Release Notes: National Ecological Footprint and Biocapacity Accounts, Edition 2026

Published results from Edition 2026 of National Ecological Footprint and Biocapacity Accounts detail Ecological Footprint and Biocapacity, by total and by component, at a national level and at a world level, from 1961 to 2025. Ecological Footprint was measured for production, imports, exports, and consumption, where consumption was derived as production plus imports minus exports. Accounts were generated for 244 countries and territories including the world, current and former/split/unified nations. From these accounts, results were published from a subset of countries, plus the world, which had a complete and logical timeline of data.

Versions and updates

Version 1.0. Public release on Apr 22, 2026.

Recommended citation

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Terms of use

Credits

This edition was produced by Kiona Lo[+], Neha Basnet[+], Eric Miller[+], Bumika Srikanthalingam[+], Beatrice Foley[+], Johanna Louise Van Berkum*, Anna Hao Long[+], Petra Toneva*, Marina Ermina*, and Clara Klinkenberg* (+ at York University and * at University of Iceland).

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This edition integrated data from multinational databases with details about production, population, and economic variables by year and by country or the world. Key sources include International Energy Agency (IEA), United Nations (UN) FAOSTAT (including its databases of human population, crop and livestock products, food balances, forestry production and trade), FAO FishStat, Sea Around Us, UN COMTRADE, Global Human Settlement Layer (GHSL), CORINE Land

Cover, Global Agro-Ecological Zones (GAEZ), Global Land Cover (GLC), Global Carbon Budget, Carbon Dioxide Information Analysis Center (CDIAC-FF), World Bank, and International Monetary Fund. Multinational databases were sourced for national statistics to maximize the breadth and consistency of international statistics. This edition also used parameters from peer-reviewed science journals and thematic collections, with citations available upon request.

Definitions and concepts

Ecological Footprint is the area of fishing grounds plus cropland plus grazing land which provide food or feed or fibres, plus the area occupied by settlements and infrastructure, plus the area of forests harvested for forest products, plus the area of forests needed to sequester human-generated carbon emissions after subtracting the amount sequestered by the world's oceans.

Ecological Footprint is measured in global hectares as the sum of the following components: fishing grounds, built-up land, cropland, grazing land, forest products, and forest carbon uptake. These components are defined below.

Fishing Grounds	Area of marine and inland waters used to produce the fish, invertebrates, and aquatic plants that were captured or cultured by humans
Built-up land	Area of land occupied by human-built infrastructure, including housing and other buildings, roads and paved areas, and urban greenspace
Cropland	Area of cropland used to grow food and fibre crops consumed by humans, and for crops that humans fed to animals and cultured fish
Grazing land	Area of pasture needed to feed livestock beyond the feed supplied by crops harvested from cropland
Forest Products	Area of forests harvested for timber products and pulpwood
Forest carbon uptake (Forest C-uptake)	Area of forests needed to sequester anthropogenic carbon emissions from the combustion of fuels, including for electricity generation and for the production and transportation of globally traded goods, minus the proportion of anthropogenic emissions sequestered in the same year by the world's oceans

Biocapacity is a measure of the potential of an area to support an Ecological Footprint. Biocapacity is also measured in global hectares as the sum of the following components: fishing grounds, built-up land, cropland, grazing land (pasture), and forest biocapacity (which provides the capacity to supply forest products or to absorb carbon).

A global hectare is a hectare of land that provides a world-average amount of biological regeneration each year. Global hectares are derived from hectares by applying several conversion factors, including: a yield factor that relates national yield of a specific land type relative to world-average yield, an equivalence factor that relates components to one another based upon their level of biological productivity, and an intertemporal yield factor that relates changes in biological productivity over time. Expressing Ecological Footprint and Biocapacity in a standardized unit of global hectares allows for comparisons across the world and over time.

Further details about the concepts and national calculations are provided in these publications:

Lin, D., Hanscom, L., Murthy, A., Galli, A., Evans, M., Neill, E., Mancini, M.S., Martindill, J., Medouar, F.Z., Huang, S. and Wackernagel, M., 2018. Ecological footprint accounting for countries: updates and results of the national footprint accounts, 2012–2018. Resources, 7(3), p.58. doi:10.3390/resources7030058

Borucke, M., Moore, D., Cranston, G., Gracey, K., Iha, K., Larson, J., Lazarus, E., Morales, J.C., Wackernagel, M. and Galli, A., 2013. Accounting for demand and supply of the biosphere's regenerative capacity: The National Footprint Accounts' underlying methodology and framework. Ecological indicators, 24, pp.518-533. doi:10.1016/j.ecolind.2012.08.005

How Edition 2026 compares to the prior Edition 2025

Results from Edition 2026 includes another year of statistics (2025) while also re-calculating prior years (1961-2024) which were in common with the timeline of the prior edition. This recalculation involved newly acquiring contemporary and historic data while improving upon data sources and methodology. Significant differences affecting many country timelines are detailed below.

- **Built-up area**, affecting **built-up biocapacity** and **built-up footprint,** was improved by sourcing data from Global Human Settlements Layer Degree of Urbanization (GHSL-SMOD). This additional dataset provided additional data over many years related to urban centres and clusters within countries. Country data was summed to provide a synthetic world statistic, thereby also updating the world's built-up area. This additional data was used if available, with a fallback of using data which had been used in prior editions: CORINE Land Cover, or Global Agro-Ecological Zones, or Global Land Cover. Over 220 countries were affected by this change in data, but with varying amounts and proportions of changes to built-up area.

- **Ecological Footprint of carbon embodied in traded products** was improved in later years of each country's timeline by using statistics from International Monetary Fund and World Bank to extend the latest national aggregates of traded goods reported by UN Comtrade. Imports and exports were each extended separately based on changes in the aggregate volume of imported or exported goods on a country-year basis. This extension applied to the last two years of trade statistics for most countries, while some countries with scarcer trade statistics had this extension apply to more years. This improvement affected Ecological Footprint of carbon embodied in traded products and therefore affected national consumption emissions.

- **Ecological Footprint embodied in traded fish products** was improved by converting the Harmonized System (HS) codes of existing traded fish products to align with the updated edition adopted by UN FAO in its Fishstat database. This database remained the primary source of input data related to the trade in fish and fish-derived products. This improvement complemented a refinement in the way that the accounts included unreported fish landings, and discards, from Sea Around Us. In this edition, imports used the unreported global catch rate, while exports used a weighted average of unreported domestic catch and unreported

global catch, in proportion to the relative volume of reported domestic catch and imports. This improvement affected all countries which traded fish and fish-derived products, to varying degrees depending upon the amount and composition of the trade.

- **Ecological Footprint embodied in traded forest products** was improved by including more forest-derived traded commodities reported by UN FAOSTAT while also improving the reconciliation of interrupted timelines of some aggregate or component statistics. This broadened and improved accounting of products included the new consideration of recovered paper and fibre pulp, which did not rely upon new domestic or imported timber harvests, but which could have been blended with virgin pulp and paper to support domestic consumption or exports. These improvements affected Ecological Footprint embodied within traded forest products and therefore in national consumption of forest products. Ecological footprint of domestic forest harvests was not affected.

- **Ecological Footprint of carbon related to production, traded, and consumption emissions** was updated using the most recent Global Carbon Budget 2025 with respect to its estimation of the global net uptake of carbon dioxide by the world's oceans. Budget 2025 incorporated new evidence and process understanding which increased its estimate of the ocean carbon sink since 1961 when compared to its prior-year Budget 2024, which was used in Edition 2025. This increase in ocean uptake reduced the forest carbon uptake component of Ecological Footprint since 1961, with effects varying annually. As with past editions, the annual amount of anthropogenic carbon emissions sequestered by the world's oceans was subtracted from production emissions to derive a net amount of anthropogenic carbon emissions. This net amount was used to derive statistics of global hectares of carbon emissions related to domestic production, trade, and consumption.

This new edition incorporates many country-specific changes in **area of cropland, grazing land, forests, and fishing grounds**, as reported by United Nations FAOSTAT. Changes in the area of these components affected national Biocapacity. Countries where the absolute difference exceeded 20% at some point along its timeline are listed below in decreasing order of difference:

- Cropland area: Guyana, Burkina Faso
- Grazing land area: French Polynesia, Pakistan, Mayotte
- Fishing grounds area: France, Portugal, Sudan (former), Suriname, Indonesia, Netherlands

Data availability

Results of Biocapacity and Ecological Footprint (of production, imports, exports, and consumption) are published at https://fodafo.org/data/ and https://footprint.info.yorku.ca/data/

Each country's data is categorized with a publication flag that identifies whether all or some or none of the data in a particular year of a country was publicly reported or why it was not. Results of Iceland and Faroe Islands are published with a distinction noted in the dataset that their national Ecological Footprint of consumption reflects their large proportion of each country's fishing

grounds component, as the top two countries in the world. In 2025, the proportion of fish in total consumption was 87% for Faroe Islands and 72% for Iceland, which was three times greater than 21% for Grenada which had the third-highest proportion. The fishing grounds component is highly sensitive to fish-specific ecological parameters such as its tropic level, and trade flows which are often reported in aggregate categories such as fish filets. The methodology of calculating the fishing grounds footprint continues to be researched to improve upon the resolution and attribution of trade flows, unreported catch and discards, and ecological parameters which relate a mass of fish to an area of aquatic primary production.

The same data of national and global measures of Ecological Footprint (of consumption) and Biocapacity, and their components, are also available at https://data.footprintnetwork.org/

Additional details may be requested on a per-nation-year basis in the form of an MS Excel Workbook that contains all the refined data used to produce the composite metrics of Ecological Footprint and Biocapacity of one country in one year.

Questions and comments

Please direct data-related questions or comments to footprint@yorku.ca or by mail to:

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Ecological Footprint Initiative at York University has the website: https://footprint.info.yorku.ca

Footprint Data Foundation has the website: https://fodafo.org

International Ecological Footprint Learning Lab has the website: https://footprintpartnership.net/