

# Global and Regional Forest Monitoring and Reporting

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Global Forest Resources Assessment

FAO



Food and Agriculture  
Organization of the  
United Nations

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Joint UNECE/FAO

Forestry and Timber Section



**UNECE**

**Second Clean Forest Annual Meeting**

**7-10 May 2024**

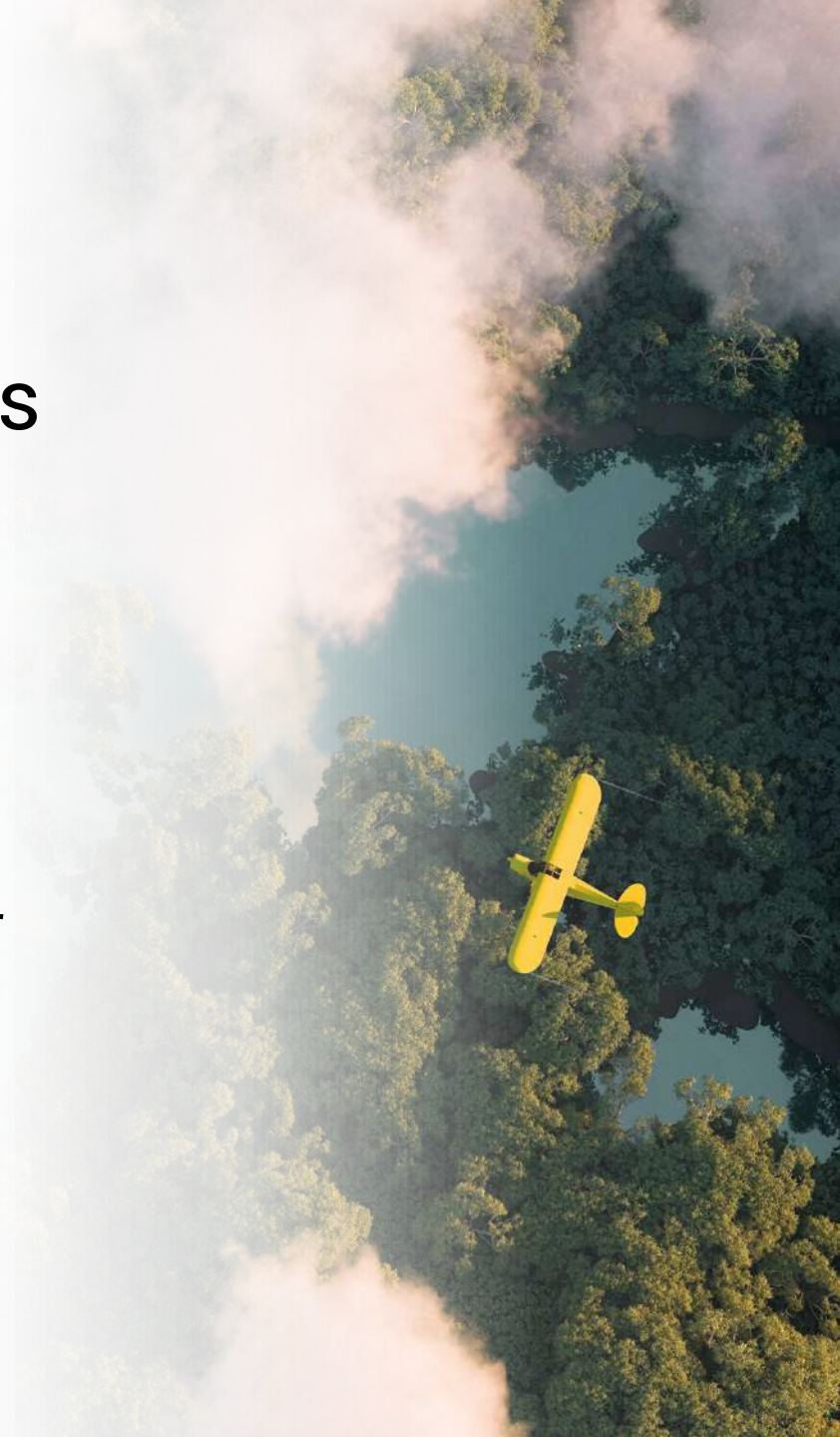
**Lisbon, Portugal**



# FRA

## - two primary components

- **COUNTRY REPORTS** prepared by **National Correspondents** officially nominated by the countries;
- **REMOTE SENSING** conducted together with national **focal points and international partners**



# FRA 2025 ROADMAP

**FRA 2025 Expert consultation**  
-  
**National Correspondent nominations**  
-  
**FRA platform improvements**

**2022**

**2023**

**Data collection and regional trainings**  
-  
**Review**  
-  
**Support for Remote Sensing**

**Flexible voluntary updates**  
-  
**Data analysis**  
-  
**Report writing**  
-  
**FRA 2025 RSS**

**2024**

**2025**

**Key Findings**  
-  
**Main report**  
-  
**Database**



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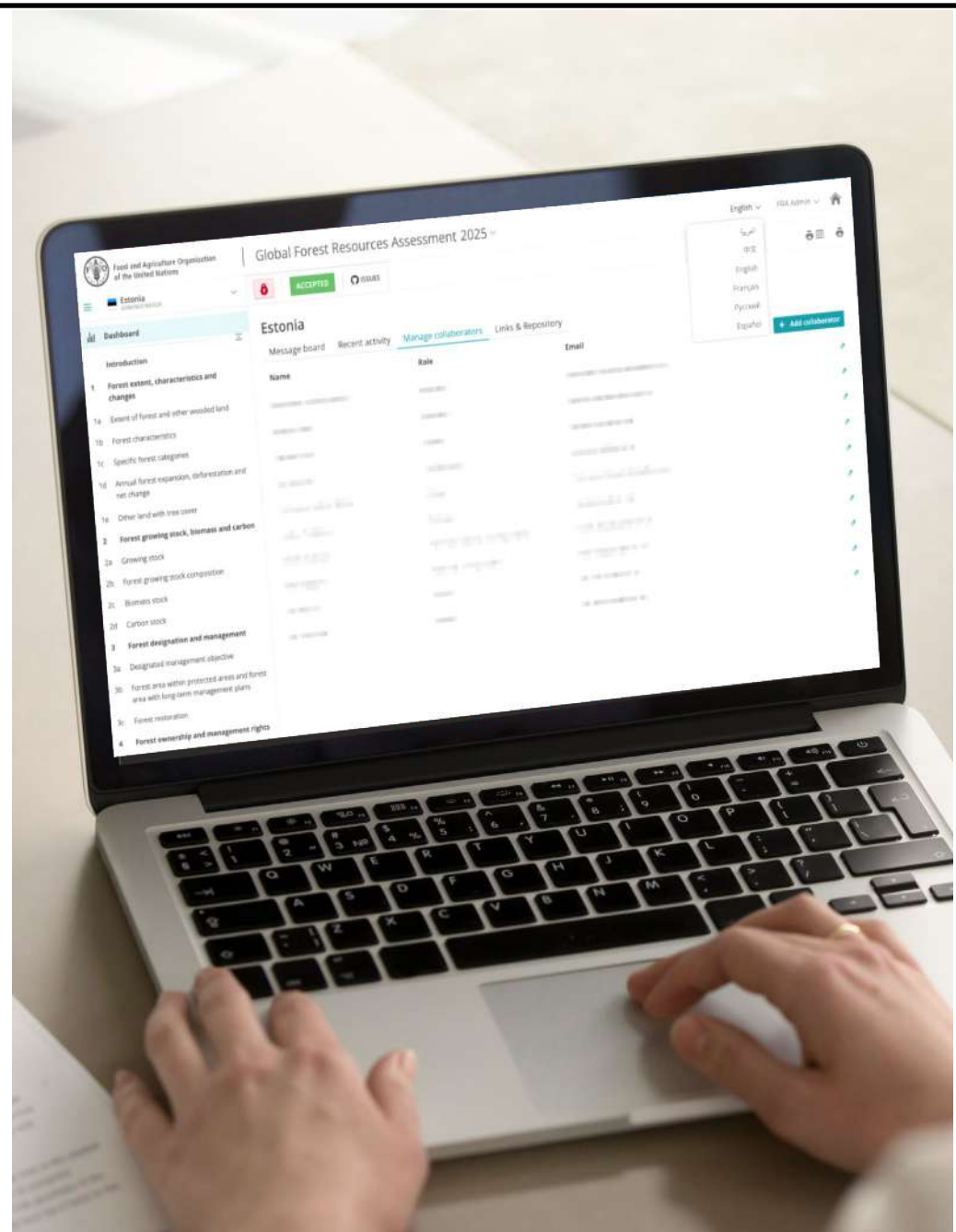
# FRA Platform



# The **FRA** platform

*For reporting, review, analysis  
and dissemination*

- Increase **consistency**
- Reduce reporting **burden**
- Improve **quality** and **transparency**
- Relevant **frequency**



# Dashboard

Portugal

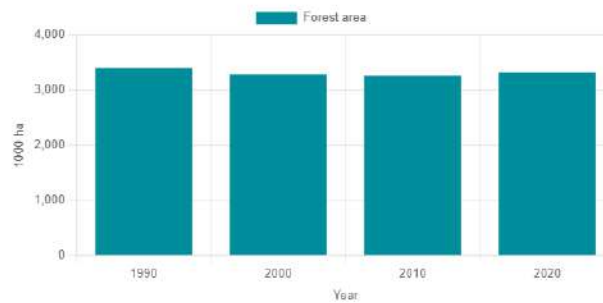
Dashboard

- Introduction
- 1 Forest extent, characteristics and changes
- 2 Forest growing stock, biomass and carbon
- 3 Forest designation and management
- 4 Forest ownership and management rights
- 5 Forest disturbances
- 6 Forest policy and legislation
- 7 Employment, education and NWFP
- 8 Sustainable Development Goal 15

## Portugal

Overview Message board Recent activity Links & Repository

Forest Area (1990 — 2020)

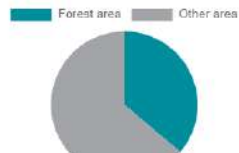


Forest growing stock and carbon (1990 — 2020)

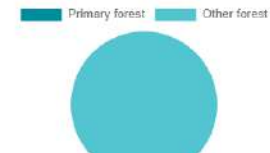
CSV

	1990	2000	2010	2020
Growing stock (million m <sup>3</sup> over bark)	-	-	170.40	-
Carbon stock in biomass (tonnes/ha)	0.00	0.00	26.39	0.00
Total carbon stock (tonnes/ha)	0.00	0.00	26.89	0.00

Forest area % of land area (2020)



Primary forest % of forest area (2020)



# NDP



## Dashboard

### Introduction

#### 1 Forest extent, characteristics and changes

##### 1a Extent of forest and other wooded land

##### 1b Forest characteristics

##### 1c Primary forest and special forest categories

##### 1d Annual forest expansion, deforestation and net change

##### 1e Annual reforestation

##### 1f Other land with tree cover

#### 2 Forest growing stock, biomass and carbon

#### 3 Forest designation and management

#### 4 Forest ownership and management rights

#### 5 Forest disturbances

#### 6 Forest policy and legislation

#### 7 Employment, education and NWFP

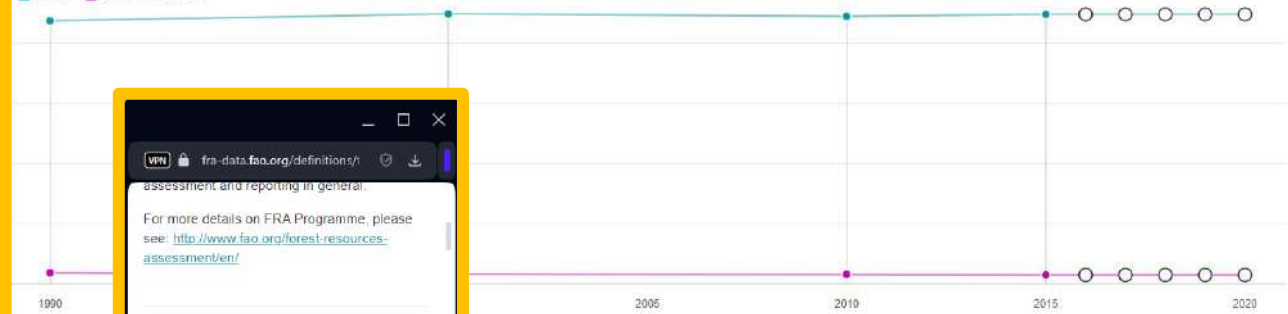
#### 8 Sustainable Development Goal 15

### NATIONAL DATA POINT

#### Extent of forest and other wooded land

Definitions FAQ

Forest Other wooded land



#### 1 Forest extent, characteristics and changes

##### 1a Extent of forest and other wooded land

###### FOREST

Land spanning more than 0.5 hectares with **trees** higher than 5 meters and a **canopy cover** of more than 10 percent, or trees able to reach these thresholds *in situ*. It does not include land that is predominantly under agricultural or urban land use.

Explanatory notes

Area (1000 ha)									
1990	2000	2010	2015	2016	2017	2018	2019	2020	
21 875.33	22 445.64	22 242.00	22 409.00	22 409.00	22 409.00	22 409.00	22 409.00	22 409.00	
825.90	823.48	789.00	746.00	746.00	746.00	746.00	746.00	746.00	-746.00





# Metadata

Finland

## Dashboard

### Introduction

#### 1 Forest extent, characteristics and changes

1a Extent of forest and other wooded land

1b Forest characteristics

1c Primary forest and special forest categories

1d Annual forest expansion, deforestation and net change

1e Annual reforestation

1f Other land with tree cover

#### 2 Forest growing stock, biomass and carbon

2a Growing stock

2b Growing stock composition

2c Biomass stock

2d Carbon stock

#### 3 Forest designation and management

#### 4 Forest ownership and management rights

## National data point

Reference year for the data

## Data sources

### References

### Methods used

National Forest Inventory

### Additional comments

NFI11 2013, Åland and Northern Lapland + NFI12 2014-2017

Forest

Same as FRA

Original data and reclassification

1a Forest, other wooded land and other land

1b Forest characteristics



# Data download

The screenshot shows the 'Data download' page of the Global Forest Resources Assessment 2020. The page features a sidebar with navigation options: Dashboard, Forest extent, characteristics and changes, Forest growing stock, biomass and carbon, Forest designation and management, Forest ownership and management rights, Forest disturbances, Forest policy and legislation, Employment, education and NWFP, and Data download. The main content area is titled 'Data download' and includes a 'Bulk Download' section with a 'ZIP' button. Below this, there are five rows of data categories, each with 'ODS' and 'XLS' download buttons. The categories are: 1. Forest extent, characteristics and changes; 2. Forest growing stock, biomass and carbon; 3. Forest designation and management; 4. Forest ownership and management rights; and 6. Area of permanent forest estate. The footer contains contact information, terms and conditions, and a copyright notice for FAO, 2024.

Food and Agriculture Organization of the United Nations | Global Forest Resources Assessment 2020 | English | Bastian Stahl

Global

Dashboard

1 Forest extent, characteristics and changes

2 Forest growing stock, biomass and carbon

3 Forest designation and management

4 Forest ownership and management rights

5 Forest disturbances

6 Forest policy and legislation

7 Employment, education and NWFP

Data download

Data download

Bulk Download

1. Forest extent, characteristics and changes

2. Forest growing stock, biomass and carbon

3. Forest designation and management

4. Forest ownership and management rights

6. Area of permanent forest estate

ZIP

ODS

XLS

ODS

XLS

ODS

XLS

ODS

XLS

ODS

XLS

ODS

XLS

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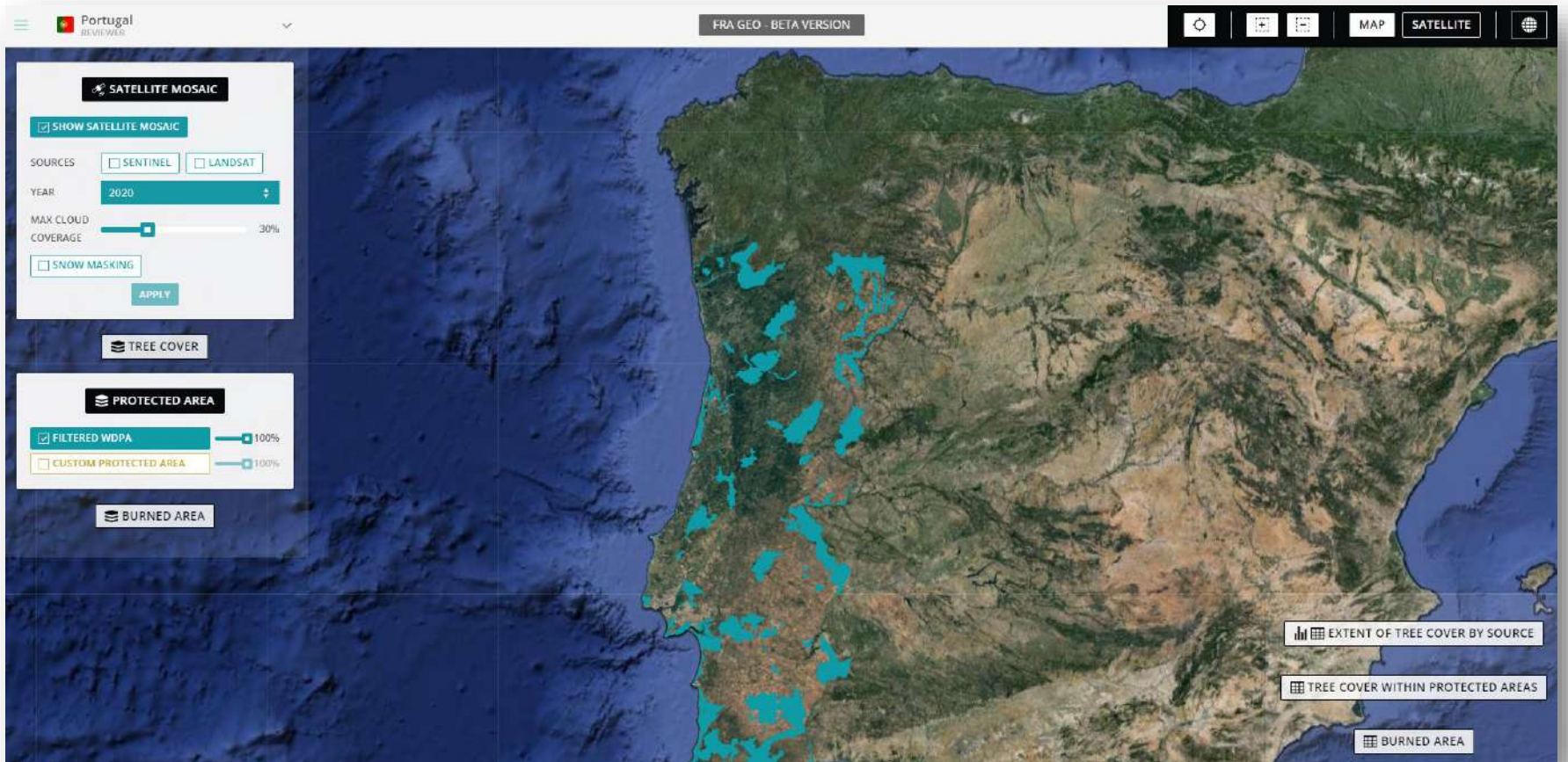
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Platform version #v3.4.0 | 2024-05-01

...and bulk download option



# GEOSPATIAL MODULES



## Upcoming Application Programming Interface

- Possible connection with multiple internal national databases and information systems

## Upcoming Upload and sharing of geospatial layers









# FRA

## Remote Sensing Survey

### FRA 2020 RSS:

#### First global participatory RSS

- 800 experts 126 countries
- Results:
  - Main report
  - World's mangrove assessment 2000-2020
  - + an interactive report
  - Study on agricultural drivers of deforestation

### FRA 2025 RSS :

- Build on FRA 2020 RSS
- Sampling design (from 400K to 300K samples)
- 2000-2010-2018-2023
- Additional variables: agriculture systems, burned forest, mangroves

**Country support / piloting:** Cuba, Zimbabwe, Bolivia,  
Mediterranean region







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United Nations

For more information:  
[fra-data.fao.org](http://fra-data.fao.org)

Thank you!

## Global Forest Resources Assessments

[Home](#)
[Background](#)
[Past assessments](#)
[Remote Sensing](#)
[Initiatives](#)
[Partnerships](#)



IN FOCUS

### Global effort to safeguard mangroves steps up

Rate of loss has slowed in the last decade, new FAO report says

FAO Global Forest Resources Assessment (FRA) provides essential information for understanding the extent of forest resources, their condition, management and uses.

The ongoing assessment, FRA 2025, examines the status of, and trends in, more than 60 forest-related variables in 236 countries and territories in the period 1990–2025. FRA 2025 data are collected using commonly agreed terms and definitions through a transparent, traceable reporting process and a well-established network of officially nominated national correspondents that covers 191 countries and territories.

### Highlights



Unveiling the vital role of transparent forest data in climate action

### Partners



# Joint Pan-European Data Collection on Forests and Sustainable Forest Management



**UNECE**



Food and Agriculture  
Organization of the  
United Nations



# Joint Pan-European Data Collection (JPEDC) on forests and sustainable management

- The process collects data of **45 countries** in the FOREST EUROPE region.
- **6 FOREST EUROPE criteria with 34 indicators** submitted via national reporting and International Data Providers (IDPs).
- Covers information on **forest area, forest damage, genetic resources, timber trade and many other aspects.**
- JPEDC provides data to the variety of outputs, including **State of Europe's Forests**, and information platforms including **Forest Information System for Europe (FISE)**.



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# FOREST EUROPE pan-European criteria and indicators for sustainable forest management

## **1. Forest Resources & Carbon**

### **C.1 Policies, institutions & instruments**

- 1.1 Forest area**
- 1.2 Growing stock**
- 1.3 Age structure &/or diameter distribution**
- 1.4 Forest carbon**

## **2. Forest Health**

### **C.2 Policies, institutions & instruments**

- 2.1 Deposition & concentration of air pollutants**
- 2.2 Soil condition**
- 2.3 Defoliation**
- 2.4 Forest damage**
- 2.5 Forest land degradation**

## **4. Biological Diversity**

### **C.4 Policies, institutions & instruments**

- 4.1 Diversity of tree species**
- 4.2 Regeneration**
- 4.3 Naturalness**
- 4.4 Introduced tree species**
- 4.5 Deadwood**
- 4.6 Genetic resources**
- 4.7 Forest fragmentation**
- 4.8 Threatened forest species**
- 4.9 Protected forests**
- 4.10 Common forest bird species**

## **3. Productive Functions**

### **C.3 Policies, institutions & instruments**

- 3.1 Increment and fellings**
- 3.2 Roundwood**
- 3.3 Non-wood goods**
- 3.4 Services**

## **6. Socio-economic Functions**

### **C.6 Policies, institutions & instruments**

- 6.1 Forest holdings**
- 6.2 Contribution of forest sector to GDP**
- 6.3 Net revenue**
- 6.4 Investment in forests and forestry**
- 6.5 Forest sector workforce**
- 6.6 Occupational safety and health**
- 6.7 Wood consumption**
- 6.8 Trade in wood**
- 6.9 Wood energy**
- 6.10 Recreation in forests**

## **5. Protective Functions**

### **C.5 Policies, institutions and instruments**

- 5.1 Protective forests – soil, water and other ecosystem functions - infrastructure and managed natural resources**

# The 2020 JPEDC data platform

<https://fra-data.fao.org/assessments/panEuropean/2020/FE/home/overview/>

Food and Agriculture Organization of the United Nations | Joint pan-European dataset 2020

Czechia

Dashboard

- 1 Forest resources and carbon
  - 1.1a Forest area
  - 1.1b Forest area by forest types
  - 1.2a Growing stock
  - 1.2b Growing stock by forest type

National Data

Data sources + type of data source eg NFI, etc

Growing stock composition

CSV

Food and Agriculture Organization of the United Nations | Joint pan-European dataset 2020

Pan-European

Dashboard

- Forest resources and carbon
- Maintenance of forest ecosystem health and vitality
- Productive functions of forests (wood and non-wood)
- Biological diversity in forest ecosystems
- Protective functions in forest management
- Socio-economic functions and conditions

### Joint Pan-European Data Collection

This platform provides comprehensive information on forests and the environmental, economic, and social dimensions of sustainable forest management in the Pan-European region (FOREST EUROPE signatory countries).

The Joint Pan-European Data Collection is the joint initiative by UNECE, FAO, and FOREST EUROPE, carried out in parallel to the FAO Global Forest Resources Assessment (GFRA).

This platform was developed jointly by EAO and UNECE.

UNECE | Food and Agriculture Organization of the United Nations

with the technical support of FOREST EUROPE

Forest Europe

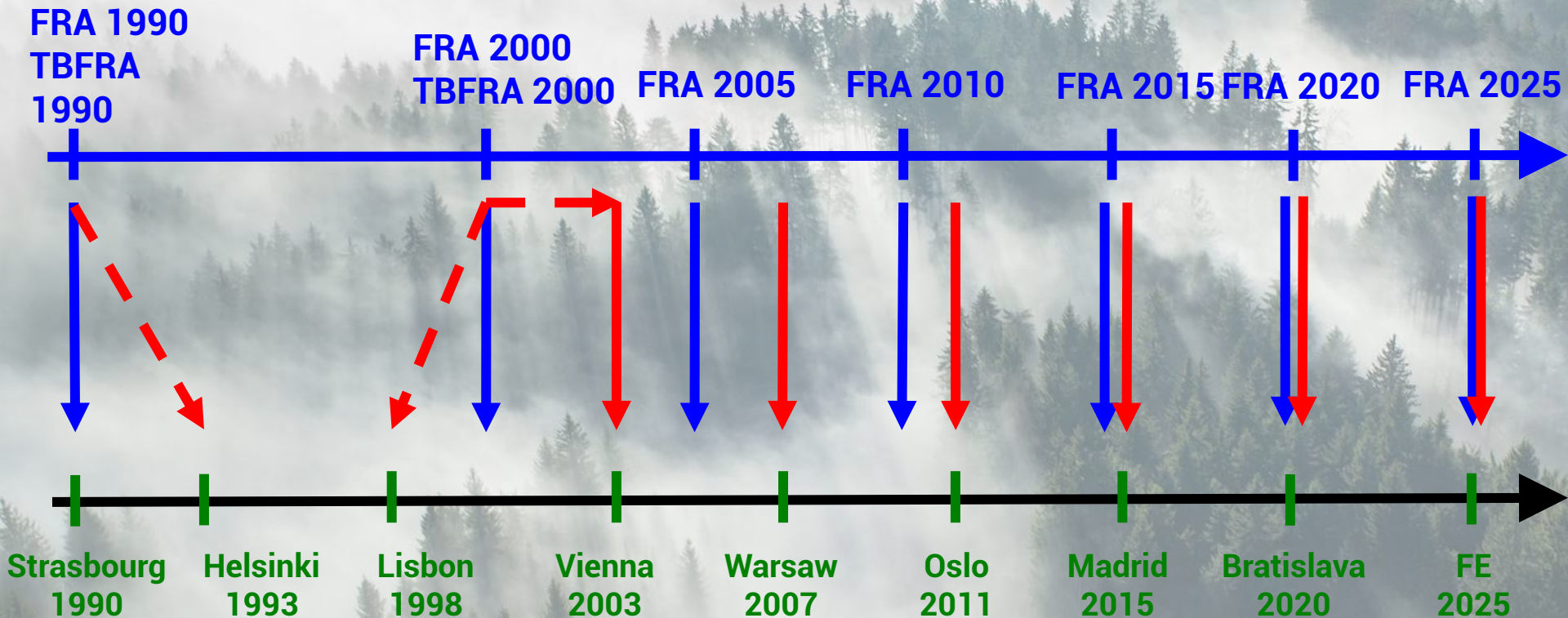
The website has been produced with the assistance of the governments of Switzerland and Sweden.

Schweizerische Eidgenossenschaft  
Confédération suisse  
Confederazione Svizzera  
Confederaziun svizra

SKOGSSTYRELSEN

Scientific name	Common name	Growing stock in forest (mill)		
		1990	2000	2005
Picea abies	Spruce			
Pinus sylvestris	Pine	403.26	439.40	456.35
Fagus sylvatica	Beech	101.15	104.28	108.58
Larix decidua	Larch	34.34	42.94	46.89
Quercus robur	Oak	18.74	25.25	29.50
Quercus petraea	Sessile oak	27.94	32.12	31.37
Betula pendula	Birch			
Abies alba	Fir	5.91	9.52	9.70
Tilia cordata	Lime	10.74	8.48	8.66
Fraxinus excelsior	Ash	3.39	5.50	6.13
		3.77	5.22	5.94

# Global and the Pan-European forest data collection



# Joint Pan-European Data Collection (JPEDC) on forests and sustainable management

2025  
cycle

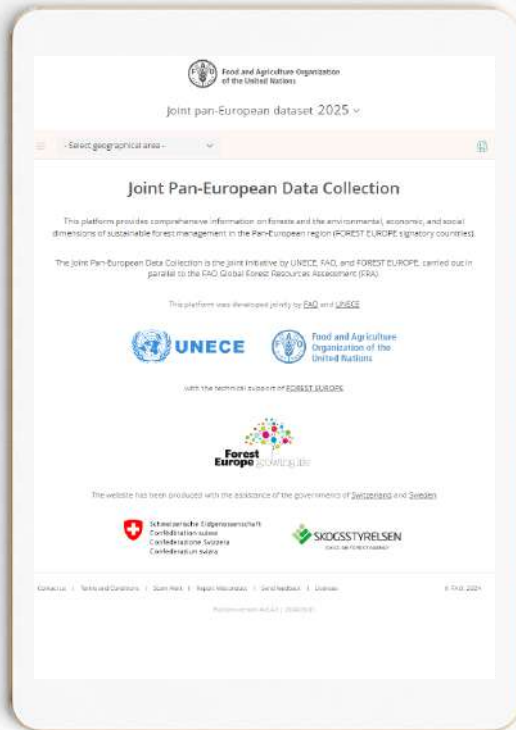
The coordination among  
both processes include:

- data collection interface
- network of national correspondents
- network of reviewers
- technical workshop

Carried out  
in coordination  
with the  
FAO Global Forest  
Resources Assessment  
data collection  
process



# The **2025** JPEDC data collection interface



**Built in the same environment as the interface for the FAO Global Forest Resources Assessment 2025.**

## **The data collection system:**

- Maintains the possible functional and visual **similarity with the FRA** interface
- **Coordinates reporting** on the overlapping variables with FRA
- Is **prefilled with data** submitted under the 2020 pan-European reporting
- Open for data reported through **International Data Providers (IDPs)**
- Initiates future comprehensive data management system


***The development of the JPEDC data interface was possible thanks to kind support provided by the Governments of Sweden and Switzerland.***





# Workshop in Helsinki for National Correspondents to the 2025 cycle

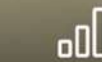
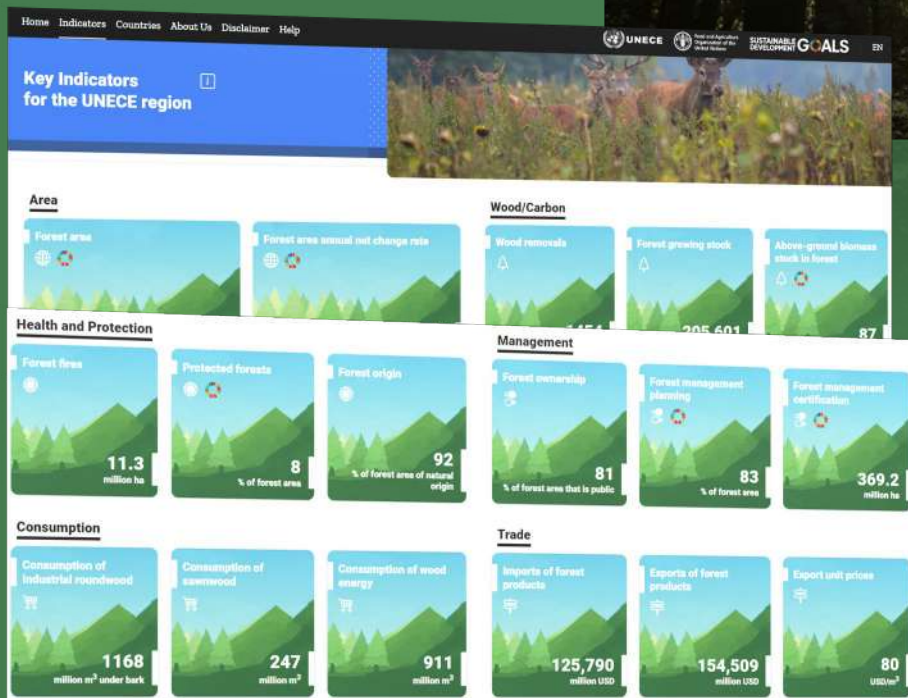




Since 1947,  
UNECE collects data and disseminates information  
on the state of forest resources,  
their management and forest products in the region.

# INForest

Your data and knowledge platform  
for forests in the UNECE region



Key Indicators



Country Data



About Us



**Comprehensive Information:** Covers North America, Europe, Russia and Central Asia



**Decision Support:** Assists sustainable forest management and timber use decisions.



**Communication:** Easy access to indicators and country-specific data



UNECE

[forest-data.unece.org](https://forest-data.unece.org)

# Interactive tool

## Forest fires

## As proportion of forest area

0.7%

### Map

Forest fires (2017 or latest available)



Area of forest fires

Forest fires as proportion of forest area

### Chart

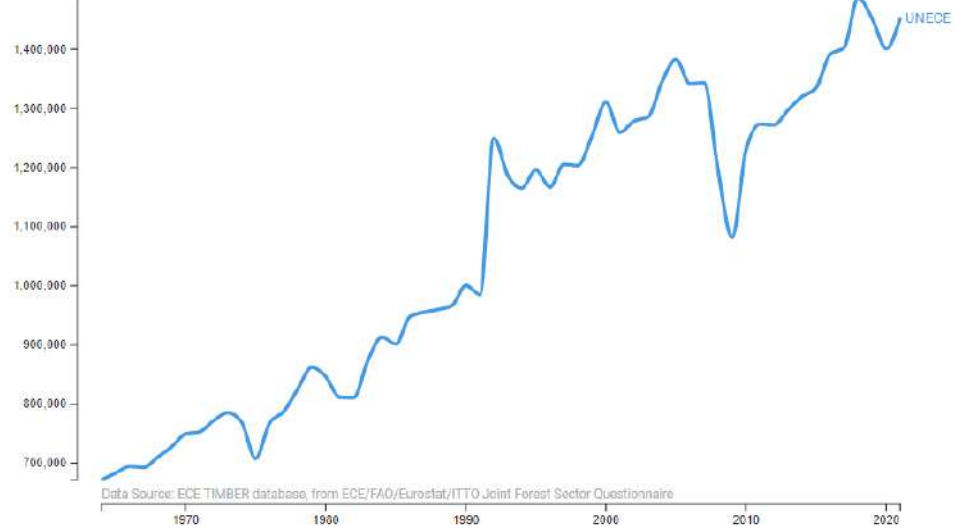
Forest fires (2017 or latest available)



## Time series

Wood removals

thous. m<sup>3</sup>/year



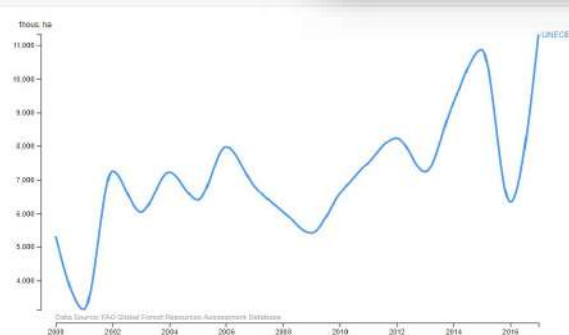
Volume of wood removals

Volume of wood removals per person

Share of wood fuel in the volume of wood removals

### Time series

Forest fires



Area of forest fires

Forest fires as proportion of forest area

Forest fires

thous. ha	2000
Albania	
Armenia	
Austria	
Belarus	1.76
Belgium	0.00
Bosnia and Herzegovina	50.82
Bulgaria	27.40
Canada	665.03
Croatia	17.17
Cyprus	
Czechia	0.38
Denmark	0.00
Estonia	0.38
Finland	6.57
France	
Germany	70.00

Expand

Area of forest fires

Forest f

# Thank you



**Anssi Pekkarinen**

Global Forest Resources and Statistics

FAO



Food and Agriculture  
Organization of the  
United Nations

**Roman Michalak**

Joint UNECE/FAO

Forestry and Timber Section



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