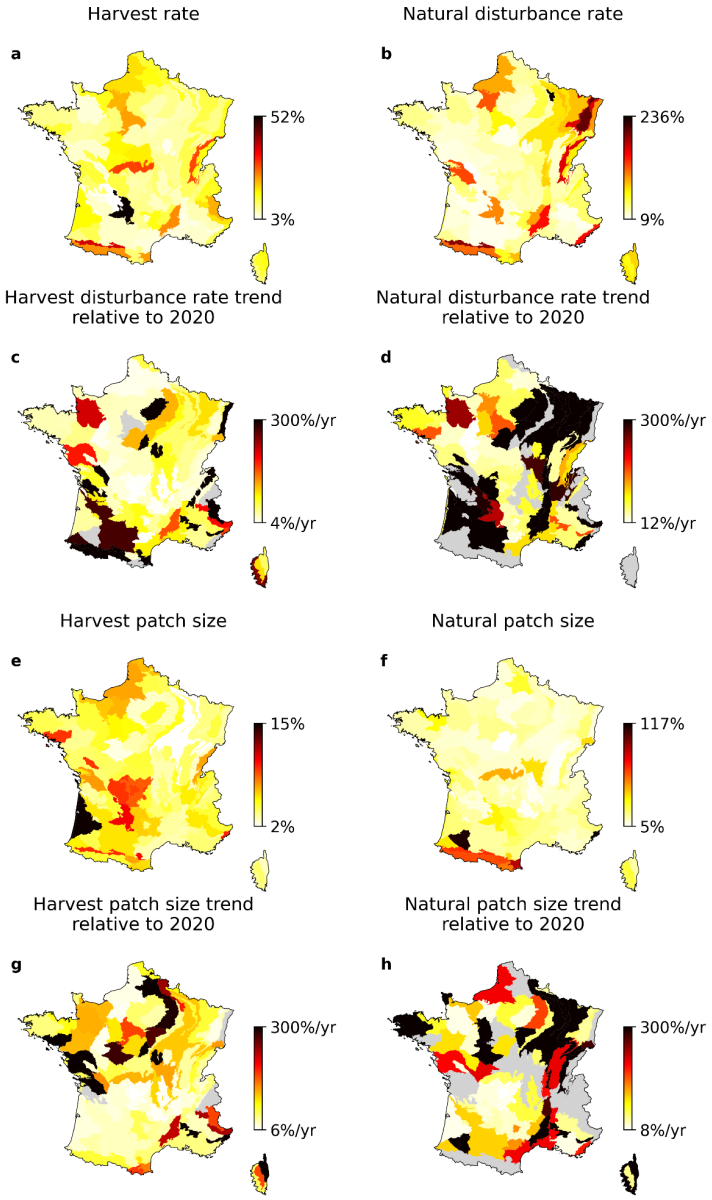

Figure SI7. **Relative uncertainty on harvest and natural disturbance rate.** Relative uncertainty on the 2020 disturbed-area estimate for harvest (a) and natural disturbances (b). Relative uncertainty on the linear annual evolution of the disturbance rate for harvest (c) and natural disturbances (d). Relative uncertainty on the 2020 mean patch size estimate for harvest (e) and natural disturbances (f). Relative uncertainty on the linear annual evolution of the mean patch size for harvest (g) and natural disturbances (h). Regions where the disturbed area is <0.2% and the relative uncertainty >200% are shown in grey. ha_F denotes total forest area and ha_D disturbed forest area.

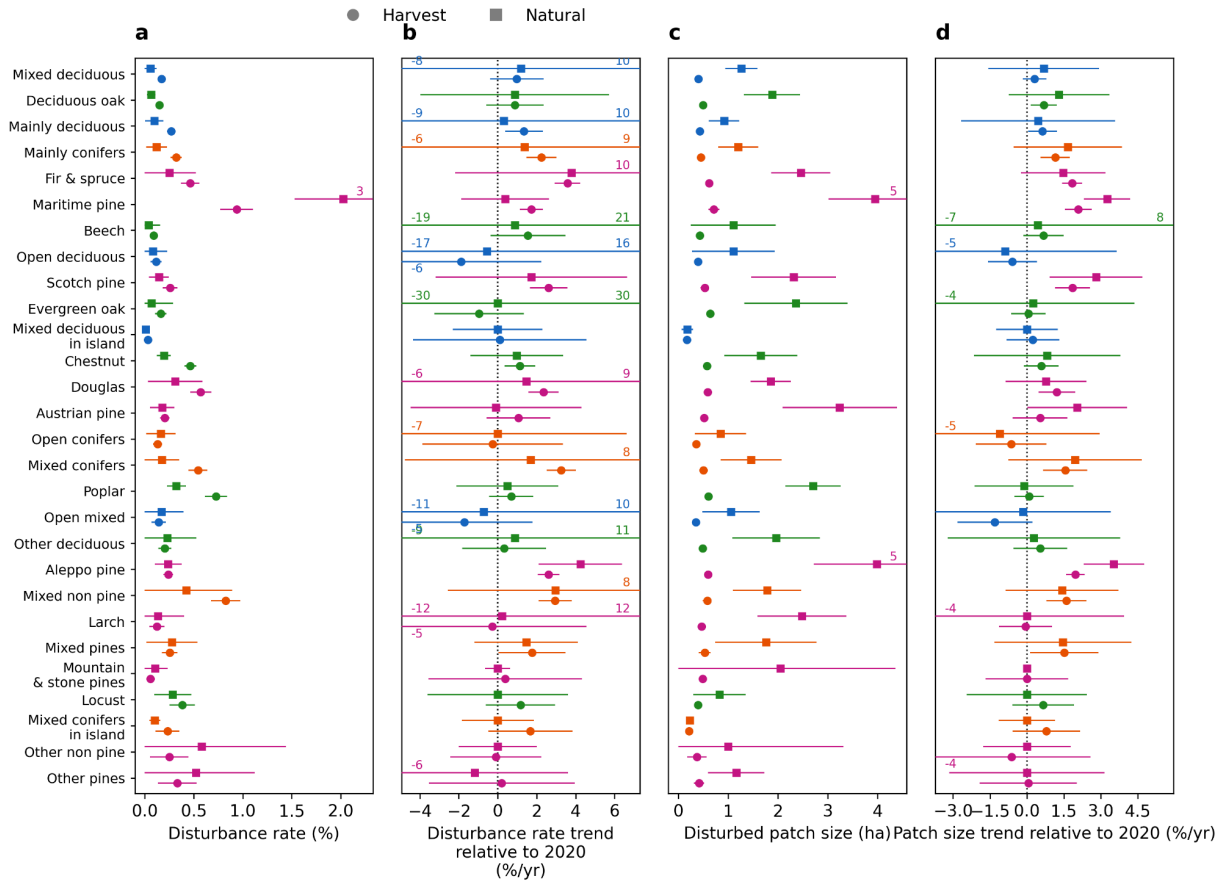

Figure S8. **Harvest and natural disturbance rate by individual forest species category**, ordered by total forest area. (a) Trend-based estimate of disturbance rates in 2020, expressed as a percentage of forest area. (b) Linear annual evolution of the disturbance rate, expressed as a percentage of the 2020 rate. (c) Trend-based estimate of mean patch size in 2020. (d) Linear annual evolution of the mean patch size, expressed as a percentage of the 2020 value. Markers show national area-weighted means; error bars are±1 SE. ha_F denotes total forest area and ha_D disturbed forest area.

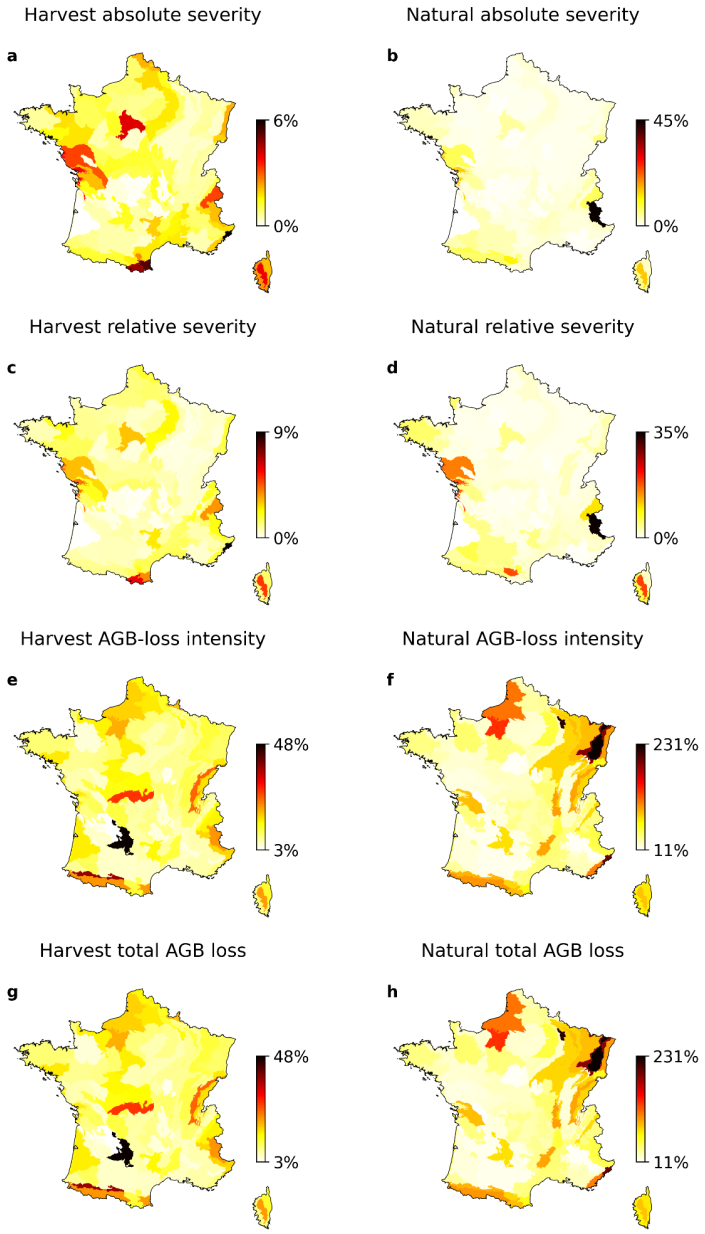

Figure S9. **Relative uncertainty on harvest and natural disturbance severity and AGB loss.** Relative uncertainty on the absolute disturbance severity (AGB pre disturbance - AGB post disturbance) per disturbed forest area for harvest (a) and natural disturbances (b). Relative uncertainty on the relative disturbance severity for harvest (c) and natural disturbances (d), expressed as a percentage of the pre disturbance AGB. Relative uncertainty on the AGB loss per forest area (trend-based estimate of disturbance rate in 2020 × disturbance severity) for harvest (e) and natural disturbances (f). Relative uncertainty on the AGB loss (trend-based estimate of disturbance rate in 2020 × disturbance severity ×

forest area) for harvest (g) and natural disturbances (h). Regions where the disturbed area is <0.2% and the relative uncertainty >200% are shown in grey.

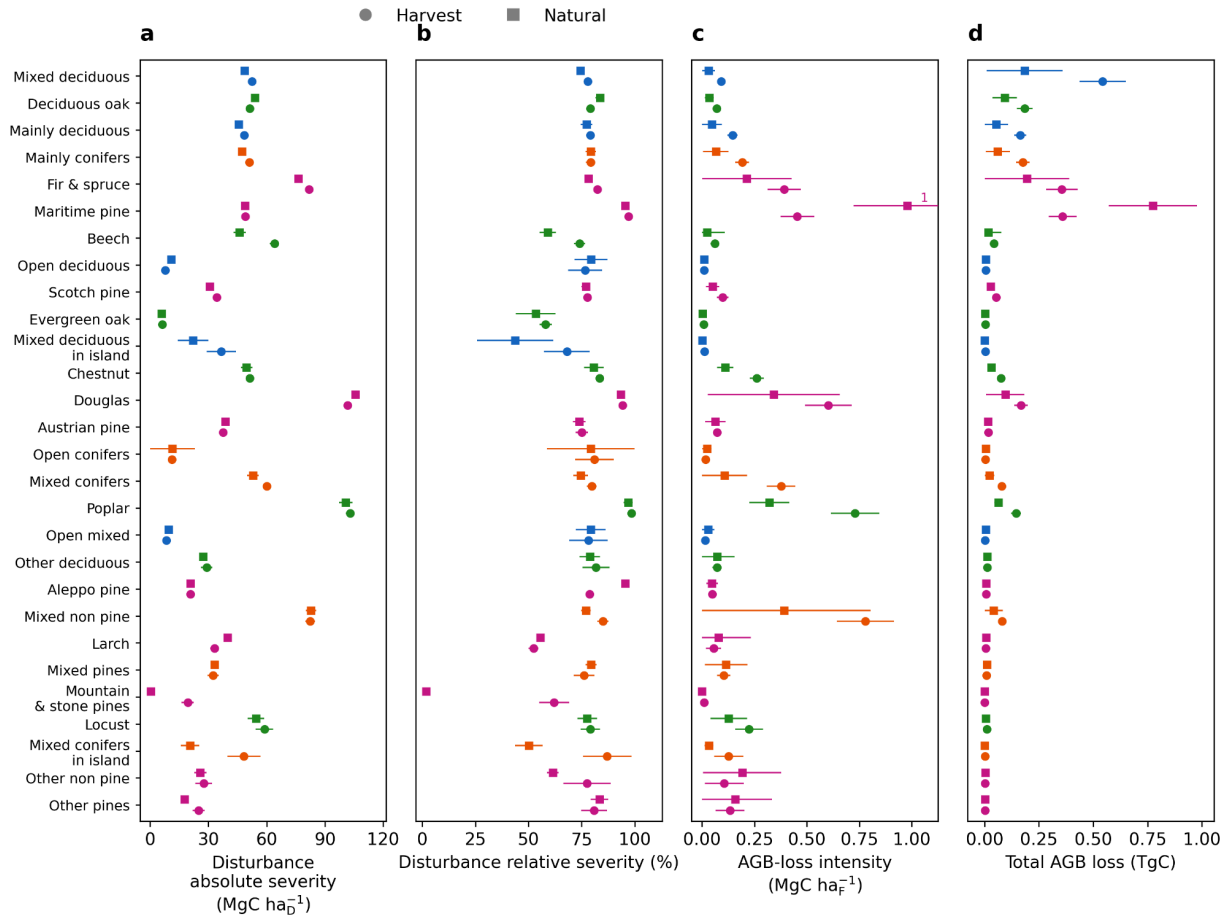

Figure S10. **Harvest and natural disturbance severity and AGB lost by individual forest species category**, ordered by total forest area. (a) Absolute disturbance severity (AGB pre disturbance - AGB post disturbance) per disturbed forest area. (b) Relative disturbance severity expressed as a percentage of the pre disturbance AGB. (c) AGB loss per forest area (trend-based estimate of disturbance rate in 2020 × disturbance severity). (d) AGB loss (trend-based estimate of disturbance rate in 2020 × disturbance severity × forest area). Markers show national area-weighted means; error bars are±1 SE.

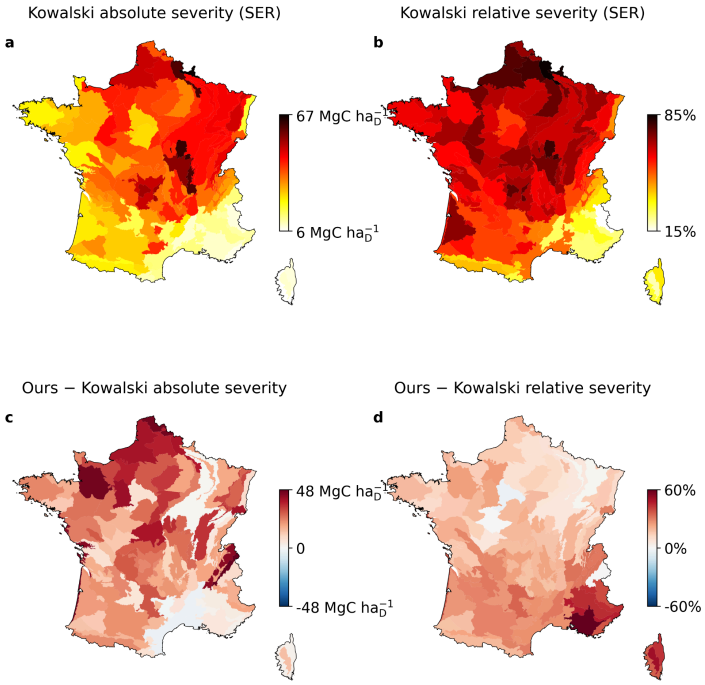

Figure S11. Comparison of disturbance severity with Kowalski et al. (2026) over France. (a) Absolute severity from Kowalski, aggregated as the area-weighted mean of 10 km cells within each small ecological region, in MgC ha^{-1} of disturbed area. (b) Relative severity from Kowalski (% of pre-disturbance AGB). (c) Difference in absolute severity: this study minus Kowalski, where our SER values are the disturbance-rate-weighted mean of harvest and natural severities from Fig. 5 (weights = 2020 rates from Fig. 4). (d) Same as (c) for relative severity.

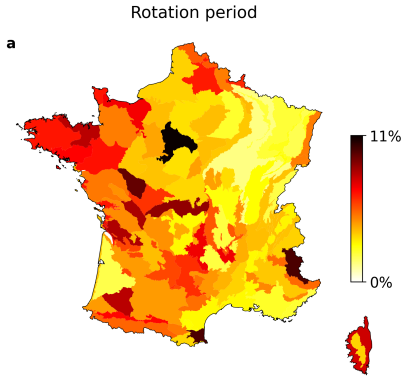

Figure S12. **Relative uncertainty on rotation period.** Relative uncertainty on rotation period for harvests (a) and by forest type (b). Regions where the disturbed area is <0.2% and the relative uncertainty >200% are shown in grey.

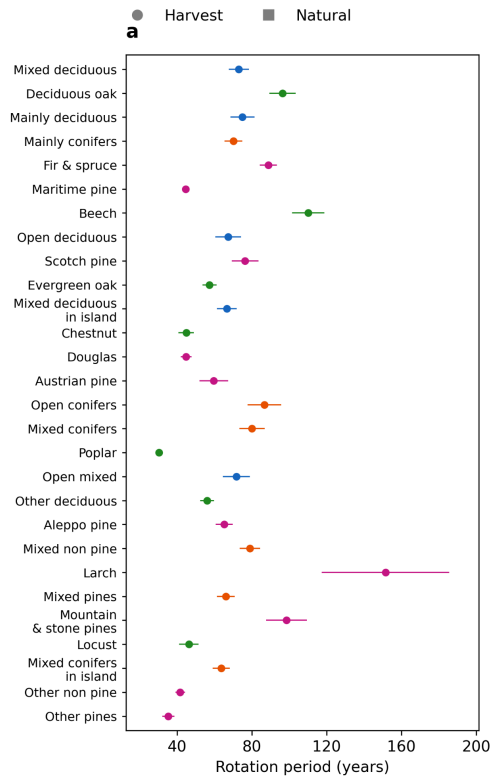

Figure S13. **Rotation period by individual forest species category**, ordered by total forest area. Markers show national area-weighted means; error bars are±1 SE.