SDG Goal 15	**Life on land**
SDG Target 15.2	**By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally**
SDG Indicator 15.2.1	**Progress towards sustainable forest management**
Time series	**Above-ground biomass stock in forest**

1. General information on the time series

- Date of national metadata: 7 June 2023
- National data: http://sdg-indicators.de/15-2-1/
- Definition: The time series measures the carbon balance for the forest ecosystem above ground.
- Disaggregation: type of biomass

2. Comparability with the UN metadata

- Date of UN metadata: December 2023
- UN metadata: https://unstats.un.org/sdgs/metadata/files/Metadata-15-02-01.pdf
- The time series is compliant with the UN metadata.

3. Data description

- Data on carbon balance for the forest ecosystem is part of the annual publication of the environmental economic accounting in Germany. Data is calculated by Thünen Institute on behalf of the Federal Statistical Office. The data collection was methodologically updated in 2014. Therefore, data before and after this year cannot be compared.

4. Access to data source

- Carbon balance for the forest ecosystem:
  https://www.destatis.de/EN/Themes/Society-Environment/Environment/Environmental-Economic-Accounting/agriculture-forest/Tables/carbon-forest-ecosystem.html
- Economic Accounts for Forestry (only available in German): “Waldgesamtrechnung”:
  https://www.destatis.de/DE/Themen/Gesellschaft-Umwelt/Umwelt/UGR/landwirtschaft-wald/Publikationen/Downloads/waldgesamtrechnung-tabellenband-pdf-5852102.html

5. Metadata on source data

- Updated method description for the forest accounts with tables for the reporting year 2012 (final) and 2013 (preliminary) (only available in German):
  https://literatur.thuenen.de/digbib_extern/dn054460.pdf
- Methodological description of the table framework of theEuropean Forest Accounts and results of theyears 2014 and 2015 (only available in German):
  https://literatur.thuenen.de/digbib_extern/dn059605.pdf
- Methodological description of the table framework of theEuropean Forest Accounts and results of theyears 2014 and 2015 – 2. revised version (only available in German):
  https://literatur.thuenen.de/digbib_extern/dn059946.pdf

6. Timeliness and frequency

- Timeliness: t + 20 months
- Frequency: Annual

7. Calculation method

- Unit of measurement:
- Calculation:

$$\textbf{Above-ground biomass} = \textit{Standing timber [Mn t] + Other woody biomass [Mn t] + Other biomass in forests [Mn t]}$$

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SDG Indicator 15.2.1	**Progress towards sustainable forest management**
Time series	**Forest area located within protected areas**

1. General information on the time series

- Date of national metadata: 7 June 2023
- National data: http://sdg-indicators.de/15-2-1/
- Definition: The time series measures the proportion of forest area within protected areas.
- Disaggregation: Not available.

2. Comparability with the UN metadata

- Date of UN metadata: December 2023
- UN metadata: https://unstats.un.org/sdgs/metadata/files/Metadata-15-02-01.pdf
- The time series is compliant with the UN metadata.

3. Data description

- Since the timestamp 2015, the data is based on a special evaluation. For the calculation of the forest area located within protected areas, all protected areas except for nature parks and UNESCO-MAB Biosphere reserves are considered. Data on protected areas was downloaded from the Protected Planet webpage. Data on forest areas come from the ecosystem extent accounts.

4. Access to data source

- Data on protected areas:
  https://www.protectedplanet.net/country/DEU
- Environmental Economic Accounting: Ecosystem area balance:
  https://www.destatis.de/EN/Themes/Society-Environment/Environment/Environmental-Economic-Accounting/ecosystem-account/_node.html

5. Metadata on source data

- Not available.

6. Timeliness and frequency

- Timeliness: Not available.
- Frequency: Every 3 years

7. Calculation method

- Unit of measurement: Percentage
- Calculation:

$$\textbf{Forest area located within protected areas} = \frac{\textit{Protected forest area [ha]}}{\textit{Total forest area [ha]}} \cdot 100\ [\%]$$

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SDG Indicator 15.2.1	**Progress towards sustainable forest management**
Time series	**Forest area net change rate**

1. General information on the time series

- Date of national metadata: 7 June 2023
- National data: http://sdg-indicators.de/15-2-1/
- Definition: The time series measures the change rate of forest area between the years.
- Disaggregation: Not available.

2. Comparability with the UN metadata

- Date of UN metadata: December 2023
- UN metadata: https://unstats.un.org/sdgs/metadata/files/Metadata-15-02-01.pdf
- The time series is compliant with the UN metadata. The change in forest area loss rate is based on a comparison of the current forest area net change rate with the baseline forest area net change rate for the period 2010-2015.

3. Data description

- The data on forest area and land area is taken from the statistical areal survey of the Federal Statistical Office. The data is collected by the statistical areal survey by type of actual use in the public land survey registers of the Länder. Until 2015 the catalogue was based on the nomenclature of the automated real estate books (ALB). Since 2016 the ALKIS type of use catalogue is applied, due to a methodological change. Data is now obtained by evaluation according to the ALKIS (Official Land Registry Information System) usage catalogue.

4. Access to data source

- Soil area (actual use): types of use – GENESIS online 33111-0001: https://www-genesis.destatis.de/genesis//online?operation=table&code=33111-0001&bypass=true&language=en
- Soil area (actual use): reference date (until 2015-12-31), types of use – GENESIS online 33111-0003: https://www-genesis.destatis.de/genesis//online?operation=table&code=33111-0003&bypass=true&language=en

5. Metadata on source data

- Quality Report – Area survey by Type of Actual Use (only available in German): https://www.destatis.de/DE/Methoden/Qualitaet/Qualitaetsberichte/Land-Forstwirtschaft-Fischerei/flaechenerhebung.pdf

6. Timeliness and frequency

- Timeliness: t + 11 months
- Frequency: Annual

7. Calculation method

- Unit of measurement: Percentage
- Calculation:

$$\textbf{Forest area net change rate} = \frac{Forest\ area_t\ [ha] - Forest\ area_{t-1}\ [ha]}{Forest\ area_{t-1}\ [ha]} \cdot 100\ [\%]$$

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SDG Indicator 15.2.1	**Progress towards sustainable forest management**
Time series	**Forest area under an independently verified forest management certification scheme**

1. General information on the time series

- Date of national metadata: 7 June 2023
- National data: http://sdg-indicators.de/15-2-1/
- Definition: The time series measures the proportion of forest area under the Programme for the Endorsement of Forest Certification Schemes (PEFC).
- Disaggregation: Not available.

2. Comparability with the UN metadata

- Date of UN metadata: December 2023
- UN metadata: https://unstats.un.org/sdgs/metadata/files/Metadata-15-02-01.pdf
- The time series is compliant with the UN metadata.

3. Data description

- The data on proportion of forest area under the Programme for the Endorsement of Forest Certification Schemes (PEFC) is calculated by the German Environment Agency (UBA) on the basis of data from Federal Agency for Nature Conservation (BfN), Programme for the Endorsement of Forest Certification Schemes (PEFC) and National Forest Inventory by the Thünen Institute.

4. Access to data source

- Sustainable Forestry:
  https://www.umweltbundesamt.de/en/data/environmental-indicators/indicator-sustainable-forestry

5. Metadata on source data

- Sustainable Forestry:
  https://www.umweltbundesamt.de/en/indicator-sustainable-forestry

6. Timeliness and frequency

- Timeliness: t + 3.5 months
- Frequency: Annual

7. Calculation method

- Unit of measurement: Percentage
- Calculation:

Not applicable.