OECD Sustainable Ocean Economy

Database documentation

The ocean is a shared global resource. Ocean-related industries in many countries have expanded with insufficient consideration for the environment, risking the natural resources and the essential marine ecosystem services on which economies and people's well-being depend.

The OECD Sustainable Ocean Economy Database synthesizes available ocean-related datasets and indicators from across the Organisation to improve their discoverability and comparability. The database brings together relevant indicators from the Environment Directorate (ENV), the Trade and Agriculture Directorate (TAD), the Centre for Entrepreneurship, SMEs, Regions and Cities (CFE), the International Transport Forum (ITF), the International Energy Agency (IEA), and others.

- **Natural capital**: informs on the quantity or quality of selected natural capital related to ocean;
- **Environmental dimension of well-being and resilience:** informs on the capacity of natural capital, and among them ecosystems, to provide goods, services and buffer to coastal and inland population;

- **Environmental and resource productivity:** informs on the links between the ocean used as a resource and beneficial or harmful outputs;

- **Economic opportunities:** reflects the activities undertaken to protect the ocean or to create wealth using the ocean as a resource;

- **Policy responses**: describes and informs on a set of policies targeted at preserving the ocean;

- **Socio-economic context**: informs on population and economic activities indirectly related to ocean.

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Natural capital

Threatened marine species

Source

OECD Threatened species dataset

Related publications

OECD (2020), Environment at a Glance Indicators, OECD Publishing, Paris, https://doi.org/10.1787/ac4b8b89-en.

Series

This indicator contains two series:

- Threatened marine fish species (last available year), number
- Threatened marine fish species (last available year), as share of known species, %

Concept and classification

The data on the state of threatened species build on country replies to the Annual Quality Assurance (AQA) of OECD environmental reference series. These data are harmonised through the work of the OECD Working Party on Environmental Information (WPEI). Some were updated or revised on the basis of comments from national delegates and in the framework of the OECD Environmental Performance Reviews.

Species assessed as Critically Endangered (CR), Endangered (EN), or Vulnerable (VU) are referred to as "threatened" species. Reporting the proportion of threatened species on The IUCN Red List is complicated by the fact that not all species groups have been fully evaluated, and also by the fact that some species have so little information available that they can only be assessed as Data Deficient (DD). For many of the incompletely evaluated groups, assessment efforts have focused on species that are likely to be threatened; therefore any percentage of threatened species reported for these groups would be heavily biased (i.e., the % threatened species would likely be an overestimate).

Interpretation

The year dimension used is the reference year of the OECD AQA and not of the observations (which is not collected).

The number of species known does not always accurately reflect the number of species in existence and varying definitions can limit comparability across countries.

Dataset last updated

February 2025

Coastal land cover change

Source

Built-up statistics are calculated from: Florczyk et al. (2019) 30m resolution multi-temporal built-up grid (GHSBUILTLDSMTGLOBER2018A385730V20)

Related publications

Haščič, I. and A. Mackie (2018), "Land Cover Change and Conversions: Methodology and Results for OECD and G20 Countries", OECD Green Growth Papers, No. 2018/04, OECD Publishing, Paris, https://doi.org/10.1787/72a9e331-en.

Series

This indicator contains six series:

- Built-up area, all land, sqkm
- Built-up area, all land, as share of all land, %
- Built-up area within 10km of coast, sqkm
- Built-up area within 10km of coast as share of land within 10km of the coast, %
- Built-up area within 1km of coast, sqkm
- Built-up area within 1km of coast as share of land within 1km of the coast, %

Concept and classification

Activities on land can harm marine and coastal ecosystems. Harm arises via organic (nutrients like nitrogen and phosphorous), inorganic (e.g. industrial chemicals, biocides) and debris (e.g. plastic litter) water pollution; changes in sediment discharges (e.g. through damming rivers); and land cover and land use changes leading to disturbance or destruction of habitats important to marine biodiversity. As well as harming biodiversity, the consequences cost countries billions of dollars each year, (e.g. via tourism losses from coastal eutrophication) (OECD 2017).

These indicators help illustrate pressures arising from urbanisation in coastal areas. As well harming biodiversity by directly destroying or degrading habitats, urbanisation and corresponding population increases in coastal regions can lead to increased discharges of wastewater to coastal regions and diffuse pollution from highway and other built infrastructure runoff; increased marine activity (commercial and recreational marine traffic and use); and increased local resource extraction. The importance of these effects depends on the local context; but are often significant.

Interpretation

Built-up area is calculated using the JRC Global Human Settlement Layers, which map the extent and change over time of built-up areas. "Built-up" is defined as the presence of buildings (roofed structures). This definition largely excludes other parts of urban environments and the human footprint such as paved surfaces (roads, parking lots), commercial and industrial sites (ports, landfills, quarries, runways) and urban green spaces (parks, gardens). Consequently, such built-up area may be

different from other urban area data that use alternative definitions. Like all earth-observation derived estimates, these results come with caveats such as scale dependence, limitations associated with classification of continuous phenomena into discrete classes, and uneven geographical and temporal accuracy; in the coastal context, results are particularly sensitive to the coastline definition (the land-water boundary used). Coastal areas are defined as either a 10km or 1km (inland and marine) buffer around countries' coastlines using the static baseline of the FAO GAUL dataset.

The OECD aggregate average is not representative of many OECD countries because of the characteristics of very large, scarcely populated member countries like Canada and Australia.

The denominator is total land area for that region, excluding inland water.

References

FAO (2015), The Global Administrative Unit Layers (GAUL) 2014 dataset, implemented by FAO within the CountrySTAT and Agricultural Market Information System (AMIS) projects. Available at http://www.fao.org/geonetwork/srv/en/main.home

Florczyk A.J., Corbane C., Ehrlich D., Freire S., Kemper T., Maffenini L., Melchiorri M., Pesaresi M., Politis P., Schiavina M., Sabo F., Zanchetta L., GHSL Data Package 2019, EUR 29788 EN, Publications Office of the European Union, Luxembourg, 2019, ISBN 978-92-76-08725-0, http://dx.doi.org/10.2760/062975

OECD (2017), Diffuse Pollution, Degraded Waters: Emerging Policy Solutions, OECD Studies on Water, OECD Publishing, Paris, https://doi.org/10.1787/9789264269064-en

Pesaresi, M., Ehrlich, D., Kemper, T., Siragusa, A., Florczyk, A., Freire, S. and Corbane, C., 2017. Atlas of the human planet 2017: Global exposure to natural hazards. Joint Research Centre, Publications Office of the European Union: Luxembourg. http://dx.doi.org/10.2760/19837

Dataset last updated

November 2020

Fish stocks

Source

The series featured here are a subset of data published by the Fisheries and Aquaculture Unit in the OECD Trade and Agriculture Directorate (TAD). The complete dataset includes the total number of stocks assessed at the country level; and of those: the number of stocks with a favourable biological status (that is, stocks within all limit reference points), the number of stocks with a favourable biological status that also meet additional management objectives (such as Maximum Sustainable Yield), the number of stocks with an unfavourable biological status (that is, stocks outside one or more limit reference points), the number of stocks with

undetermined status (where an assessment was attempted but uncertainty in the results prevented a determination being made). Detailed metadata is available at the source below.

The original indicators provide information on the number of fish stocks recently assessed; it is built using data periodically collected for the OECD Fisheries Committee (COFI) by the Trade and Agriculture Directorate (TAD) from national authorities, notably those in charge of fisheries management.

Related publications

OECD (2022), OECD Review of Fisheries 2022, OECD Publishing, Paris, https://doi.org/10.1787/9c3ad238-en

Series

This indicator contains three series:

- Percentage of fish stocks assessed where biological situation is favourable over all fish stocks assessed, %
- Percentage of fish stocks assessed where biological situation is unfavourable over all fish stocks assessed, %
- Percentage of fish stocks assessed where biological situation is undetermined over all fish stocks assessed, %

Concept and classification

A fish stock is considered assessed when management objectives were set and stock status was recently quantitatively assessed with respect to the associated reference points.

A quantitative reference point is a target or threshold for which objective and measurable criteria are used to set a quantity (either fishing mortality or biomass), usually with reference to a stock assessment.

A Target (or Target Reference Point, TRP) corresponds to a state of a stock which is considered desirable. Management action, whether during a fishery development or a stock rebuilding process should aim at bringing and maintaining the fishery system at this level. In most cases a TRP will be expressed in a desired level of output for the fishery (e.g. in terms of catch) or of fishing effort or capacity and will be reflected as an explicit management objective for the fishery.

A threshold (or Limit Reference Point) is a benchmark used to indicate when harvests should be constrained substantially so that the stock remains within safe biological limits. The probability of exceeding limits should be low. Thresholds may also be used as buffer points that signal when a limit requiring action is being approached. A threshold indicates a state of a fish stock below which is considered to be undesirable and which management action should avoid.

Interpretation

Share of fish stocks assessed are calculated based on the number of fish stocks reported to the OECD as having been recently assessed. Calculating the share rather than the number eliminates the bias whereby some countries are harvesting a larger variety of fish stocks; and the fact that some countries assess a larger proportion of the stocks they harvest.

Dataset last updated

April 2023

Environmental dimension of well-being and resilience

Coastal flooding

Source

OECD Exposure to coastal flooding dataset

Related publications

Maes, M., et al. (2022), "Monitoring exposure to climate-related hazards: Indicator methodology and key results", OECD Environment Working Papers, No. 201, OECD Publishing, Paris, https://doi.org/10.1787/da074cb6-en

Series

This indicator contains eight series:

- Population exposure to coastal flooding with a 10-year return period, % of population
- Population exposure to coastal flooding with a 25-year return period, % of population
- Population exposure to coastal flooding with a 50-year return period, % of population
- Population exposure to coastal flooding with a 100-year return period, % of population
- Built-up area exposure to coastal flooding with a 10-year return period, % of built-up area
- Built-up area exposure to coastal flooding with a 25-year return period, % of built-up area
- Built-up area exposure to coastal flooding with a 50-year return period, % of built-up area
- Built-up area exposure to coastal flooding with a 100-year return period, % of built-up area

Concept and classification

Coastal flooding hazard and exposure indicators are developed using the World Bank Global Coastal Flood Hazard maps. The maps present a global reanalysis of storm surges and extreme sea level events based on hydrodynamic modelling (Muis et al., 2016).. The maps depict coastal flood hazard for nine different frequencies of occurrence (i.e. 2, 5, 10, 25, 50, 100, 250, 500, 1000-year return period). In this dataset, exposure indicators for coastal flooding hazards are developed with a 10, 25, 50 and 100-year return period. Annual values of the population and built-up area exposed to coastal flooding hazards is measured for each country, and on the sub-national TL2 level (i.e. large subnational regions) results are reported for all OECD countries as well as for Argentina, Brazil, China, India, Indonesia and South Africa.

The Copernicus Global Land Cover data allows identifying artificial surfaces, which includes built-up area, at a high spatial resolution of 300 m from 2000 to 2020. This data source is updated yearly, depending on data availability. This paper identifies built-up areas using the land cover area classification within the Copernicus Global Land Cover data. By overlaying the coastal flooding hazard maps with the Copernicus urban area data, this paper calculates the percentage of built-up area exposed to coastal flooding hazards for each country between 2000 and 2022.

The GHSL population grids developed by the European Commission Joint Research Centre (JRC) allow for the estimation of the number of persons exposed to coastal flooding hazards per country. The GHSL population grids are updated each epoch and are produced for every five years from 1975 to 2030. By overlaying the coastal flooding hazard maps with the GHSL population grids, this paper calculates the percentage of the population exposed to coastal flooding hazards for each country from 2000 to 2020. A value for 2020 is developed based on the 2015 population grid, and this will be updated as soon as an updated population grid for 2020 is available. All data to develop this indicator is freely available online and all source code to compute this indicator is available upon request.

More information is available on Related Publications cited above.

Interpretation

Low-lying coastal communities face a range of coastal flooding hazards such as storm surges ,coastal erosion and sea level rise. All of these hazards are expected to increase as climate change increases the frequency and severity of coastal floods.

Exposure in some countries may be over-estimated because the indicator does not account for flood protection measures. The data source on which this indicator is based also does not account for sea level rise. A return period is the average or estimated time that a flood event is likely to recur.

The OECD aggregates include all OECD members as of January 2025.

Dataset last updated

September 2024

Environmental and resource productivity

CO2 emissions from international marine bunkers

Source

These data are taken from the International Energy Agency's Greenhouse gas emissions from energy database:

https://www.iea.org/data-and-statistics/data-product/greenhouse-gas-emissions-from-energy

https://www.iea.org/data-and-statistics

Related publications

OECD (2020), Environment at a Glance Indicators, OECD Publishing, Paris, https://doi.org/10.1787/ac4b8b89-en

Series

This indicator contains two series:

- International marine bunker CO2 emissions, thousand tonnes
- International marine bunker CO2 emissions as share of total CO2 emissions from fuel combustion, %

Concept and classification

For the denominator, the sum of aviation and marine bunkers and total CO2 emissions from fuel combustion are used (in the case of the World aggregate, total CO2 emissions from fuel combustion already includes the bunkers emissions so this is used as provided in the IEA data)

International marine bunkers contains emissions from fuels burned by ships of all flags that are engaged in international navigation. The international navigation may take place at sea, on inland lakes and waterways, and in coastal waters. Consumption by ships engaged in domestic navigation is excluded. The domestic/international split is determined on the basis of port of departure and port of arrival, and not by the flag or nationality of the ship. Consumption by fishing vessels and by military forces is also excluded. Emissions from international marine bunkers should be excluded from the national totals. This corresponds to IPCC Source/Sink Category 1A.

CO2 fuel combustion presents total CO2 emissions from fuel combustion. This includes CO2 emissions from fuel combustion in IPCC Source/Sink Category 1 A Fuel Combustion Activities and those which may be reallocated to IPCC Source/Sink Category 2 Industrial Processes and Product Use under the 2006 GLs. CO2FCOMB = MAINPROD + AUTOPROD + OTHEN + TOTIND +TOTTRANS + RESIDENT+ COMMPUB + AGRICULT + FISHING + ONONSPEC.

Interpretation

Aggregate values are taken directly from the underlying IEA data. Please see the documentation linked above for more information about coverage.

Dataset last updated

February 2024

Economic opportunities

Ocean renewable energy RD&D budgets

Source

The IEA Energy Technology RD&D (research, development and demonstration) budget database collects budgetary data on research, development and demonstration of various energy technologies in IEA member countries. Energy RD&D covers basic and applied research, experimental development, and demonstration related to the production, storage, transportation, distribution and rational use of all forms of energy.

Data is collected from central or federal government budgets, as well as budgets of state-owned companies.

Shown here are data for the following ocean-related renewable energy sectors:

- Offshore wind RD&D activities which focus on the performance and the reliability of these technologies.
- Ocean energy, including technologies that harness the physical properties of the ocean to generate electricity from tidal energy, wave energy, and salinity gradient power. RD&D activities for this sector includes the design and development of equipment and turbine technology, as well as the research on the effect on marine life of ocean energy

Energy Technology RD&D Budgets - Data product - IEA

Related publications

IEA (2024), *Energy Technology RD&D Budgets: Overview*, IEA, Paris

Series

This indicator contains ten series:

- Offshore wind technology (excl. low wind speed) RD&D, million USD 2023 PPP
- All ocean energy (excl. offshore wind) RD&D, million USD 2023 PPP
- Tidal energy RD&D, million USD 2023 PPP
- Wave energy RD&D, million USD 2023 PPP
- Salinity gradient power RD&D, million USD 2023 PPP
- Other ocean energy RD&D, million USD 2021 PPP
- Unallocated ocean energy RD&D, million USD 2023 PPP
- All ocean and offshore energy (offshore wind + ocean energy) RD&D, million USD 2023 PPP
- All ocean and offshore energy (offshore wind + ocean energy) RD&D, share of total energy RD&D budget, %
- Total energy RD&D, million USD 2023 PPP

Concept and classification

The database classification can be seen in full at: RDD_Documentation.pdf (iea.blob.core.windows.net)

Interpretation

The OECD aggregate includes 32 of 38 OECD countries (excludes COL, CRI, ISL, ISR, LVA, SVN). The aggregate is a simple sum of OECD countries without any backward or forward filling or interpolation of missing data points.

Note that there are many data points that are missing, or have been estimated by the IEA at "I". This can lead to choppy year-to-year totals (which are not necessarily anomalous - budgets can change dramatically).

Generic wind technology RD&D is not shown however some of that spending will be relevant to offshore wind.

Dataset last updated

October 2024

Technology development (innovation)

Source

OECD Patents - Technology Development dataset

Related publications

Haščič, I. and Migotto, M. (2015), Measuring environmental innovation using patent data, OECD Environment Working Papers, No. 89, OECD Publishing, Paris. https://doi.org/10.1787/5js009kf48xw-en

OECD (2019), Rethinking Innovation for a Sustainable Ocean Economy, OECD Publishing, Paris. https://doi.org/10.1787/9789264311053-en

Series

This indicator contains ten series:

- Ocean-related high value environmental inventions as share of total high value inventions, %
- Desalination inventions, number Ocean-related environmental inventions, number
- Ocean-related environmental inventions as share of total inventions, %
- Ocean-related high value environmental inventions, number
- Ocean renewable energy inventions, number
- Ocean pollution abatement inventions, number
- Climate change mitigation inventions in maritime transport, number Climate change mitigation inventions in maritime fishing and aquaculture, number

- Coastal adaptation inventions, number

Concept and classification

Innovation is a key driver of productivity and economic growth. It can help achieve environmental objectives at lower costs, and lead to new business opportunities and markets. It is widely acknowledged that far-reaching innovation will be needed to address climate change and other major environmental challenges.

The innovation indicators based on patent data presented here relate to technology development. That is, the number of inventions (simple patent families) developed by a country's inventors, independent of the jurisdictions where a patent application has been registered (i.e. all known patent families worldwide are considered). Patents in ocean-related ENVTECH technologies represent only a small portion of overall patenting activity. Therefore, prior to data retrieval from a patent database, a search strategy shown below is developed to identify the relevant patent documents using common patent classification systems.

"High value" patents are higher-value inventions for which patent protection has been sought in two or more jurisdictions. For more information see the family size discussion in the related publications and source dataset. Where "high value" is not mentioned, the statistics is on the number of inventions with a family size one, i.e. for which patent protection has been sought at least in one jurisdiction.

You can also refer to the detailed patent search strategy for the identification of selected environment-related technologies (ENV-TECH). Section number 10 in this file is dedicated to the Sustainable Ocean Economy.

Interpretation

Indicators are based on fractional counts based on the country of residence of the inventors. No smoothing or moving averages applied.

Dataset last updated

March 2025

Policy responses

Illegal, Unreported and Unregulated fishing

Source

These indicators are a subset of dataset published by the Fisheries and Aquaculture Unit in the OECD Trade and Agriculture Directorate (TAD). It is part of a suite of policy indicators developed using information periodically collected for the Fisheries Committee (COFI) by the Trade and Agriculture Directorate (TAD) from national authorities, notably those in charge of fisheries management, on the adoption and implementation at national level of best policies and practices against Illegal, Unreported and Unregulated (IUU) fishing.

Related publications

OECD (2020), *OECD Review of Fisheries 2020*, OECD Publishing, Paris, https://doi.org/10.1787/7946bc8a-en

FAO (2001), *International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing (IPOA-IUU),* Roma, https://www.fao.org/3/y1224e/y1224e.pdf

Series

This indicator contains six series:

- IUU policy indicators, A - Vessel registration (Indicator),
- IUU policy indicators, B - Authorisation to operate in the EEZ (Indicator)
- IUU policy indicators, C - Authorisation to operate outside the EEZ (Indicator)
- IUU policy indicators, D - Port state measures (Indicator)
- IUU policy indicators, E - Market measures (Indicator)
- IUU policy indicators, F - International co-operation (Indicator)

Concept and classification

IUU fishing refers to Illegal, Unreported and Unregulated fishing. Countries and national jurisdiction may use different definition boundaries and the 'International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing (IPOA-IUU)' provides a description of IUU fishing as follows:
- Illegal fishing refers to activities conducted in a country's exclusive economic zone (EEZ) in contravention of its laws and regulations as well as to fishing in international waters in violation of that country's flag state law and regulations related to its obligations under the international treaties and regional fisheries management organisations (RFMO) convention arrangements to which it is party;

- Unreported fishing refers to fishing activities that have not been reported, or have been misreported, to the relevant national authority or RFMO, in contravention of the laws, regulations and reporting procedures of that country or organisation. This

can occur both within EEZs and on the high seas (Areas beyond national jurisdiction - ABNJ);

- Unregulated fishing refers to fishing activities in areas or to fish stocks where there are no national, regional or international conservation or management measures applicable to a particular fishery or fishing vessel. Unregulated fishing can occur in an unmanaged fishery within an EEZ or on the high seas by vessels without nationality, or by vessels flying the flag of a country that is not a party to international conventions or a relevant RFMO.

Interpretation

Each indicator is scored on a 0-1 range, where 0 is associated with the lowest performance, and 1 with the highest. Analysis using spider graphs with the six components for each country is the most appropriate to have a comprehensive view of where the country stands with regards to adoption and implementation of best practices and policies to fight IUU fishing.

Dataset last updated

June 2022

Taxes, fees and charges, tradable permits and offsets, environmentally beneficial subsidies, deposit refund schemes and other instruments directed at ocean sustainability

Source

OECD Policy Instruments for the Environment (PINE) database

Related publications

PINE Brochure: https://issuu.com/oecd.publishing/docs/pine_database_brochure

PINE domain tagging methodology :

Chhun, B., et al. (2024), "Environmental domain tagging in the OECD PINE database", *OECD Environment Working Papers*, No. 232, OECD Publishing, Paris, https://doi.org/10.1787/be984b0a-en.

OECD (2016), The Ocean Economy in 2030, OECD Publishing, Paris, https://doi.org/10.1787/9789264251724-en.

OECD (2020), Sustainable Ocean for All: Harnessing the Benefits of Sustainable Ocean Economies for Developing Countries, The Development Dimension, OECD Publishing, Paris, https://doi.org/10.1787/bede6513-en.

Series

This indicator contains seven series:

- Environmentally beneficial ocean subsidies, number
- Ocean-related taxes, number

- Ocean-related fees or charges, number
- Ocean-related tradable permits, number
- Ocean-related voluntary approaches, number
- Ocean-related policy instruments, number
- Ocean-related policy instruments as share of all policy instruments , %

Concept and classification

Taxes, subsidies and other economic instruments provide important market signals that can influence the behaviour of producers and consumers. They can incorporate environmental costs and benefits into the budgets of businesses and households, by increasing (or decreasing) the price of a product or service. As such, they help internalise the use of natural resources or the emission of pollutants into firms' or households' decisions. They can be an effective and cost-efficient way to achieve environmental goals, such as fighting air pollution and climate change, or protecting biodiversity.

The OECD Policy Instruments for the Environment (PINE) database contains quantitative and qualitative information on five types of market-based policy instruments across 130+ countries worldwide. Each of the 4000+ policy instruments are tagged into 22 environmental domains, which represent the focal issues (environmental externalities) of each instrument.

A search strategy is developed to identify potential ocean-related instruments in the PINE database with the objective to tag only those instruments that directly affect the ocean.

First, a keyword search is conducted through the instrument names, descriptions and tax bases. The aim is to pre-screen all PINE instruments and identify a subset of potential candidates for the ocean domain. Such pre-screening will also facilitate spotting new candidates in future submissions to the database. The table below lists the keywords used including generic ocean terms, keywords related to ocean industries and the ocean economy. Keywords on ocean sustainability are not needed because the database includes, by definition, only sustainability-related policy instruments.

Example of search terms: ocean, sea, marine*, maritime, offshore, blue, reef, deep-sea, deep-water, sea-bed, benthic, lagoon, mudflat, tidal, mangrove, coast*, coastal, wetland, coastal marsh, salt marsh, salt water, brackish, exclusive economic zone, EEZ , subsea, fish*, aqua*, mariculture, cod, tuna, coral, mussel, oyster, crustacean, mollus*, pelagic, seafood, algae, algal, seaweed, sea grass, piranha, shellfish, endanger, threatened, conservation area, ship*, boat, cargo, craft, vessel*, ferry, floating, light attractor, naval, port, sea-port, harbour, harbor, dock, freight, ballast, oil spill*, oceanogra*, plastic*.

Second, the candidate instruments are individually reviewed in order to verify their relevance to the ocean domain. Finally, review strategies are adopted to further refine the tagging on a case-by-case basis:

1. For land-locked countries, no instruments are tagged as ocean-related unless ocean or marine elements are explicitly mentioned. This is particularly important for instruments related to fisheries; for example, all fishing taxes in Switzerland are

excluded. On the other hand, some land-locked countries have introduced economic instruments that are directly relevant to ocean; for example, Austria applies a charge on the import of plants and animals, which includes those harvested from the ocean.

2. Policy instruments with indirect impacts on the ocean (e.g. through climate change or land-based waste disposal) are generally excluded unless relevance to the ocean is explicitly stated. Such instruments can be identified using the 'climate change' and 'waste management' domains in the PINE database.

3. Instruments related to water abstraction are excluded, as they typically refer to freshwater, unless ocean or marine elements are explicitly mentioned.

4. Taxes on ownership of motor vehicles, can include a specific tax rate for vessels or boats. In practice, the relevance for maritime transportation is rather low for such broadly defined instruments. Tagging them could overestimate the role of transport policies in the ocean domain, and subsequently inflate the level of revenue raised from such taxes. Therefore, instruments related to general ownership of motor vehicles have been excluded, unless they are defined specifically for water-based transportation.

5. Additional spot checks on the untagged instruments are conducted (using broader keywords such as water, transport, passenger, tourist) in order to ascertain that relevant instrument have not been omitted. 6. This approach is in line with previous efforts to identify environment-related instruments in government statistics and to tag environmental domains in the PINE database. The list of keywords is coherent with similar efforts across the OECD to define the ocean economy (OECD 2016) and to identify ocean-related public finance flows (OECD, 2020). 7. All PINE instruments are, by definition, environment-related, so any instrument identified as ocean-related is also relevant to ocean sustainability. The most commonly tagged instruments relate to fish and vessels and a majority are taxes, fees and charges

Interpretation

Care should be given when interpreting the indicators included in this section. The existence of an instrument does not guarantee its enforcement; moreover, the level of stringency might not be adequate for the desired environmental outcome. Analysis of the effectiveness of ocean-related instruments is paramount, and structured cross-country information on policies can allow these analyses to be performed.

Dataset last updated

June 2024

Revenues from environmentally related taxes in the ocean economy

Source

OECD Environmentally related tax revenue dataset

Related publications

OECD (2023), Methodological Guidelines for Environmentally Related Tax Revenue Accounts, OECD Publishing, Paris, https://doi.org/10.1787/d752d120-en.

Series

This indicator contains four series:

- Ocean-related tax revenue as share of environmentally related tax revenue, %
- Ocean-related tax revenue as share of GDP, %
- Ocean-related tax revenue, million USD 2015 PPP
- Ocean-related tax revenue as share of total tax revenue, %

Concept and classification

Taxes are compulsory, unrequited payments, in cash or in kind, made by institutional units to government units. Taxes play a key role in the transition towards a sustainable ocean economy. Compared to regulatory instruments, environmentally related taxation encourages the lowest-cost abatement across polluters. It also provides incentives for abatement at each unit of pollution. In addition, the revenue raised can be used to support fiscal consolidation or to reduce other taxes (e.g. taxes on labour and capital that distort the labour supply and saving decisions).

The identification of Ocean-environment related tax revenues follows the same process as used for the section called "Taxes and fees, tradable permit and offsets, environmentally beneficial subsidies and payments, deposit refund schemes, and voluntary approaches, directed at ocean sustainability. These are the revenues from the tax instruments identified through that process.

Interpretation

Note that the indicators on environmentally related taxes discussed here should not be used to assess the "environmental friendliness" of the tax systems. For such analysis, additional information, describing the economic and taxation structure of each country, is required. Moreover, a number of environmentally related taxes can have important environmental impacts, even if they raise little (or no) revenue. In addition, revenue from fees and charges, and from royalties related to resource management, is not included.

Dataset last updated

October 2024

Ocean-related fossil fuel support

Source

OECD Fossil fuel support – detailed indicators dataset

Related publications

OECD (2021), OECD Companion to the Inventory of Support Measures for Fossil Fuels 2021, OECD Publishing, Paris, https://doi.org/10.1787/e670c620-en

Series

This indicator contains nine series:

- Ocean-related Fossil-fuel support estimate benefitting consumers (CSE), million USD nominal
- Ocean-related Fossil-fuel support estimate benefitting general services (GSSE), million USD nominal
- Ocean-related Fossil-fuel support estimate benefitting producers (PSE), million USD nominal
- Ocean-related Fossil-fuel support estimate benefitting consumers (CSE) as share of ocean-related FFS, %
- Ocean-related Fossil-fuel support estimate benefitting general services (GSSE) as share of ocean-related FFS, %
- Ocean-related Fossil-fuel support estimate benefitting producers (PSE) as share of ocean-related FFS, %
- Ocean-related Fossil-fuel support estimate benefitting agriculture and fisheries sectors as share of ocean-related FFS, %
- Ocean-related Fossil-fuel support estimate benefitting transportation sector as share of ocean-related FFS, %
- Ocean-related Fossil-fuel support estimate benefitting hydrocarbon sector as share of ocean-related FFS, %

Concept and classification

Background

The OECD Inventory of FFS Measures is an online database that identifies, documents and estimates direct budgetary support and tax expenditures supporting the production or consumption of fossil fuels (http://www.oecd.org/fossil-fuels/countrydata). The Inventory currently covers 50 countries, including 38 OECD member countries and five partner economies (Brazil, China, India, Indonesia, and South Africa) and has compiled more than 1 100 individual support measures (both active and terminated ones). In addition to national measures, subnational support measures for selected economies are also covered (i.e., Australia, Canada, China, Germany and the US).

For each measure two types of information are provided: (i) fiscal information on the budgetary transfers or tax expenditures (monetary value) and (ii) textual metadata about a measure's beneficiaries, eligibility criteria, historical background, and any relevant data on procurement and processing information.

Following the OECD's PSE-CSE framework the measures benefitting fossil fuel producers are classified as the Producer Support Estimate (PSE) while those that benefit individual fossil fuel consumers are classified under the Consumer Support Estimate (CSE). A third category, the General Services Support Estimate (GSSE), is

assigned for measures that do not currently increase fossil fuel production and consumption but may do so in the future.

The Inventory identifies the type of fossil fuels benefitted by each measure and presents a breakdown of the amount of support by assigning fuel type tags. In cases where this breakdown is not available in official government sources, the OECD performs data transformation procedure to allocate support to individual fuel tags according to the relative value of production or consumption as calculated from the IEA's World Energy Balances database. Note that measures can benefit more than one type of fossil fuel at the same time and can thus receive multiple fuel tags in this respect. For example, a measure granting lower sales tax rates for road transport fuels will receive multiple fuel tags such as motor gasoline, diesel, LPG and natural gas.

Building on this methodology, an additional binary tag is developed for ocean-related government support for fossil fuels.

Search strategy to identify ocean-related measures:

First, measures in countries not bounded by a coastline are removed (Austria, Czech Republic, Hungary, Luxembourg, Slovak Republic and Switzerland).

Second, a keyword search is conducted on both the programme name and description to pre-screen measures and identify potential candidates for ocean-related FFS. The list of keywords includes generic ocean terms, keywords related to off-shore oil and gas, maritime transport, maritime fisheries and the ocean economy more broadly. See the following table for the full list. While entries in the programme name and description fields occasionally appear in their original language, all of these occurrences are consistently translated into English thus removing the necessity to devise foreign language keywords in the dictionary.

Keywords to identify a candidate subset of ocean-related FFS measures
Search terms: ocean sea marine maritime offshore blue reef coral deep-sea deep-water sea-bed benthic lagoon mudflat tidal mangrove coast* coastal wetland coastal marshsalt marsh salt-water brackish fish* aquaculture mariculture cod tuna coral* mussels oysters crustacean mollusc pelagic sea-food aquatic plants ship* shipping ship-building boat vessel ferry floating naval port sea-port harbour harbor dock sea transport cargo ballast oil spill* oceanogra* cruise tour touris* dredg* sea salt desali* hurricane cyclone typhoon flood biotechnology robotics wave underwater vehicle continental shelf EEZ exclusive economic arctic piracy submarine

Third, additional measures may be identified using the sector dimension which labels individual measures following the nomenclature used in the IEA World Energy Balances. Multiple sectors may be assigned to a single measure. The following table lists the sector tags that are used (adapted from IEA (2019), "World energy balances", IEA World Energy Statistics and Balances).

Selected sector dimension tags to identify ocean-related FFS measures

Sector (IEA shortname)	Remarks
Indigenous production (INDPROD)	This category comprises the production of primary energy such as various types of primary coal and natural gas. Among ocean-related measures falling under this category are measures benefitting oil and natural gas extraction in off-shore environments
Oil and gas extraction (EOILGASEX)	This category represents the energy which is used for oil and gas extraction. Ocean-related measure under this category are those benefitting off-shore oil and gas extraction operations.
Domestic navigation (DOMESNAV)	Measures benefitted under this category includes fuels delivered to maritime vessels not engaged in domestic navigation (i.e. determined in terms of the port of departure and port of arrival belonging to the same single country and not by the flag or nationality of the ship). Note that while the voyages considered are domestic, these may involve routes of considerable distance that may transit through foreign countries or international waters
Fishing (FISHING)	Measures are classified under the fishing sector if the benefitted fuels are used for inland, coastal and deepsea fishing as well as energy used in the fishing industry. It is recognised that this sector captures fuels used for inland fishing, which is not considered as ocean-related, but this approach is adapted in the absence of more specific breakdown that isolates fuels used for ocean-related purposes under the FISHING sector

Finally, following the pre-screening by the automated keyword-based searches, each candidate measure is then individually reviewed in order to eliminate false positives and to ascertain that measures inadvertently flagged as 'negative' have not been omitted.

The table below shows some examples of ocean-related measures identified.

Selected examples of ocean-related measures in the FFS inventory

Sectors benefitting	CSE	PSE	GSSE
Indigenous production		Sales Tax Exemption for Exploration Equipment (Canada)	Norwegian Petroleum Directorate geological surveys (Norway)
Oil and gas extraction	Mineral oil tax exemption for	Sales-Tax Exemption for Repairs and	

	offshore petroleum sector (Norway)	Materials Used on Drilling Rigs (United States)	
Domestic navigation	Fuel tax exemption for shipping (Italy)		
Fishing	Fuel tax exemption for fisheries (Korea)		

Interpretation

Please see the underlying inventory documentation for general comments on these data.

Not all sectors or support types are necessarily present per country. A missing entry means that either no corresponding measures were identified, or that measures were identified however there is insufficient or incomplete data to report a value. Note that the complete inventory can be accessed at the source link above.

For the sectoral variables (agriculture and fisheries, transport and hydrocarbon), percentage shares are derived from median measure disbursement values for period 2018-21.

Dataset last updated

May 2023

Protected area designation

Source

OECD Protected Areas

Related publications

Mackie, A., et al. (2017), "Indicators on Terrestrial and Marine Protected Areas: Methodology and Results for OECD and G20 countries", OECD Environment Working Papers, No. 126, OECD Publishing, Paris, https://doi.org/10.1787/e0796071-en

Series

This indicator contains ten series:

- Total marine protected area, sqkm
- Total marine protected areas as share of exclusive economic zone, %
- Marine protected area designated with IUCN management objectives I-III which generally preclude commercial fishing and other extractive industries, sqkm

- Marine protected area designated with IUCN management objectives I-III which generally preclude commercial fishing and other extractive industries, as share of exclusive economic zone, %
- Marine protected area designated with IUCN management objectives IV-VI or with no management category provided, sqkm
- Marine protected area designated with IUCN management objectives IV-VI or with no management category provided, as share of exclusive economic zone, %
- Total protected area within 1km of coastline (both terrestrial and marine), sqkm
- Total protected area within 10km of coastline (both terrestrial and marine), sqkm
- Total protected area within 1km of coastline (both terrestrial and marine) as share of 1km buffer area, %
- Total protected area within 10km of coastline (both terrestrial and marine) as share of 10km buffer area, %

Concept and classification

Marine protected areas (MPAs) are generally defined as any area within or adjacent to the marine environment which has been reserved by legislation or other effective means so that its marine and/or coastal biodiversity enjoys a higher level of protection. MPAs can help conserve and restore habitats and species and ensure that marine and coastal ecosystems continue to provide storm and erosion protection, carbon storage, fisheries, recreation and tourism opportunities, and other services. The importance of protected area networks for marine biodiversity and ecosystem services is recognised by the Global Biodiversity Framework Target 3 to ensure that by 2030 at least 30 per cent of areas of degraded terrestrial, inland water, and coastal and marine ecosystems are under effective restoration.

The underlying data for this indicator are taken from UNEP-WCMC's World Database on Protected Areas (WDPA). For marine coverage the protected area boundaries are intersected with the boundaries of countries' Exclusive Economic Zones (EEZs) derived from the VLIZ Flanders Marine Institute dataset (v11, 2019). EEZs typically extend for 200 nautical miles from a country's coast or halfway to a neighbour where the zone would otherwise overlap. For coastal coverage, coastal areas are defined as either a 10km or 1km (inland and marine) buffer around countries' coastlines.

Protected areas recorded as points are included in the 'all marine' variables (the first 6 variables above) but excluded for the calculation of coastal protected areas in this dataset. Where protected areas are recorded as points, they are accompanied by a reported area attribute (submitted by the original data sources to UNEP-WCMC).

Interpretation

Protection designation does not guarantee that the area in question is effectively managed or appropriately located; and empirical studies of the effectiveness of marine protected areas in conserving biodiversity show mixed results.

The WDPA relies on regular submissions of data from countries and other data providers; therefore, where these have not been provided the database is

incomplete or outdated. Furthermore, protected area attribute fields (such as the management category) can be missing or incomplete so these measures are not perfectly reliable.

Some designated marine protected areas target only a narrow range of species (or even just a single species) through (e.g.) proscription of a particular fishing technique but without any special restrictions on other high impact activities that may harm biodiversity and are therefore only marginally more protected than other areas.

Protected areas without a designation date provided are assumed to have always existed so historical totals may be overestimated. A number of aggregates are included: OECD, OECD Europe, OECD Asia Oceania, OECD Americas, Euro area, European Union, Advanced economies, Emerging market economies, G7, G20.

Dataset last updated

April 2025

Socio-economic context

Marine landings

Source

These data are a subset of data published by the Fisheries and Aquaculture Unit in the OECD Trade and Agriculture Directorate (TAD). The complete dataset, includes a distinction between foreign and domestic landings. More comprehensive metadata are available at the source below.

The marine landings data collection is part of the data gathering exercise carried out on an annual basis for the Fisheries Committee (COFI) by the Trade and Agriculture Directorate (TAD). Data is sourced from national authorities in OECD members and participating non-OECD economies. Data on marine landings are collected from Fisheries Ministries, National Statistics Offices and other institutions designated as an official data source.

OECD Marine fisheries landings dataset

Related publications

OECD (2022), OECD Review of Fisheries 2022, OECD Publishing, Paris, https://doi.org/10.1787/9c3ad238-en

Series

This indicator contains two series:

- Total marine landings, all species, thousand tonnes
  The mass in tonnes of fish, crustaceans, molluscs and other aquatic invertebrates (and animals), residues and seaweeds landed in any port (foreign or domestic) by vessels registered to that country.
- Total marine landings, all species, million real 2020 USD
  The value, expressed in real 2020 USD, of fish, crustaceans, molluscs and other aquatic invertebrates (and animals), residues and seaweeds landed in any port (foreign or domestic) by vessels registered to that country

Concept and classification

The concept of landings refers to the quantities of fish, crustaceans, molluscs and other aquatic invertebrates (and animals), residues and seaweeds on a landed weight basis, i.e. the mass (or weight) of a product at the time of landing, regardless of the state in which is landed (i.e. whole, gutted, filleted, meal, etc.). The flag of the vessel performing the essential part of the operation catching the fish should be considered the paramount indication of the nationality assigned to the catch. However, the catch of chartered vessels should be considered to be the catch of the chartering country. Data cover all industrial, artisanal and subsistence fisheries, excluding aquaculture.

The methodological reference document for fisheries and aquaculture statistics is the CWP Handbook of Fishery Statistics.

Interpretation

The OECD aggregate includes 31 of 38 OECD countries (excludes Austria, Switzerland, Czechia, Hungary, Israel, Luxembourg, and Slovakia). When calculating aggregates, missing values are interpolated if bracketed by valid values or else back-and-forward filled using the closest valid result.

Nominal USD values are converted to real 2020 USD values.

Dataset last updated

March 2025

Aquaculture production

Source

These data are a subset of dataset published by the Fisheries and Aquaculture Unit in the OECD Trade and Agriculture Directorate (TAD). The complete dataset, includes a distinction between production of different species and species classes. More comprehensive metadata are available at the source below. Data on aquaculture production are collected from FAO FishStatJ (see below).

FAO. 2022. Fishery and Aquaculture Statistics. Global aquaculture production 1950-2020 (FishstatJ). In: FAO Fisheries Division [online]. Rome. Updated 2022

OECD Aquaculture production

Related publications

OECD (2022), OECD Review of Fisheries 2022, OECD Publishing, Paris, https://doi.org/10.1787/9c3ad238-en

Series

This indicator contains two series:

- Total aquaculture production, marine and partly-marine species, thousand tonnes
- Total aquaculture production, marine and partly-marine species, million real 2020 USD

Concept and classification

Aquaculture is the farming of aquatic organisms including fish, molluscs, crustaceans and aquatic plants. Farming implies some form of intervention in the rearing process to enhance production, such as regular stocking, feeding, protection from predators, etc. Farming also implies individual or corporate ownership of the stock being cultivated. For statistical purposes, aquatic organisms which are harvested by an individual or corporate body which has owned them throughout their rearing period contribute to aquaculture while aquatic organisms which are exploitable by the

public as a common property resource, with or without appropriate licenses, are the harvest of fisheries.

The methodological reference document for fisheries and aquaculture statistics is the CWP Handbook of Fishery Statistics.

Fish, crustaceans, molluscs and all other aquatic organisms included in the database have been classified according to approximately 630 commercial species items, further arranged within the 50 groups of species constituting the nine divisions of the FAO International Standard Statistical Classification of Aquatic Animals and Plants (ISSCAAP). The taxonomic code descriptors are taken from the "ASFIS list of species for fishery statistics purposes".

Further references can be accessed here:

ASFIS list of species for fishery statistics purposes

International Standard Statistical Classification of Aquatic Animals and Plants (ISSCAAP)

Table. Classes included as marine or partly-marine (consult the OECD AQUA_FISH database to find the complete full classification)

Division	Species group	Name
Diadromous fish	21	Sturgeons, paddlefishes
	22	River eels
	23	Salmons, trouts, smelts
	24	Shads
	25	Miscellaneous diadromous fishes
Marine fishes	31	Flounders, halibuts, soles
	32	Cods, hakes, haddocks
	33	Miscellaneous coastal fishes
	34	Miscellaneous demersal fishes
	36	Tunas, bonitos, billfishes
	37	Miscellaneous pelagic fishes
	39	Marine fishes not

		identified
Crustaceans	42	Crabs, sea-spiders
	43	obsters, spiny-rock lobsters
	45	Shrimps, prawns
	47	Miscellaneous marine crustaceans
Molluscs	52	Abalones, winkles, conchs
	53	Oysters
	54	Mussels
	55	Scallops, pectens
	56	Clams, cockles, arkshells
	57	Squids, cuttlefishes, octopuses
	58	Miscellaneous marine molluscs
Miscellaneous aquatic animals	72	Turtles
	74	74 Sea-squirts and other tunicates
	76	Sea-urchins and other echinoderms
	77	Miscellaneous aquatic invertebrates
Miscellaneous aquatic animals products	81	Pearls, mother-of-pearl, shells
Aquatic plants	91	Brown seaweeds
	92	Red seaweeds
	93	Green seaweeds
	94	Miscellaneous aquatic plants

Table. Classes excluded, considered as not marine

Division	Species Group	Name
Freshwater fishes	11, 12, 13	Freshwater fishes
Crustaceans	41	Freshwater crustaceans
Molluscs	51	Freshwater molluscs
Miscalleneous aquatic animals	71	Frogs and other amphibians

Interpretation

In this dataset, species considered to be marine or partly marine are selected and aggregated according to the table above. This is done with the intention of better identifying only the ocean-relevant parts of aquaculture production however in some cases (such as diadromous species groups like sturgeons) the farmed species may plausibly in fact be bred and raised entirely in inland freshwater. Full data are available from the source dataset.

The underlying species-level data includes estimated values. Please see the underlying data for more specific information.

OECD aggregate includes 37 of 38 OECD countries (excludes Luxembourg).

Nominal USD values are converted to real 2020 USD values.

Dataset last updated

March 2025

Employment in fishing

Source

These data are a subset of data published by the Fisheries and Aquaculture Unit in the OECD Trade and Agriculture Directorate (TAD). The data are jointly collected with FAO. The complete dataset, including more sectoral disaggregation. More comprehensive metadata are available at the source below. Data on employment are collected from Fisheries Ministries, National Statistics Offices and other institutions designated as an official data source. The surveys used for this exercise are the joint OECD FAO Fisheries questionnaires.

OECD Employment in fisheries, aquaculture and processing dataset

Related publications

OECD (2022), OECD Review of Fisheries 2022, OECD Publishing, Paris, https://doi.org/10.1787/9c3ad238-en

Series

This indicator contains three series:

- People employed in fishing sectors excluding inland fisheries, total by occupation rate, thousands
- People employed in aquaculture sector (marine and inland), total by occupation rate, thousands
- People employed in fishery processing sector (marine and inland), total by occupation rate, thousands

These are all expressed by occupation rate - see below for more details

Concept and classification

Data on employment are collected by economic sector, occupation rate and gender. The occupation rate is defined as follows:

- Full-time fishers receive at least 90% of their livelihood from fishing or spend at least 90% of their working time in that occupation.
- Part-time fishers receive at least 30% but less than 90% of their livelihood from fishing or spend at least 30% but less than 90% of their working time in that occupation.
- Occasional fishers receive under 30% of their livelihood from fishing, or spend under 30% of their working time in that occupation.

The 'fishing population' includes all commercial, industrial and subsistence fishers, operating in freshwater, brackish water, and marine waters in economically inspired efforts to catch and land any of the great variety of aquatic animals and plants, should be included. People working on fish farms, hatcheries, and employed in shellfish culture operations, should also be included. The term 'fisher' should include not only those operating from fishing vessels of all types, but also those operating land-based fishing gears and installations from the banks of rivers, lakes, canals, dams etc., and from beaches and shores which do not require the use of auxilliary boats. Where possible a breakdown by the type of activity should be included. The crews on fish factory ships, mother ships to fishing fleets, and on auxilliary craft such as, fish carriers, and fish transport craft should be included.

The methodological reference document for fisheries and aquaculture statistics is the CWP Handbook of Fishery Statistics.

Interpretation

The CWP noted a number of problems in identifying and enumerating separately 'fishers' as primary producers among the economically active population. These problems arise largely from the seasonal availability of the various fishery resources compounded by the seasonal availability of more lucrative occupations. In many countries the number of people whose only source of income is from a year-round activity in fishing is small compared with the number of people entering the industry at peaks of activity in that industry, or slack periods in a more lucrative industry. For example, fishing is often of major importance in 'under-developed' regions where the other major industry may be tourism. (See FAO Fisheries Circular 929,

Revision2). The fishing 'season' may be adapted so that it does not coincide with the peak tourist period from which earnings might well be higher.

Another problem is associated with subsistence fishing which is undertaken on a full-time, part-time, or occasional basis in many developed or developing communities as part of the occupation of the economically-active populations. However, people who are too young, too old to be normally included in the economically active population may be involved in subsistence fishing. These issues are further complicated where subsistence fishing merges with recreational fishing. For example, sports fishers and people owning and operating pleasure craft might try to offset their capital expenditure and running costs through the sale of fish caught during trips of such recreational craft.

The OECD aggregate includes 37 of 38 OECD countries (excludes Luxembourg). When calculating aggregates, missing values are interpolated if bracketed by valid values or else back-and-forward filled using the closest valid result. Sometimes this involves filling data many years from the nearest valid value so caution in using the aggregate is advised.

Dataset last updated

March 2025

Fishing fleet

Source

These data are a subset of data published by the Fisheries and Aquaculture Unit in the OECD Trade and Agriculture Directorate (TAD). The complete dataset includes a distinction by length of vessel and power type. More comprehensive metadata are available at the source below.

The fishing fleet data collection is part of the data gathering exercise carried out on an annual basis for the Fisheries Committee (COFI) by the Trade and Agriculture Directorate (TAD) from OECD members and participating non-OECD economies. Data are collected from Fisheries Ministries, National Statistics Offices and other institutions designated as an official data source. For countries that are part of the European Union, fishing fleet data are directly sourced from the Eurostat dataset 'Fishing fleet by age, length and gross tonnage (fish_fleet_alt)'.

OECD Fishing fleet dataset

Related publications

OECD (2022), OECD Review of Fisheries 2022, OECD Publishing, Paris, https://doi.org/10.1787/9c3ad238-en

Series

- Total number of fishing vessels, all sizes
- Gross tonnage of fishing vessels of all sizes, thousand tonnes

Concept and classification

Data on vessels are broken down by Length Over All (LOA), in meters. LOA is the most frequently used and preferred measure of the length of a fishing vessel; it refers to the maximum length of a vessel from the two points on the hull most distant from each other, measured perpendicular to the waterline.

The data cover only active fishing vessels, i.e. vessels that at the time of reporting are active and engaged only in catching operations.

Data are provided in number of vessels and Gross Tonnage (GT). The Gross Tonnage for ships of 24 metres in length and over refers to the volume of all ship's enclosed spaces (from keel to funnel) measured to the outside of the hull framing.

The methodological reference document for fisheries and aquaculture statistics is the CWP Handbook of Fishery Statistics.

Interpretation

The OECD aggregate includes 32 of 38 OECD countries (excludes Switzerland, Czech Republic, Hungary, Israel, Luxembourg and Slovakia). When calculating aggregates, missing values are interpolated if bracketed by valid values or else back-and-forward filled using the closest valid result.

Dataset last updated

March 2025

Trade in fisheries products

Source

These data are a subset of data published by the Fisheries and Aquaculture Unit in the OECD Trade and Agriculture Directorate (TAD). The underlying data are sourced from FAO FishStatJ (see below). They have been provided to FAO by many national offices; others submitted provisional figures only. Whenever national offices failed to report their annual statistics in time for publication, FAO, in the absence of other information, has generally used as trade estimates the returns of trading partners. Where national figures in this dataset differ from those previously released by FAO, the most recently published data represent the latest revisions. The World Sturgeon Conservation Society (WSCS) provided support on caviar data. The Marine Ingredients Organization (IFFO) provided support on fishmeal and fish oil data.

FAO. 2022. Fishery and Aquaculture Statistics. Global Fish Trade Statistics 1976-2020 (FishstatJ). In: FAO Fisheries and Aquaculture Division [online]. Rome. Updated 2022

The complete dataset includes a distinction between different product classes. More comprehensive metadata are available at the source below.

OECD International trade of fisheries commodities dataset

Related publications

OECD (2022), OECD Review of Fisheries 2022, OECD Publishing, Paris, https://doi.org/10.1787/9c3ad238-en

Series

This indicator contains two series:

- Total exports of fisheries products, million real USD 2020
- Total imports of fisheries products, million real USD 2020

Concept and classification

Following the UN recommendations, the international merchandise trade statistics record all goods which add to or subtract from the stock of material resources of a country by entering (imports) or leaving (exports) its economic territory. Goods simply being transported through a country (goods in transit) or temporarily admitted or withdrawn (except for goods for inward or outward processing) do not add to or subtract from the stock of material resources of a country and are not included in the international merchandise trade statistics.

Customs records should be the main source of the data; and the additional sources could be used where customs sources are not available. Goods should be included in statistics at the time when they enter or leave the economic territory of a country. In the case of customs-based data collection systems, the time of recording should be the date of lodgement of the customs declaration.

International trade statistics published by the Statistical Office of the European Communities (Eurostat) for EU Member states might differ from data disseminated by UN in Comtrade because of different treatment of goods in transit.

The methodological manual of reference on international trade statistics is the International Merchandise Trade Statistics, Concepts and Definitions (IMTS, 2010).

Dataset last updated

March 2025

Marine freight

Source

These data are a subset of data published by the International Transport Forum (ITF). The International Transport Forum collects transport statistics on an annual basis from its member countries. Data are collected from Transport Ministries, statistical offices and other institution designated as official data source.

The complete dataset is available at the source is available in *OECD Transport database on Annual Transport trends* from the dataset *on Annual container transport*.

Related publications

ITF (2021), *ITF Transport Outlook 2021*, OECD Publishing, Paris, https://doi.org/10.1787/16826a30-en

Series

This indicator contains three series:

- Total coastal shipping, freight, million tonne-kilometers
- Total maritime container transport, number of TEUs, thousands
- Total maritime container transport, million tonnes

Concept and classification

Containers are a special box to carry freight, strengthened and stackable and allowing horizontal or vertical transfers. Swap bodies are excluded. Coastal shipping or short sea shipping [E.V.06] is the movement of cargo by sea between ports situated within a relatively narrow geographical area. Included in such movements would be ferry and feeder traffic. For Europe, short sea shipping would consist of the movement of cargo by sea between ports situated in Europe as well as between ports in Europe and ports situated in non-European countries having a coastline on the enclosed seas bordering Europe.

Interpretation

The OECD aggregate includes 36 of 38 OECD countries (excludes Colombia and Costa Rica). When calculating aggregates, missing values are interpolated if bracketed by valid values or else back-and-forward filled using the closest valid result. Sometimes this involves filling data many years from the nearest valid value so caution in using the aggregate is advised. Because this is measuring freight passing through ports, for each departure is there is also an arrival somewhere, so individual freight units will sometimes be double counted.

Dataset last updated

Coastal shipping: October 2023

Maritime container transport: November 2024

Tourism receipts and expenditure

Source

These data are a subset of data published by the OECD Centre for Entrepreneurship (CFE) as part of their work on tourism. Data comes from the OECD International Trade in Services Statistics (ITSS) database and the WTO. The complete dataset and more comprehensive metadata are available at the sources below.

OECD Tourism dataset

Related publications

OECD (2022), OECD Tourism Trends and Policies 2022, OECD Publishing, Paris, https://doi.org/10.1787/a8dd3019-en

Series

This indicator contains four series:

- International sea passenger transport expenditure, million real USD 2015
- International sea passenger transport expenditure as share of total international tourism expenditure, %
- International sea passenger transport receipts, million real USD 2020
- International sea passenger transport receipts as share of total international tourism receipts, %

Concept and classification

Passenger services cover the transport of people. This category covers all services provided in the international transport of non-residents by resident carriers (credit or international passenger transport receipts) (similar to exports) and that of residents by non-resident carriers (debit or international passenger transport expenditure) (similar to imports). Passenger services include fares and other expenditure related to the carriage of passengers, any taxes levied on passenger services, and fares that are a part of package tours, cruise fares, rentals, charters, and leases of vessels, aircraft, coaches, or other commercial vehicles with crews for the carriage of passengers.

Interpretation

The OECD aggregate only includes around 20 of 38 OECD countries so those results may not be representative of OECD members. When calculating aggregates, missing values are interpolated if bracketed by valid values or else back-and-forward filled using the closest valid result.

Dataset last updated

May 2024

Coastal population

Source

OECD calculations using Florczyk et al., (2019)

Global Human Settlement - Data released P2023 - European Commission (europa.eu)

Related publications

Florczyk A.J., Corbane C., Ehrlich D., Freire S., Kemper T., Maffenini L., Melchiorri M., Pesaresi M., Politis P., Schiavina M., Sabo F., Zanchetta L., GHSL Data Package 2019,

EUR 29788 EN, Publications Office of the European Union, Luxembourg, 2019, ISBN 978-92-76-08725-0, http://dx.doi.org/10.2760/062975

Series

This indicator contains four series:

- Population resident within 100km of coast, millions
- Population resident within 10km of coast, millions
- Population resident within 100km of coast as share of total population, %
- Population resident within 10km of coast as share of total population, %

Concept and classification

These population estimates are calculating using GIS analysis of gridded population data. Coastlines from FAO GAUL are buffered at 10 and 100km distances and the population within the buffers summed. Counts are scaled to match UN population estimates.

The GHS POP datasets used (GHSPOPE2015GLOBERYYYYA54009250V10) are created by allocating census-sourced area population estimates (GPWv4) from the Center for International Earth Science Information Network to built-up areas.

Interpretation

These counts use a definition of coastal based on distance (as opposed to travel time or some socioeconomic concept of coastalness). Obviously such areas do not necessarily have any close physical access to the sea or any cultural or economic connection. Conversely, areas well inland but with (e.g.) river ports may have economic or coastal links (and exposure to coastal risks) but are not counted.

Coastlines are inherently 'fuzzy' concepts and results calculated using them are likely to be sensitive to the specific coastal boundaries used.

References

Center for International Earth Science Information Network (CIESIN)—Columbia University, 2016. Gridded population of the world, version 4 (GPWv4): population density. https://sedac.ciesin.columbia.edu/data/collection/gpw-v4

Agricultural Market Information System (AMIS) projects. Available at http://www.fao.org/geonetwork/srv/en/main.home

Florczyk A.J., Corbane C., Ehrlich D., Freire S., Kemper T., Maffenini L., Melchiorri M., Pesaresi M., Politis P., Schiavina M., Sabo F., Zanchetta L., GHSL Data Package 2019, EUR 29788 EN, Publications Office of the European Union, Luxembourg, 2019, ISBN 978-92-76-08725-0, http://dx.doi.org/10.2760/062975

UN World Population Prospects https://population.un.org/wpp/

Dataset last updated

May 2023

Observation Status

B: Break in time series. Observations are characterised as such when different content exists or a different methodology has been applied to this observation as compared with the preceding one (the one given for the previous period).

E: Estimated - Observation obtained through an estimation methodology (e.g. to produce back-casts) or based on the use of a limited amount of data or ad hoc sampling and through additional calculations (e.g. to produce a value at an early stage of the production stage while not all data are available).

I: Imputed value - Observation imputed by a receiving agency to replace or fill gaps in reported data series. This code is intended to cover all cases where a receiving agency publishes data about a sending agency that do not come from an official source in the sender agency's reporting framework. When the estimation is done by the sender agency, the flag to use is E "Estimated value".

U: Low reliability - This indicates existing observations, but for which the user should also be aware of the low quality assigned.

O: This code is to be used when no breakdown is made between the reasons why data are missing. Data can be missing due to many reasons: data cannot exist, data exist but are not collected (e.g. because they are below a certain threshold).

P: Provisional value - An observation is characterised as "provisional" when the source agency - while it bases its calculations on its standard production methodology - considers that the data, almost certainly, are expected to be revised.