DEPLETION AND GROWTH OF FOREST RESOURCES

DIMINUTION ET ACCROISSEMENT DES RESSOURCES FORESTIÈRES
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Database documentation

The objective of this dataset is to trace net changes in terms of volume in the growing stock of standing wood on forest land.

It shows data underlying the indicator on the intensity of use of forest resources. This indicator relates actual fellings to annual productive capacity (i.e. gross increment).

Forest depletion and growth describe balances or imbalances in different types of forests. The intensity of use of forest resources reflects various forest management methods and their sustainability.

These data should be read in connection with other indicators of the OECD Core Set, in particular with indicators on land use changes and forest quality (species diversity, forest degradation), and be complemented with data on forest management practices and protection measures.

In interpreting these data, it should be borne in mind that definitions and estimation methods vary among countries.

Variables and indicators

Intensity of use of forest resources

This indicator relates actual fellings to annual productive capacity (i.e. gross increment).

When interpreting this indicator, it should be noted that relating resource abstraction to renewal of stocks is a central question concerning sustainable forest resource management. It should however be kept in mind that they only give insights into quantitative aspects of forest resources and that a national average can conceal important variations among forests.

Felling

Average annual standing volume of all trees, living or dead, measured overbark to a minimum diameter of 0 cm (d.b.h.) that are felled during the given reference period, including the volume of trees or part of trees that are not removed from the forest, other wooded land or other felling site. Includes: silvicultural and pre-commercial thinnings and cleanings left in the forest; and natural losses that are recovered (harvested).

Volumes salvaged

Volume of non growing stock of wood (standing or non-standing) which is recovered for commercial purposes.

Net fellings

Calculated as Fellings minus volumes salvaged.

Natural losses

Average annual losses to the growing stock during the given reference period, measured to a minimum diameter of 0 cm (d.b.h.), due to mortality from causes other than cutting by man, e.g. natural mortality, diseases, insect attacks, fire, windthrow or other physical damage.

Gross increment

Average annual volume of increment over the reference period of all trees, measured to a minimum diameter breast height (d.b.h) of 0 cm.

Includes: the increment on trees which have been felled or die during the reference period.
**Net Increment**

Average annual volume over the given reference period of gross increment less that of natural losses on all trees to a minimum diameter of 0 cm (d.b.h.).

**Net change**

Calculated as Gross Increment minus Net fellings minus Natural losses.
OECD MEMBER ECONOMIES

Australia

Fellings: merchantable roundwood excluding firewood.
Log harvest includes log harvested from native forests and commercial timber plantations.


Austria

Data refer to annual averages over several years (e.g. 2005 data are a 2000-09 average).
Fellings, natural losses and gross increment include all relevant trees measured to a minimum diameter breast height (d.b.h.) of 5 cm.

Canada

Fellings: data refer to removals and include industrial roundwood (which includes logs and bolts, pulpwod, and other industrial roundwood such as poles, piling, and others), fuelwood (which includes wood harvested for industrial or institutional energy), and firewood (which includes wood to be used for household or recreational energy).

National forestry database: http://nfdp.ccfm.org
Canadian Forest Service: http://www.nrcan.gc.ca/forests

ECONOMIES MEMBRES DE L’OCDE

Australie

Abattages : bois rond marchand, exclut le bois de chauffage.
La récolte de rondins inclut les rondins récoltés dans les forêts natives et les plantations commerciales de bois.

Autriche

Les données font référence à des moyennes annuelles sur plusieurs années (par ex. 2005 est une moyenne 2000-09).
Les abattages, pertes naturelles et les accroissements bruts incluent les arbres mesurant un minimum de 5 cm de diamètre à hauteur de poitrine.

Belgique

Avant 1990, Wallonie uniquement.

Canada

Abattages : les données font référence aux prélèvements et incluent le bois rond industriel (bûches, boulons, bois de trituration et autres bois ronds industriels tels que les poteaux, les empilements…), le bois de chauffage (bois récolté pour la production d’énergie industrielle ou institutionnelle), et le bois à brûler (bois utilisé pour produire de l’énergie domestique ou récréationnelle).
**Chile**

**Net change:** as of 2013 calculated as *gross increment* – *gross fellings*.

**Denmark**

**Fellings:** change in methodology in 2012. The high amount of 2000 is due to a storm in December 1999.

**Estonia**

Data for 1950-1995 refer to total forest including other wooded land and trees outside the forests.
Since 1999 data refer to the forest available for wood supply.
**Natural losses:** exclude recovered natural losses.
**Gross increment** data for 1950-1995 refer to total forest (not only forest available for wood supply).

**Finland**

Data covers forests available for wood supply.
**Natural losses** include *volumes salvaged*.

**France**

Data are 5 years mobile averages.
Data refer to forest available for wood supply only.
Data refer to quantity collected in the forest, i.e. fellings plus dead wood harvested.
Data exclude the consequences of 2009 storms (Klaus and Quinten), considered as exceptional events.
Operating losses are not included in the quantity collected.
Fellings refer to amounts harvested, i.e. fellings and quantities of windfall woods stored in the forest.

Germany

According to German conventions volume is measured from 7 cm diameter breast height (d.b.h.).

Fellings: annual figures.

Natural losses and gross increment: annual averages over several years.

Natural losses: 2002-13 data estimated based on the National Forest Inventory (NFI) 2002 mortality rate (0.44 m³/ha/year). As of 2014 data estimated based on the NFI 2012 mortality rate (0.6 m³/ha/year).

Hungary

Data refer to all Hungarian forests (not only forest available for wood supply).

Italy

http://www.sian.it/inventarioforestale/
http://www.corpoforestale.it/Home
https://www.politicheagricole.it/flex/cm/pages/ServeBLOB.php/L/IT/IDPagina/202
http://mpf.entecra.it/

Korea

Fellings are based on timber cutting permission and consist of: final clearing, thinning for profit, forest tending, species conversion, damaged tree removal, removals from forest land conversion, others removal.

Natural Losses: losses caused by disease and insect pest are excluded.

Gross Increment: estimates based on a sample survey conducted every 5 years.

www.forest.go.kr
Latvia
Data are annual averages over several years.
http://www.silava.lv

Lithuania
Data are 5-year averages.

Luxembourg
Data refers to volumes measured to a minimum of diameter of 7 cm.
Natural losses: 1990 data include trees fallen during the 1990 storm. 2014 data includes trees fallen during a local storm in June 2014.
Fellings: data based on fellings in public forests, extrapolated to national surface level.

Mexico
1990 onwards: annual authorised production.

Netherlands
The data refer to the average over a 5 year period. Until 1995 data refer to total exploitable forest. Natural losses are included in Net fellings.

New Zealand
Fellings: includes roundwood removals from both natural and planted production forests. Gross Increment: includes data from planted production forests only.

Lettonie
Les données sont des moyennes annuelles sur plusieurs années.

Lituanie
Les données sont des moyennes annuelles sur 5 ans.

Luxembourg

Mexique
À partir de 1990 : production annuelle autorisée.

Pays-Bas

Nouvelle Zélande
Abattages : inclut les prélèvements de bois rond des forêts naturelles et des forêts de production plantées. Accroissement brut : inclut les forêts de production plantées uniquement.
**Norway**

**Fellings** are annual averages over a 5-year period for the reference years 1950-2000. From 2005 fellings have been estimated as annual figures. Data on fellings are based on official statistics of wood removals, adjusted for bark and volume of felled trees left in the forest. **Increment** data are based on the National Forest Inventory.

**Poland**

Until 1990: data refers to the whole forest area. **Fellings**: decrease in 1990 was a result of decreased demand for wood in the economic transition period.

**Portugal**

The data refer to the average over a 5 year period (e.g. 1990 refers to the average over 1988-1992).

**Slovak Republic**

**Net change** is calculated as **gross increment** minus **gross fellings**.  
[http://www.forestportal.sk/Pages/Home.aspx](http://www.forestportal.sk/Pages/Home.aspx)  
[http://enviroportal.sk/spravy/spravy-o-zp/kapitola/1](http://enviroportal.sk/spravy/spravy-o-zp/kapitola/1)

**Sweden**

1980 and 1990 data refer to 1971-80 and 1986-90 averages. Data are 5 year averages except data for 2009-2012 on fellings that are annual. The area of forest available for wood supply has steadily decreased from 1990 as a result of environmental considerations including formally and informally protected areas. Data on **volumes salvaged** and **natural losses** refers to productive forest land excluding protected land.

**Norvège**


**Pologne**

Jusqu’en 1990: les données font référence. **Abattages**: la baisse en 1990 est le résultat d’une baisse de la demande de bois durant la période de transition économique.

**Portugal**


**République Slovaque**

Le **changement net** correspond à l’**accroissement brut** moins les **abattages brut**.

**Suède**

Switzerland

Data for 1990, 2000, 2005 and 2010 come from the National Forest Inventory and refer to the volume of trees measured to a minimum diameter of 12 cm. No value for trees with a diameter smaller than 12 cm, their influence on the total volume is negligible.

Turkey

Net change: calculated as gross increment minus fellings.

United Kingdom

1990 data onwards are 5-year averages, except 2009-2010 which is 2-year average. Volume is measured from 7 cm diameter breast height (d.b.h.). Increment figures exclude natural losses that are not recovered.
United States

The intensity of use of forest resources is estimated by dividing net fellings by net increment (instead of total fellings versus gross increment).

États-Unis

L'intensité d'utilisation des resources forestières est estimée en divisant les abattages nets par les accroissement nets (au lieu des abattages bruts versus accroissement bruts).

NON-OECD MEMBER ECONOMIES

Costa Rica

The data refer to the annually authorized volumes.

ECONOMIES NON-MEMBRES DE L’OCDE

Costa Rica

Les données font référence aux volumes annuels autorisés.