What can we learn from international statistics on European forests?

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Principal sources of international statistics on forests

- Global Forest Resources Assessment
- State of Europe's Forests
- Eurostat
- Biodiversity assessments (EEA)
- UNECE/FAO Statistics
- National Forest Inventories (if harmonized)

General indicators

Forest area & cover
- 38.3%
- +0.31% (1990-2020)

Ownership
- 39.3% public, 60.7% private
- +2% public, +22% private (1990-2015)

Age
- Average forest age highly variable, 20-80 years on average
- The share of old forests (>100 years) has decreased from 26% in 1950 to 17% in 1990 (then remained), and the mean age over the studied area decreased from 67 to 60 years (Vilén et al. 2012)

Growing stock
- 182 m³/ha
- +1.33% (1990-2020)
- Not always a good thing

Harvest in relation to increment
- 75% of the increment is felled
- Slight upward trend

Direct indicators

Common forest bird species index
- Relatively stable for almost 40 years
- On average, the index decreased by 3% between 1990 and 2016 in the EU (with a reversed trend over the last years), whereas the common farmland bird index decreased by 32%.

IUCN Red List species
- Vulnerable/endangered: 86%
- Critically endangered: 12%
- Extinct: 2%
- Includes tree species at the edges of their potential range
- Information is fragmentary

Habitat Directive species
- Of non-bird species protected under the Habitats Directive, 6% show an improving trend, 37% a stable trend and 27% a decreasing trend

Proxy indicators

Dead wood
- 11.5 m³/ha (7% of growing stock)

Naturalness
- 94% forests classified as semi-natural (2020)
- 3.9% plantations
- 2.2% undisturbed by man

Tree species composition
- 67% of the area with 2 or more tree species; diversity increases

Stand structure
- > 70% even-aged (FAWS); trend data limited, but decrease of even-aged observed

Regeneration
- 66% of area from natural regeneration or expansion; 29% - planting/seeding
- Proportion of natural regeneration/expansion slightly increasing (not in North Europe)

Forest habitats
- 31% of assessments have a bad conservation status
- Forest habitats exhibit the highest proportion of improving trends among the assessments (13%)

Forest fragmentation
- 92% continuous forests
- 64% continuous areas larger than 100,000 ha
- Stable between 2000 and 2018

Invasive species
- Introduced species: 3% of area
- Invasive alien species: 0.5% of area, slightly increasing

Atmospheric depositions
- Critical loads and levels are still exceeded in many places (esp. nitrogen in Central Europe)
- Mean annual sulphur and nitrogen throughfall deposition decreased by about 60-70% and about 20-40% from 1997 to 2017, respectively.

Protected forest areas
- 24% of forests are protected areas
- Upward trend

FMP coverage
- Most forest area is covered by forest management planning
- Upward trend

Biodiversity decline drivers

Internal, forestry related pressures

- Loss of old growth-forests
- Loss of ancient forests
- **Loss of historical forest management systems**
- **Increasing growing stocks**
- Replacement of native forests by homogeneous (conifer) plantation forests
- **Increased wood removals**

External pressures

- **Climate change**
- Landscape fragmentation
- **Atmospheric depositions**
- **Long distance drift of pesticides from agriculture**
- Wildlife damage
- Biological invasions
- Increased pressure on forest area from agriculture

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