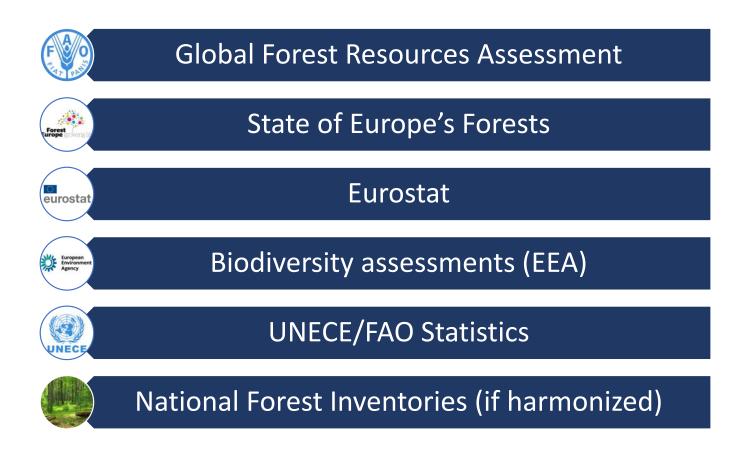
What can we learn from international statistics on European forests?

Andrzej Talarczyk

Forest and Natural Resources Research Centre Foundation

# Principal sources of international statistics on forests



#### 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 m<sup>3</sup>/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

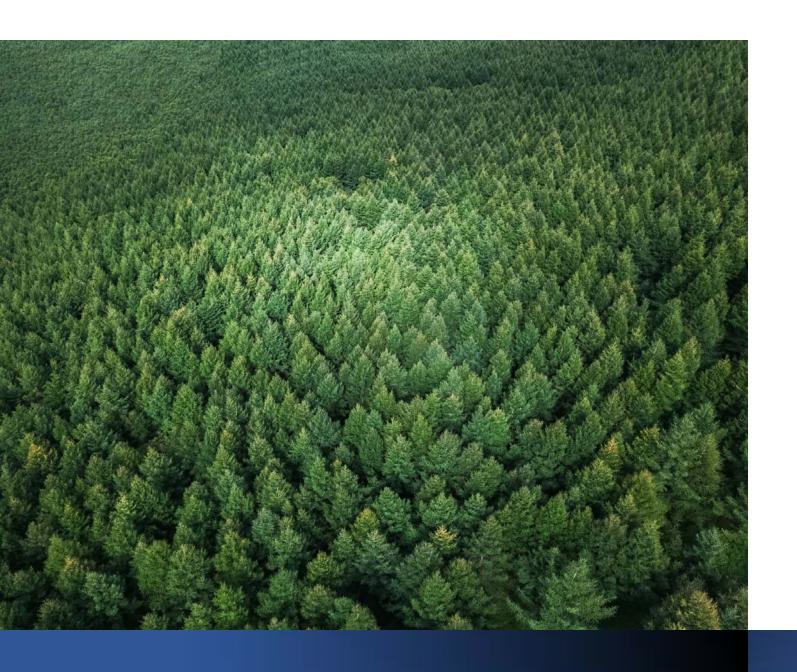
# Biodiversity decline drivers

## 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



Andrzej Talarczyk
Forest and Natural
Resources Research Centre
Foundation

andrzej@talarczyk.com