THE QUALITY OF GOVERNMENT INSTITUTE

UNIVERSITY OF GOTHENBURG

QoG Environmental Indicators Dataset 2021

PREPARED BY
MARINA POVITKINA
NATALIA ALVARADO PACHON
CEM MERT DALLI

The QoG Institute
P.O. Box 711
405 30 Gothenburg, Sweden
infoqog@pol.gu.se

THE QUALITY OF
GOVERNMENT INSTITUTE

THE QOG ENVIRONMENTAL INDICATORS DATASET 2021

CODEBOOK

The dataset users are kindly requested to cite both the original source of the variables (as stated in this codebook) and use the following citation:

Povitkina, Marina, Natalia Alvarado Pachon & Cem Mert Dalli. 2021. The Quality of Government Environmental Indicators Dataset, version Sep21. University of Gothenburg: The Quality of Government Institute, https://www.gu.se/en/quality-government

https://www.gu.se/en/quality-government
The QoG Institute
P.O. Box 711
405 30 Gothenburg
Sweden
infoqog@pol.gu.se

UNIVERSITY OF
GOTHENBURG

We would like to thank Morgan Young, David Nese, Jan-Georg Knappe, Salima Ismayilzada, Erik Brinde, Valeria Caras, Mie Sørensen, Felix Backstedt, and Laurisa Dohm for their excellent research assistance in the preparation of this codebook.

Contents

1 Introduction

1.1 The Quality of Government Institute

The Quality of Government Institute (QoG) was founded in 2004 by Professor Bo Rothstein and Professor Sören Holmberg. It is an independent research institute within the Department of Political Science at the University of Gothenburg. The institute conducts research on the causes, consequences and nature of Good Governance and the Quality of Government, that is, trustworthy, reliable, impartial, uncorrupted, and competent government institutions.

The main objective of the research is to address the theoretical and empirical problems of how political institutions of high quality can be created and maintained. A second objective is to study the effects of Quality of Government on a number of policy areas, such as health, environment, social policy, and poverty. While Quality of Government is the common intellectual focal point of the research institute, a variety of theoretical and methodological perspectives are applied.

1.2 The Environmental Indicators Dataset

The Quality of Government Environmental Indicators Dataset (QoG-EI) is a compilation of major freely available indicators measuring environmental performance of countries over time. These indicators include the presence and stringency of environmental policies, the level of pressure on the environment (such as ecological footprint and emission levels), and public opinion on the environmental matters. The dataset also includes background geographical data such as the annual average rainfall and the size of land area, among others. The users can merge the dataset with other major compilations of political and social science data by using country codes from the World Bank, Correlates of War, Quality of Government, or Varieties of Democracy datasets.

The information about all the variables included in this dataset is also available online through the Quality of Government Data Finder - https://datafinder.qog.gu.se/ . The data finder can be treated as an online version of this Codebook.

Most of the indicators are available for several years, however, some are only available for a single year. When using these indicators, the users are encouraged to filter the dataset on that year.

Other sources that are for various reasons not included into this compilation and that can be useful for time-series cross-sectional analysis of environmental performance are:

- ECOLEX - a database of environmental laws;
- FAOLEX - a database of laws related to the focus ares of the Food and Agriculture Organization of the United Nations;
- GRACE - a continuation of the ENVIPOLCONCHANGE dataset of environmental policy presence and stringency;
- IUCN - detailed biodiversity measures from Red Lists of threatened species by the International Union for Conservation of Nature;
- Climate Change Performance Index - an expert assessment of countries' performance in addressing climate change;
- Global Climate Risk Index - an expert assessment of the extent to which countries have been affected by the impacts of weather-related events;
- Climate Action Tracker - an expert evaluation of climate action by the governments;
- Climate Policy Tracker - overview of climate policies by country and industry;
- Questions related to climate change perceptions and environmental attitudes from Afrobarometer, Latinobarometer, and some other major regional surveys.

If the users would like to make suggestions of other environmental indicators for future editions of the dataset, please contact us at marina.povitkina@gu.se.

In 2023, we have uploaded a new version of the data that has dropped all the observations that are empty for content variables (meaning variables that are not used for identification). In August, 2023 we changed the name of the variables ccode and cname to ccode_wb and cname_wb respectively. The data's content has not changed otherwise.

2 Data Structure

2.1 Data Structure

The Environmental Indicators dataset is presented in a time-series long-form format with country-year (identified as cname, year) observations as units; please be aware that the original source may have a different data structure.

When deciding which countries to include in the datasets, we have relied on the following reasoning:

We have included current members of the United Nations (UN) as well as previous members, provided that their de facto sovereignty has not changed since they were members. This means that we, for example, have included Taiwan.

Using UN membership to decide whether to include a country in the dataset works well for cases from around 1955. Afterwards, states, in general, joined the UN following independence. This raises an important question of what to do with countries that might be said to have been independent some time during the period from 1946 to around 1955, but were not independent after that period (such as Tibet). We decided to include data for Tibet from 1946 to 1950, making it possible for users to decide for themselves whether to include Tibet in their analysis. It is worth noting that we do not use the date when a country gained membership in the UN as a date when a country came into being, but we use it to determine which countries to include in the dataset.

In this time-series dataset, we include 194 nations together with additional 17 historical countries that did not exist in 2014: Tibet, Pakistan pre 1971 (including East Pakistan, presently Bangladesh), North and South Vietnam, North and South Yemen, East and West Germany, Yugoslavia pre 1992 (the Peoples Republic of Yugoslavia), Serbia and Montenegro, the USSR, Czechoslovakia, Ethiopia pre 1993 (including Eritrea), France pre 1962 (including Algeria), Malaysia pre 1965 (including Singapore), Cyprus pre 1974 (including the later Turkish occupied north Cyprus) and Sudan pre 2012 (including South Sudan). This makes a total of 211 countries. The Appendix provides the full list of countries and a short note on each country. This country-name convention is under the variable cname_qog.

Since there is no established international standard on how historical cases resulting either from country mergers or country splits, should be treated in a time-series setting, we have applied the following principles:

After a merger of two countries, the new country is considered to be a new case, even if the newly formed state could be considered as a continuation of one of the merging states. This rule applies to: (1) Vietnam, which is a result of the merger between North and South Vietnam in 1976; (2) Yemen, which is a result of the merger between North and South Yemen in 1990; and (3) Germany, which is a result of the merger between East and West Germany in 1990.

If a country split, the new countries are considered new cases, even if one of the new countries could be considered as a continuation of the country that split. This rule applies to: (1) Pakistan, which split into Pakistan and Bangladesh in 1971; (2) the USSR, which split into 15 Post-Soviet

countries in 1991; (3) Yugoslavia, which split into Slovenia, Croatia, Bosnia and Herzegovina, North Macedonia, and Serbia and Montenegro in 1991; (4) Czechoslovakia, which split into the Czech Republic and Slovakia in 1993; (5) France which split into France and Algeria in 1962; (6) Malaysia which split into Malaysia and Singapore in 1965; (7) Cyprus which was occupied by Turkey in 1974, effectively splitting the country into Cyprus and the internationally unrecognized northern Cyprus; (8) Ethiopia, which split into Ethiopia and Eritrea in 1993; and (9) Sudan, which split into Sudan and South Sudan in 2011. There is one exception to this rule: Indonesia is considered to be a continuation of the country that existed before the independence of Timor-Leste in 2002 (while Timor-Leste is considered to be a new country).

Since most of the original data sources treat these cases of country mergers and splits differently, we have rearranged data in accordance with the criteria above. Consequently, if a merger or a split has occurred and a data source does not treat the countries as different cases, we consider them to be different countries and transform the data accordingly.

In order to assign the data for the year of the merger/split, we relied on the July 1st-principle. If the merger/split or independence occurred after July 1st, the data for this year is assigned to the historical country.

For example, if a data source treats Germany as a continuation of West Germany, we assign the data up to and including 1990 to West Germany and leave Germany blank until and including 1990. Another example; if a data source treats Serbia and Montenegro as a continuation of Yugoslavia, we assign the data up to and including 1991 to Yugoslavia and from 1992 and onward to Serbia and Montenegro (which is left blank until and including 1991), since the split occurred from June 1991 to March 1992 (before July 1st, 1992).

Finally, Cyprus (1974-) denotes the Greek part of the island after the Turkish occupation. Most sources probably do the same with the data they refer to Cyprus, but the documentation of the original data rarely specifies this.

In 2018, we updated the name of Swaziland to Eswatini (former Swaziland) and in 2019, we updated the name of Macedonia to North Macedonia; however, the other identification codes remain the same.

3 Variables by Original Source

3.1 Identification Variables

Note: the ccode_qog-year combination is the unique identifier for the observations in this dataset.

3.1.1 cname_qog QoG Country Name

Name of the country in English with a distinction of countries that have experienced merges or splits. For more information on how these codes are assigned, please see the Appendix.

3.1.2 ccode_qog QoG Country code

Numeric country code based on the ISO-3166-1 numeric standard. All the numeric country codes are unique and this makes it the best suited variable to use when merging files (in combination with year for time-series data). For more information on how these codes are assigned, please see the Appendix. (http://en.wikipedia.org/wiki/ISO_3166-1_numeric)

3.1.3 year Year

Year.

3.1.4 cname_wb Country Name

Name of the country in English based on the International Organization for Standardization (ISO). Please be advised this standard does not have Tibet as a country name in this standard.

3.1.5 ccode_wb Country Code

Numeric country code based on the International Organization for Standardization (ISO). Please be advised that Tibet, South and North Vietnam and the Yemen Arab Republic (North Yemen) do not have a country code in this standard.

3.1.6 ccodealp 3-letter Country Code

A three-letter country code based on the ISO-3166-1 alpha3 standard. Please note that the ccodealp variable does not uniquely identify all countries.

3.1.7 ccodealp_year 3-letter Country Code and Year

A three-letter country code and year.

3.1.8 ccodecow Country Code COW

Country code from the Correlates of War.

3.1.9 ccodevdem Country Code V-Dem

Country code from the Varieties of Democracy Project.

3.1.10 cname_year Country Name and Year

Country name and year.

3.1.11 version Version of the Dataset

Version of the Environmental Indicators dataset.

3.2 Accountable Climate Targets

Dataset by: Frida Borang, Simon Felgendreher, Niklas Harring, and Asa Lofgren

If you use any of these variables, make sure to cite the original source and QoG Data. Our suggested citation for this dataset is:

Boräng, Frida et al. 2019. "Committing to the climate: a global study of accountable climate targets". *Sustainability.* 11. 7

Link to the original source: `https://www.mdpi.com/2071-1050/11/7/1861/htm`

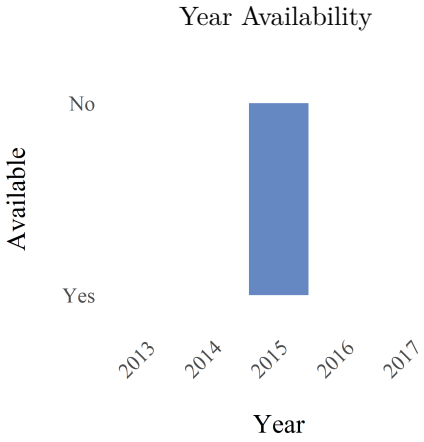
Data used in the article:

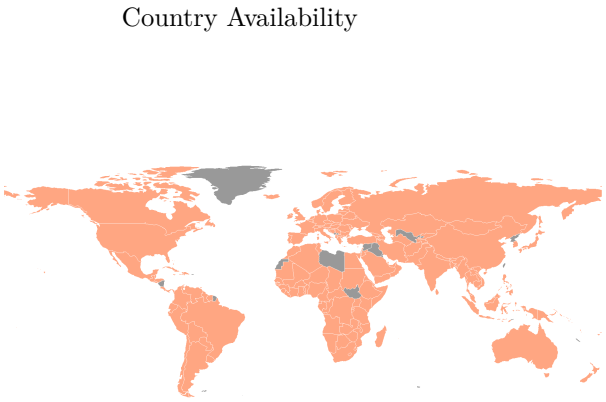
Boräng, F., Felgendreher, S., Harring, N. and Löfgren, Å., 2019. Committing to the climate: a global study of accountable climate targets. Sustainability, 11(7), p.1861.

The authors assess and compare the accountability of climate targets as outlined in the nationally determined contributions (NDC) of the Paris Agreement.

3.2.1 Accountable Climate Target (act_act)

A binary measure of whether a country has an accountable climate target (ACT) or not. An ACT is a precise emissions target for which other countries can hold a country - and only that country - accountable. A country has an ACT if it fulfills two criteria: 1) the country's nationally determined contribution (NDC) must state an economy-wide target in reference to emission levels from a past year, a target compared to the business-as-usual scenario, or a target in terms of the CO2 emissions per unit of gross domestic product (GDP); 2) the commitment must not be conditional upon receiving financial support from third parties. The measure is for 2015, at the time of the first NDCs.


Year Availability
No
Yes
Available
2013
2014
2015
2016
2017
Year


Country Availability

3.3 Aquastat

Dataset by: Food and Agricultural Organization of the United Nations (FAO)

If you use any of these variables, make sure to cite the original source and QoG Data. Our suggested citation for this dataset is:

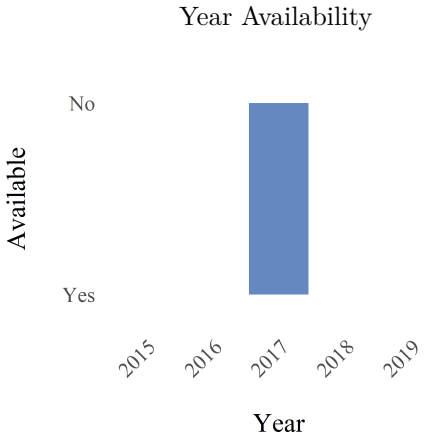
FAO. 2021. *AQUASTAT Database.* URL: `http://www.fao.org/aquastat/statistics/query/index.html`

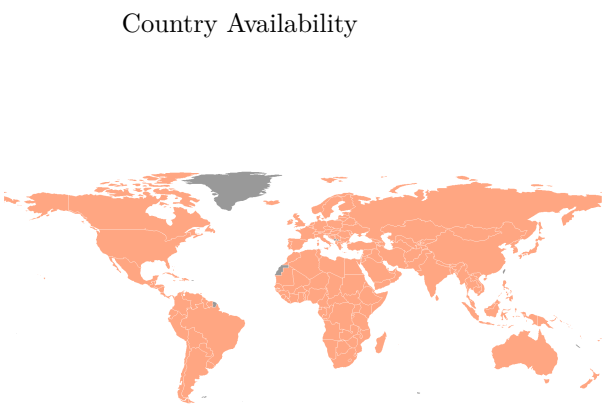
Link to the original source: `http://www.fao.org/aquastat/en/`

AQUASTAT is the FAO global information system on water resources and agricultural water management.

3.3.1 Renewable internal freshwater resources (bln m3) (as_rifr)

Renewable water resources (internal and external) include average annual flow of rivers and recharge of aquifers generated from endogenous precipitation and those water resources that are not generated in the country, such as inflows from upstream countries (groundwater and surface water), and part of the water of border lakes and/or rivers. Measured in billion cubic meters (bln m3).

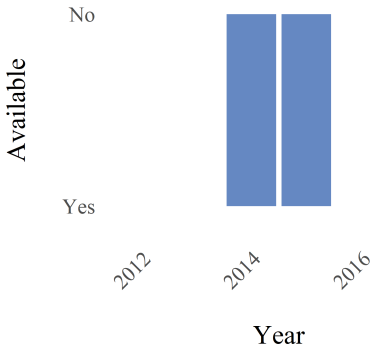




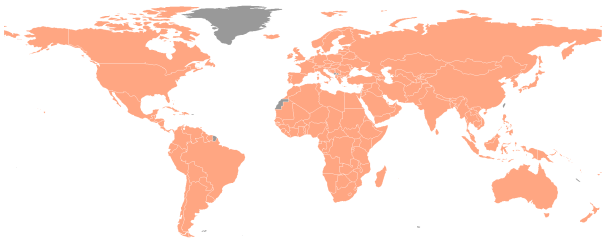
3.3.2 Water stress: freshwater withdrawal, proportion of available freshwater (as_-ws)

The level of water stress: freshwater withdrawal as a proportion of available freshwater resources is the ratio between total freshwater withdrawn by all major sectors and total renewable freshwater resources, after taking into account environmental flow requirements. Main sectors include agriculture, forestry and fishing, manufacturing, electricity industry, and services. This indicator is also known as water withdrawal intensity.

Year Availability



Country Availability



3.4 Bertelsmann Transformation Index

Dataset by: Bertelsmann Stiftung

If you use any of these variables, make sure to cite the original source and QoG Data. Our suggested citation for this dataset is:

Donner, Sabine, Hauke Hartmann, and Robert Schwarz. 2020. *Transformation Index of the Bertelsmann Stiftung 2020*. URL: `http://www.bti-project.org`

Link to the original source: `http://www.bti-project.org/en/index/`

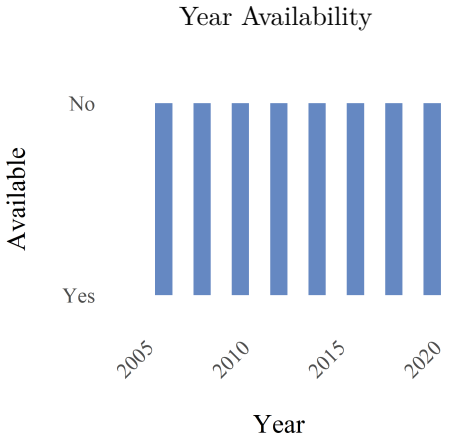
The Bertelsmann Stiftung's Transformation Index (BTI) analyzes and evaluates the quality of democracy, a market economy, and political management in 137 developing and transition countries. It measures successes and setbacks on the path towards democracy based on the rule of law and a socially responsible market economy.

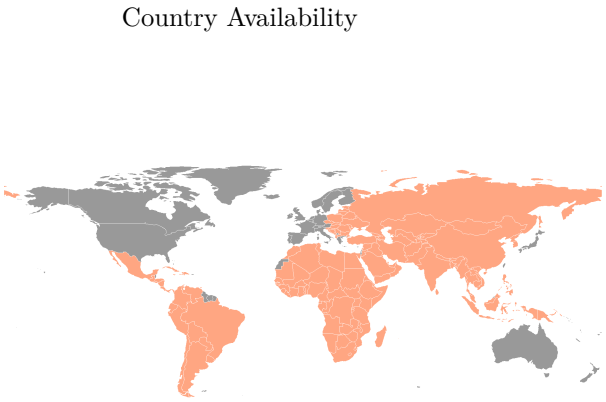
In-depth country reports provide the basis for assessing the state of transformation and persistent challenges and for evaluating the ability of policymakers to carry out consistent and targeted reforms. The BTI is the first cross-national comparative index that collects data to comprehensively measure the quality of governance during processes of transition.

3.4.1 Environmental concerns taken into account (bti_envc)

Expert answer to the question "To what extent are environmental concerns effectively taken into account?"

The variable ranges from 1 to 10, where 1 is "Environmental concerns receive no consideration and are entirely subordinated to growth efforts. There is no environmental regulation", 4 is "Environmental concerns receive only sporadic consideration and are often subordinated to growth efforts. Environmental regulation is weak and hardly enforced", 7 is "Environmental concerns are taken into account but are occasionally subordinated to growth efforts. Environmental regulation and incentives are in place, but their enforcement at times is deficient", and 10 is "Environmental concerns are effectively taken into account and are carefully balanced with growth efforts. Environmental regulation and incentives are in place and enforced".


Year Availability
No
Yes
Available
2005
2010
2015
2020
Year


Country Availability

3.5 Climate Change Knowledge Portal

Dataset by: The World Bank Group

If you use any of these variables, make sure to cite the original source and QoG Data. Our suggested citation for this dataset is:

The World Bank Group. 2021. *Climate Change Knowledge Portal*. URL: https://climateknowledgeportal.worldbank.org

Harris, Ian et al. 2020. "Version 4 of the CRU TS monthly high-resolution gridded multivariate climate dataset". *Scientific Data*. 7. 1. URL: https://doi.org/10.1038/s41597-020-0453-3

Link to the original source: https://climateknowledgeportal.worldbank.org

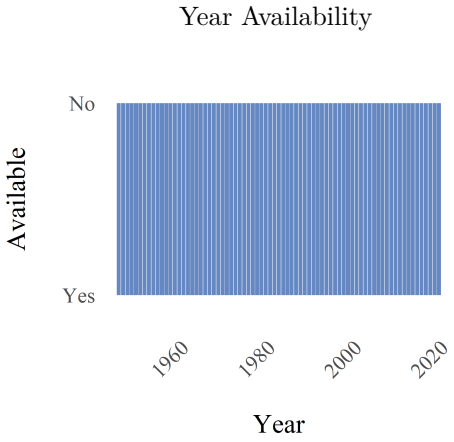
The Climate Change Knowledge Portal provides global data on historical and future climate, vulnerabilities, and impacts.

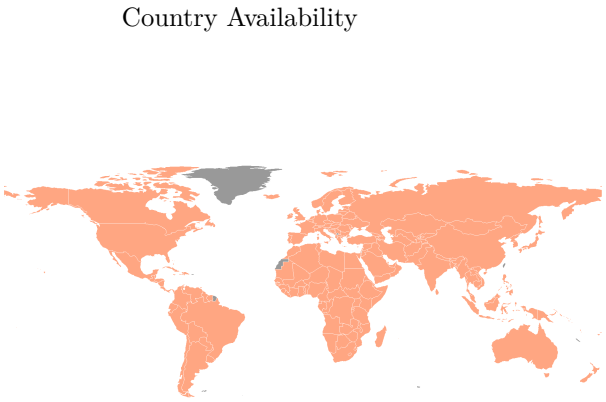
The data on historical temperature and rainfall data included in this compilation comes from the historical CRU dataset. The CRU TS version 4.04 gridded historical dataset is derived from observational data and provides quality-controlled temperature and rainfall values from thousands of weather stations worldwide, as well as derivative products including monthly climatologies and long-term historical climatologies. The dataset is produced by the Climatic Research Unit (CRU) of the University of East Anglia (UEA) CRU-(Gridded Product).

In order to present historical climate conditions, the World Bank Group's Climate Change Knowledge Portal (CCKP) uses the globally available observational datasets derived from CRU to quantify changes in mean annual temperature and mean annual precipitation for the period 1901-2019 per country.

3.5.1 Annual average rainfall (cckp_rain)

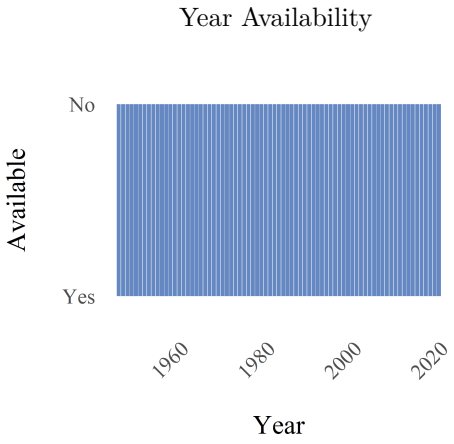
Annual average rainfall in millimeters.

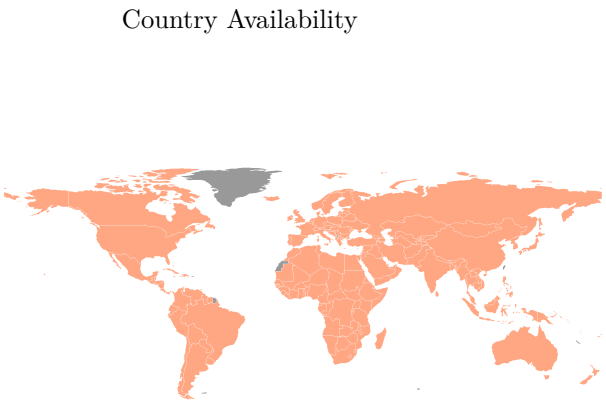




3.5.2 Annual average temperature (cckp_temp)

Annual average temperature in Celsius.





3.6 Climate Change Laws of the World

Dataset by: Grantham Research Institute on Climate Change and the Environment

If you use any of these variables, make sure to cite the original source and QoG Data. Our suggested citation for this dataset is:

Grantham Research Institute on Climate Change and the Environment and Sabin Center for Climate Change Law. 2021. *Climate Change Laws of the World database.* URL: `climate-laws.org`

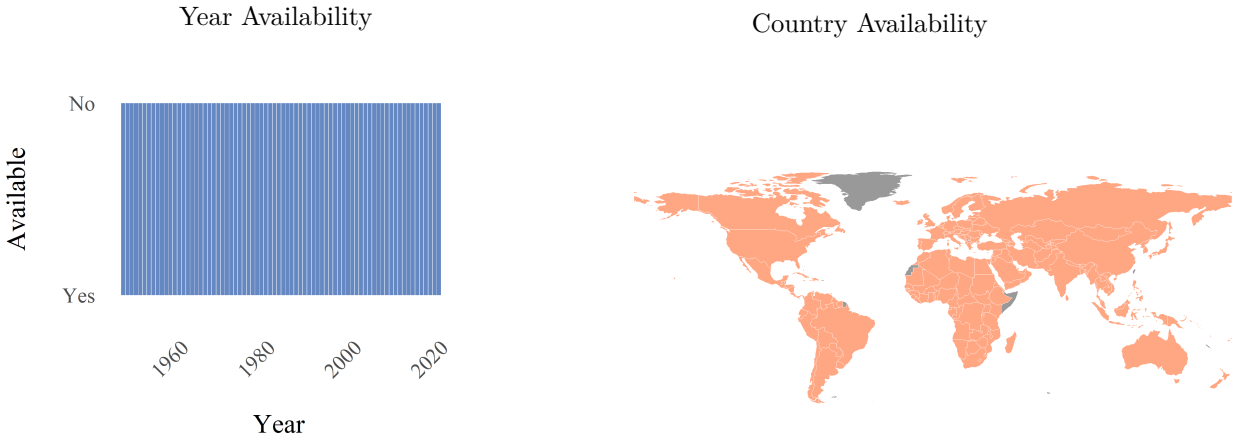
Link to the original source: `https://climate-laws.org/`

Climate change-related laws and policies refer to legal documents related to reducing energy demand, promoting low carbon energy supply, low-carbon buildings, carbon pricing, lower industry emissions, tackling deforestation and promoting sustainable land use, other mitigation efforts, research and development, sustainable transportation, enhancing adaptation capabilities, and natural disaster risk management. The dataset only included laws and policies that have been passed by legislative branches or published by executive branches, and that are no longer in draft form. The dataset also captures major amendments to legislation. Laws that are outdated, either because they have been repealed, replaced, or reversed, are not included.

The database distinguishes between Laws or legislative acts (e.g. acts, laws, decree-laws), which were passed by a parliament or equivalent legislative authority, and Policies, or other executive provisions (e.g. presidential decrees, executive orders, regulations, government policies, strategies, or plans), which were published or decreed by the government, president, or equivalent executive authority.

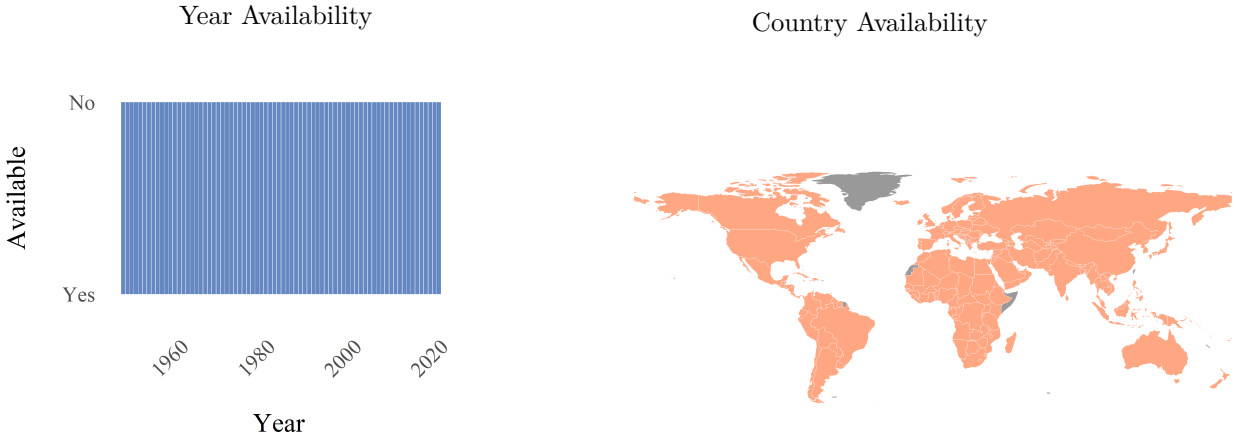
3.6.1 Climate change policy/executive provision in place (ccl_exepp)

Number of climate change-related policies or other executive provisions (e.g., presidential decrees, executive orders, regulations, government policies, strategies, or plans), which were published or decreed by the government, president, or equivalent executive authority, in the recorded year.



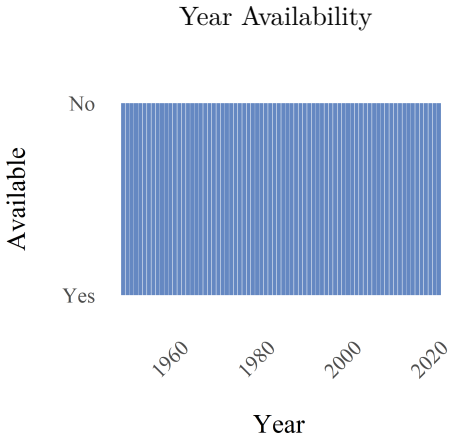
3.6.2 Climate change law in place (ccl_leglp)

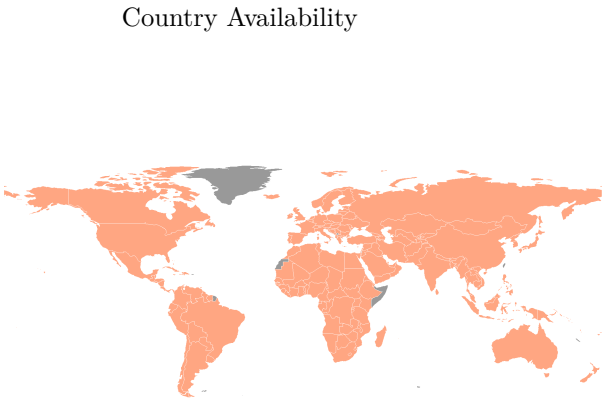
Number of climate change-related laws or legislative acts (e.g. acts, laws, decree-laws), which were passed by a parliament or equivalent legislative authority, in the recorded year.



3.6.3 Climate change law or policy in place (ccl_lpp)

Number of climate change-related laws (legislative acts) and policies (executive provisions) adopted per year.

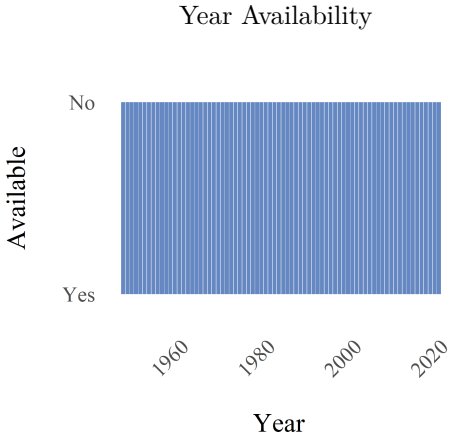


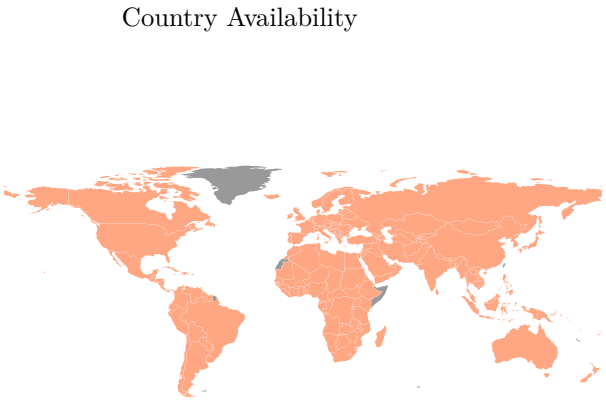


3.6.4 Climate change mitigation law or policy in place (ccl_mitlpp)

Number of laws (legislative acts) or policies (executive provisions) related to climate change mitigation adopted per year.

Mitigation laws and policies refer to a legislative or executive disposition focused on curbing a country's greenhouse gases emissions in one sector or more. Measures can be directly related to emissions reductions, such as laws establishing a national carbon budget or cap and trade system, or indirectly related, such as laws or policies establishing relevant institutions or providing additional funding for research and development into low carbon technologies. Laws and policies addressing forests and land use are included as long as they explicitly support climate change mitigation through activities that reduce emissions and increase carbon removals. General forest management and conservation laws are not included, even if they may have implicit consequences for climate change mitigation.

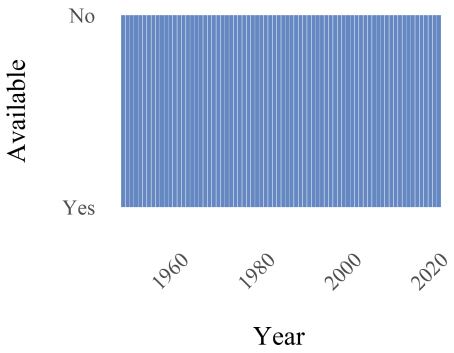




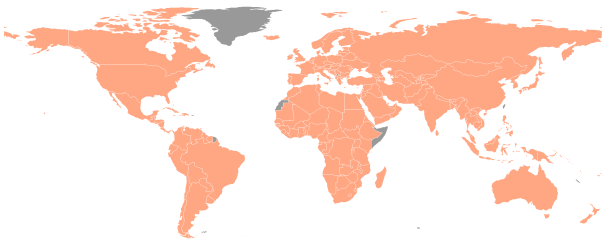
3.6.5 Number of climate change policies/executive provisions (ccl_nexep)

Cumulative sum of climate change-related policies or other executive provisions (e.g. presidential decrees, executive orders, regulations, government policies, strategies, or plans), which were published or decreed by the government, president, or equivalent executive authority.

Year Availability



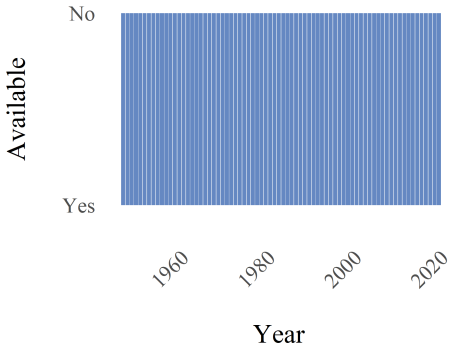
Country Availability



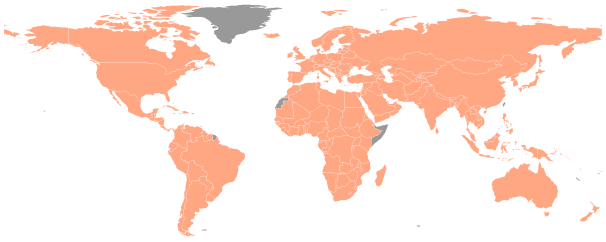
3.6.6 Number of climate change laws (ccl_nlegl)

Cumulative sum of climate change-related laws or legislative acts (e.g. acts, laws, decree-laws), which were passed by a parliament or equivalent legislative authority.

Year Availability

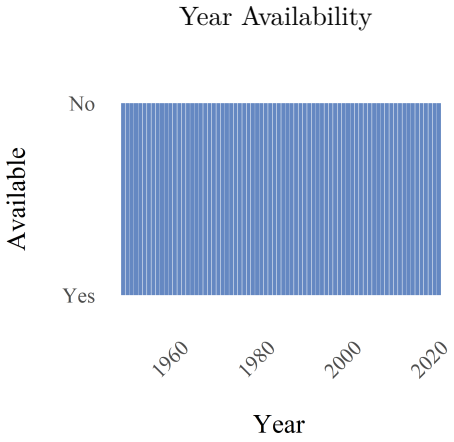


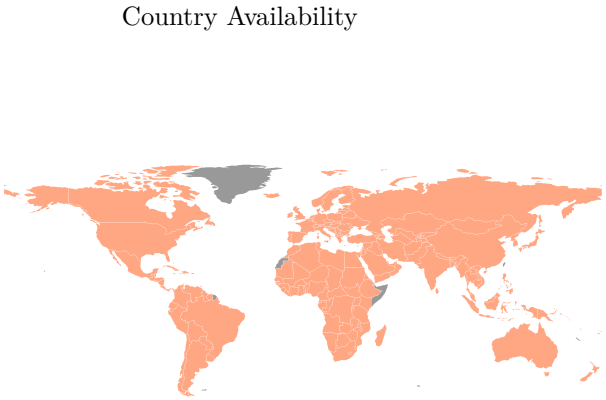
Country Availability



3.6.7 Number of climate change laws and policies (ccl_nlp)

Cumulative sum of laws (legislative acts) and policies (executive provisions) related to climate change.

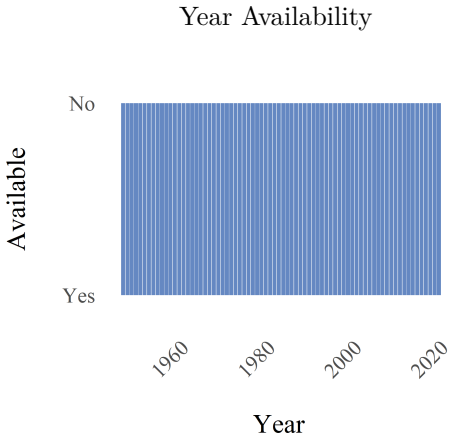


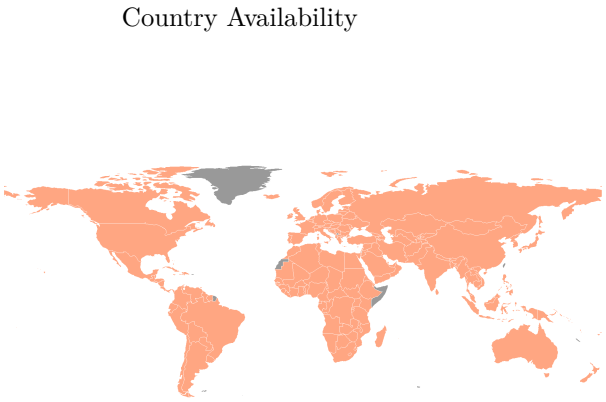


3.6.8 Number of climate change mitigation laws and policies (ccl_nmitlp)

Cumulative sum of laws (legislative acts) and policies (executive provisions) related to climate change mitigation.

Mitigation laws and policies refer to a legislative or executive disposition focused on curbing a country's greenhouse gases emissions in one sector or more. Measures can be directly related to emissions reductions, such as laws establishing a national carbon budget or cap and trade system, or indirectly related, such as laws or policies establishing relevant institutions or providing additional funding for research and development into low carbon technologies. Laws and policies addressing forests and land use are included as long as they explicitly support climate change mitigation through activities that reduce emissions and increase carbon removals. General forest management and conservation laws are not included, even if they may have implicit consequences for climate change mitigation.


Year Availability
No
Yes
Available
1960
1980
2000
2020
Year


Country Availability

3.7 Cooperation in International Climate Change Regime

Dataset by: Michèle B. Baettig, Simone Brander, Dieter M. Imboden

If you use any of these variables, make sure to cite the original source and QoG Data. Our suggested citation for this dataset is:

Bättig, Michèle B, Simone Brander, and Dieter M Imboden. 2008. "Measuring countries cooperation within the international climate change regime". *Environmental Science & Policy.* 11. 6

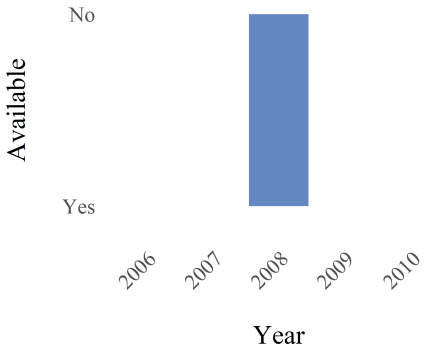
Link to the original source: `https://www.sciencedirect.com/science/article/abs/pii/S1462901108000440`

The index and its components measure countries' cooperation within the international climate change regime. The Cooperation in International Climate Change Regime Index is an aggregate of five indicators: The United Nations Framework Convention on Climate Change (UNFCCC) and Kyoto Protocol Indicators, which measure countries' commitment to common international goals, and the Reporting, Finance, and Emission Indicators, which measure the degree to which countries follow up on the respective commitments within the international regime.

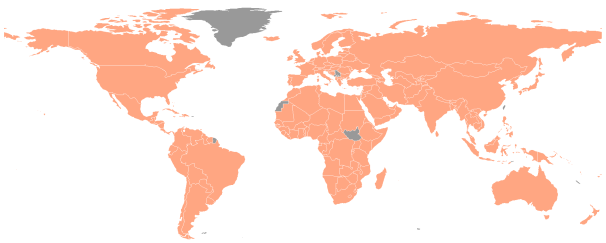
3.7.1 Cooperation in International Climate Change Regime Index (ccci_coop)

The index aggregates the UNFCCC, Kyoto Protocol, Reporting, Finance, and Emission Indicators. All variables are summed and have equal weight except for the Emission Indicator which is given double weight. The index varies on a 0-6 scale.

Year Availability

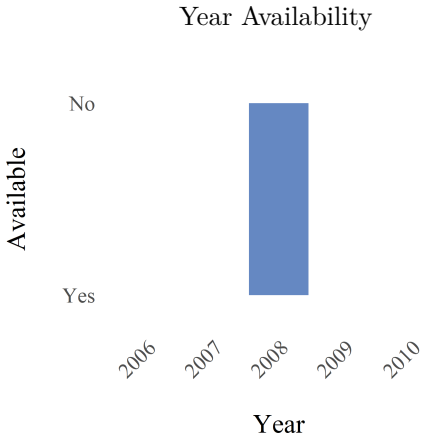


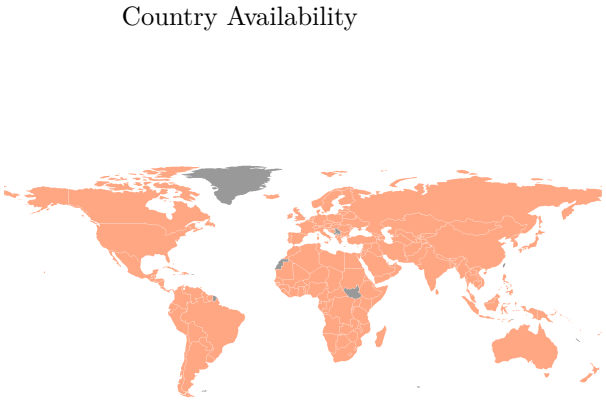
Country Availability



3.7.2 Emission Indicator (ccci_em)

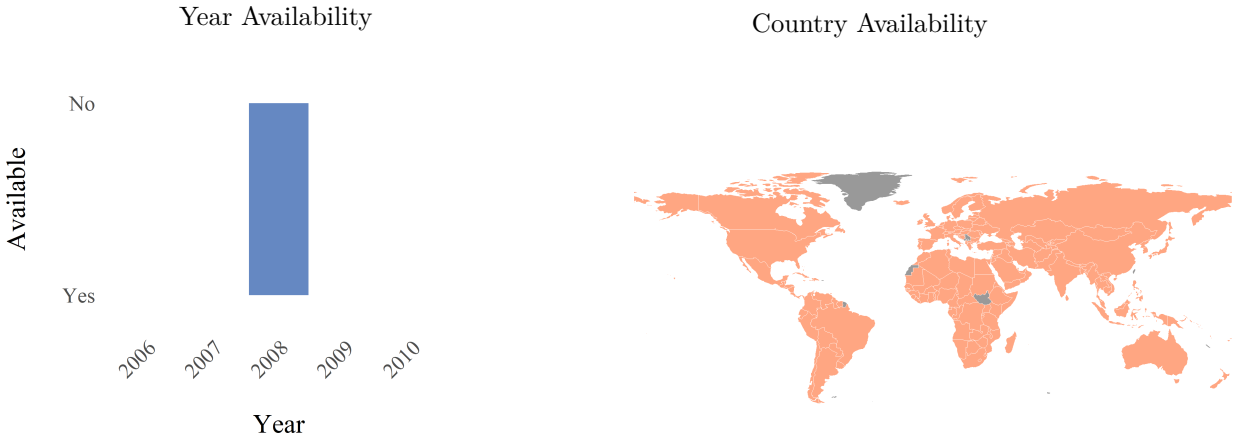
The indicator measures the status of CO2 emissions while accounting for differences in national population and different paths of economic development. Countries are assessed according to the Environmental Kuznets Curve (EKC), which indicates that the relationship between per capita CO2 emissions and per capita GDP is positive only up to a certain point of development, after which the relationship becomes negative. A +/- 50 percent interval is created for the EKC, and a trend is measured for each country from 1990 to 2002. If a country's trend is greater than the +50 percent band, the country scores 0. If a country's trend is less than the band, it scores 1.





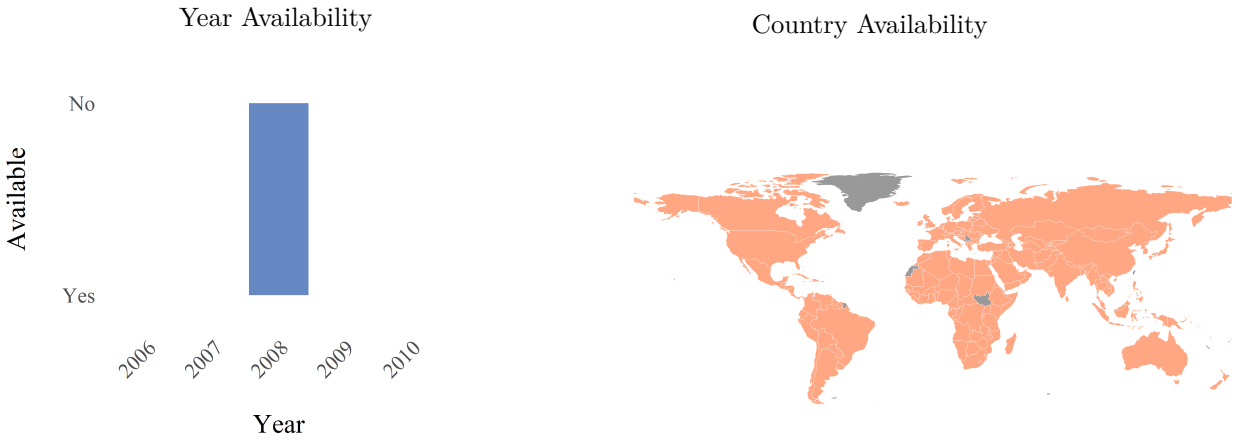
3.7.3 Finance Indicator (ccci_fin)

The indicator measures how well a country has upheld its financial obligations to the core budget of the UNFCCC. Countries were evaluated according to their "Status of Contributions" reports from 1996 and 2005. A score of 1 is given if the country has paid all due payments up to the present year and at least 50 percent of the amount for the present year. The score decreases linearly to a score of 0 if the country has paid no contributions.



3.7.4 Kyoto Protocol Indicator (ccci_kyoto)

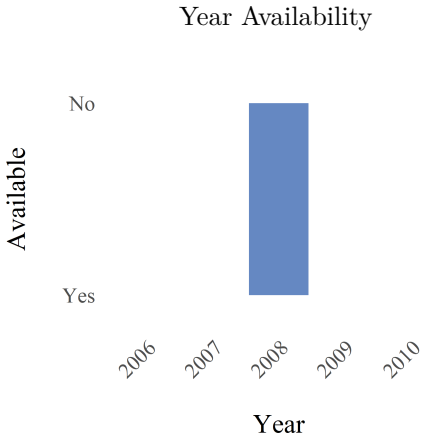
This two-part indicator equally weighs the willingness and promptness of a country in adopting the Kyoto Protocol. Willingness is scored as either 0.5 if a country adopted the Kyoto Protocol by the end of 2005 or 0 if it did not. Promptness is scored on a declining scale that starts at 0.5 and ends at 0. The highest score is given if a country adopted the Kyoto Protocol at its earliest possible ratification in April 1998. The lowest score is given if a country had not ratified the Kyoto Protocol by the end of 2005.

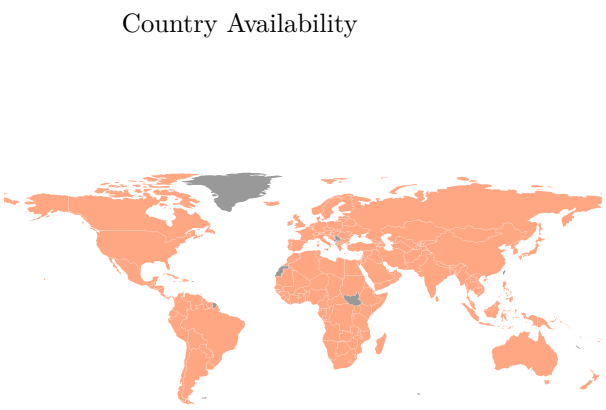


3.7.5 Reporting Indicator (ccci_rep)

This two-part indicator equally measures whether and how fast a country has submitted its latest National Communication (NC) on the state of its climate plan. The country is scored either 0.5 if it submitted the lastest required NC before the end of 2005 or 0 if it did not. The country is

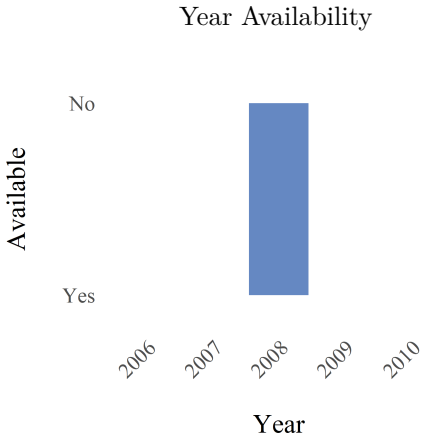
given an additional 0.5 if the report was submitted before the deadline. This score decreases until reaching 0 for a submission 6 or more months after the deadline for Annex I (AI) countries, and a submission 36 months or more after the deadline for Non-Annex I (NAI) countries.

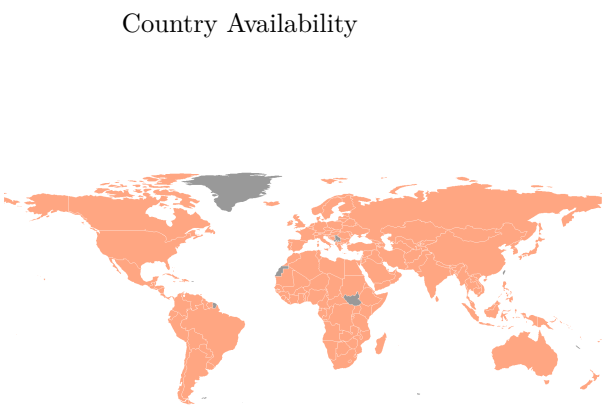




3.7.6 UNFCCC Indicator (ccci_unfccc)

This two-part indicator equally weighs the willingness and promptness of a country in adopting the United Nations Framework Convention on Climate Change (UNFCCC). Willingness is scored as either 0.5 if a country adopted the UNFCCC by the end of 2005 or 0 if it did not. Promptness is scored on a declining scale that starts at 0.5 and ends at 0. The highest score is given if the country adopted the UNFCCC at its earliest possible ratification date in July 1992. The lowest score is given if a country had not ratified the UNFCC at the time of the Kyoto Conference in December 1997.





3.8 EDGAR - Fossil CO2 Emissions of All World Countries

Dataset by: European Commission

If you use any of these variables, make sure to cite the original source and QoG Data. Our suggested citation for this dataset is:

Crippa, Monica, Diego Guizzardi, Marilena Muntean, E. Schaaf, et al. 2020. *Fossil CO2 emissions of all world countries - 2020 Report.* URL: `https://edgar.jrc.ec.europa.eu/overview.php?v=booklet2020`

Link to the original source: `https://edgar.jrc.ec.europa.eu/report_2020`

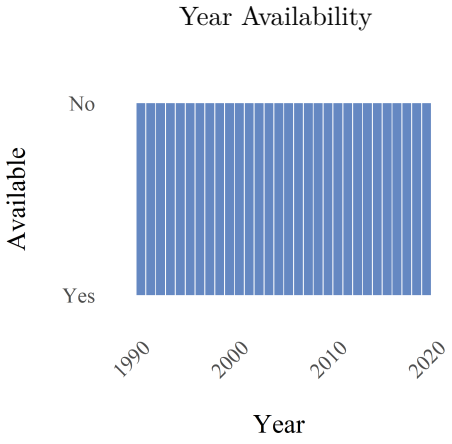
The Emissions Database for Global Atmospheric Research (EDGAR) provides global past and present-day anthropogenic emissions of greenhouse gases and air pollutants by country and on a spatial grid.

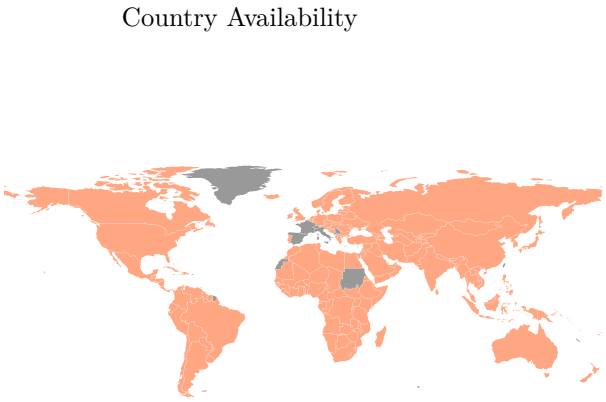
Fossil CO2 emissions of all world countries from EDGAR provides an independent estimate of CO2 emissions for each world country, based on a robust and consistent methodology stemming from the latest IPCC guidelines and most recent activity data. Fossil CO2 emission data are available for the time period 1970-2019.

3.8.1 CO2 emissions per GDP (edgar_co2gdp)

The total CO2 (carbon dioxide) emissions per country, divided by each country's respective GDP (gross domestic product). Units are tonnes of CO2 per thousand US dollars of GDP.

Includes all fossil CO2 sources, such as fossil fuel combustion, non-metallic mineral processes (e.g., cement production), metal (ferrous and non-ferrous) production processes, urea production, agricultural liming, and solvents use. Large-scale biomass burning with Savannah burning, forest fires, and sources and sinks from land-use, land-use change, and forestry (LULUCF) are excluded.

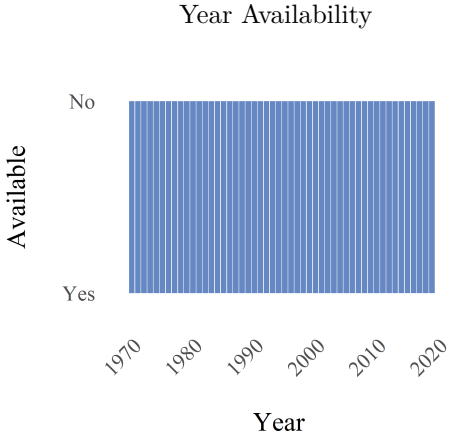


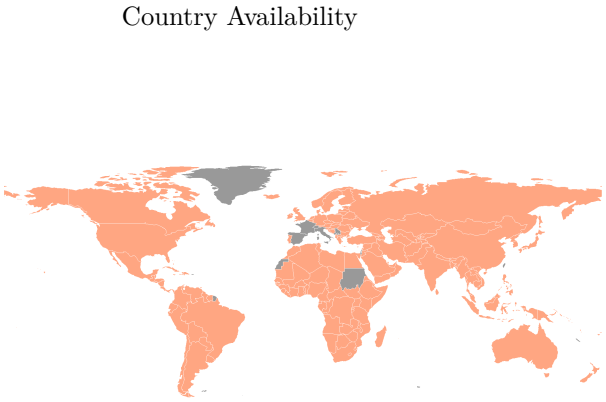


3.8.2 CO2 emissions per capita (edgar_co2pc)

The total CO2 (carbon dioxide) emissions per country, divided by each country's respective population. Units are tonnes of CO2 per capita per year.

Includes all fossil CO2 sources, such as fossil fuel combustion, non-metallic mineral processes (e.g., cement production), metal (ferrous and non-ferrous) production processes, urea production, agricultural liming, and solvents use. Large-scale biomass burning with Savannah burning, forest fires, and sources and sinks from land-use, land-use change, and forestry (LULUCF) are excluded.



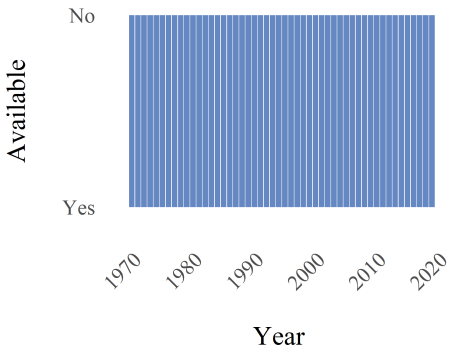


3.8.3 CO2 emissions total (edgar_co2t)

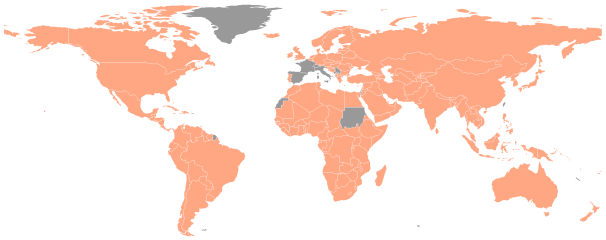
The total CO2 (carbon dioxide) emissions aggregated across sectors per country. Includes all fossil CO2 sources, such as fossil fuel combustion, non-metallic mineral processes (e.g., cement

production), metal (ferrous and non-ferrous) production processes, urea production, agricultural liming, and solvents use. Large-scale biomass burning with Savannah burning, forest fires, and sources and sinks from land-use, land-use change, and forestry (LULUCF) are excluded. Units are kilotonnes (kt) of CO2 per year.

Year Availability



Country Availability



3.9 EDGAR - Global Air Pollutant Emissions

Dataset by: European Commission

If you use any of these variables, make sure to cite the original source and QoG Data. Our suggested citation for this dataset is:

Crippa, Monica, Efisio Solazzo, et al. 2020. "High resolution temporal profiles in the Emissions Database for Global Atmospheric Research". *Nature Scientific Data.* Vol. 7. 1

European Commission, Joint Research Centre (EC-JRC)/Netherlands Environmental Assessment Agency (PBL). 2020. *Emissions Database for Global Atmospheric Research (EDGAR), release EDGAR v5.0 (1970 - 2015) of April 2020.* URL: `https://edgar.jrc.ec.europa.eu/overview.php?v=50_AP`

Crippa, Monica, Diego Guizzardi, Marilena Muntean, Edwin Schaaf, et al. 2019. *EDGAR v5.0 Global Air Pollutant Emissions.* URL: `http://data.europa.eu/89h/377801af-b094-4943-8fdc-f79a7c0c2d19`

Link to the original source: `https://edgar.jrc.ec.europa.eu/dataset_ap50`

The Emissions Database for Global Atmospheric Research (EDGAR) provides global past and present-day anthropogenic emissions of greenhouse gases and air pollutants by country and on a spatial grid. EDGAR provides emission data for the following air pollutants:

Ozone precursor gases: Carbon Monoxide (CO), Nitrogen Oxides (NOx), Non-Methane Volatile Organic Compounds (NMVOC) and Methane (CH4).

Acidifying gases: Ammonia (NH3), Nitrogen oxides (NOx) and Sulfur Dioxide (SO2).

Primary particulates: Fine Particulate Matter (PM10 and PM2.5 and Carbonaceous speciation (BC, OC).

Emissions from large-scale biomass burning with Savannah burning, forest fires, and sources and sinks from land-use, land-use change, and forestry (LULUCF) are excluded.

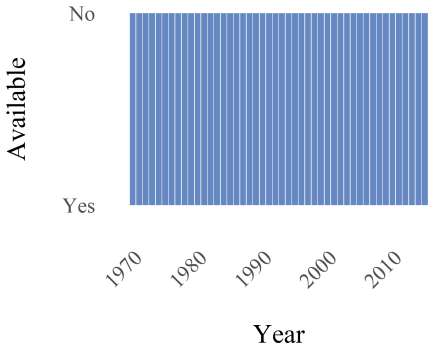
For the energy-related sectors, the activity data are mainly based on the energy balance statistics of IEA (2017) (http://www.oecd-ilibrary.org/energy/co2-emissions-from-fuel-combustion-2017_co2_-fuel-2017-en), whereas the activity data for the agricultural sectors originate mainly from FAO (2018) (http://www.fao.org/faostat/en/#home). Additional information can be found in Crippa

et al. (2019).

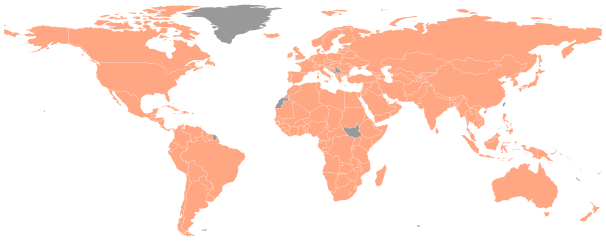
3.9.1 BC emissions (edgar_bc)

The total BC (black carbon, particulate matter) emissions, aggregated across sectors per country. Units are kilotonnes (kt) of black carbon per year.

Year Availability



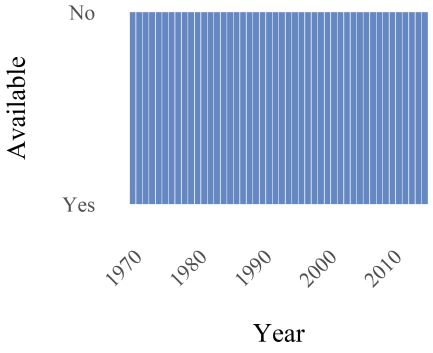
Country Availability



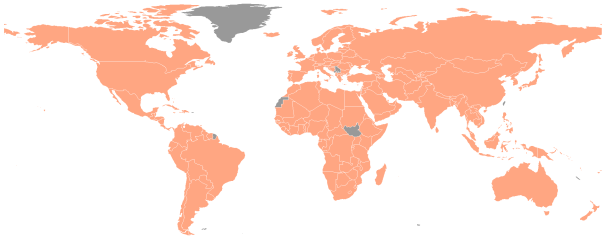
3.9.2 CH4 emissions (edgar_ch4)

The total CH4 (methane) emissions aggregated across sectors per country. Units are kilotonnes (kt) of CH4 per year.

Year Availability

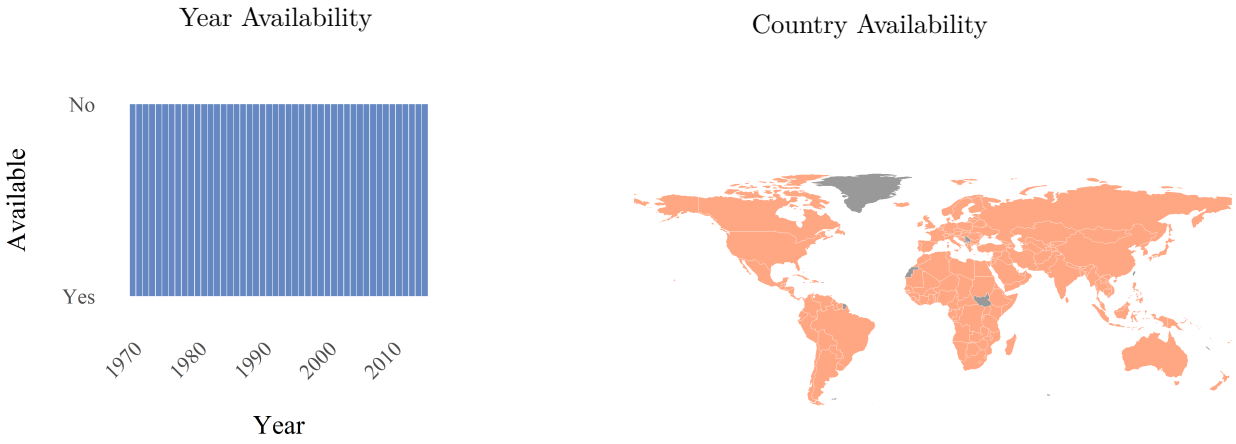


Country Availability



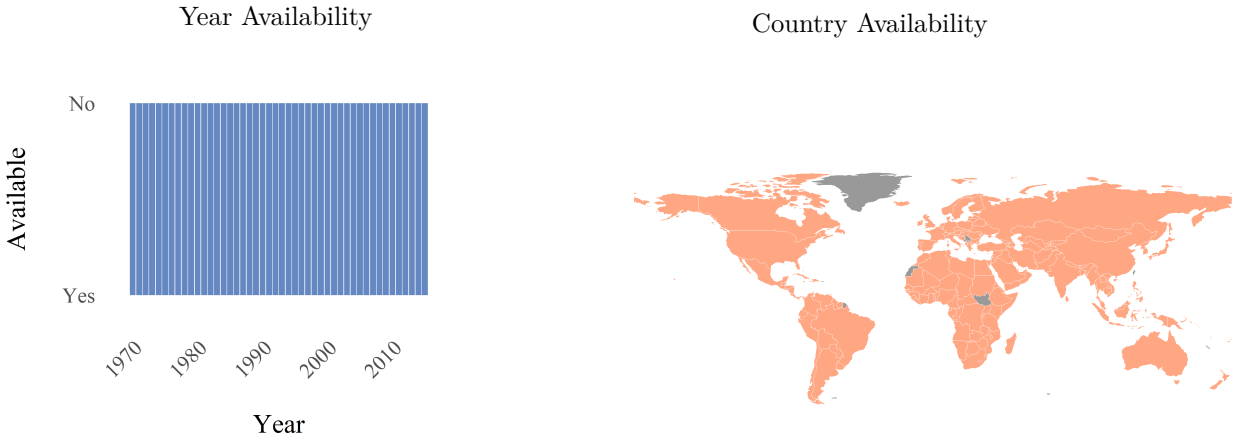
3.9.3 CO emissions (edgar_co)

The total CO (carbon monoxide) emissions aggregated across sectors per country. Emissions from large-scale biomass burning with Savannah burning, forest fires, and sources and sinks from land-use, land-use change, and forestry (LULUCF) are excluded. Units are kilotonnes (kt) of CO per year.



3.9.4 N2O emissions (edgar_n2o)

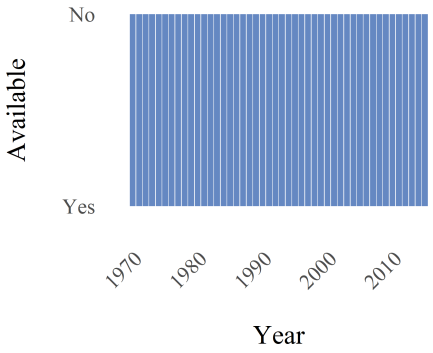
The total N2O (nitrous oxide) emissions aggregated across sectors per country. Units are kilotonnes (kt) of N2O per year.



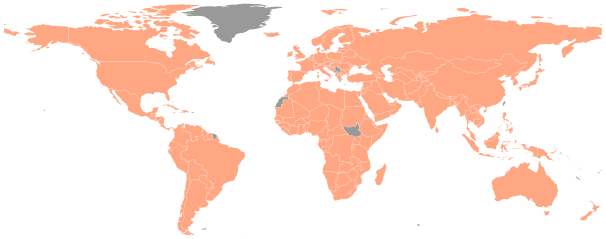
3.9.5 NH3 emissions (edgar_nh3)

The total NH3 (ammonia) emissions aggregated across sectors per country. Units are kilotonnes (kt) of NH3 per year.

Year Availability



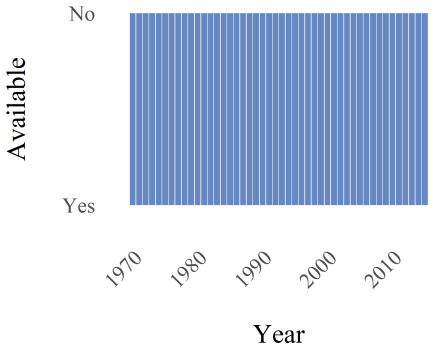
Country Availability



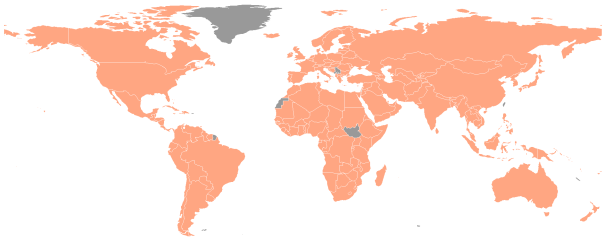
3.9.6 NMVOC emissions (edgar_nmvoc)

The total NMVOC (non-methane volatile organic compounds) emissions aggregated across sectors per country. Units are kilotonnes (kt) of NMVOC per year.

Year Availability



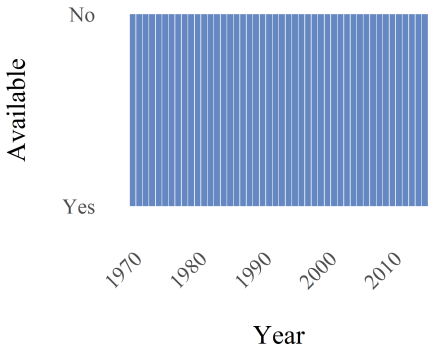
Country Availability



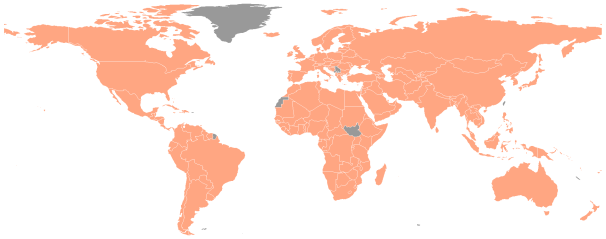
3.9.7 NOx emissions (edgar_nox)

The total NOx (nitrogen oxides) emissions aggregated across sectors per country. Units are kilotonnes (kt) of NOx per year.

Year Availability



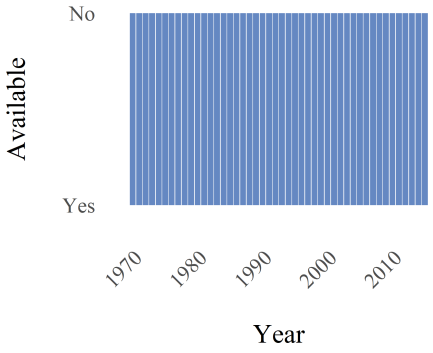
Country Availability



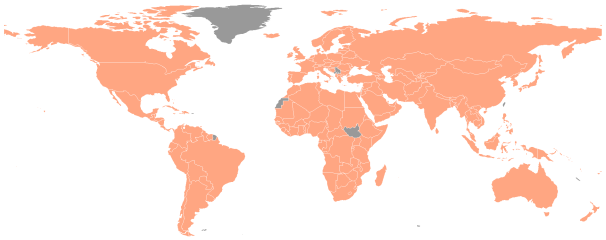
3.9.8 OC emissions (edgar_oc)

The total OC (organic carbon, particulate matter) emissions aggregated across sectors per country. Units are kilotonnes (kt) of OC per year.

Year Availability



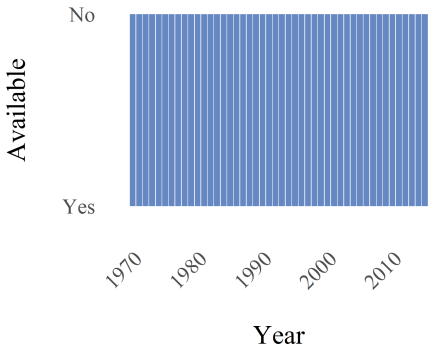
Country Availability



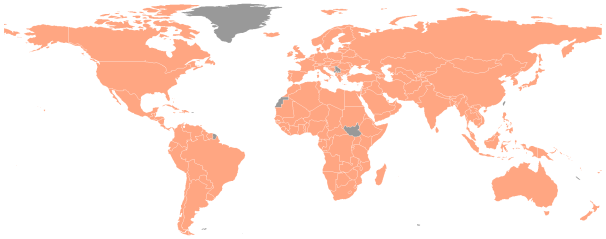
3.9.9 PM10 emissions (edgar_pm10)

The total PM10 (particulate matter, 10 micrometers or smaller) emissions aggregated across sectors per country. Units are kilotonnes (kt) of PM10 per year.

Year Availability



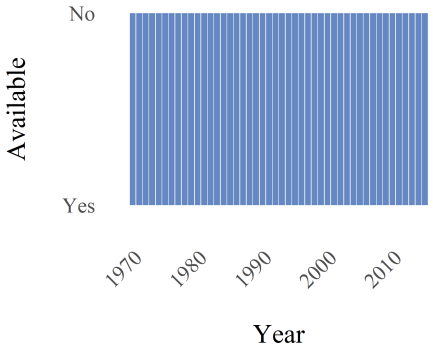
Country Availability



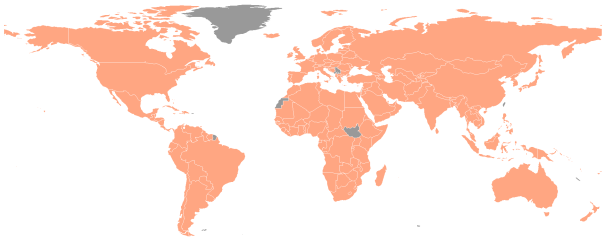
3.9.10 PM2.5 emissions (edgar_pm25)

The total PM2.5 (particulate matter, 2.5 micrometers or smaller) emissions aggregated across sectors per country. Units are kilotonnes (kt) of PM2.5 per year.

Year Availability



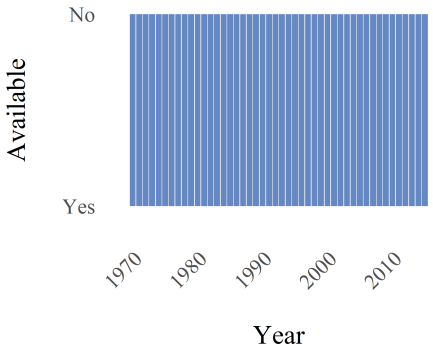
Country Availability



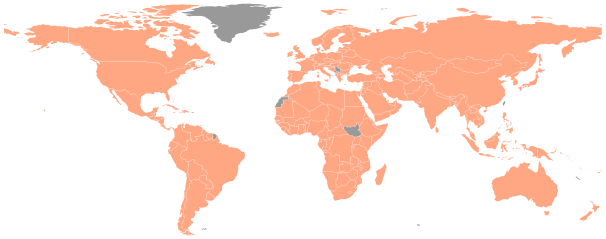
3.9.11 SO2 emissions (edgar_so2)

The total SO2 (sulfur dioxide) emissions aggregated across sectors per country. Units are kilotonnes (kt) of SO2 per year.

Year Availability



Country Availability



3.10 ENVIPOLCON

Dataset by: Holzinger, Knill, Sommerer

If you use any of these variables, make sure to cite the original source and QoG Data. Our suggested citation for this dataset is:

Heichel, Stephan et al. 2008. "Research design, variables and data". URL: `https://www.polver.uni-konstanz.de/en/holzinger/research/research-projects/enviromental-policy-convergence-in-europe-envipolcon/project-deliverables/`

Link to the original source: `https://www.polver.uni-konstanz.de/holzinger/research/research-projects/enviromental-policy-convergence-in-europe-envipolcon/`

ENVIPOLCON is the acronym of "Environmental governance in Europe: the impact of international institutions and trade on policy convergence". The project was carried out between 2003 and 2006 by the University of Konstanz, University of Hamburg, Germany, Free University of Berlin, University of Salzburg, and Radboud University Nijmegen. The project was supported by the EU, RTD programme "Improving the human research potential and the socioeconomic knowledge base", contract no. HPSE-CT-2002-00103.

This compilation only includes data on policy instrument adoption from ENVIPOLCON. Each of the instrument variables is coded with scores ranging from 1= obligatory standard to 10 = voluntary instrument. 0 = no instrument because no policy was in place yet. For the variable on the promotion of renewable energy (e.g. ener_i7) the additional instrument "legal obligation to purchase that electricity" was coded as = 11.

Other variables from ENVIPOLCON are included into the extension of the dataset - ENVIPOLCONCHANGE, which is also a part of this compilation.

3.10.1 Policy instruments for quality of bathing water (epc_bath)

Policy instruments on quality of bathing water. The variable measures the presence of a policy instrument in 1970, 1980, 1990, and 2000.

Variable coding:

0 = 'No policy'

1 = 'Obligatory standard, prohibition or ban'

2 = 'Technological prescription'

3 = 'Tax or levy'

4 = 'Subsidy or tax reduction'

5 = 'Liability scheme(s)'

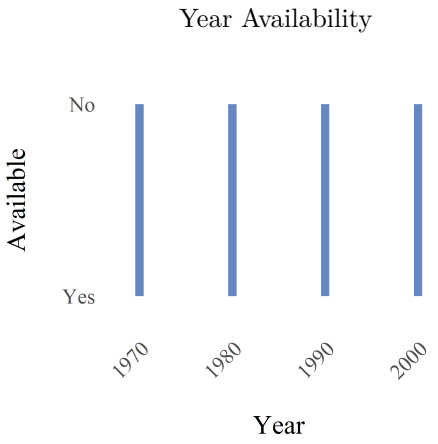
6 = 'Planning instrument'

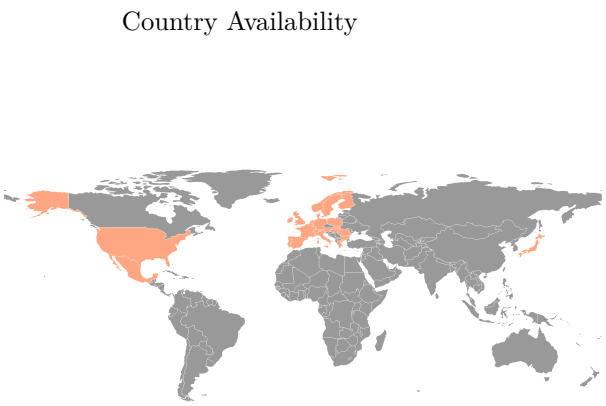
7 = 'Public investment'

8 = 'Data collection / monitoring programme(s)'

9 = 'Information based instrument'

10 = 'Voluntary instrument'.





3.10.2 Policy instruments for exhaust emissions from cars (epc_car)

Policy instruments on exhaust emissions from cars. The variable measures the presence of a policy instrument in 1970, 1980, 1990, and 2000.

Variable coding:

0 = 'No policy'

1 = 'Obligatory standard, prohibition or ban'

2 = 'Technological prescription'

3 = 'Tax or levy'

4 = 'Subsidy or tax reduction'

5 = 'Liability scheme(s)'

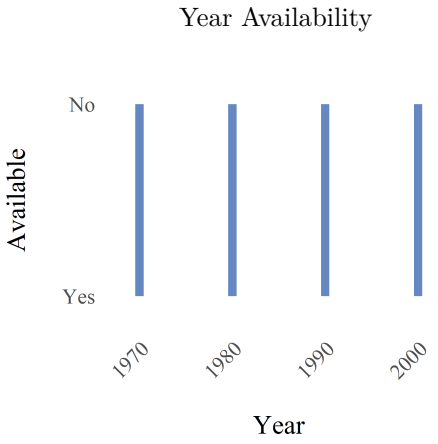
6 = 'Planning instrument'

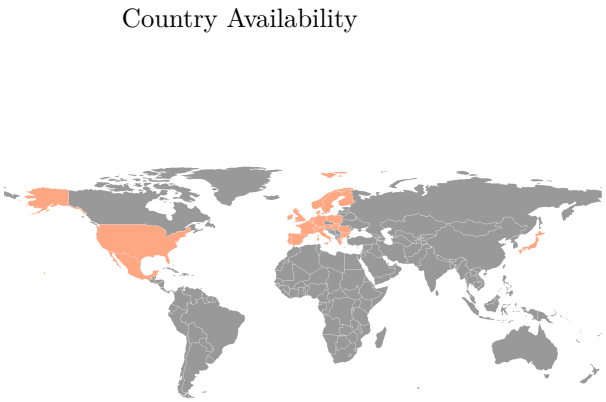
7 = 'Public investment'

8 = 'Data collection / monitoring programme(s)'

9 = 'Information based instrument'

10 = 'Voluntary instrument'.





3.10.3 Policy instruments for reduction of CO2 emissions from heavy industry (epc__co2)

Policy instruments on reduction of CO2 emissions from heavy industry. The variable measures the presence of a policy instrument in 1970, 1980, 1990, and 2000.

Variable coding:

0 = 'No policy'

1 = 'Obligatory standard, prohibition or ban'

2 = 'Technological prescription'

3 = 'Tax or levy'

4 = 'Subsidy or tax reduction'

5 = 'Liability scheme(s)'

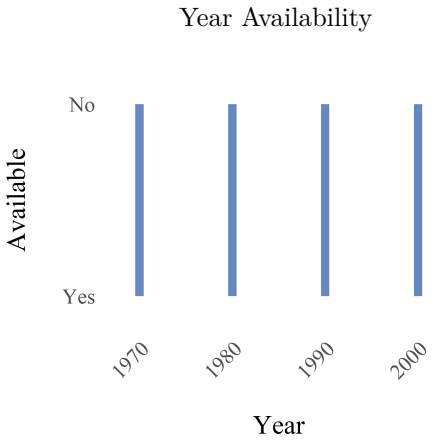
6 = 'Planning instrument'

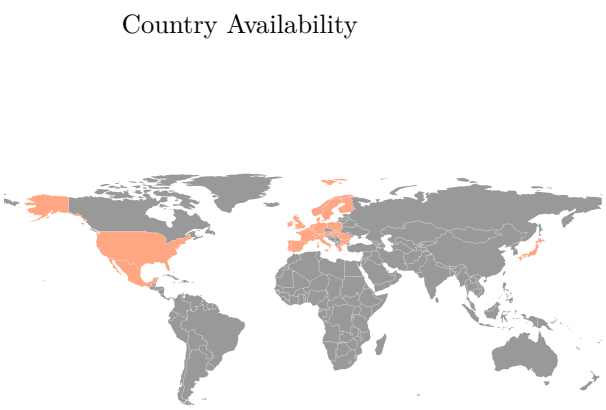
7 = 'Public investment'

8 = 'Data collection / monitoring programme(s)'

9 = 'Information based instrument'

10 = 'Voluntary instrument'.





3.10.4 Policy instruments for hazardous substances in detergents (epc_dete)

Policy instruments on hazardous substances in detergents. The variable measures the presence of a policy instrument in 1970, 1980, 1990, and 2000.

Variable coding:

0 = 'No policy'

1 = 'Obligatory standard, prohibition or ban'

2 = 'Technological prescription'

3 = 'Tax or levy'

4 = 'Subsidy or tax reduction'

5 = 'Liability scheme(s)'

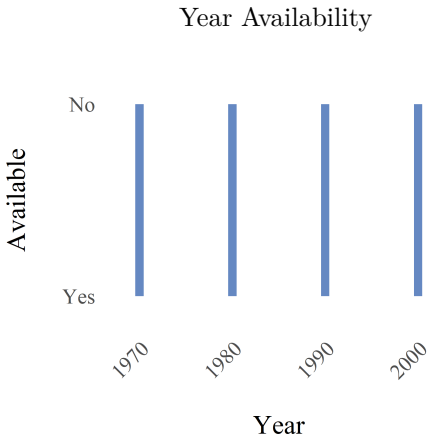
6 = 'Planning instrument'

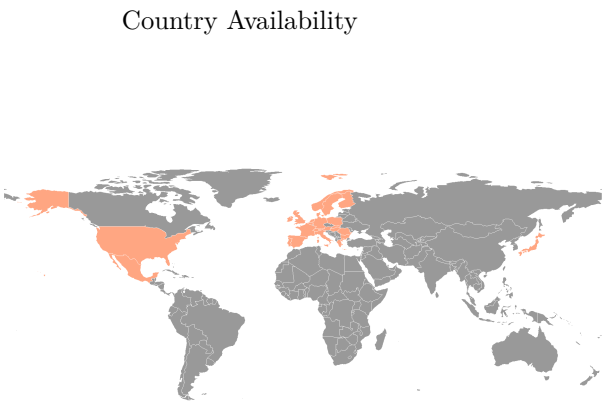
7 = 'Public investment'

8 = 'Data collection / monitoring programme(s)'

9 = 'Information based instrument'

10 = 'Voluntary instrument'.





3.10.5 Policy instruments for energy efficiency of refrigerators (epc_enef)

Policy instruments on energy efficiency of refrigerators. The variable measures the presence of a policy instrument in 1970, 1980, 1990, and 2000.

Variable coding:

0 = 'No policy'

1 = 'Obligatory standard, prohibition or ban'

2 = 'Technological prescription'

3 = 'Tax or levy'

4 = 'Subsidy or tax reduction'

5 = 'Liability scheme(s)'

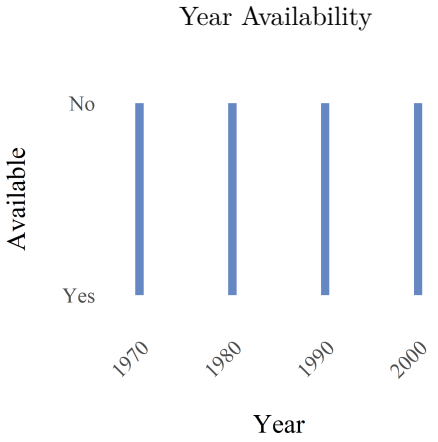
6 = 'Planning instrument'

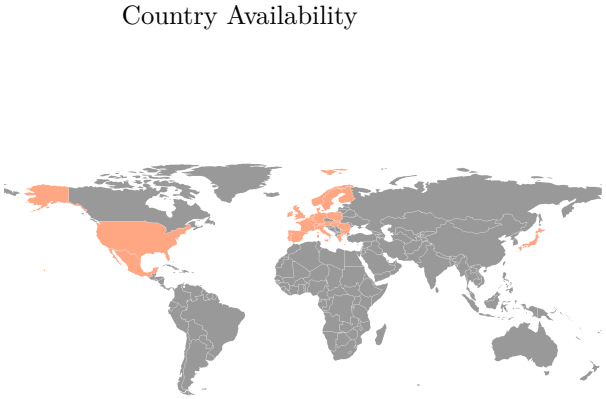
7 = 'Public investment'

8 = 'Data collection / monitoring programme(s)'

9 = 'Information based instrument'

10 = 'Voluntary instrument'.





3.10.6 Policy instruments for electricity from renewable sources (epc_ener)

Policy instruments on electricity production from renewable sources. The variable measures the presence of a policy instrument in 1970, 1980, 1990, and 2000.

Variable coding:

0 = 'No policy'

1 = 'Obligatory standard, prohibition or ban'

2 = 'Technological prescription'

3 = 'Tax or levy'

4 = 'Subsidy or tax reduction'

5 = 'Liability scheme(s)'

6 = 'Planning instrument'

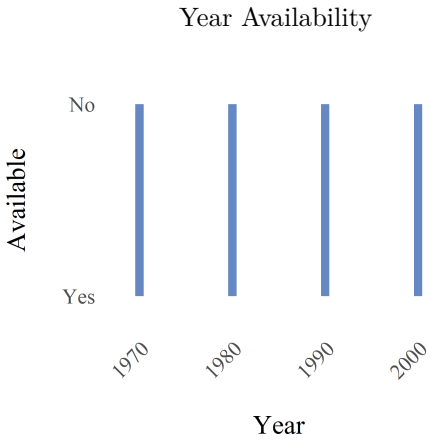
7 = 'Public investment'

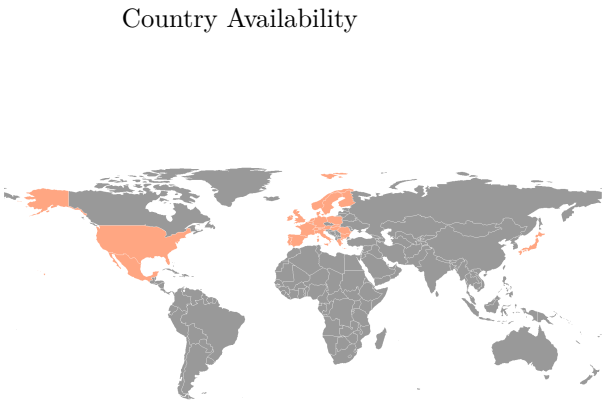
8 = 'Data collection / monitoring programme(s)'

9 = 'Information based instrument'

10 = 'Voluntary instrument'

11 = 'Extra instrument for energy.





3.10.7 Policy instruments for forest protection policy (epc_fors)

Policy instruments on forest protection. The variable measures the presence of a policy instrument in 1970, 1980, 1990, and 2000.

Variable coding:

0 = 'No policy'

1 = 'Obligatory standard, prohibition or ban'

2 = 'Technological prescription'

3 = 'Tax or levy'

4 = 'Subsidy or tax reduction'

5 = 'Liability scheme(s)'

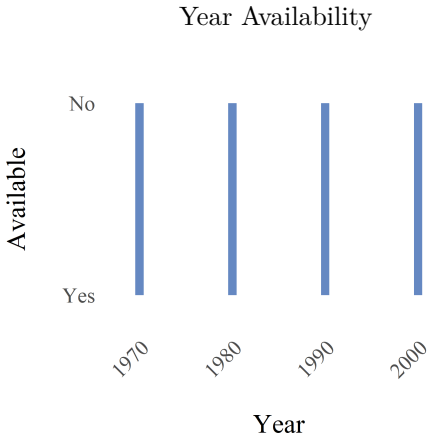
6 = 'Planning instrument'

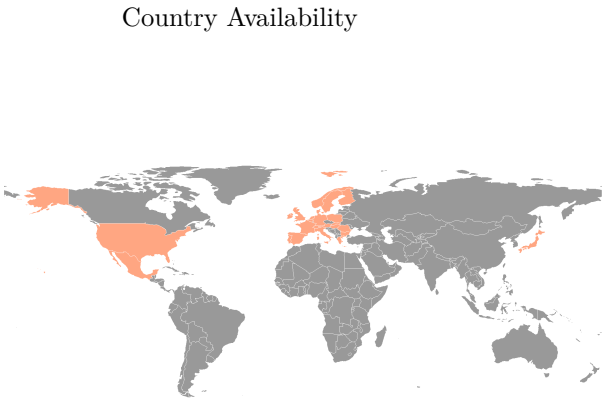
7 = 'Public investment'

8 = 'Data collection / monitoring programme(s)'

9 = 'Information based instrument'

10 = 'Voluntary instrument'.





3.10.8 Policy instruments for lead emissions from vehicles (epc_lead)

Policy instruments on lead emissions from vehicles. The variable measure the presence of a policy instrument in 1970, 1980, 1990, and 2000.

Variable coding:

0 = 'No policy'

1 = 'Obligatory standard, prohibition or ban'

2 = 'Technological prescription'

3 = 'Tax or levy'

4 = 'Subsidy or tax reduction'

5 = 'Liability scheme(s)'

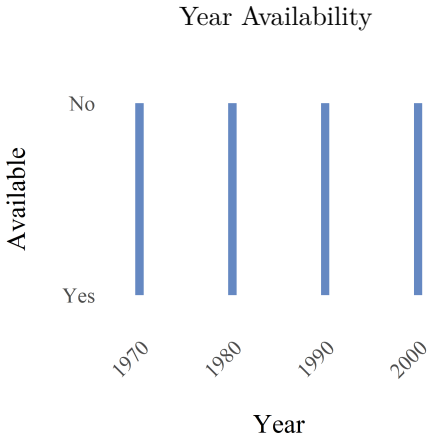
6 = 'Planning instrument'

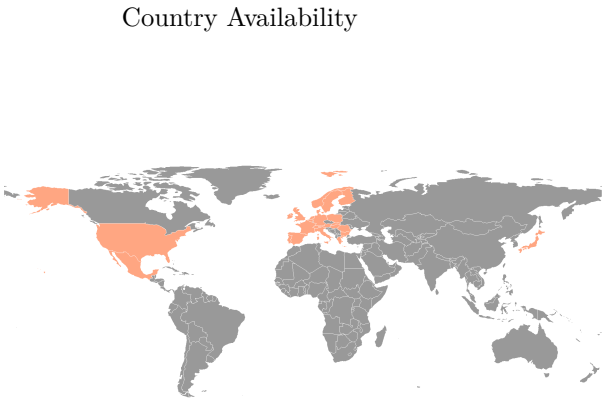
7 = 'Public investment'

8 = 'Data collection / monitoring programme(s)'

9 = 'Information based instrument'

10 = 'Voluntary instrument'.





3.10.9 Policy instruments for noise emissions from lorries (epc_nois)

Policy instruments on noise emission from lorries. The variable measures the presence of a policy instrument in 1970, 1980, 1990, and 2000.

Variable coding:

0 = 'No policy'

1 = 'Obligatory standard, prohibition or ban'

2 = 'Technological prescription'

3 = 'Tax or levy'

4 = 'Subsidy or tax reduction'

5 = 'Liability scheme(s)'

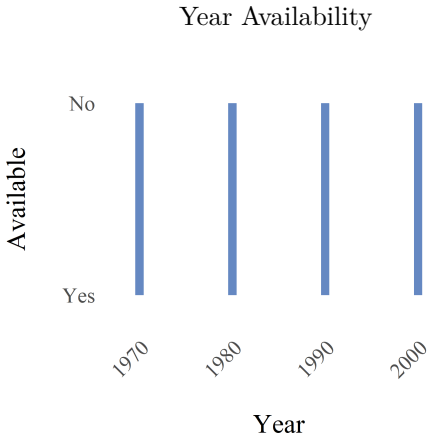
6 = 'Planning instrument'

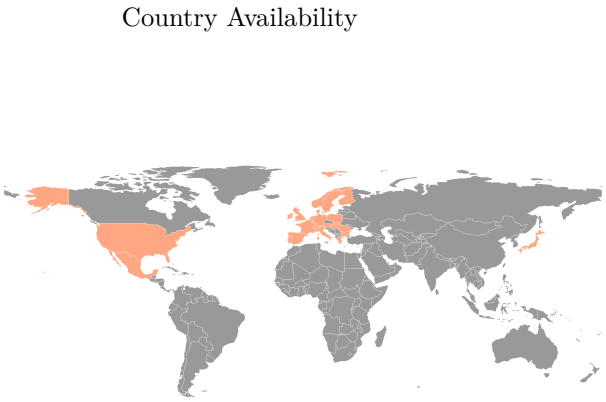
7 = 'Public investment'

8 = 'Data collection / monitoring programme(s)'

9 = 'Information based instrument'

10 = 'Voluntary instrument'.





3.10.10 Policy instruments to promote refillable beverage containers (epc_pawa)

Policy instruments to promote refillable beverage containers. The variable measures the presence of a policy instrument in 1970, 1980, 1990, and 2000.

Variable coding:

0 = 'No policy'

1 = 'Obligatory standard, prohibition or ban'

2 = 'Technological prescription'

3 = 'Tax or levy'

4 = 'Subsidy or tax reduction'

5 = 'Liability scheme(s)'

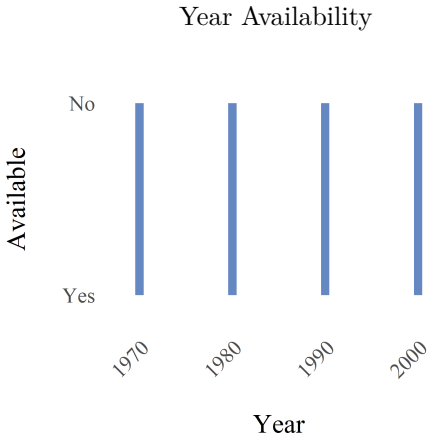
6 = 'Planning instrument'

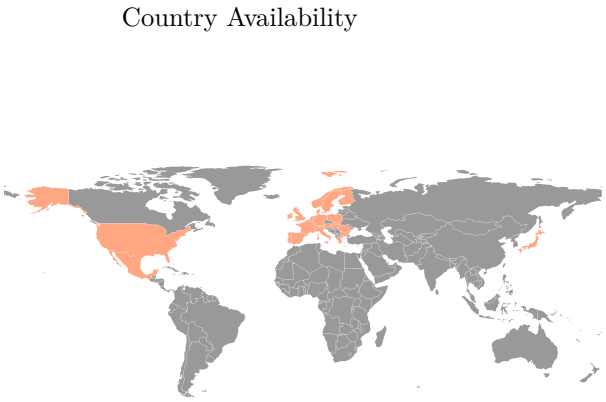
7 = 'Public investment'

8 = 'Data collection / monitoring programme(s)'

9 = 'Information based instrument'

10 = 'Voluntary instrument'.





3.10.11 Policy instruments for contaminated sites (epc_soil)

Policy instruments on contaminated sites. The variable measures the presence of a policy instrument in 1970, 1980, 1990, and 2000.

Variable coding:

0 = 'No policy'

1 = 'Obligatory standard, prohibition or ban'

2 = 'Technological prescription'

3 = 'Tax or levy'

4 = 'Subsidy or tax reduction'

5 = 'Liability scheme(s)'

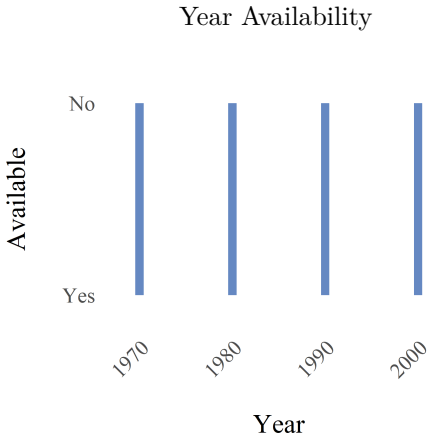
6 = 'Planning instrument'

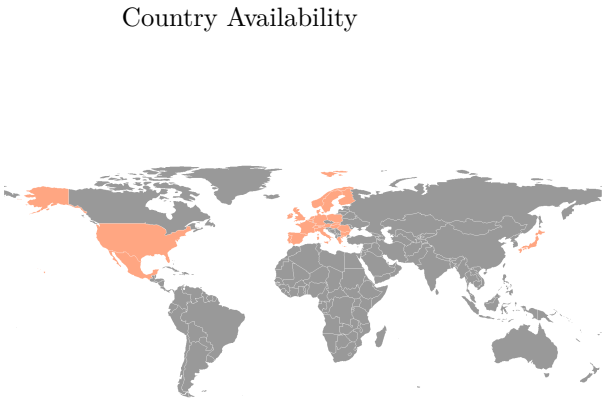
7 = 'Public investment'

8 = 'Data collection / monitoring programme(s)'

9 = 'Information based instrument'

10 = 'Voluntary instrument'.





3.10.12 Policy instruments for water protection related to industrial discharges (epc_watp)

Policy instruments on industrial discharges into water bodies. The variable measures the presence of a policy instrument in 1970, 1980, 1990, and 2000.

Variable coding:

0 = 'No policy'

1 = 'Obligatory standard, prohibition or ban'

2 = 'Technological prescription'

3 = 'Tax or levy'

4 = 'Subsidy or tax reduction'

5 = 'Liability scheme(s)'

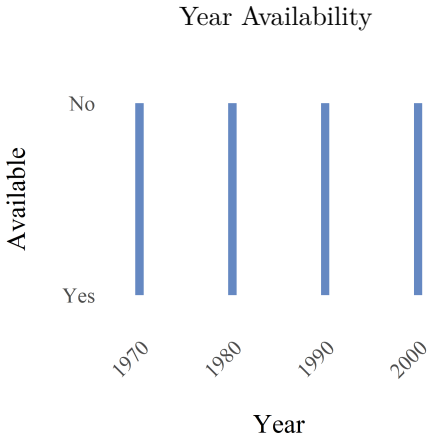
6 = 'Planning instrument'

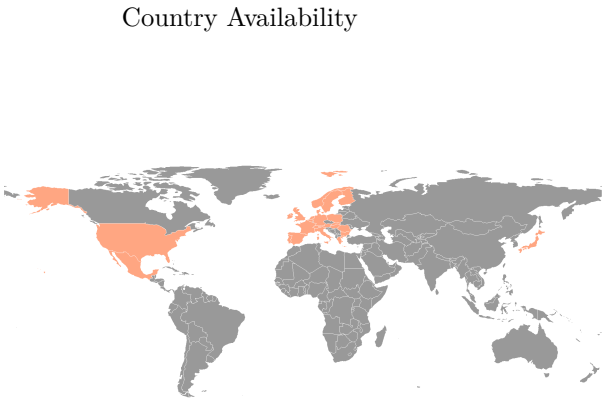
7 = 'Public investment'

8 = 'Data collection / monitoring programme(s)'

9 = 'Information based instrument'

10 = 'Voluntary instrument'.


Year Availability
No
Yes
Available
1970
1980
1990
2000
Year


Country Availability

3.11 ENVIPOLCONCHANGE

Dataset by: Holzinger, Knill, Sommerer

If you use any of these variables, make sure to cite the original source and QoG Data. Our suggested citation for this dataset is:

Holzinger, Katharina, Christoph Knill, and Thomas Sommerer. 2011. "Is there convergence of national environmental policies? An analysis of policy outputs in 24 OECD countries". *Environmental politics*. 20. 1. URL: `https://www.polver.uni-konstanz.de/holzinger/research/research-projects/policy-wandel-in-der-umweltpolitik-der-einfluss-von-nationalen-vetospielern-und-transnationalem-policy-learning/der-datensatz-environmental-policy-chance-envipolchange/`

Link to the original source: `https://www.polver.uni-konstanz.de/holzinger/research/research-projects/policy-wandel-in-der-umweltpolitik-der-einfluss-von-nationalen-vetospielern-und-transnationalem-policy-learning/der-datensatz-environmental-policy-chance-envipolchange/`

The Dataset "ENVIPOLCONCHANGE (Environmental Policy Change). A dataset on environmental regulations in 24 OECD countries from 1970 to 2005" has been collected by the ENVIPOLCON group at the University of Konstanz (Stephan Heichel, Katharina Holzinger, Christoph Knill, Thomas Sommerer) in 2009. Data collection was funded by the German Research Foundation DFG (Grant HO 1811/3-1; KN 891/1-1)."

The names of most variables follow the following structure:

epcc_*_in2 - the introduction of the policy for the first time;

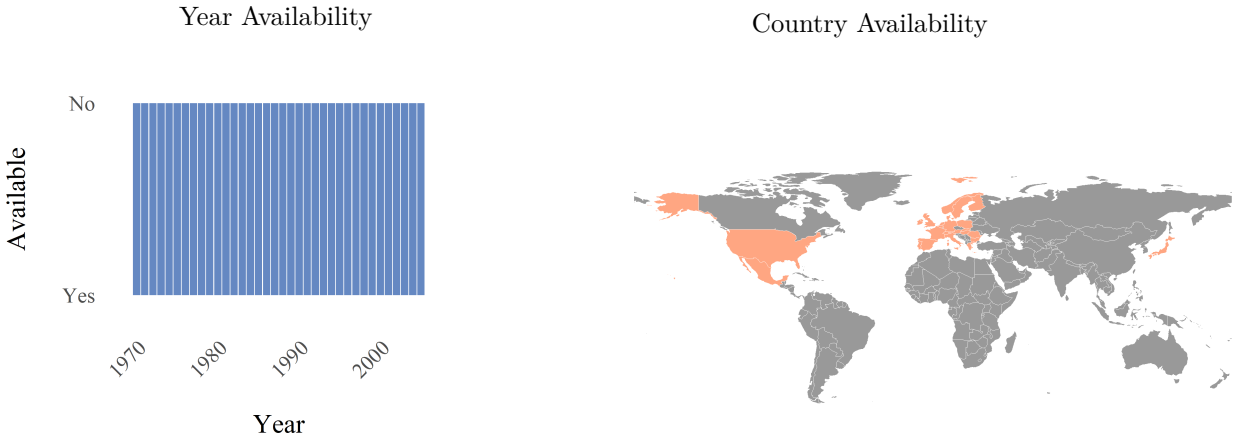
epcc_*_ch2 - change in the policy, including the introduction;

epcc_*_s, epcc_car_*, and epcc_lcp_* - standards, such as limit values on emissions and similar,

where * is a code of the policy issue.

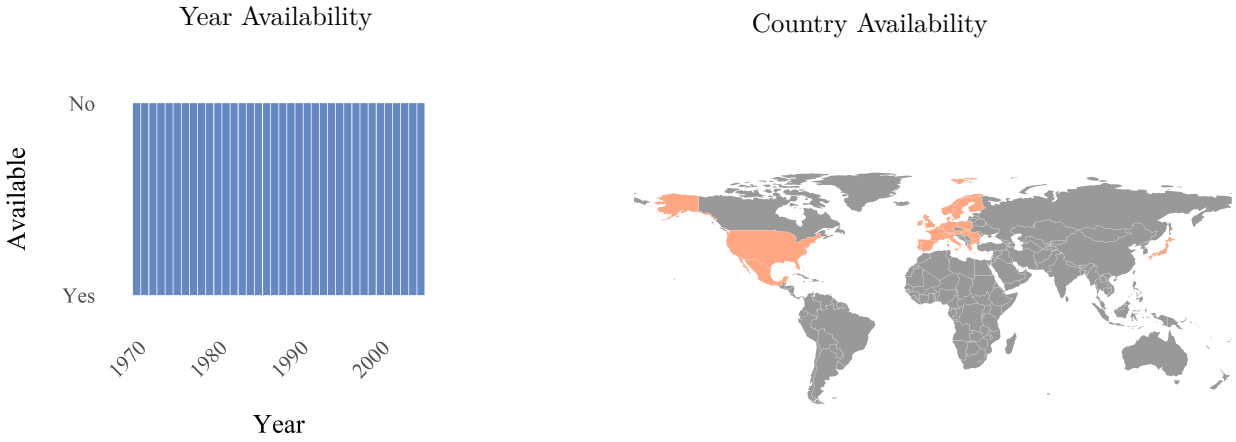
3.11.1 Change in eco audit policy (epcc_audi_ch2)

The variable measures whether there was a change in the policy for eco-audit in the recorded year. This is a binary variable, where "1" is assigned to the year when there was a change in the policy, including its first introduction, and "0" is assigned to all other years.



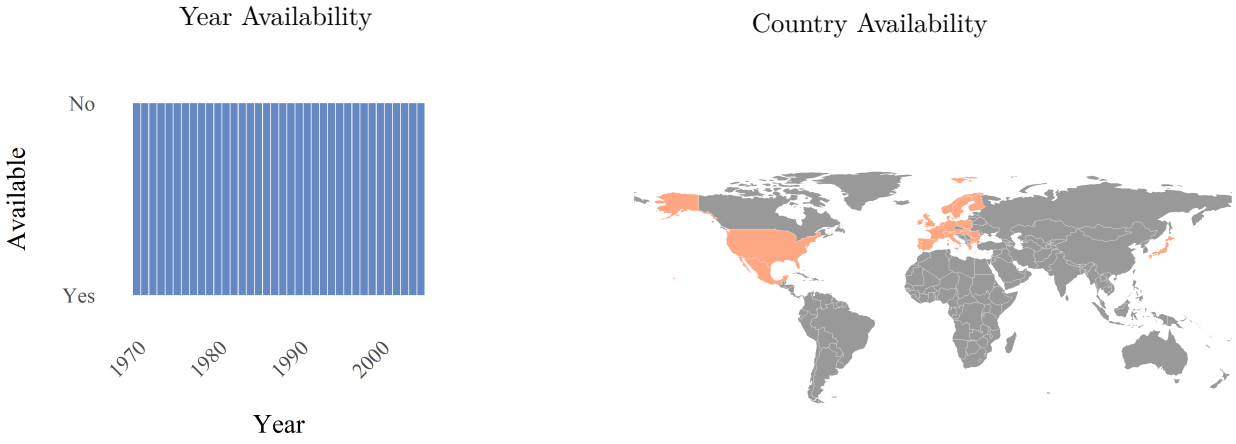
3.11.2 Eco audi policy introduction (epcc_audi_in2)

The variable measures the first introduction of the policy for eco-audit. This is a binary variable, where "1" is assigned to the year when the policy was first introduced and "0" is assigned to all other years.



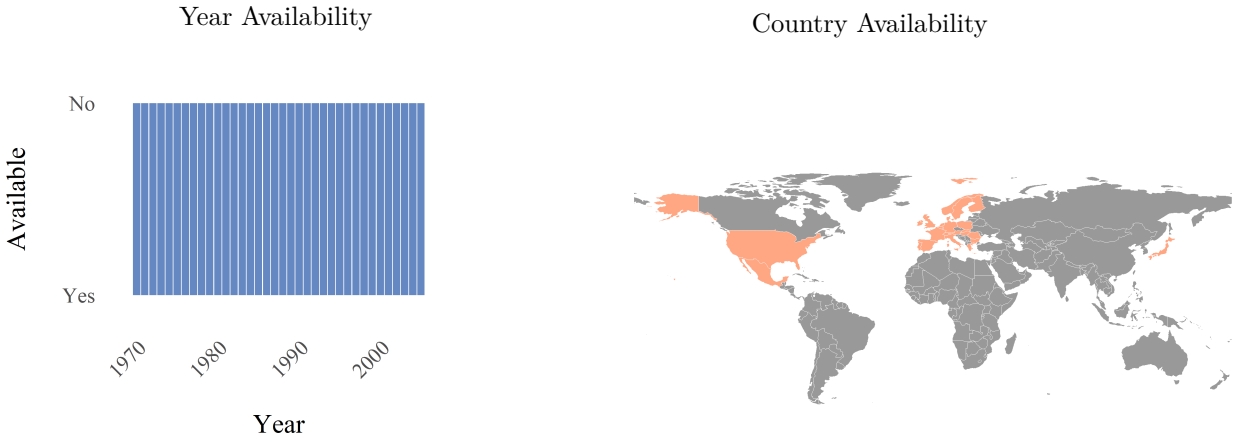
3.11.3 Change in coliforms in bathing water policy (epcc_bath_ch2)

The variable measures whether there was a change in the policy for the quality of bathing water in the recorded year. This is a binary variable, where "1" is assigned to the year when there was a change in the policy, including its first introduction, and "0" is assigned to all other years.



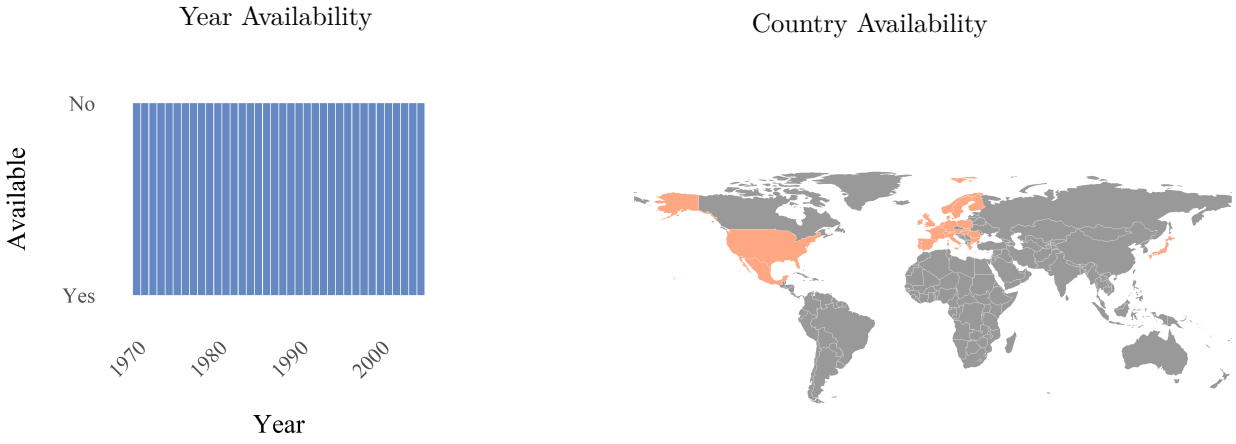
3.11.4 Coliforms in bathing water policy introduction (epcc_bath_in2)

The variable measures the first introduction of the policy for quality of bathing water. This is a binary variable, where "1" is assigned to the year when the policy was first introduced and "0" is assigned to all other years.



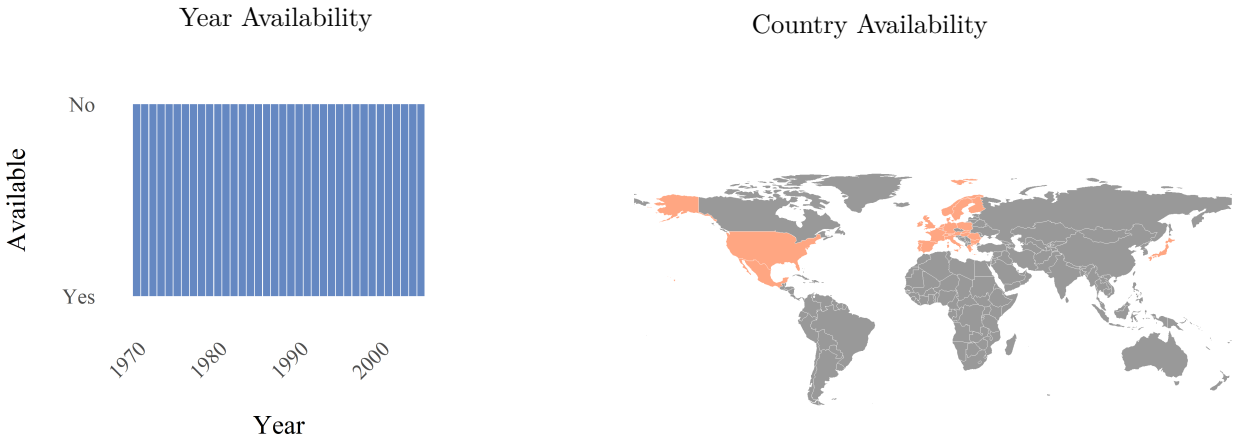
3.11.5 Passenger car emissions CO regulatory level (epcc_car_co)

A limit value for CO emissions in g/km, adjusted.



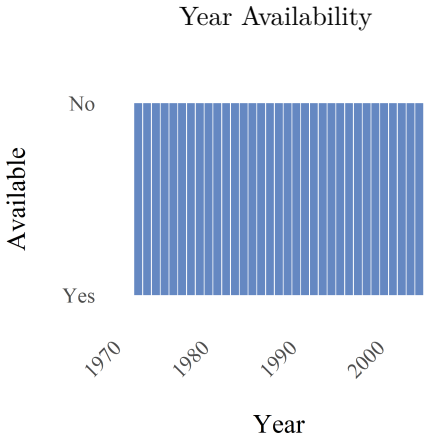
3.11.6 Passenger car emissions HC regulatory level (epcc_car_hc)

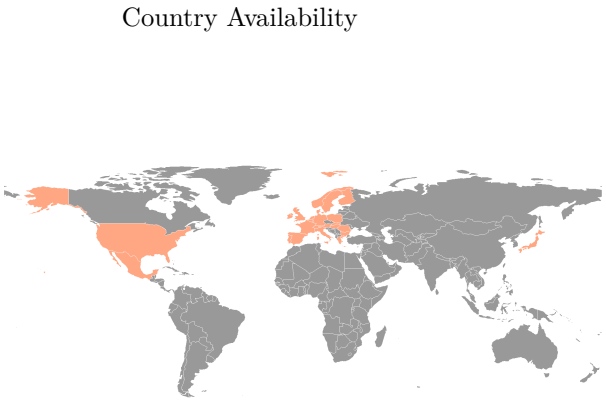
A limit value for HC emissions in g/km, adjusted.



3.11.7 Passenger car emissions NOx regulatory level (epcc_car_nox)

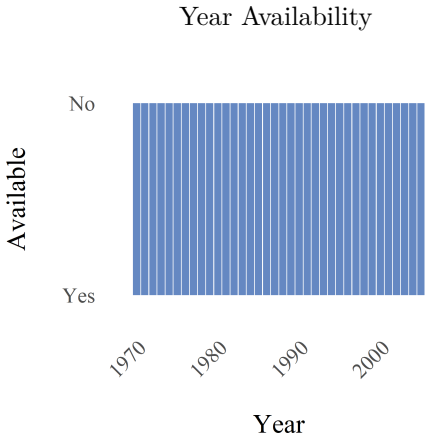
A limit value for NOx emissions in g/km, adjusted.

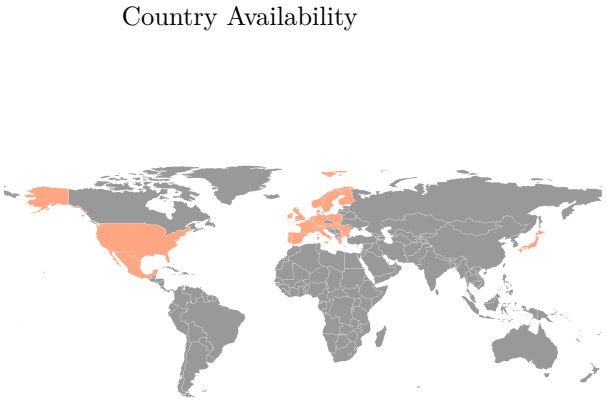




3.11.8 Change in passenger car emissions policy (epcc_care_ch2)

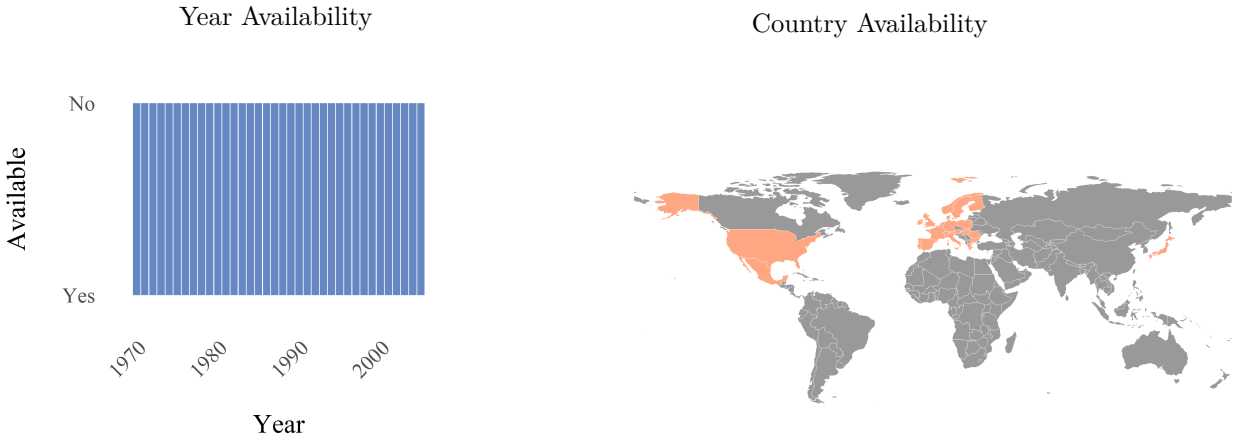
The variable measures whether there was a change in the policy for exhaust emissions from cars in the recorded year. This is a binary variable, where "1" is assigned to the year when there was a change in the policy, including its first introduction, and "0" is assigned to all other years.





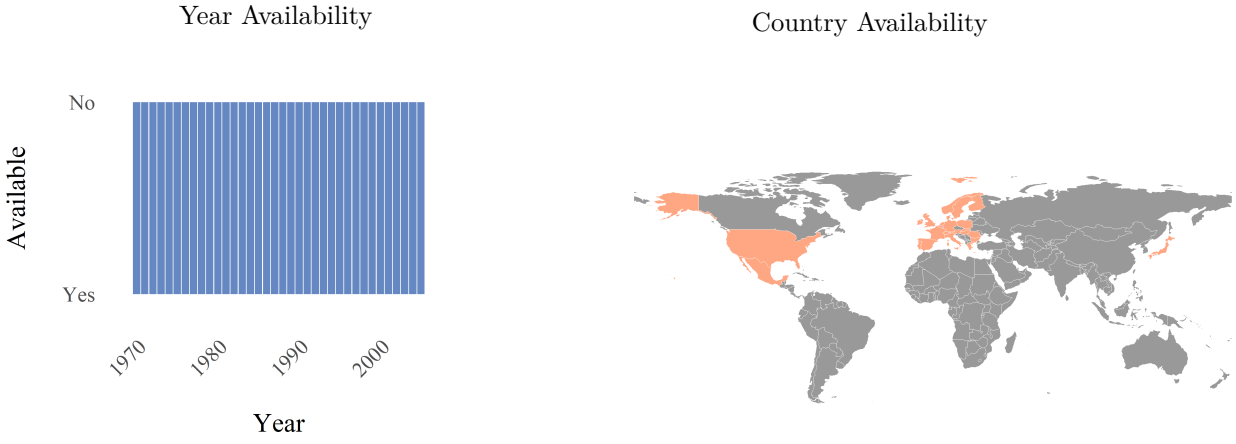
3.11.9 Passenger car emissions policy introduction (epcc_care_in2)

The variable measures the first introduction of the policy for exhaust emissions from cars. This is a binary variable, where "1" is assigned to the year when the policy was first introduced and "0" is assigned to all other years.



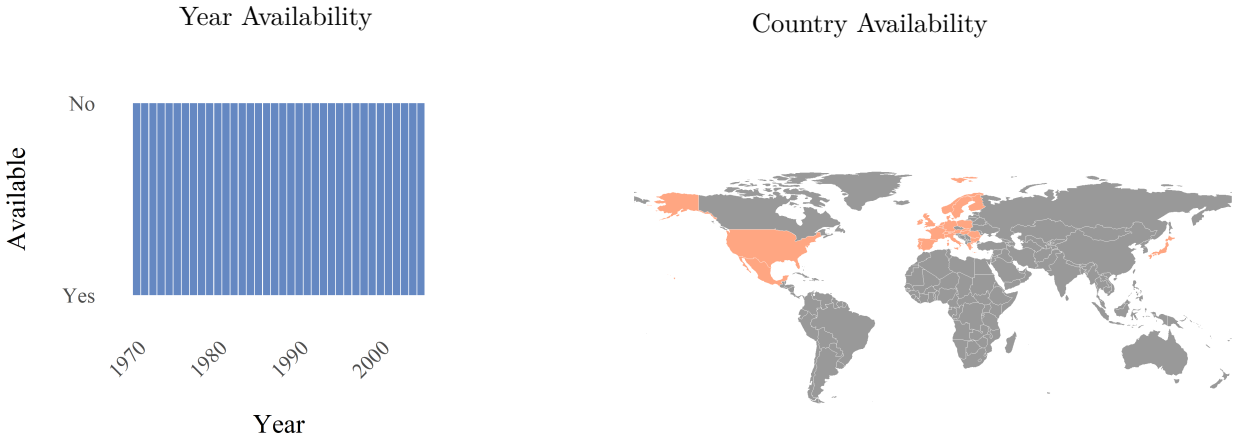
3.11.10 Sum of downward changes in all 17 standards (epcc_cd_dwsum)

Sum of downward changes in all 17 variables that measure standards/regulatory levels in the recorded year. Higher score, on average, corresponds to a decrease in policy standards.



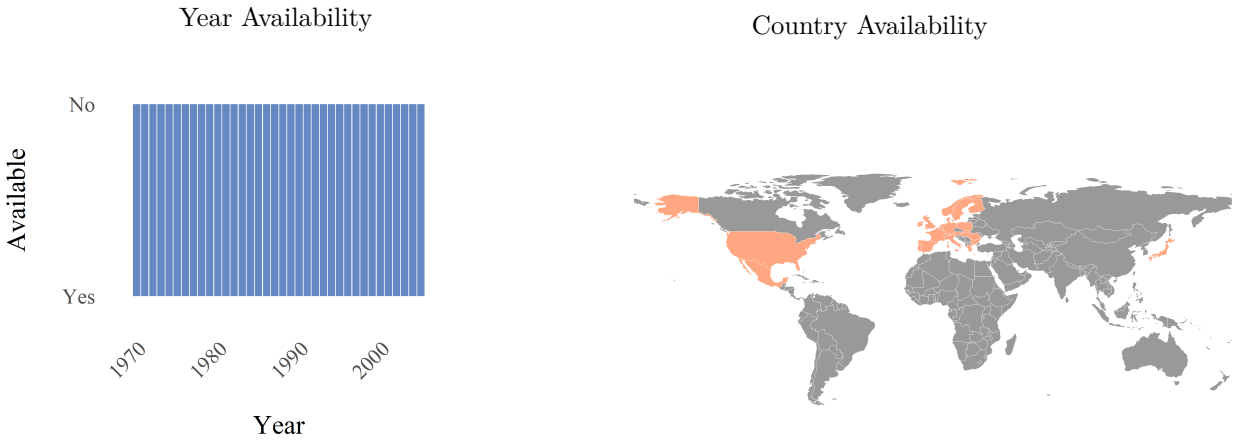
3.11.11 Sum of upward changes in all 17 standards (epcc_cd_upsum)

Sum of all upward changes in the 17 variables that measure standards/regulatory levels included in this dataset in the recorded year. Higher score corresponds to, on average, increased policy standards.



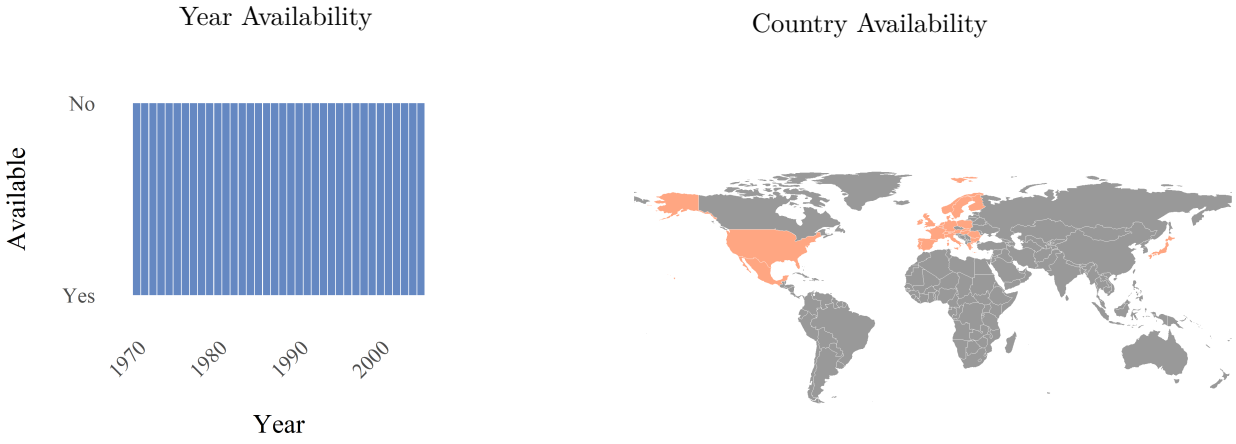
3.11.12 Sum of all changes in policy (epcc_ch2)

Sum of all changes in policies, including introductions, in the recorded year.



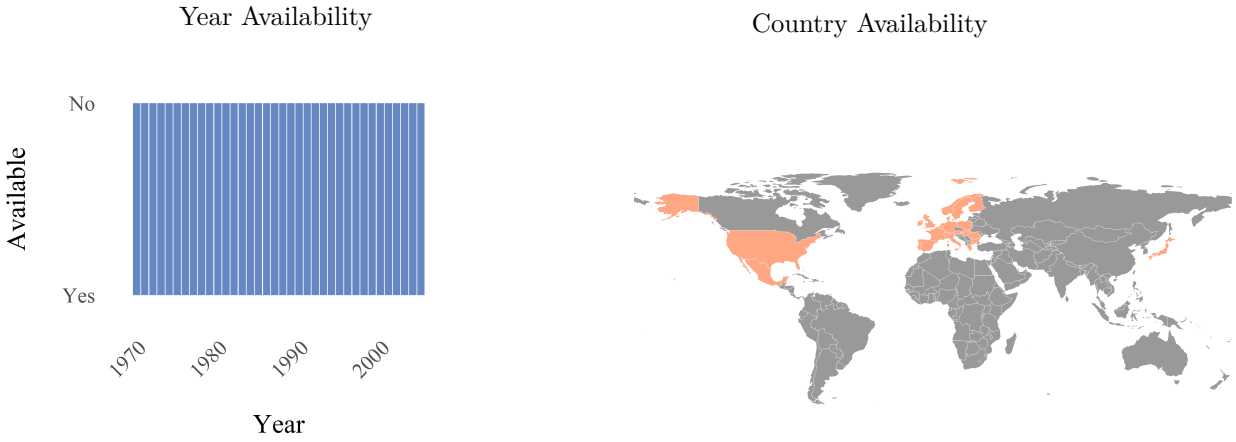
3.11.13 Cumulative sum of all policy-in-place items (epcc_ch_kum)

Cumulative sum of all Policy-in-Place variables. Higher score corresponds to a higher number of policies in place.



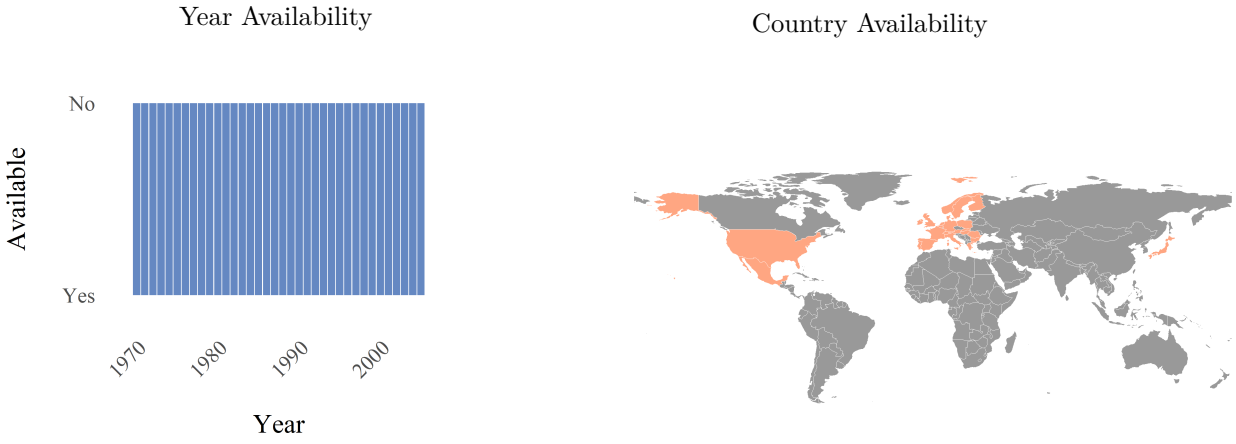
3.11.14 Change in contaminated sites policy (epcc_cont_ch2)

The variable measures whether there was a change in the policy for contaminated sites in the recorded year. This is a binary variable, where "1" is assigned to the year when there was a change in the policy, including its first introduction, and "0" is assigned to all other years.



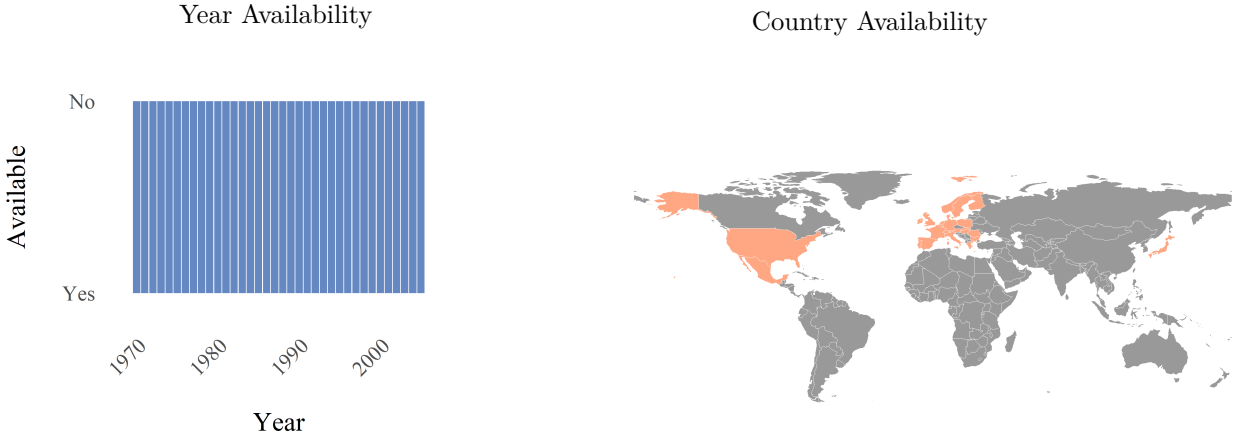
3.11.15 Contaminated sites policy introduction (epcc_cont_in2)

The variable measures the first introduction of the policy for contaminated sites. This is a binary variable, where "1" is assigned to the year when the policy was first introduced and "0" is assigned to all other years.



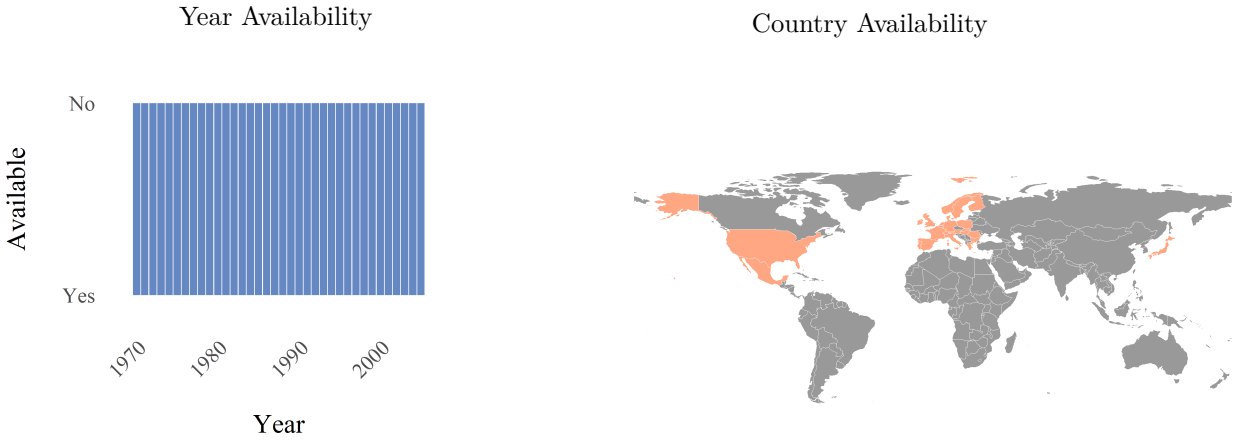
3.11.16 Change in recycling of construction waste policy (epcc_cowa_ch2)

The variable measures whether there was a change in the policy for recycling construction waste in the recorded year. This is a binary variable, where "1" is assigned to the year when there was a change in the policy, including its first introduction, and "0" is assigned to all other years.



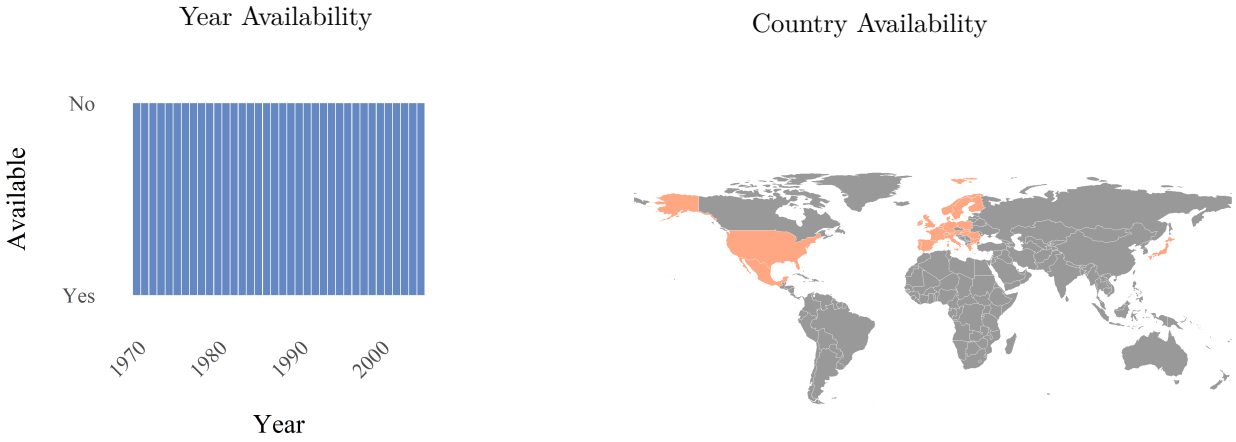
3.11.17 Recycling of construction waste policy introduction (epcc_cowa_in2)

The variable measures the first introduction of the policy for recycling of construction waste. This is a binary variable, where "1" is assigned to the year when the policy was first introduced and "0" is assigned to all other years.



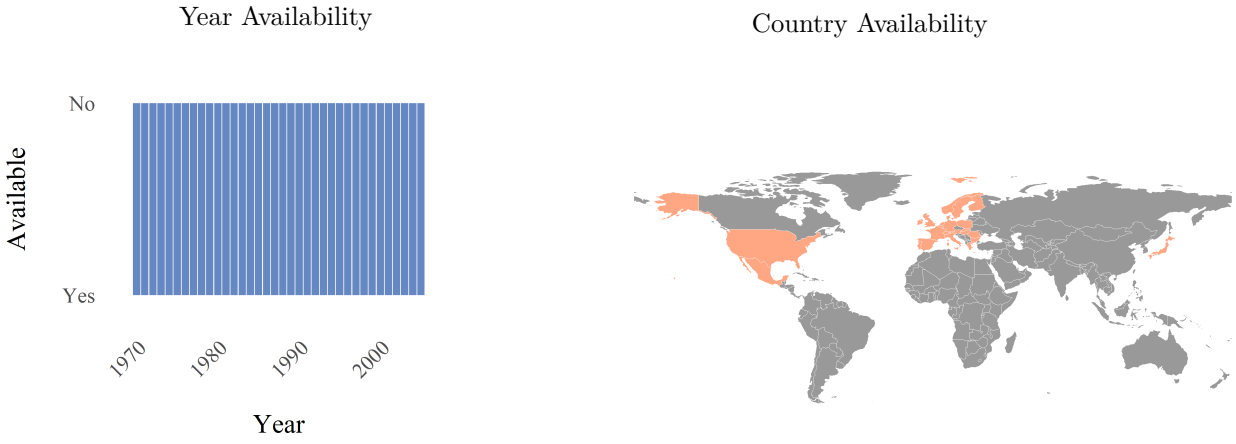
3.11.18 Change in detergents regulation policy (epcc_dete_ch2)

The variable measures whether there was a change in the policy for hazardous substances in detergents in the recorded year. This is a binary variable, where "1" is assigned to the year when there was a change in the policy, including its first introduction, and "0" is assigned to all other years.



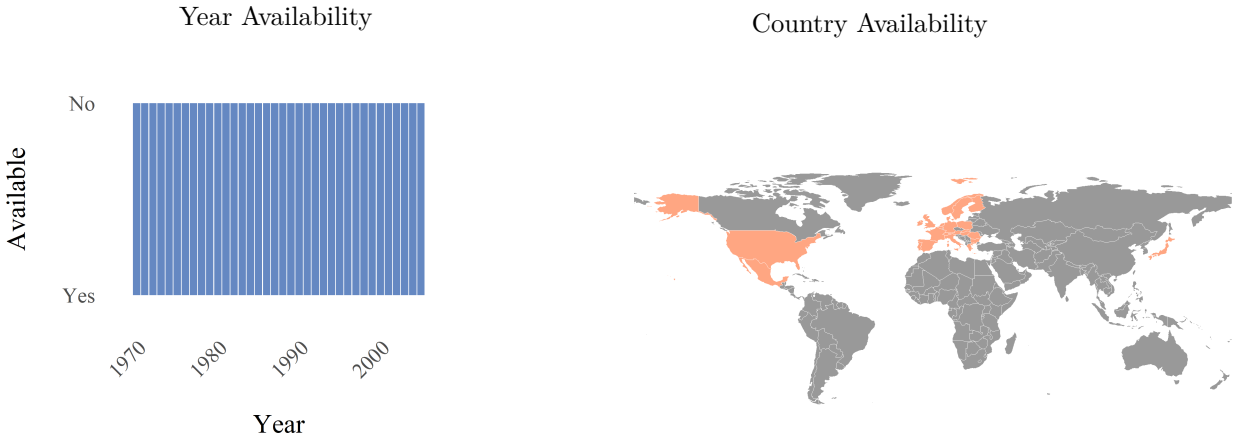
3.11.19 Detergents regulation policy introduction (epcc_dete_in2)

The variable measures the first introduction of the policy for hazardous substances in detergents. This is a binary variable, where "1" is assigned to the year when the policy was first introduced and "0" is assigned to all other years.



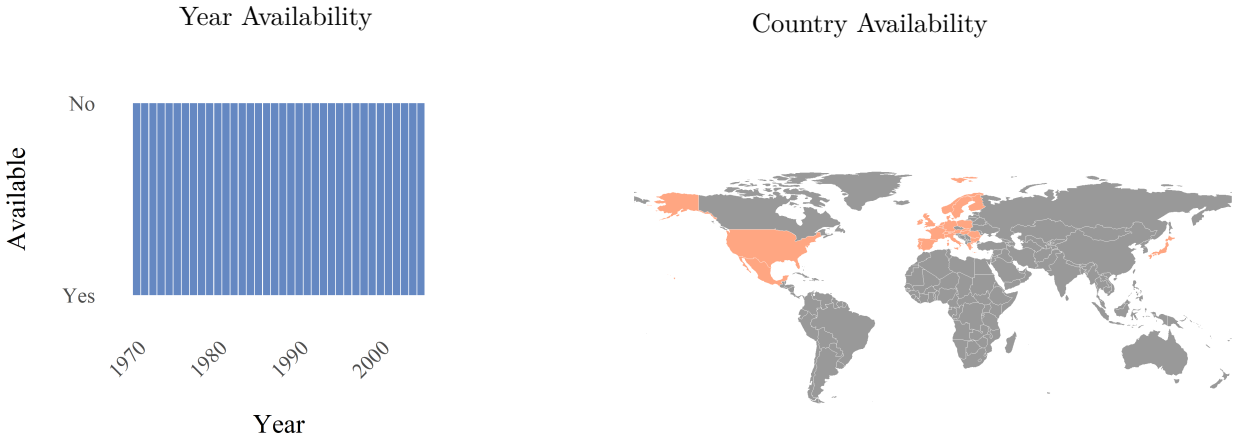
3.11.20 Change in ecolabel policy (epcc_ecol_ch2)

The variable measures whether there was a change in the policy for eco-labelling in the recorded year. This is a binary variable, where "1" is assigned to the year when there was a change in the policy, including its first introduction, and "0" is assigned to all other years.



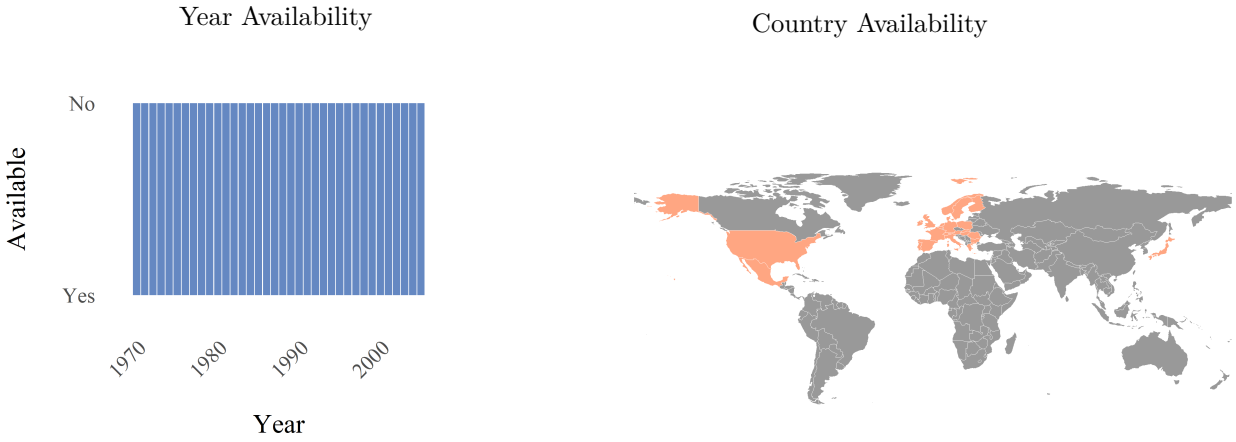
3.11.21 Ecolabel policy introduction (epcc_ecol_in2)

The variable measures the first introduction of the policy for eco-labeling. This is a binary variable, where "1" is assigned to the year when the policy was first introduced and "0" is assigned to all other years.



3.11.22 Change in environmental impact assessment (epcc_eias_ch2)

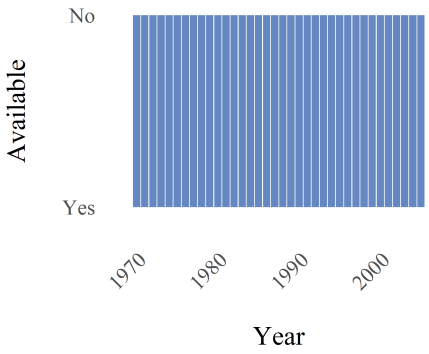
The variable measures whether there was a change in the policy for environmental impact assessment in the recorded year. This is a binary variable, where "1" is assigned to the year when there was a change in the policy, including its first introduction, and "0" is assigned to all other years.



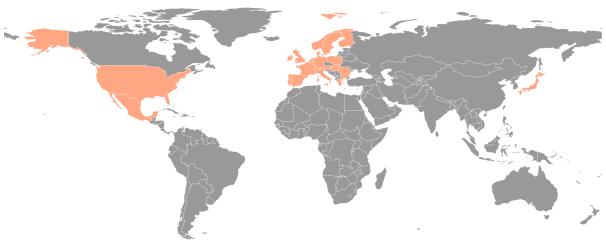
3.11.23 Environmental impact assessment introduction (epcc_eias_in2)

The variable measures the first introduction of the policy for environmental impact assessment. This is a binary variable, where "1" is assigned to the year when the policy was first introduced and "0" is assigned to all other years.

Year Availability



Country Availability

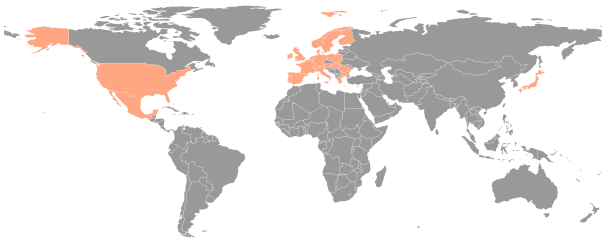


3.11.24 Change in energy efficiency of refrigerators policy (epcc_enef_ch2)

The variable measures whether there was a change in the policy for the energy efficiency of refrigerators in the recorded year. This is a binary variable, where "1" is assigned to the year when there was a change in the policy, including its first introduction, and "0" is assigned to all other years.

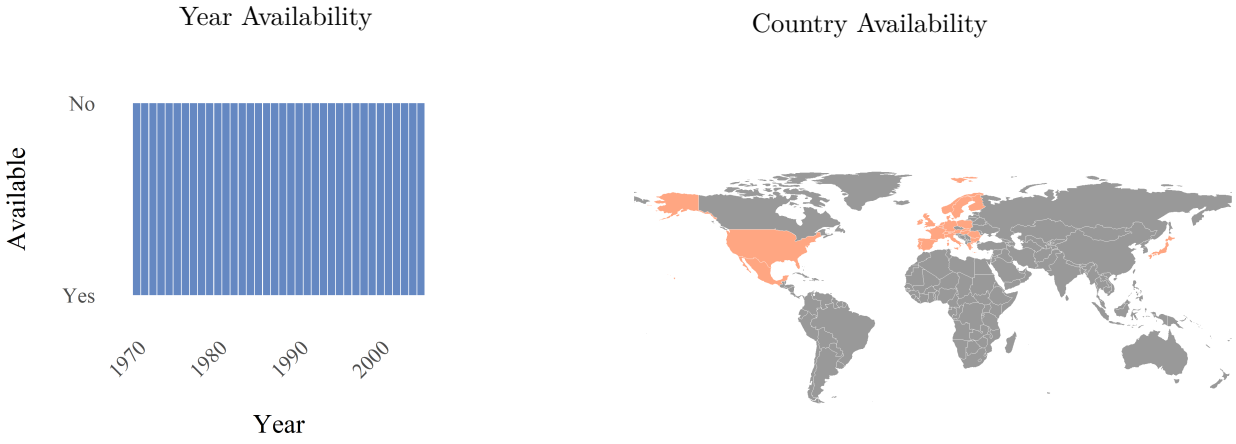
Year Availability

Country Availability



3.11.25 Energy efficiency of refrigerators policy introduction (epcc_enef_in2)

The variable measures the first introduction of the policy for energy efficiency of refrigerators. This is a binary variable, where "1" is assigned to the year when the policy was first introduced and "0" is assigned to all other years.

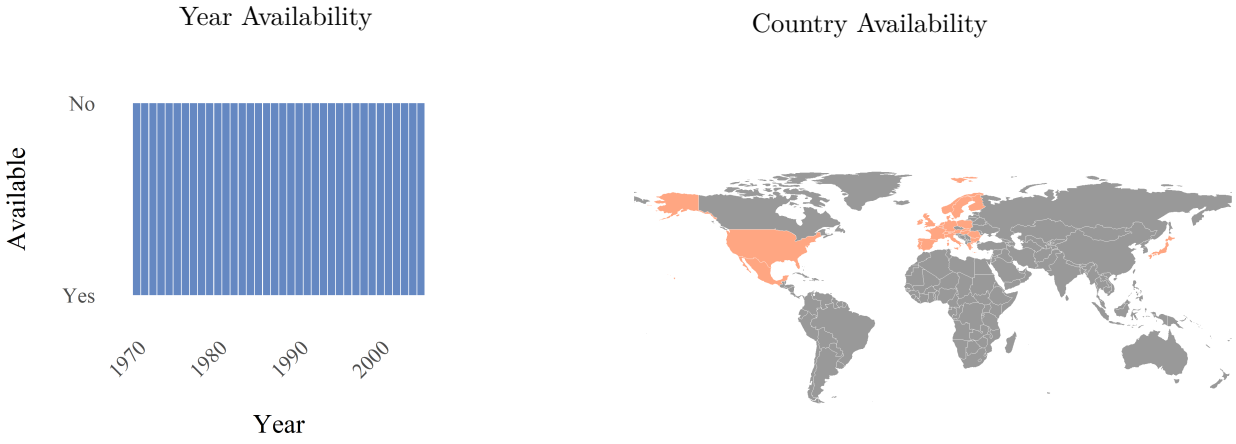


3.11.26 Glass recycling target in regulations, % (epcc_glas2_s)

Glass reuse/recycling target in percent of total waste generated.

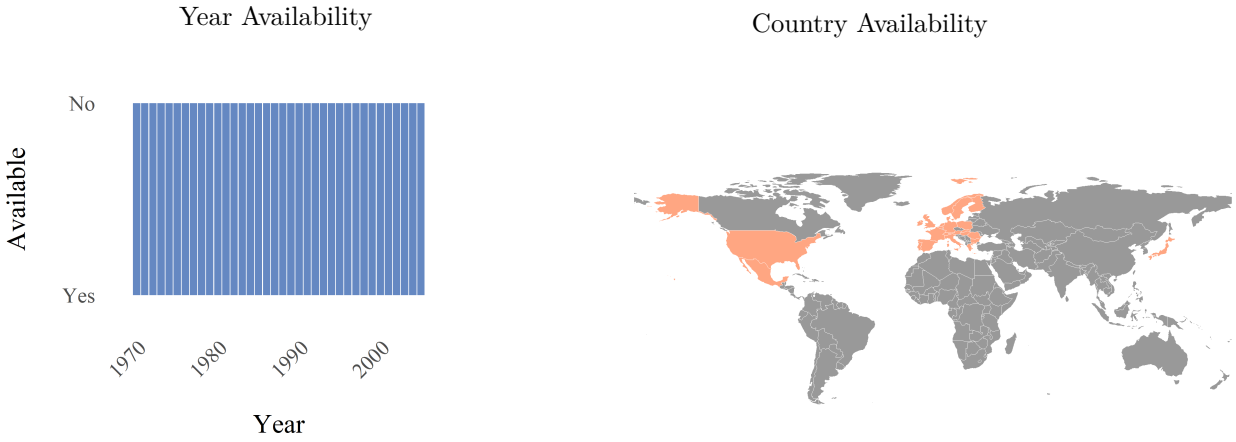
3.11.27 Change in glass recycling target in regulation (epcc_glas_ch2)

The variable measures whether there was a change in the policy for glass reuse/recycling target in the recorded year. This is a binary variable, where "1" is assigned to the year when there was a change in the policy, including its first introduction, and "0" is assigned to all other years.



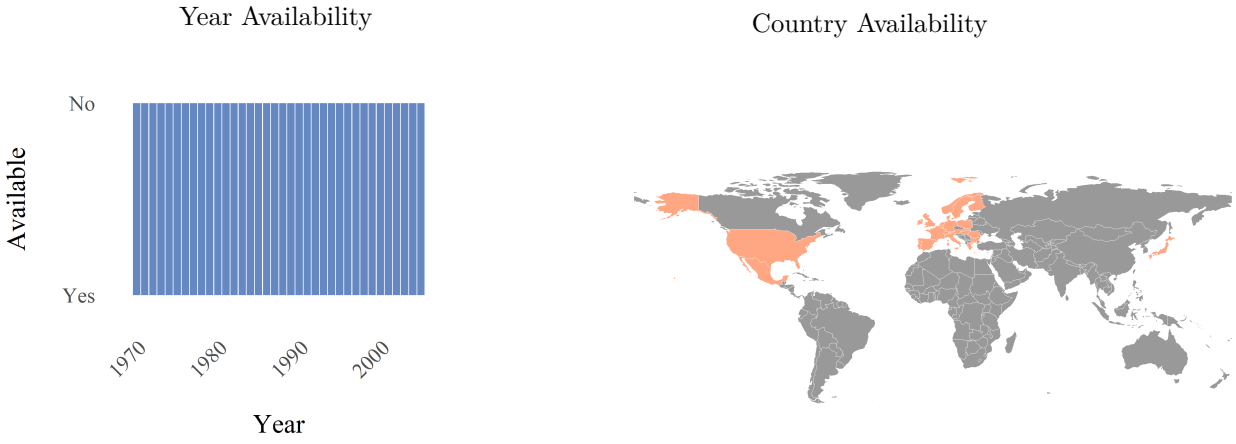
3.11.28 Glass recycling target in regulation introduction (epcc_glas_in2)

The variable measures the first introduction of the policy for glass reuse/recycling target. This is a binary variable, where "1" is assigned to the year when the policy was first introduced and "0" is assigned to all other years.



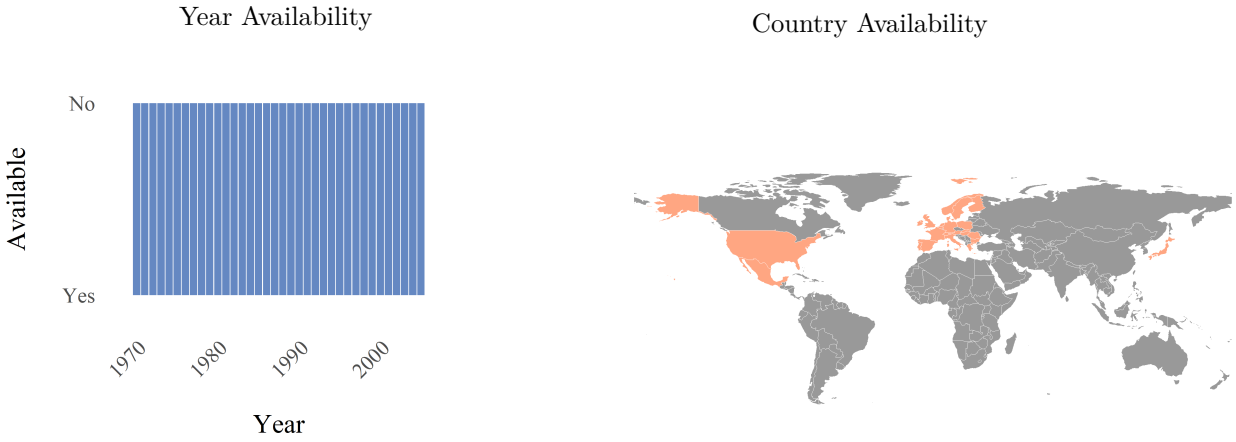
3.11.29 Sum of first policy introductions (epcc_intro_kum)

Sum of all variables measuring the first introduction of a policy. Higher number corresponds to a higher number of policies being adopted in the recorded year.



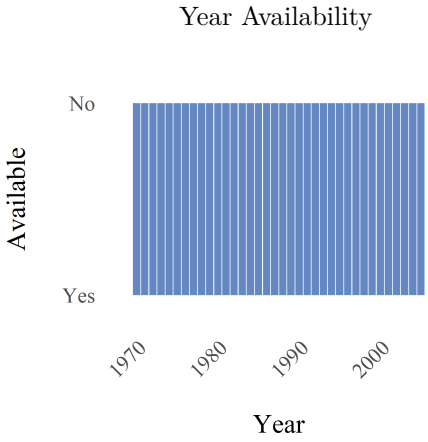
3.11.30 Change in landfill target in regulations (epcc_land_ch2)

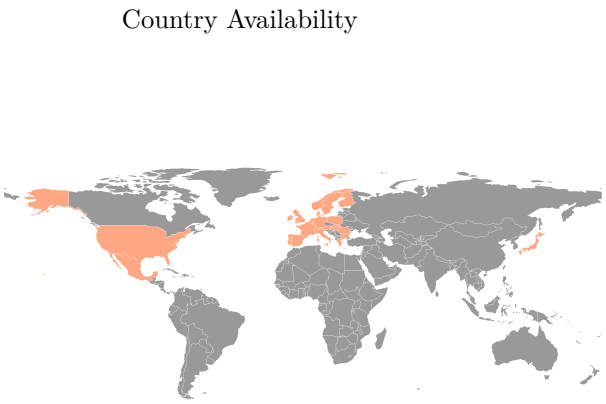
The variable measures whether there was a change in the policy for waste landfill target in the recorded year. This is a binary variable, where "1" is assigned to the year when there was a change in the policy, including its first introduction, and "0" is assigned to all other years.



3.11.31 Landfill target in regulations introduction (epcc_lanr_in2)

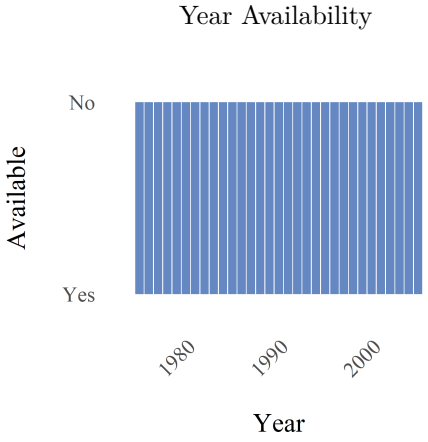
The variable measures the first introduction of the policy for waste landfill target. This is a binary variable, where "1" is assigned to the year when the policy was first introduced and "0" is assigned to all other years.

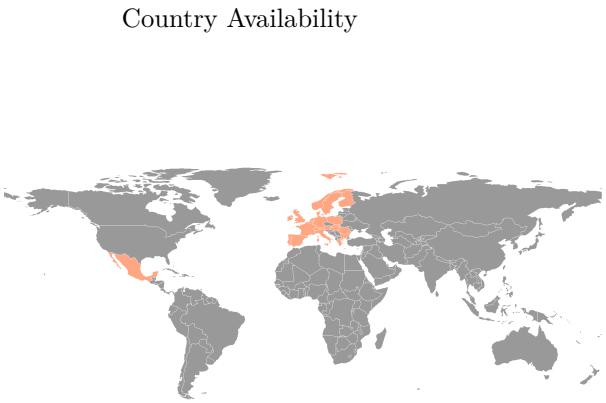




3.11.32 Large combustion plants regulatory level DUST (epcc_lcp_dust)

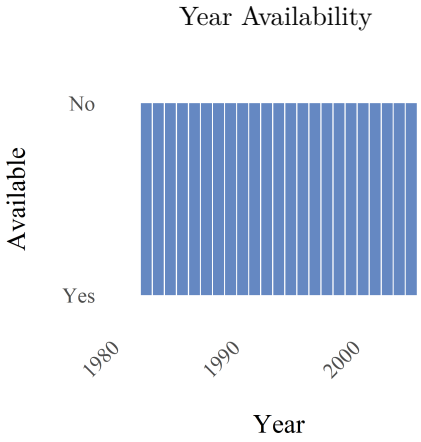
A limit value for dust from large combustion plants in mg/m3.

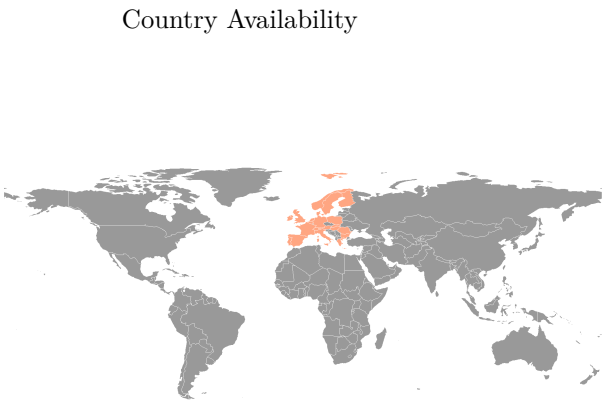




3.11.33 Large combustion plants regulatory level NOX (epcc_lcp_nox)

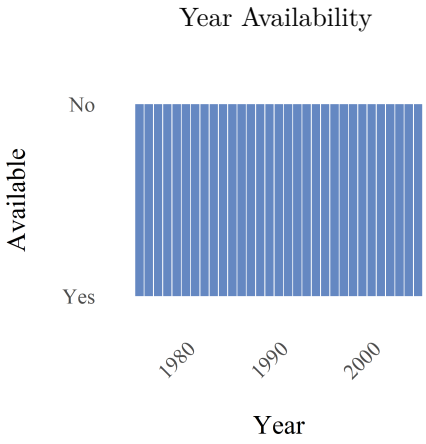
A limit value for NOx emissions from large combustion plants in mg/m3.

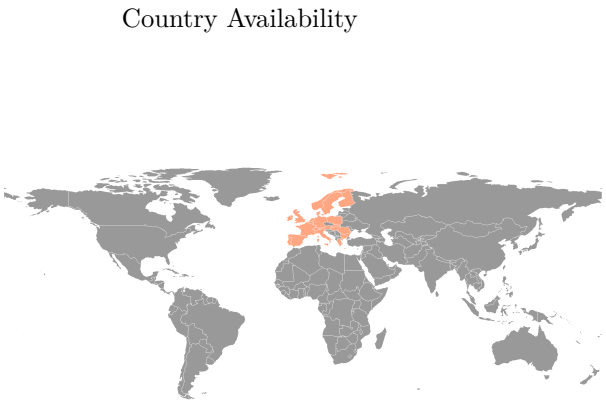




3.11.34 Large combustion plants regulatory level SO2 (epcc_lcp_so2)

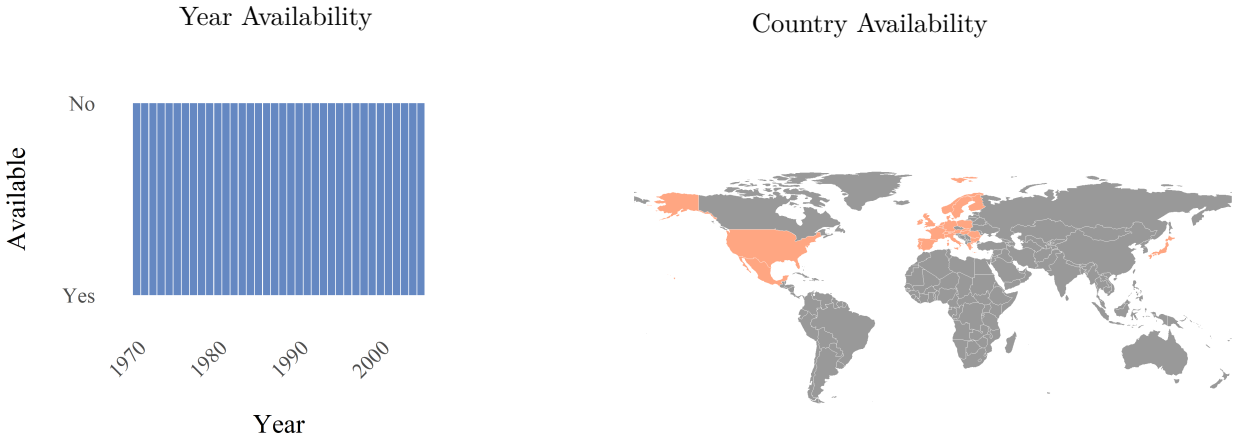
A limit value for SO2 emissions from large combustion plants in mg/m3.





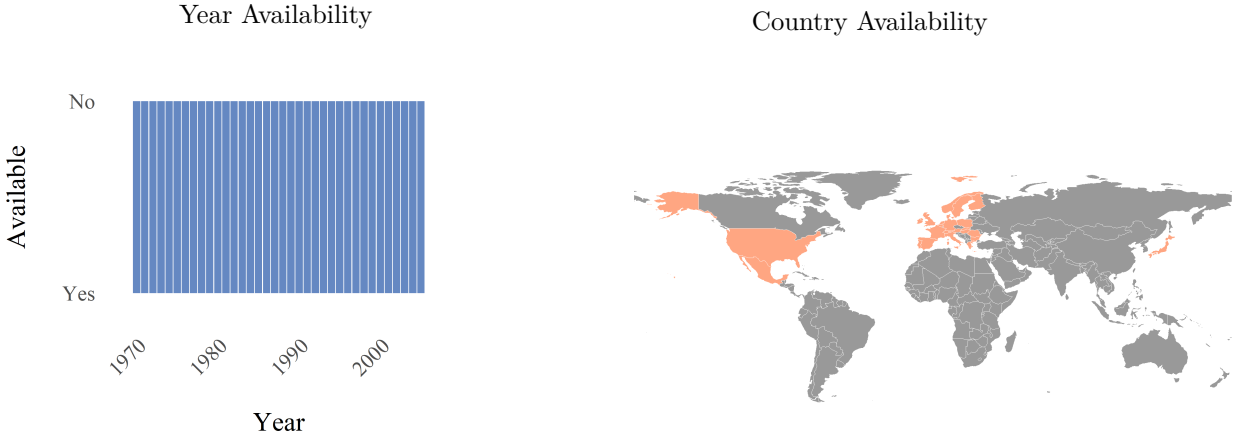
3.11.35 Change in large combustion plants policy (epcc_lcpt_ch2)

The variable measures whether there was a change in the policy for airborne emissions from large combustion plants in the recorded year. This is a binary variable, where "1" is assigned to the year when there was a change in the policy, including its first introduction, and "0" is assigned to all other years.



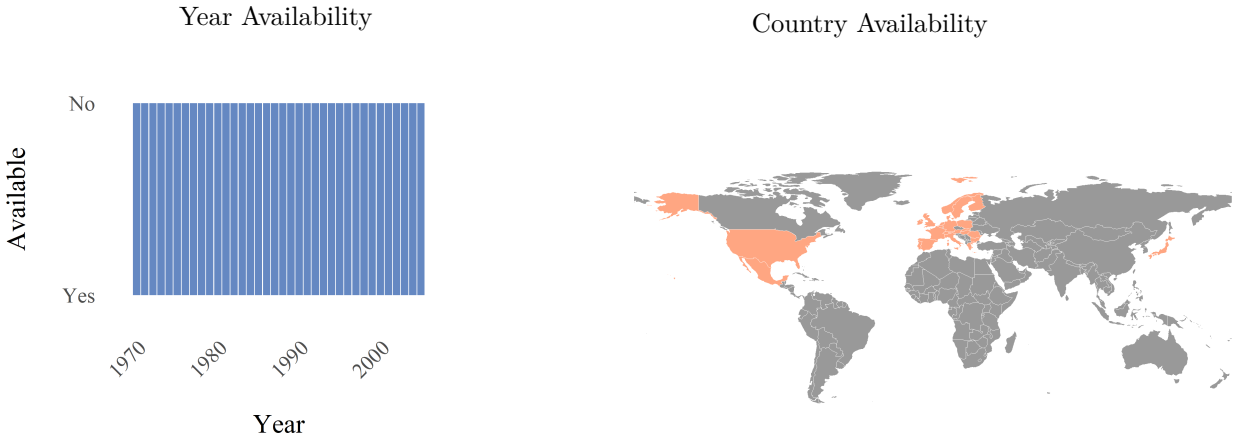
3.11.36 Large combustion plants policy introduction (epcc_lcpt_in2)

The variable measures the first introduction of the policy for airborne emissions from large combustion plants. This is a binary variable, where "1" is assigned to the year when the policy was first introduced and "0" is assigned to all other years.



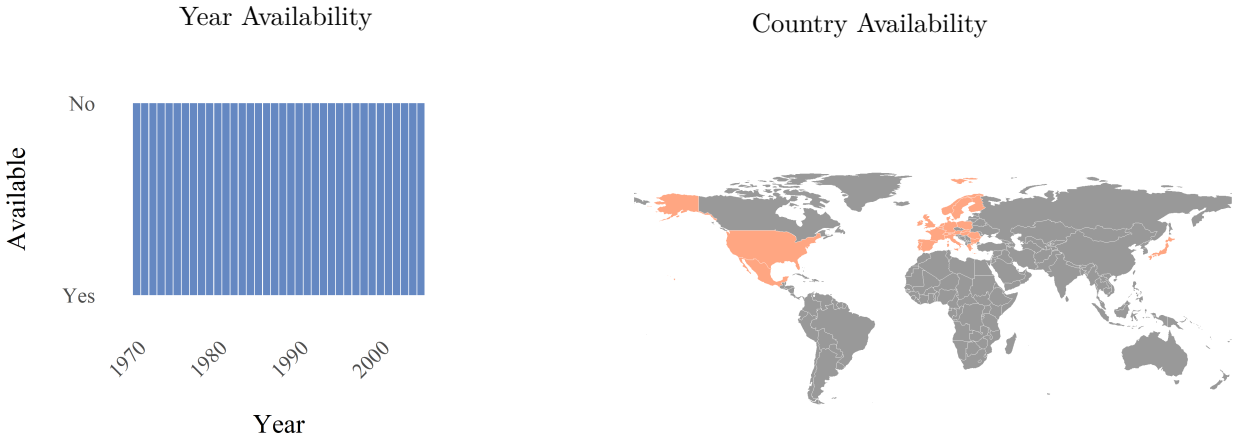
3.11.37 Change lead content in petrol policy (epcc_lead_ch2)

The variable measures whether there was a change in the policy for lead emissions from vehicles in the recorded year. This is a binary variable, where "1" is assigned to the year when there was a change in the policy, including its first introduction, and "0" is assigned to all other years.



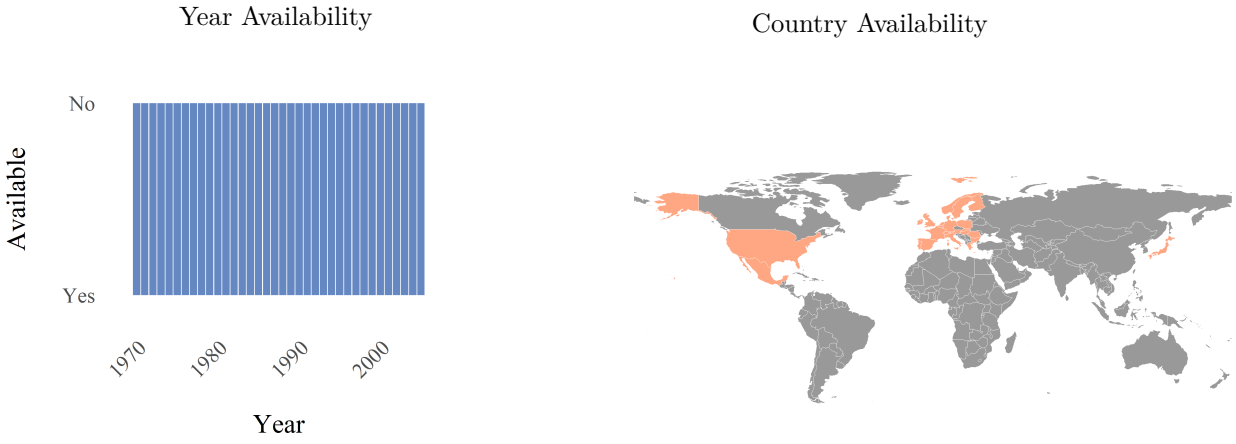
3.11.38 Lead content in petrol policy introduction (epcc_lead_in2)

The variable measures the first introduction of the policy for lead emissions from vehicles. This is a binary variable, where "1" is assigned to the year when the policy was first introduced and "0" is assigned to all other years.



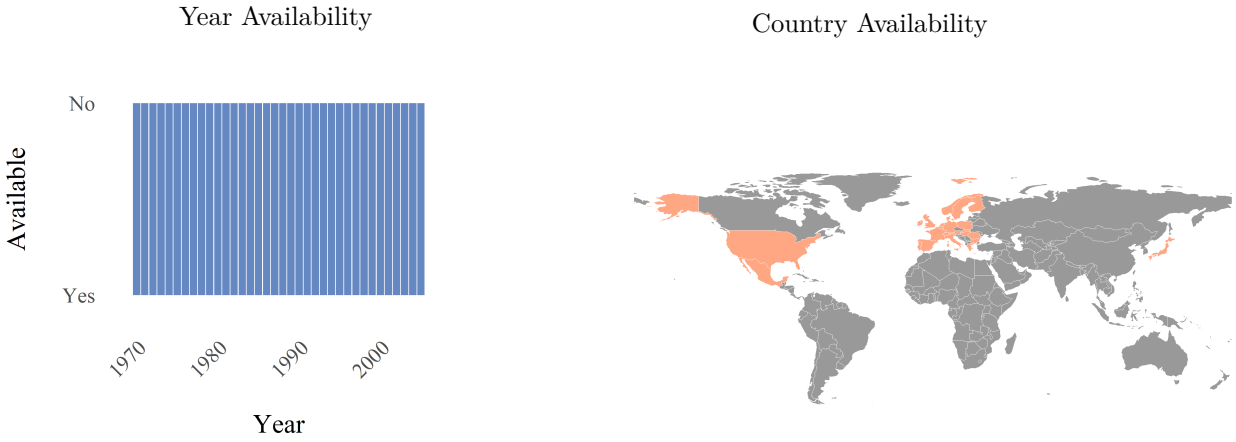
3.11.39 Lead content in petrol regulatory level (epcc_lead_s)

A limit value for lead content in petrol in g/l.



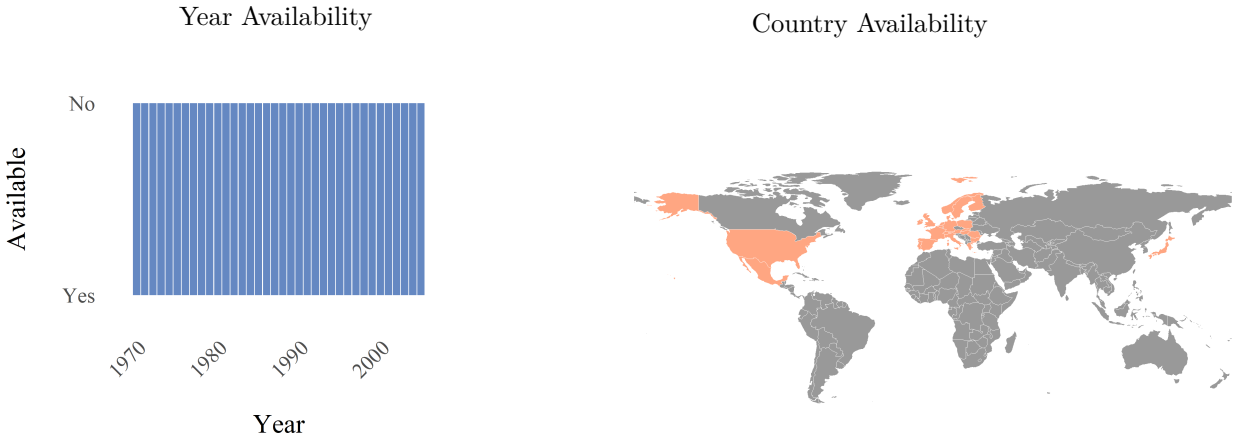
3.11.40 Change in motorway noise emissions policy (epcc_moto_ch2)

The variable measures whether there was a change in the policy for noise level around motorways in the recorded year. This is a binary variable, where "1" is assigned to the year when there was a change in the policy, including its first introduction, and "0" is assigned to all other years.



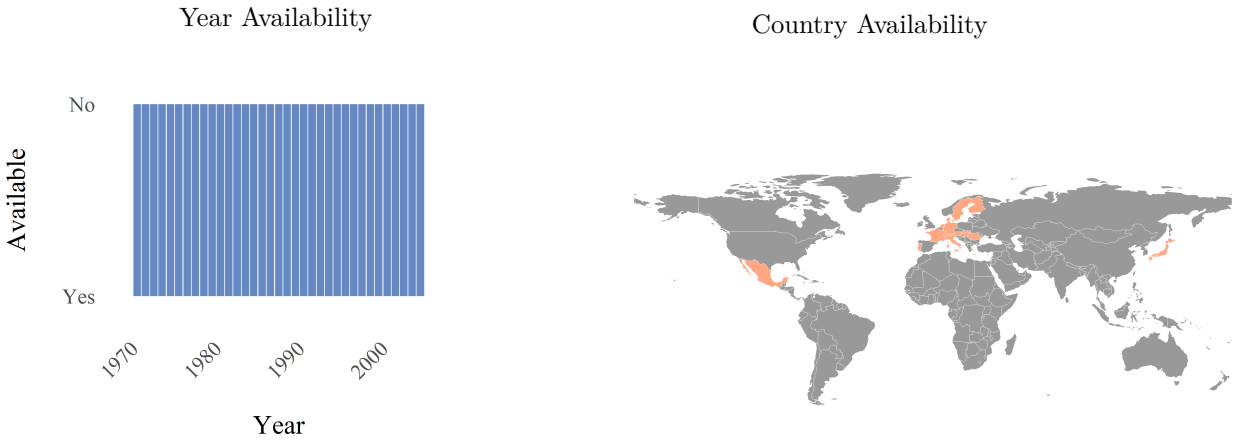
3.11.41 Motorway noise emissions policy introduction (epcc_moto_in2)

The variable measures the first introduction of the policy for noise level around motorways. This is a binary variable, where "1" is assigned to the year when the policy was first introduced and "0" is assigned to all other years.



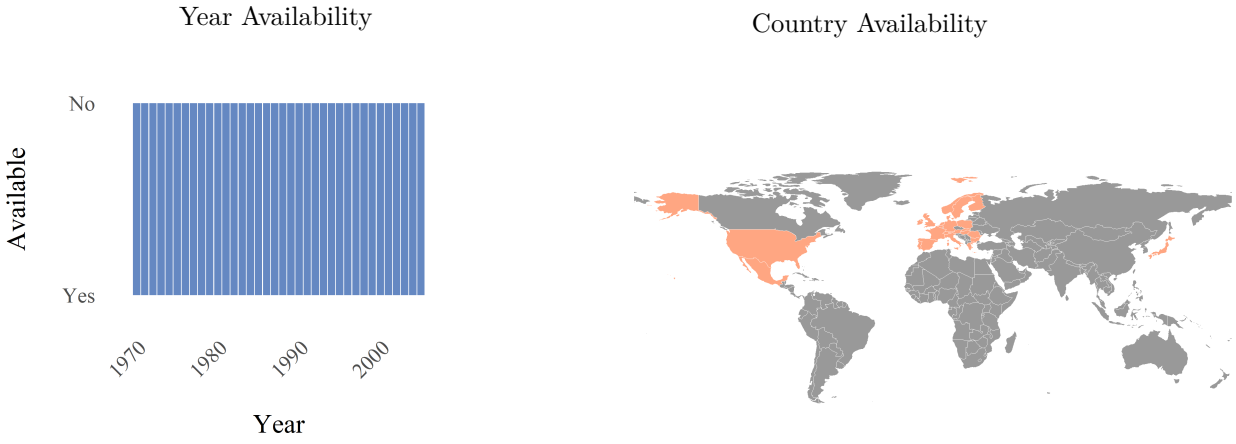
3.11.42 Motorway noise emissions regulatory level (epcc_moto_s)

Motorway noise emissions standard in decibel (dB (A)).



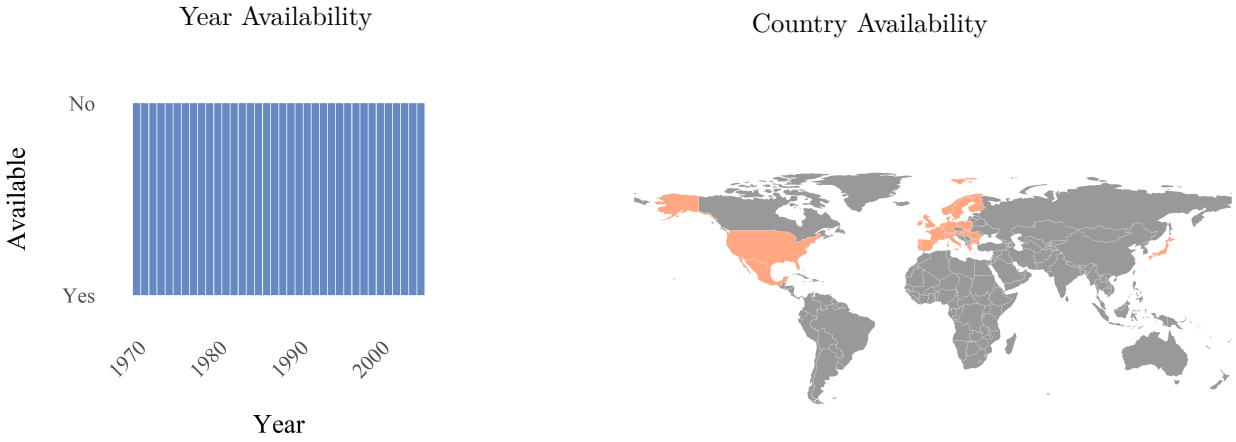
3.11.43 Change in noise emissions from lorries policy (epcc_nois_ch2)

The variable measures whether there was a change in the policy for noise emissions from lorries in the recorded year. This is a binary variable, where "1" is assigned to the year when there was a change in the policy, including its first introduction, and "0" is assigned to all other years.



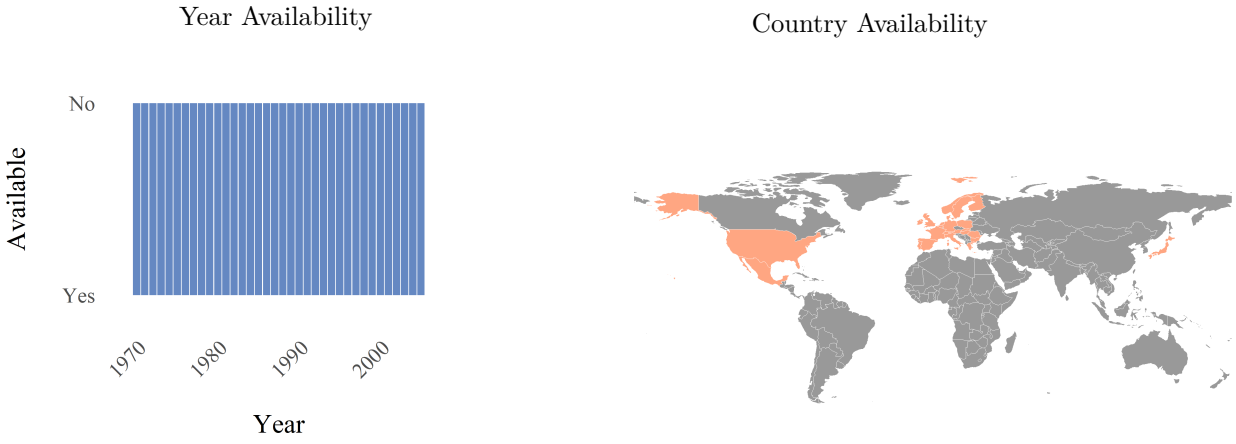
3.11.44 Noise emissions from lorries policy introduction (epcc_nois_in2)

The variable measures the first introduction of the policy for noise emissions from lorries. This is a binary variable, where "1" is assigned to the year when the policy was first introduced and "0" is assigned to all other years.



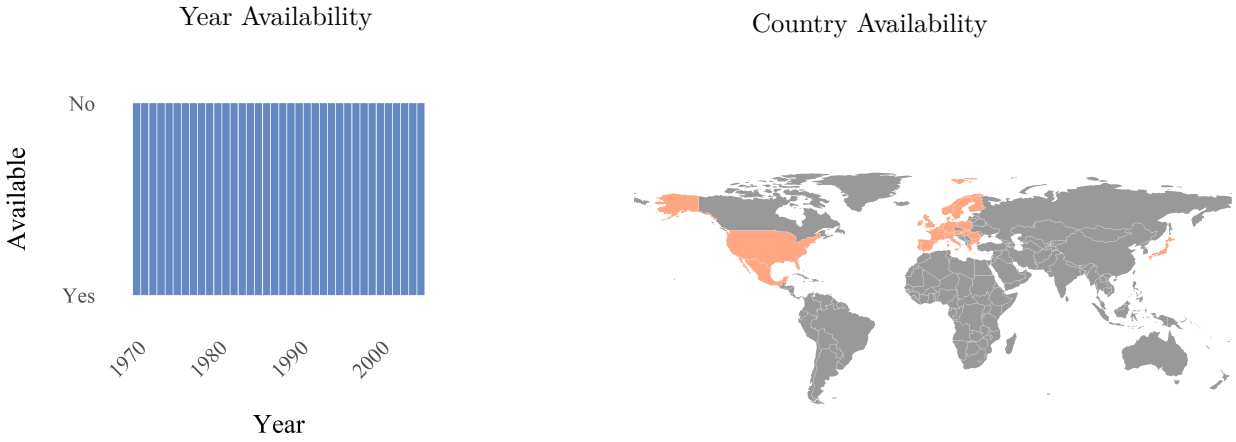
3.11.45 Noise emissions from lorries regulatory level (epcc_nois_s)

Noise emissions standard from lorries in decibel (dB(a)).



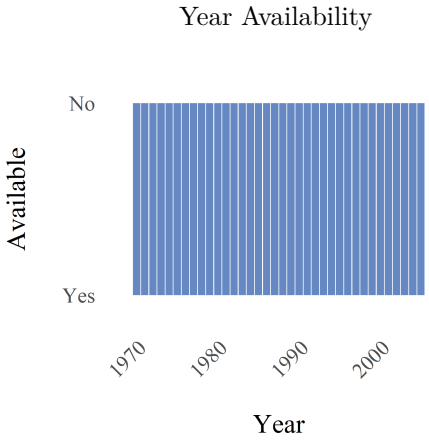
3.11.46 Change in packaging waste recycling target (epcc_pact_ch2)

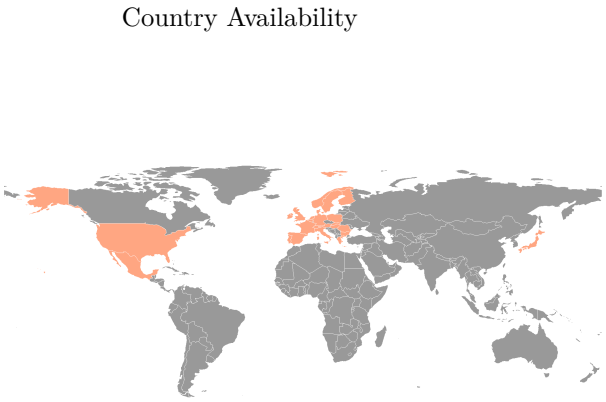
The variable measures whether there was a change in the policy for waste packaging target in the recorded year. This is a binary variable, where "1" is assigned to the year when there was a change in the policy, including its first introduction, and "0" is assigned to all other years.



3.11.47 Packaging waste recycling target introduction (epcc_pact_in2)

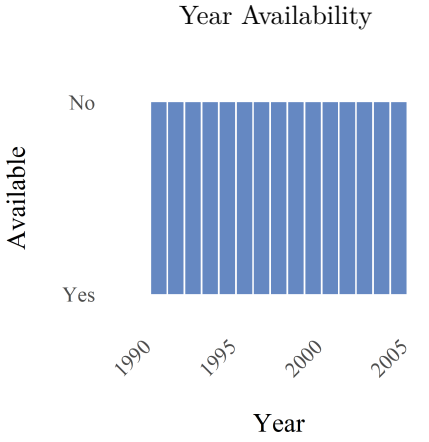
The variable measures the first introduction of the policy for waste packaging target. This is a binary variable, where "1" is assigned to the year when the policy was first introduced and "0" is assigned to all other years.

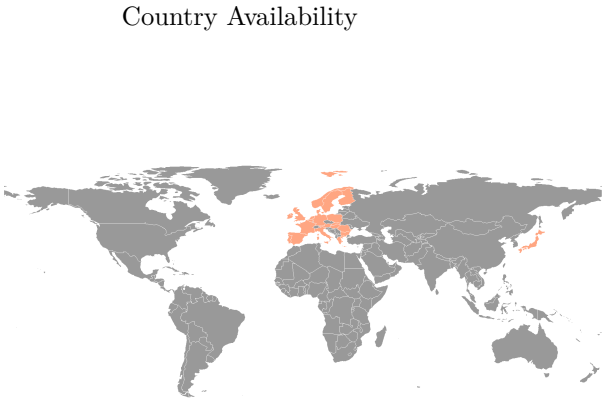




3.11.48 Paper recycling target in regulations, % (epcc_pape2_s)

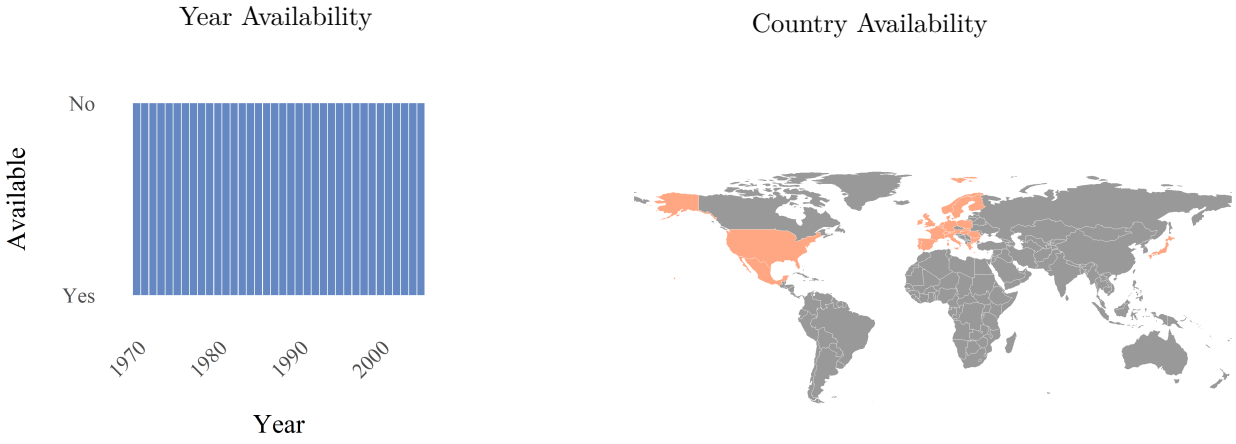
Waste paper reuse/recycling target in percent of waste generated.





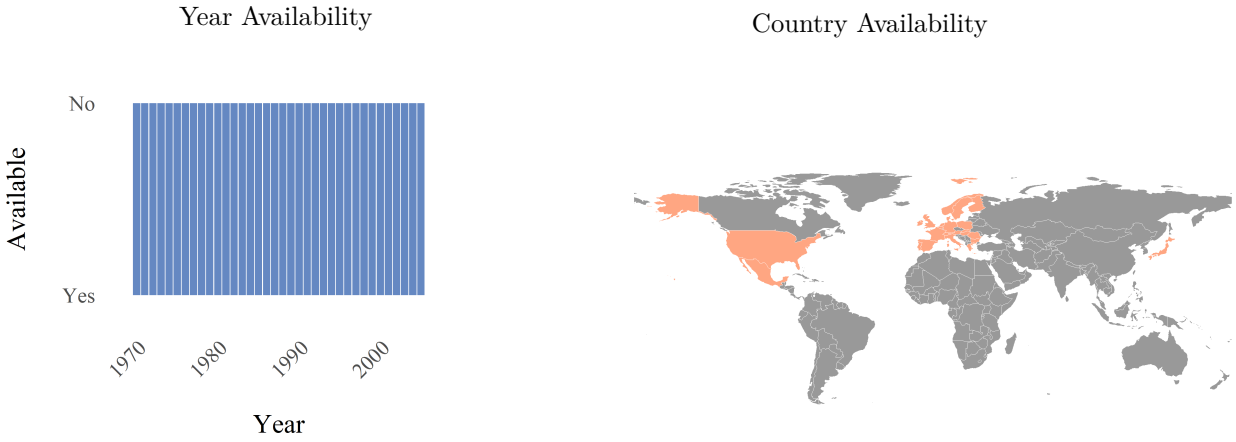
3.11.49 Change in paper recycling target in regulation (epcc_pape_ch2)

The variable measures whether there was a change in the policy for waste paper reuse/recycling target in the recorded year. This is a binary variable, where "1" is assigned to the year when there was a change in the policy, including its first introduction, and "0" is assigned to all other years.



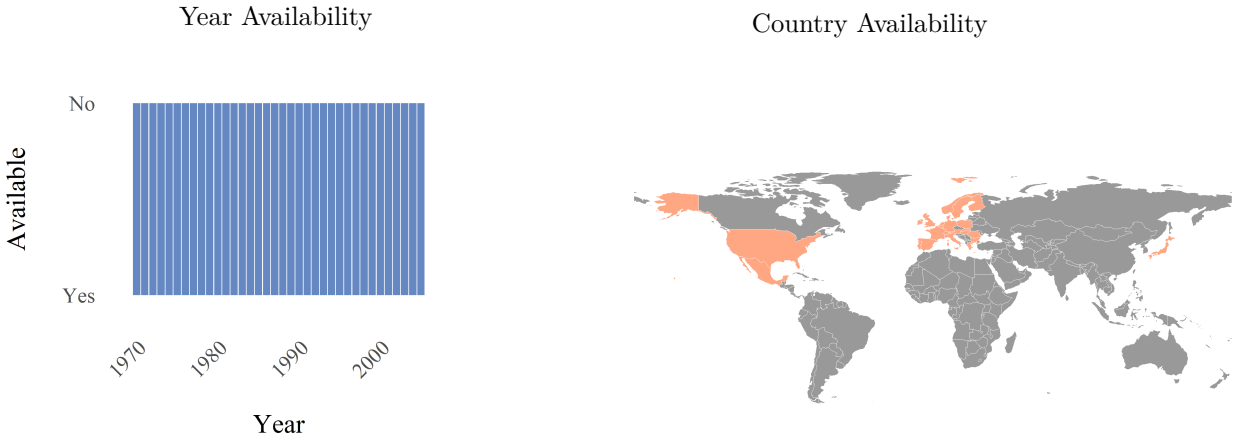
3.11.50 Paper recycling target in regulation introduction (epcc_pape_in2)

The variable measures the first introduction of the policy for waste paper reuse/recycling target. This is a binary variable, where "1" is assigned to the year when the policy was first introduced and "0" is assigned to all other years.



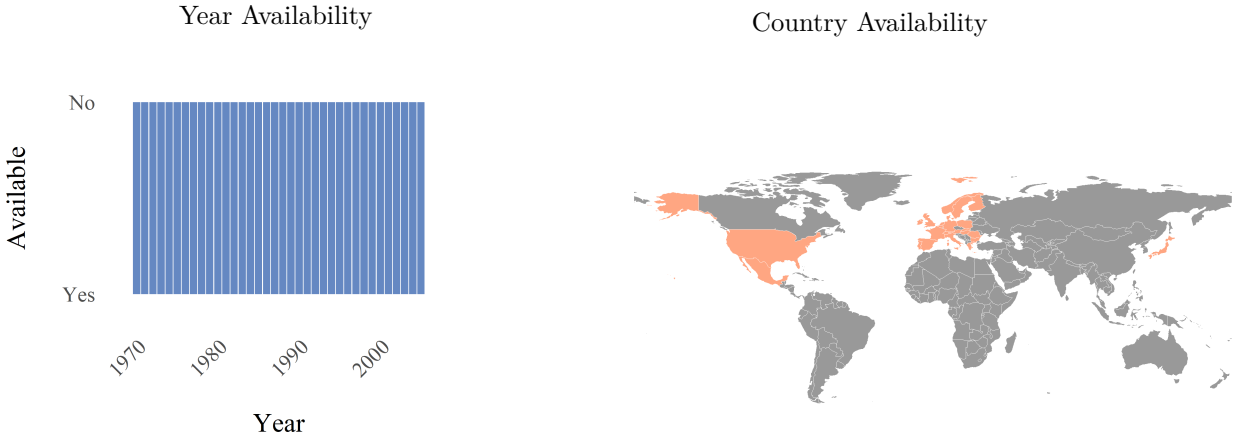
3.11.51 Change in soil policy (epcc_soil_ch2)

The variable measures whether there was a change in the soil policy in the recorded year. This is a binary variable, where "1" is assigned to the year when there was a change in the policy, including its first introduction, and "0" is assigned to all other years.



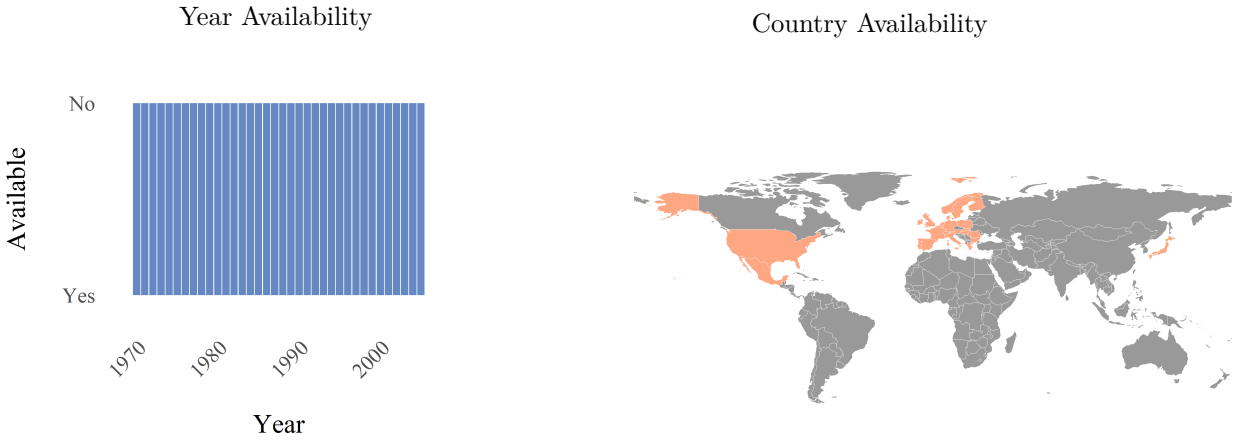
3.11.52 Soil policy introduction (epcc_soil_in2)

The variable measures the first introduction of the soil policy. This is a binary variable, where "1" is assigned to the year when the policy was first introduced and "0" is assigned to all other years.



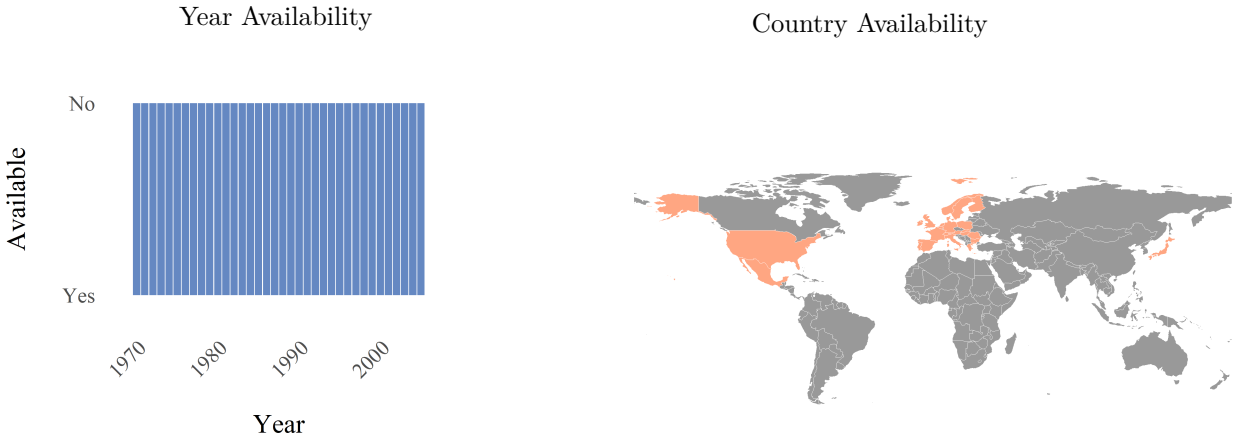
3.11.53 Change in sulphur content gas oil policy (epcc_sulp_ch2)

The variable measures whether there was a change in the policy for sulphur content in gas oil in the recorded year. This is a binary variable, where "1" is assigned to the year when there was a change in the policy, including its first introduction, and "0" is assigned to all other years.



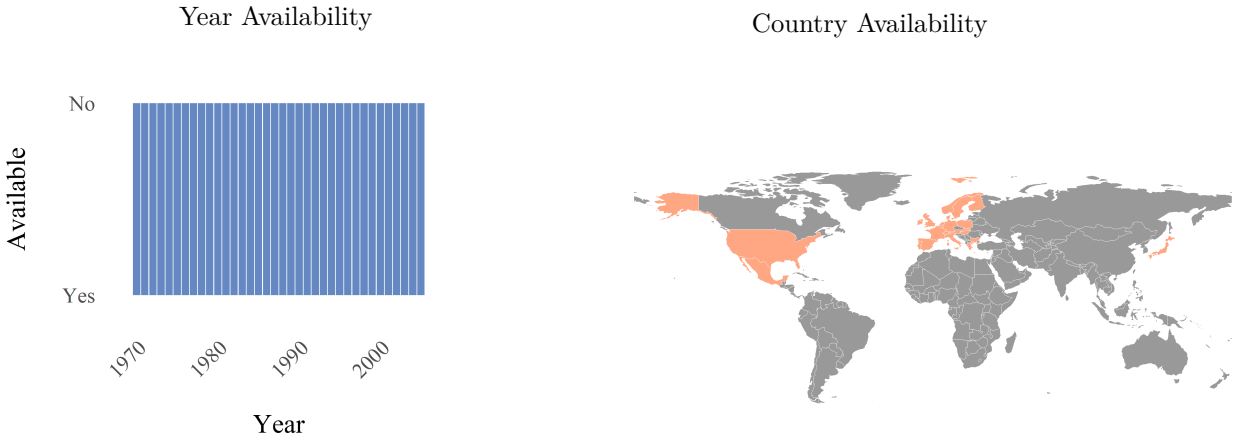
3.11.54 Sulphur content gas oil policy introduction (epcc_sulp_in2)

The variable measures the first introduction of the policy for sulphur content in gas oil. This is a binary variable, where "1" is assigned to the year when the policy was first introduced and "0" is assigned to all other years.



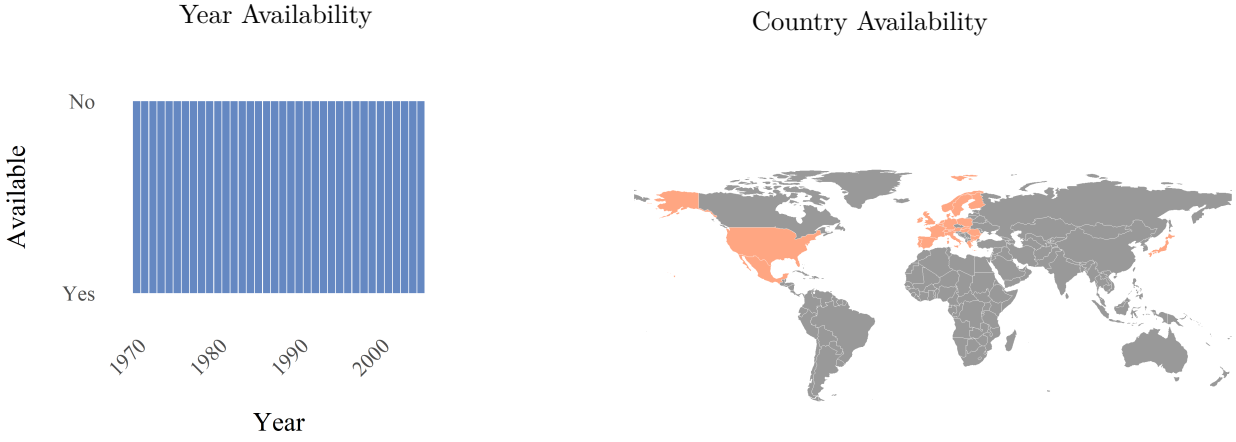
3.11.55 Sulphur content in gas oil regulatory level (epcc_sulp_s)

A limit value for sulphur content in gas oil, as % per weight.



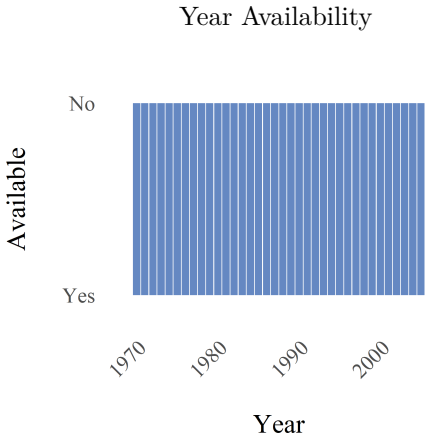
3.11.56 Change in National environmental policy/Sustainable development plan (epcc_susp_ch2)

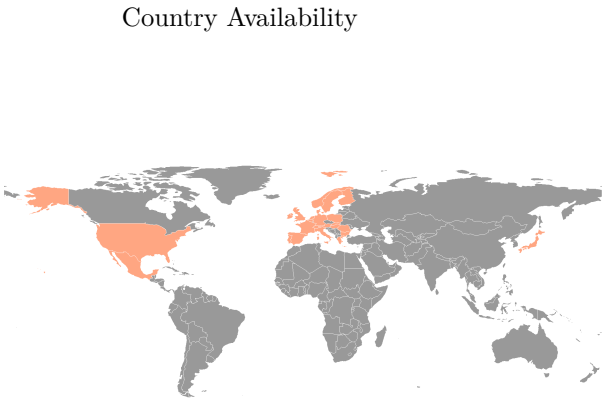
The variable measures whether there was a change in the policy for the national environmental policy or sustainable development plan in the recorded year. This is a binary variable, where "1" is assigned to the year when there was a change in the policy, including its first introduction, and "0" is assigned to all other years.



3.11.57 National environmental policy/Sustainable development plan introduction (epcc_susp_in2)

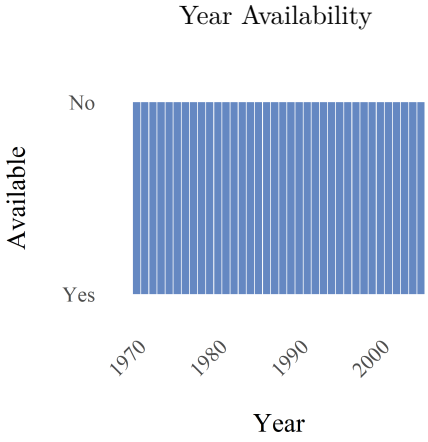
The variable expresses the first introduction of the policy for the national environmental policy or sustainable development plan. This is a binary variable, where "1" is assigned to the year when the policy was first introduced and "0" is assigned to all other years.

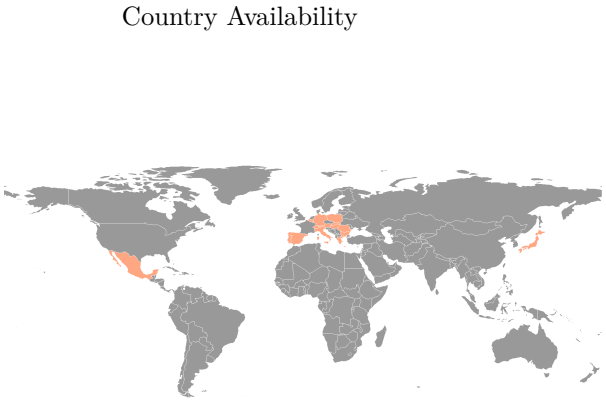




3.11.58 Water protection - BOD in industrial discharges (epcc_wabo_s)

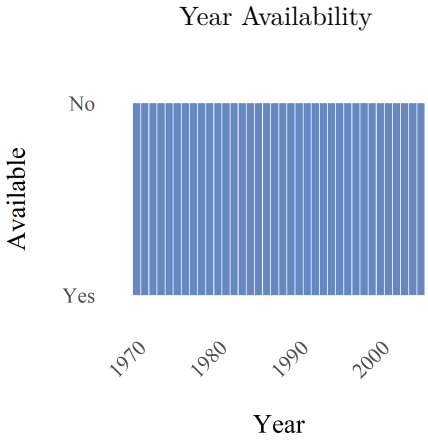
A limit value for biochemical oxygen demand (BOD) in industrial discharges in mg/l.

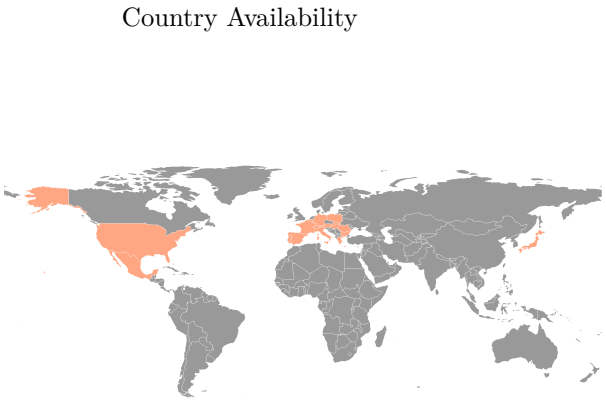




3.11.59 Water protection - Copper in industrial discharges (epcc_waco_s)

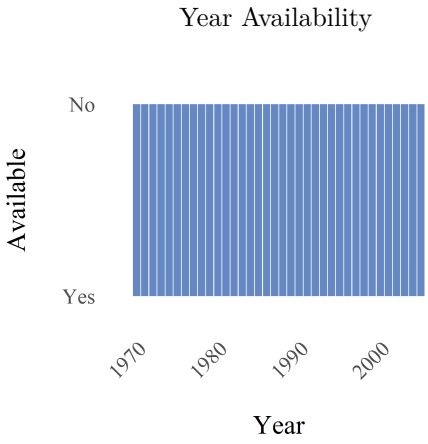
A limit value for Copper in industrial discharges in mg/l.

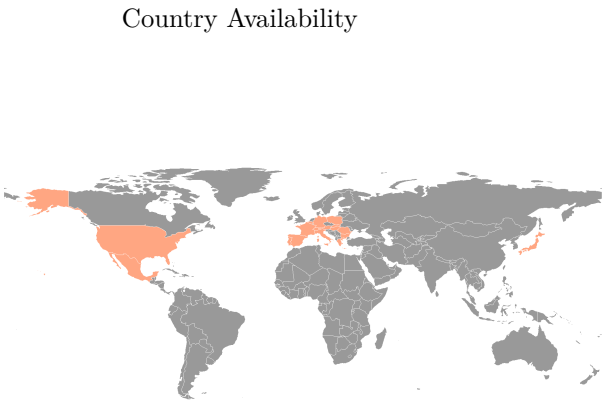




3.11.60 Water protection - Chromium in industrial discharges (epcc_wacr_s)

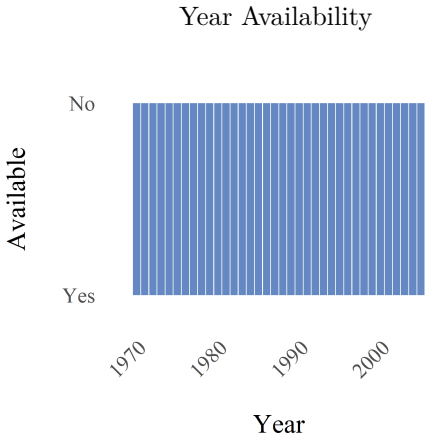
A limit value for Chromium in industrial discharges in mg/l.

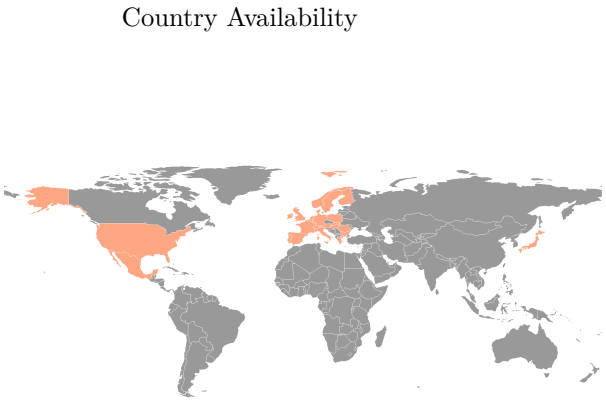




3.11.61 Change in efficient use of water in industry policy (epcc_waef_ch2)

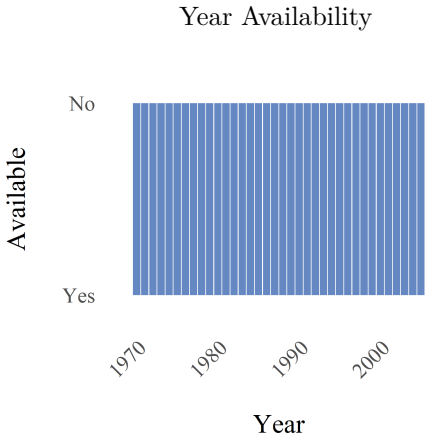
The variable measures whether there was a change in the policy for efficient use of the water industry in the recorded year. This is a binary variable, where "1" is assigned to the year when there was a change in the policy, including its first introduction, and "0" is assigned to all other years.

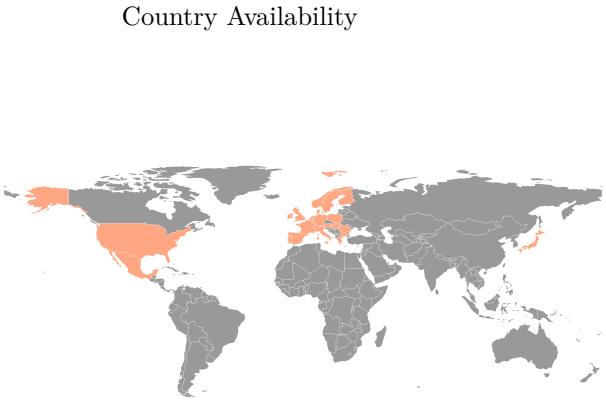




3.11.62 Efficient use of water in industry policy introduction (epcc_waef_in2)

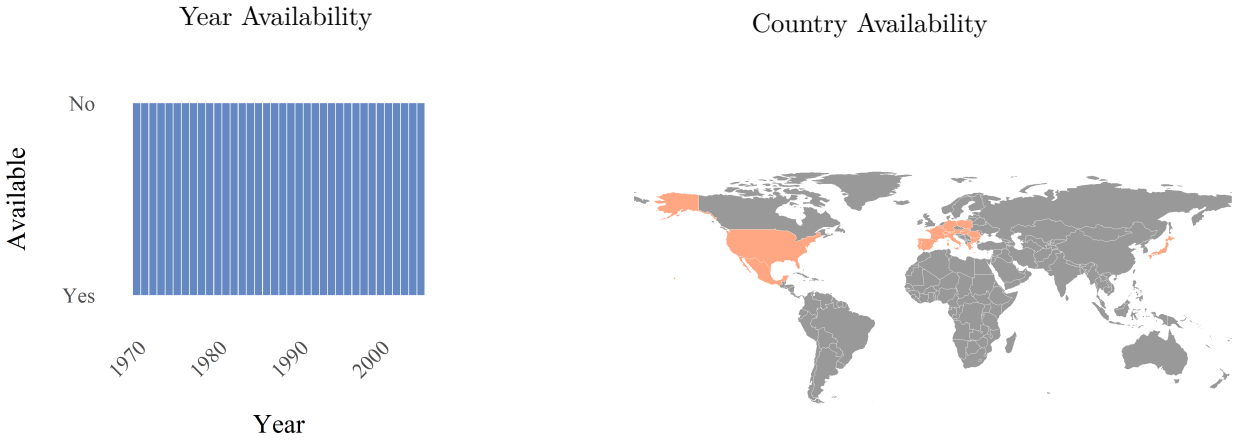
The variable measures the first introduction of the policy for efficient use of the water industry. This is a binary variable, where "1" is assigned to the year when the policy was first introduced and "0" is assigned to all other years.





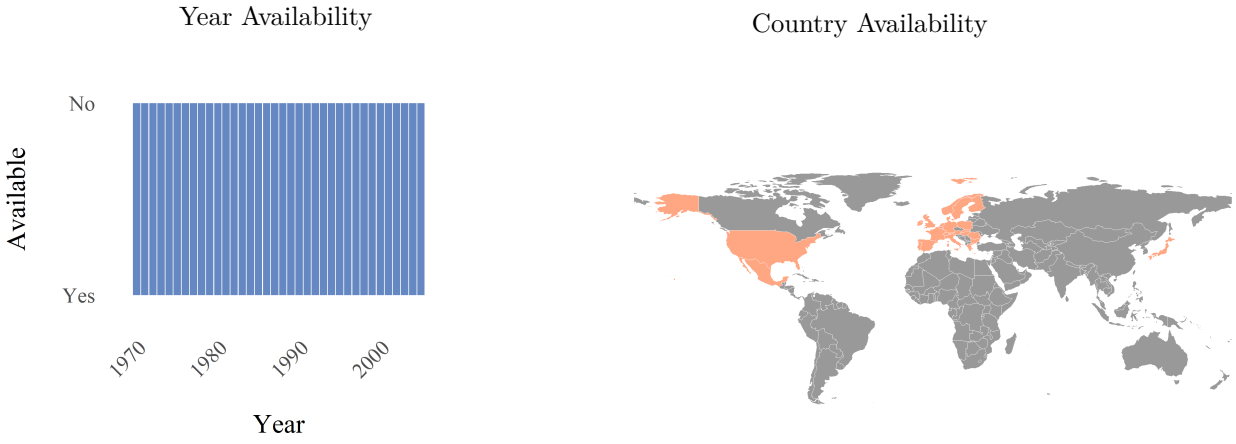
3.11.63 Water protection - Lead in industrial discharges (epcc_wale_s)

A limit value for Lead in industrial discharges in mg/l.



3.11.64 Change in water protection policy - industrial discharges (epcc_wapr_ch2)

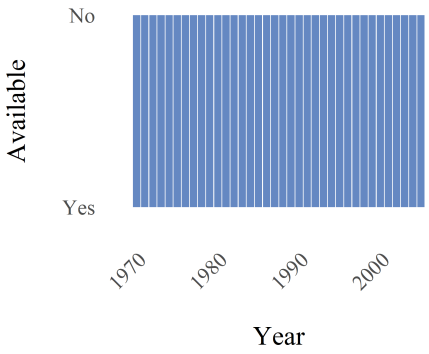
The variable measures whether there was a change in the policy for water protection in industrial discharges in the recorded year. This is a binary variable, where "1" is assigned to the year when there was a change in the policy, including its first introduction, and "0" is assigned to all other years.



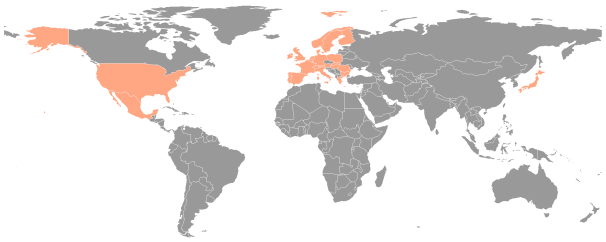
3.11.65 Water protection - industrial discharges introduction (epcc_wapr_in2)

The variable measures the first introduction of the policy for water protection in industrial discharges. This is a binary variable, where "1" is assigned to the year when the policy was first introduced and "0" is assigned to all other years.

Year Availability



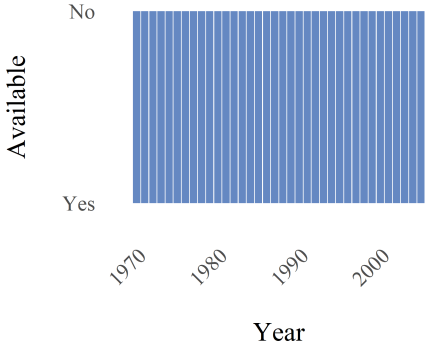
Country Availability



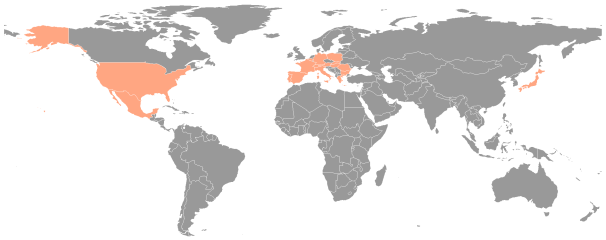
3.11.66 Water protection - Zinc in industrial discharges (epcc_wazi_s)

A limit value for Zinc in industrial discharges in mg/l.

Year Availability



Country Availability



3.12 Emergency Events Database

Dataset by: Centre for Research on the Epidemiology of Disasters

If you use any of these variables, make sure to cite the original source and QoG Data. Our suggested citation for this dataset is:

Guha-Sapir, Debarati. 2020. "EM-DAT, the Emergency Events Database". URL: `www.emdat.be`

Link to the original source: `https://www.emdat.be/`

EM-DAT is a global database on natural and technological disasters, containing essential core data on the occurrence and effects of more than 21,000 disasters in the world, from 1900 to present. EM-DAT is maintained by the Centre for Research on the Epidemiology of Disasters (CRED) at the School of Public Health of the Université catholique de Louvain located in Brussels, Belgium.

The database is made up of information from various sources, including UN agencies, non-governmental organizations, insurance companies, research institutes, and press agencies. Priority is given to data from UN agencies, governments, and the International Federation of Red Cross and Red Crescent Societies. This prioritization is not only a reflection of the quality or value of the data, it also reflects the fact that most reporting sources do not cover all disasters or have political limitations that could affect the figures. The entries are constantly reviewed for inconsistencies, redundancy, and incompleteness. CRED consolidates and updates data on a daily basis. A further check is made at monthly intervals, and revisions are made at the end of each calendar year.

EM-DAT distinguishes between two generic categories for disasters: natural and technological. The natural disaster category is divided into 5 sub-groups - geophysical (e.g., earthquakes), meteorological (e.g., extreme temperature), hydrological (e.g., flood), climatological (e.g., drought), biological (e.g., epidemic), and extraterrestrial (e.g., asteroids). The 5 sub-groups in turn cover 15 disaster types and more than 30 sub-types. The technological disaster category is divided into 3 sub-groups - industrial, transport, and miscelleanous accidents, - which in turn cover 15 disaster types.

For a disaster to be entered into the database at least one of the following criteria must be fulfilled:

a) Ten (10) or more people reported killed;

b) Hundred (100) or more people reported affected;

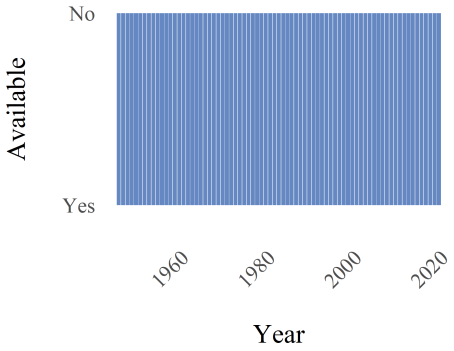
c) Declaration of a state of emergency;

d) Call for international assistance.

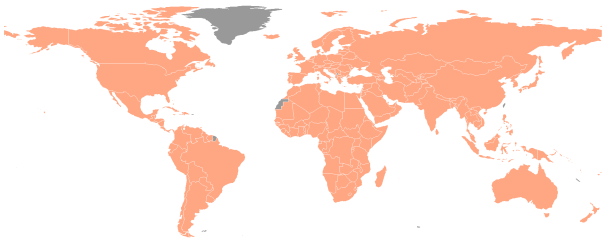
3.12.1 Total damage from natural disasters in USD (emdat_damage)

The amount of damage to property, crops, and livestock from natural disasters. The value of estimated damage is given in thousands of US dollars. For each natural disaster, the registered number corresponds to the damage value at the moment of the event, i.e. the figures are shown true to the year of the event (do not include expenses that extended to the following years).

Year Availability



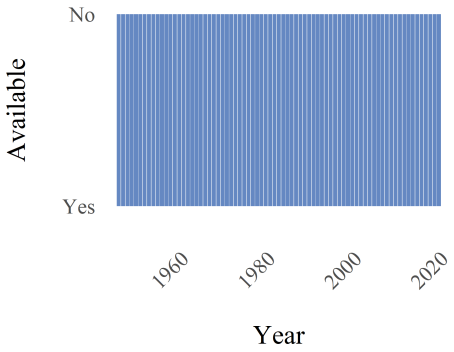
Country Availability



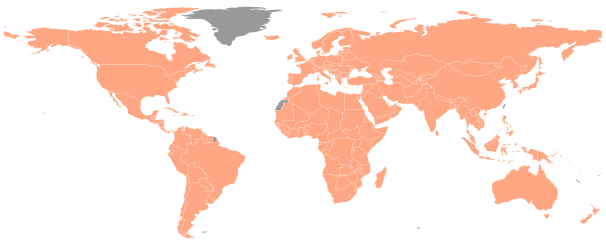
3.12.2 Number of people affected by natural disasters (emdat_naffect)

The number of people requiring immediate assistance during a period of emergency after a natural disasters, i.e. requiring basic survival needs such as food, water, shelter, sanitation, and immediate medical assistance.

Year Availability



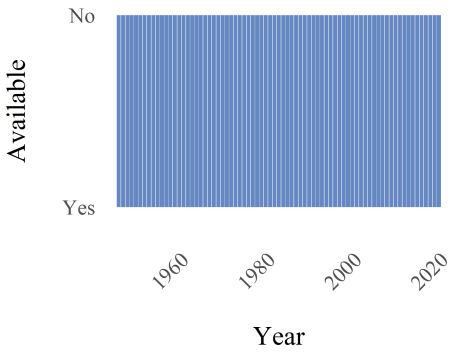
Country Availability



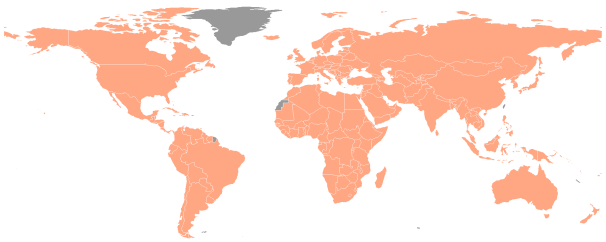
3.12.3 Number of people killed by natural disasters (emdat_ndeath)

The number of people who lost their lives because the natural hazard happened and people whose whereabouts since the natural disaster is unknown, and who are presumed dead (official figure when available).

Year Availability



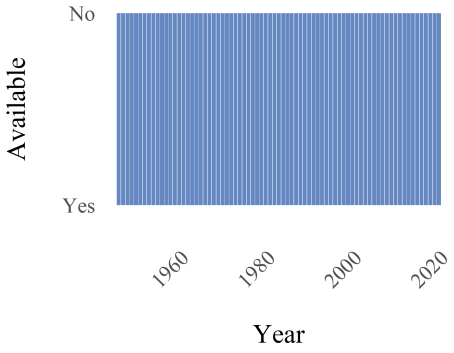
Country Availability



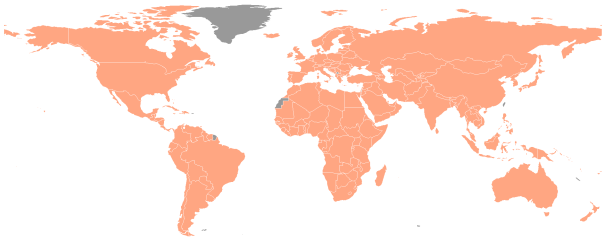
3.12.4 Number of natural disasters (emdat_ndis)

Total number of natural disasters occurring per country per year. Natural disasters that last more than one year or begin at the end of the year and last into the next are counted at the year of their first occurrence.

Year Availability



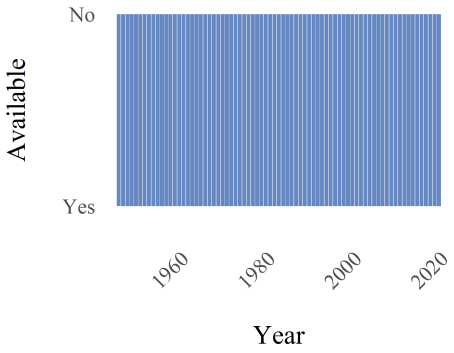
Country Availability



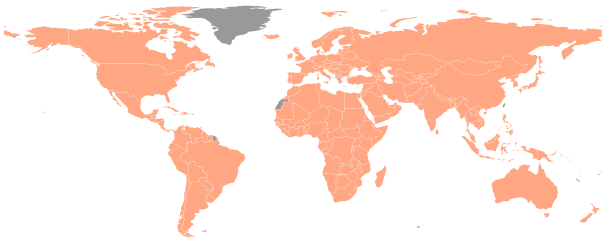
3.12.5 Number of homeless people after natural disaster (emdat_nhome)

The number of people whose house is destroyed or heavily damaged and therefore need shelter after a natural disaster.

Year Availability



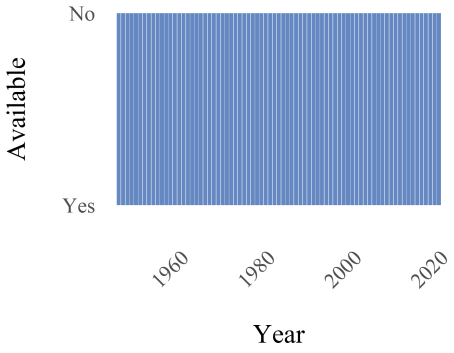
Country Availability



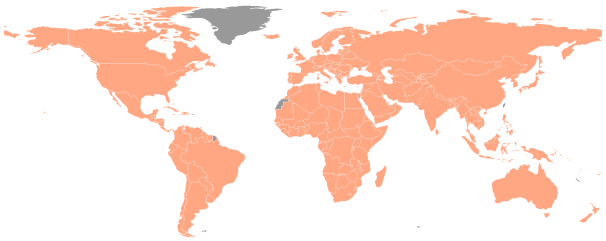
3.12.6 Number of people injured in natural disasters (emdat_ninj)

The number of people suffering from physical injuries, trauma or an illness requiring immediate medical assistance as a direct result of a natural disaster.

Year Availability

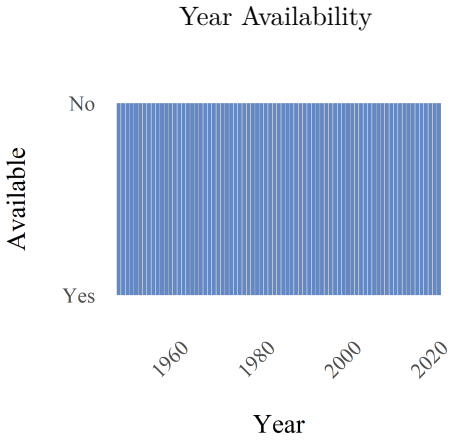


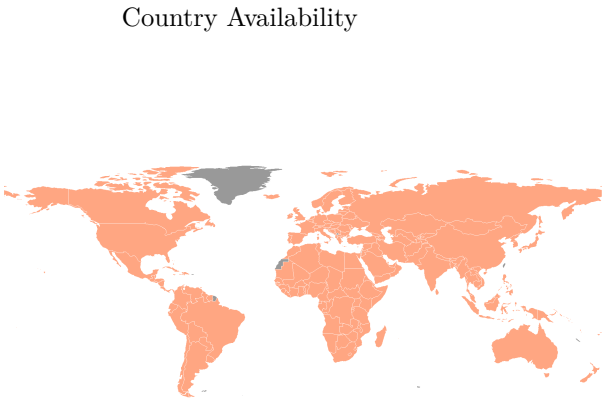
Country Availability



3.12.7 Number of affected (total) by natural disasters (emdat_ntotaff)

Sum of people injured, homeless, and affected as a result of natural disasters.


Year Availability
No
Yes
Available
1960
1980
2000
2020
Year


Country Availability

3.13 Environmental Land Use Data

Dataset by: Food and Agricultural Organization of the United Nations (FAO)

If you use any of these variables, make sure to cite the original source and QoG Data. Our suggested citation for this dataset is:

Food and Agricultural Organization of the United Nations. 2020. *Global Forest Resources Assessments*. URL: `http://www.fao.org/forest-resources-assessment/en/`

Link to the original source: `http://www.fao.org/faostat/en/#home`

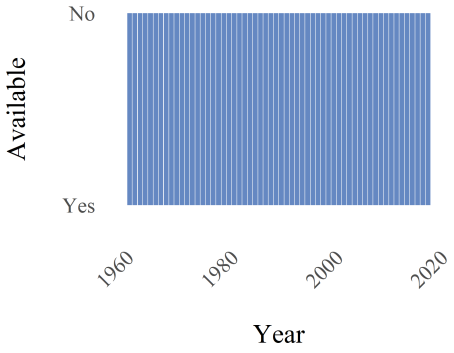
The FAOSTAT Land Use domain contains data on 47 categories of land use, irrigation and agricultural practices, relevant to monitor agriculture, forestry, and fisheries activities at national, regional and global level. Data are available by country and year, with global coverage and annual updates.

Note: Micronesia has been dropped due to duplicate cases.

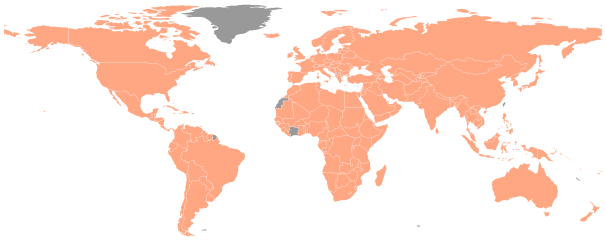
3.13.1 Agricultural land (% of Land area) (fao_luagr)

Agricultural land as a share of total land area.

Year Availability

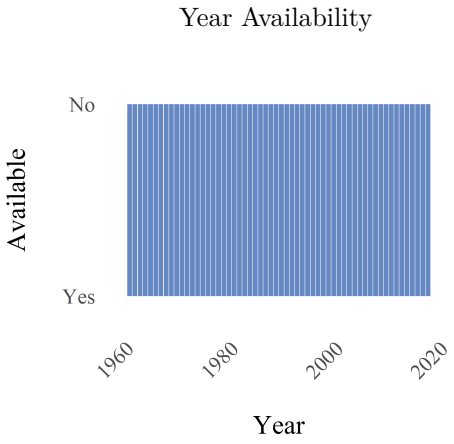


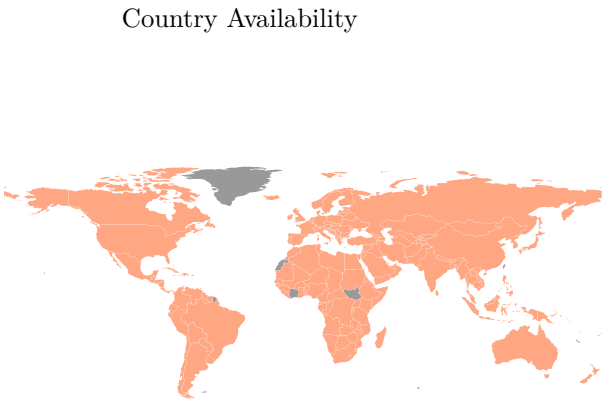
Country Availability



3.13.2 Arable land (% of Agricultural land) (fao_luagrara)

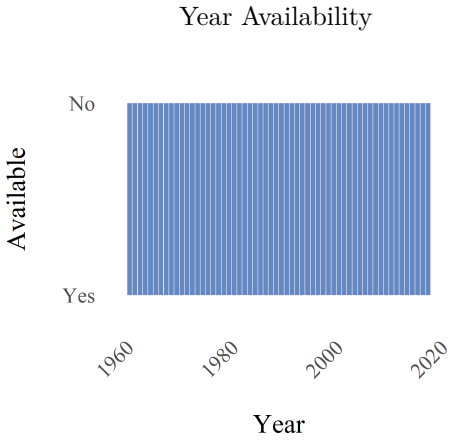
Arable land as a share of total agricultural land.

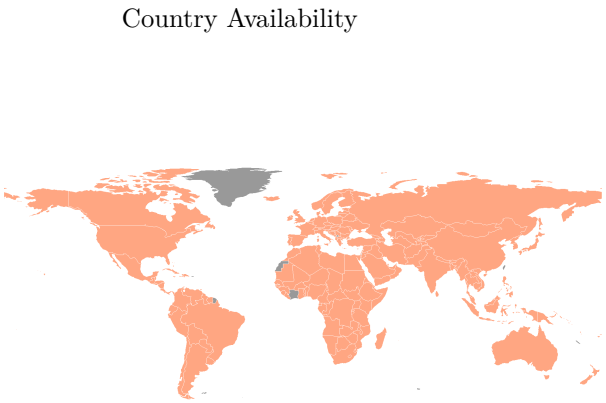




3.13.3 Cropland (% of Agricultural land) (fao_luagrcrop)

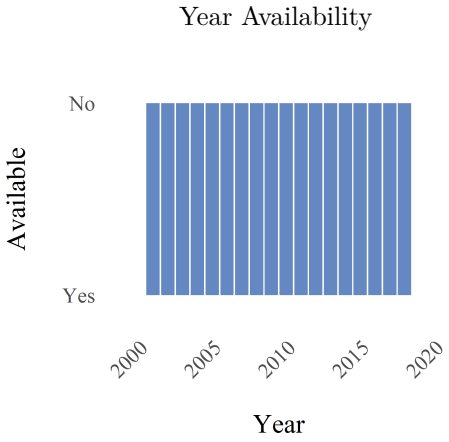
Cropland as a share of total agricultural land.

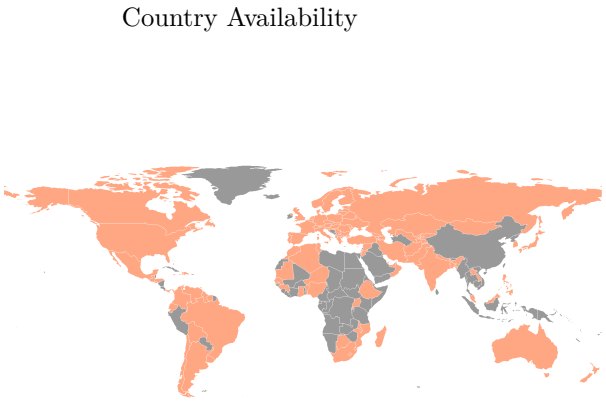




3.13.4 Agriculture area actually irrigated (% of Agricultural land) (fao_luagrirrac)

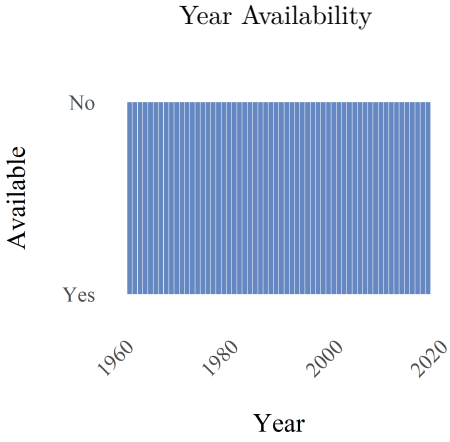
Agriculture area actually irrigated as a share of total agricultural land.

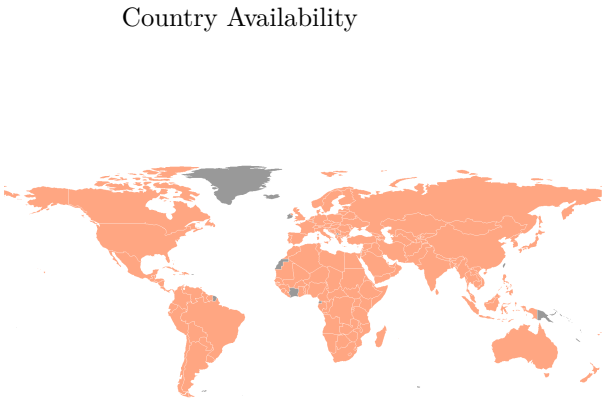




3.13.5 Land area equipped for irrigation (% of Agricultural land) (fao_luagrirreq)

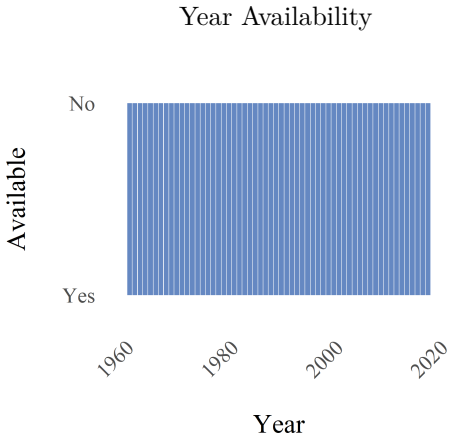
Land area equipped for irrigation as a share of total agricultural land.

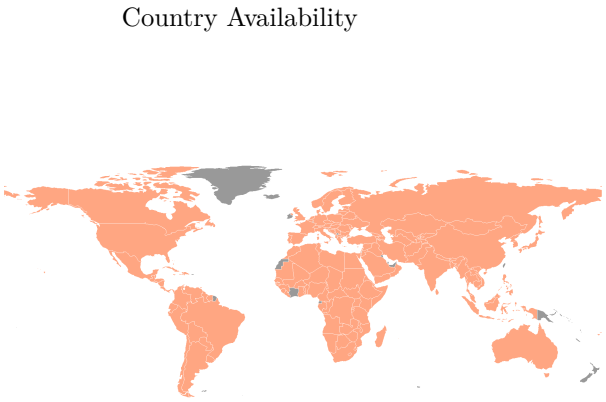




3.13.6 Land area equipped for irrigation (% of Cropland) (fao_luagrirreqcrop)

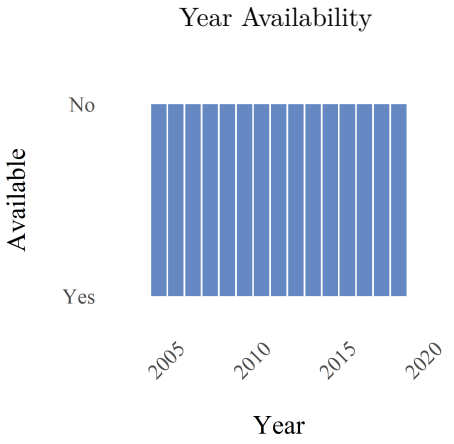
Land area equipped for irrigation as a share of total cropland.

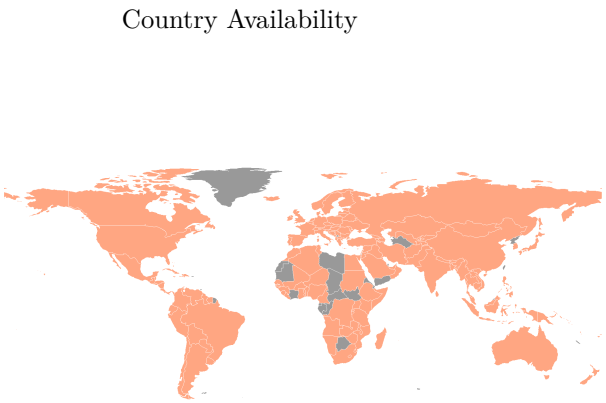




3.13.7 Agriculture area under organic agric. (% of Agricultural land) (fao_luagrorg)

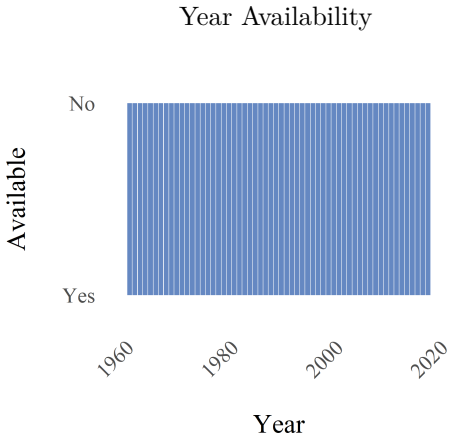
Agriculture area under organic agriculture as a share of total agricultural land.

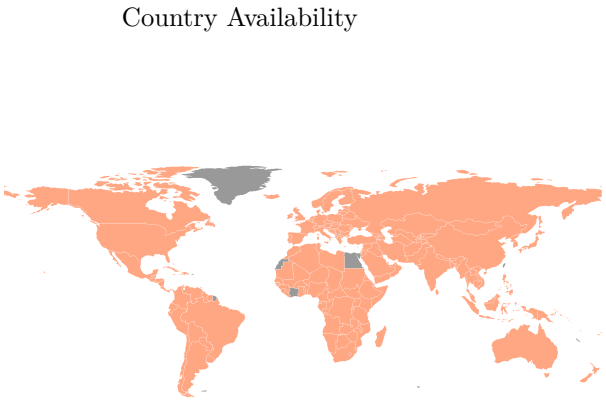




3.13.8 Land under perm meadows and pastures (% of Agricultural land) (fao_luagrpas)

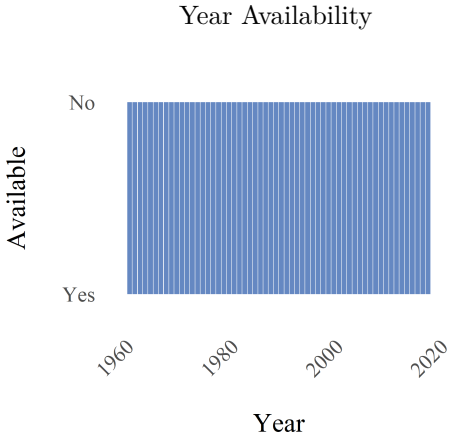
Land under perm meadows and pastures as a share of total agricultural land.

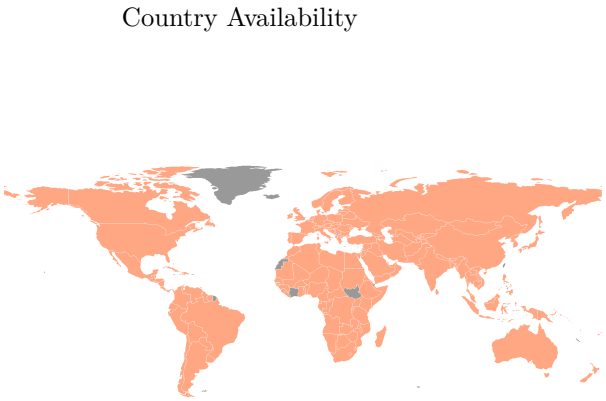




3.13.9 Land under permanent crops (% of Agricultural land) (fao_luagrpcrop)

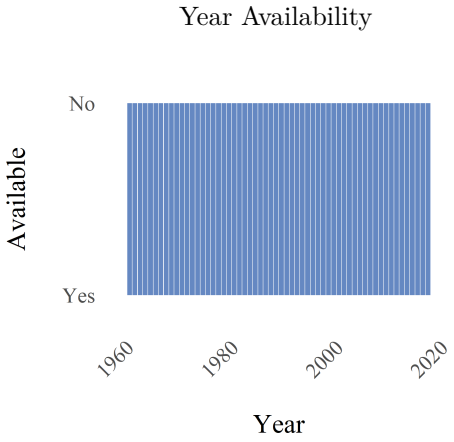
Land under permanent crops as a share of total agricultural land.

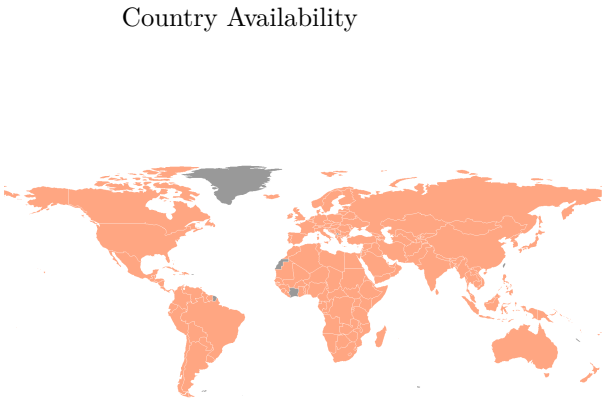




3.13.10 Cropland (% of Land area) (fao_lucrop)

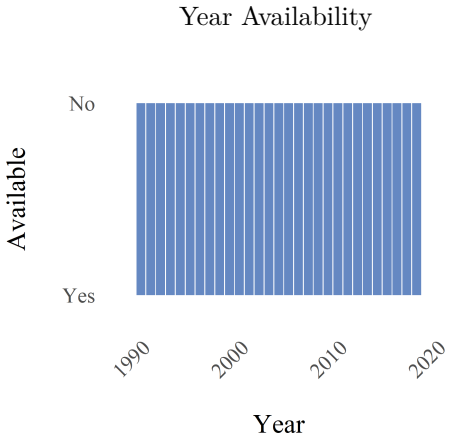
Cropland as a share of total land area.

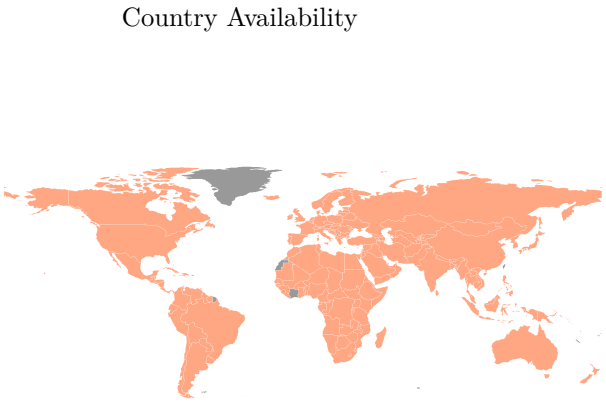




3.13.11 Forest land (% of Land area) (fao_luforest)

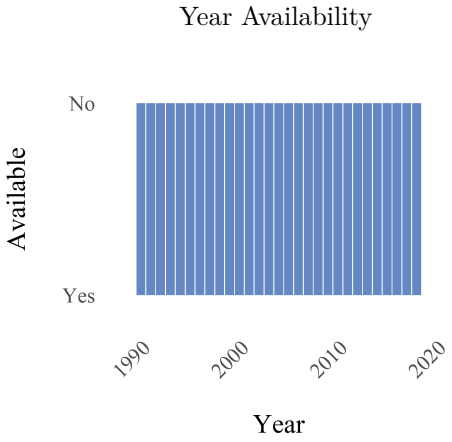
Forest land as a share of total land area.

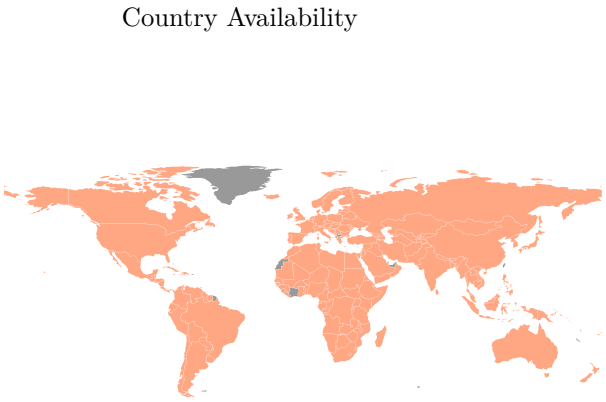




3.13.12 Planted forest (% of Forest area) (fao_luforplant)

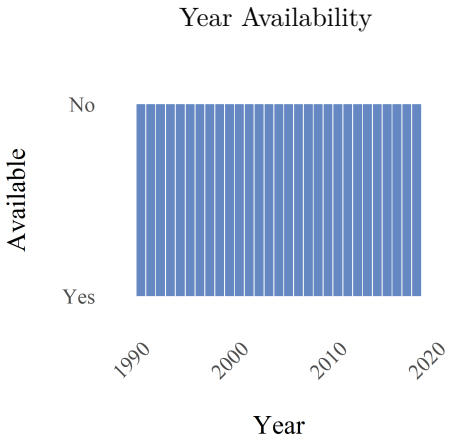
Planted forest as a share of total forest area.

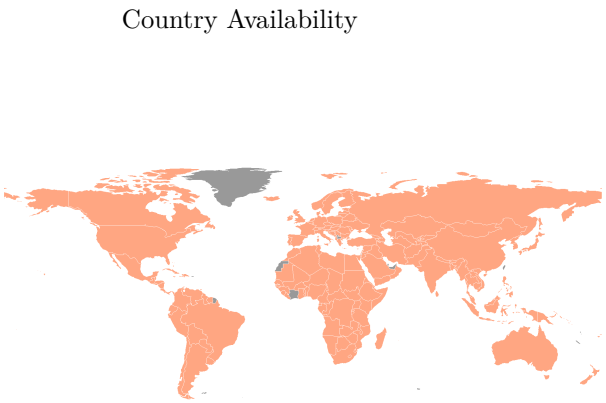




3.13.13 Other naturally regenerated forest (% of Forest area) (fao_luforreg)

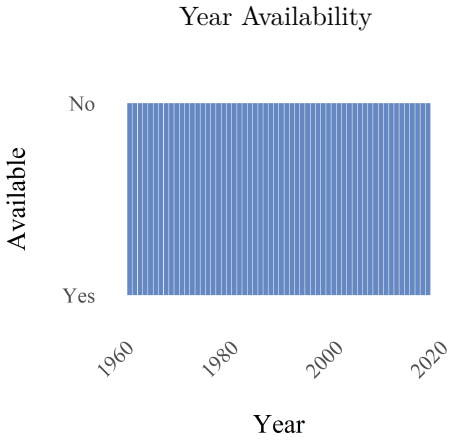
Other naturally regenerated forest as a share of total forest area.

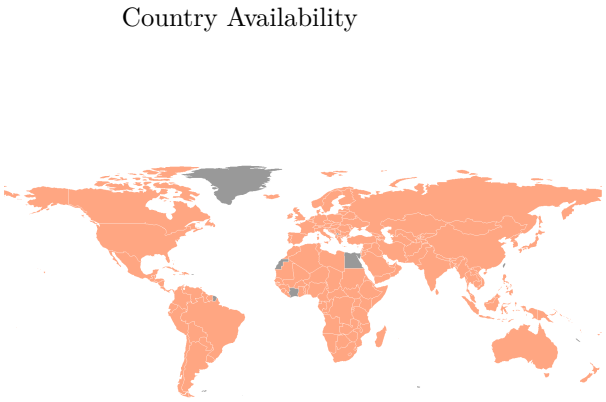




3.13.14 Land under perm meadows and pastures (% of Land area) (fao_lupas)

Land under perm meadows and pastures as a share of total land area.


Year Availability
No
Yes
Available
1960
1980
2000
2020
Year


Country Availability

3.14 Environmental Ministries

Dataset by: Michaël Aklin and Johannes Urpelainen

If you use any of these variables, make sure to cite the original source and QoG Data. Our suggested citation for this dataset is:

Aklin, Michaël and Johannes Urpelainen. 2014. "The global spread of environmental ministries: domestic–international interactions". *International Studies Quarterly.* 58. 4

Link to the original source: `https://academic.oup.com/isq/article/58/4/764/1815756?login=true`

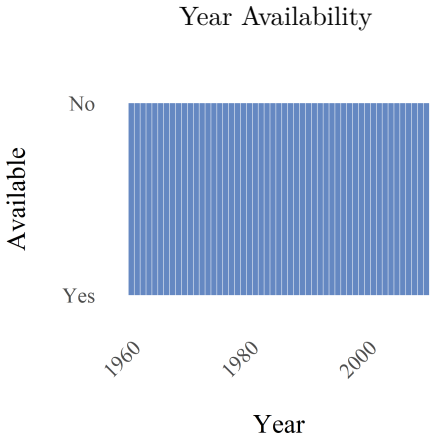
Data on the establishment of environmental ministries from the article:

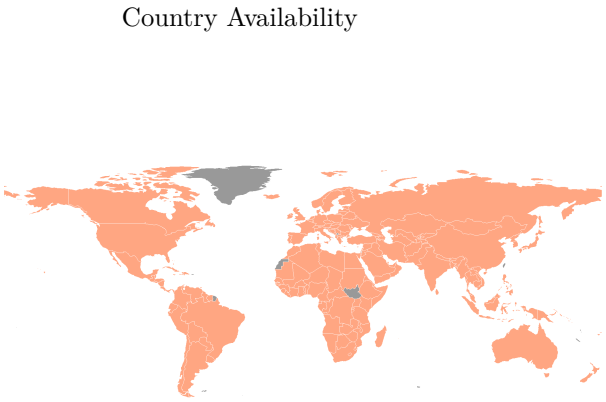
Aklin, M. and Urpelainen, J., 2014. The global spread of environmental ministries: domesticinternational interactions. International Studies Quarterly, 58(4), pp.764-780.

3.14.1 Environmental ministry establishment (em_envmin)

Environmental ministry onset. The variable is coded "1" on the year when a national environmental ministry got established. For the rest of the years, the variable is coded "0". The authors expanded temporal and spatial coverage of the data initially published in the article:

Busch, P.O. and Jörgens, H., 2005. The international sources of policy convergence: explaining the spread of environmental policy innovations. Journal of European public policy, 12(5), pp.860-884.


Year Availability
No
Yes
Available
1960
1980
2000
Year


Country Availability

3.15 Environmental Non-Governmental Organizations

Dataset by: Thomas Bernauer, Tobias Böhmelt, and Vally Koubi

If you use any of these variables, make sure to cite the original source and QoG Data. Our suggested citation for this dataset is:

Bernauer, Thomas, Tobias Böhmelt, and Vally Koubi. 2013. "Is there a democracy–civil society paradox in global environmental governance?" *Global Environmental Politics*. 13. 1

Link to the original source: `https://ib.ethz.ch/data/civilsoc.html`

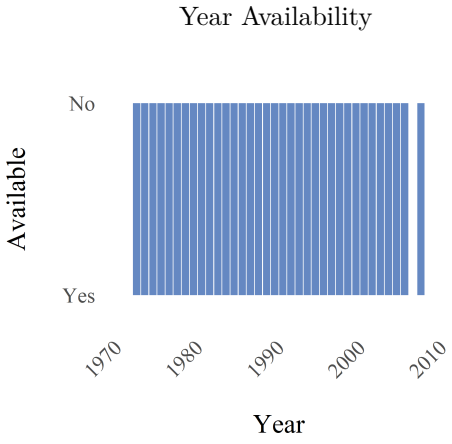
Data on environmental non-governmental organizations used in the article:

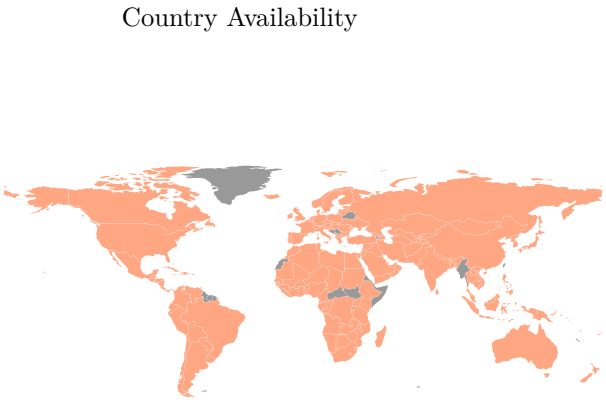
Bernauer, T., Böhmelt, T. and Koubi, V., 2013. Is there a democracycivil society paradox in global environmental governance? Global Environmental Politics, 13(1), pp.88-107.

3.15.1 Number of national ENGOs (engo_nengo)

National environmental non-governmental organizations (ENGOs) registered in a country.

The data on registered national ENGOs comes from the archives of the International Union for Conservationof Nature (IUCN) for the time period 1973-2006 from 181 countries. While the IUCN covers most countries, it is an umbrella organization where membership is not mandatory and ENGOs do not have to register. As a result, some ENGOs that have not registered with the IUCN may have been omitted. Therefore the variable becomes a proxy for the political leverage of ENGOs.


Year Availability
Available
No
Yes
1970
1980
1990
2000
2010
Year


Country Availability

3.16 Environmental Performance Index Data 2020

Dataset by: Environmental Performance Index

If you use any of these variables, make sure to cite the original source and QoG Data. Our suggested citation for this dataset is:

Wendling, Z.A. et al. 2020. "2020 Environmental Performance Index". *New Haven, CT: Yale Center for Environmental Law and Policy.* URL: `https://epi.envirocenter.yale.edu/`

Link to the original source: `https://epi.envirocenter.yale.edu/epi-downloads`

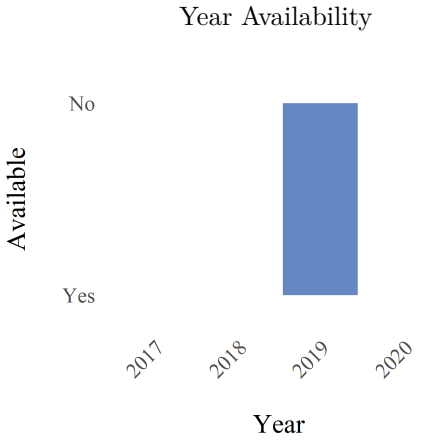
The Environmental Performance Index provides a ranking that shines light on how each country manages environmental issues. The Environmental Performance Index (EPI) ranks how well countries perform on high-priority environmental issues in two broad policy areas: protection of human health from environmental harm and protection of ecosystems. Within these two policy objectives the EPI scores country performance in 11 issue areas comprised of 32 indicators. Indicators in the EPI measure how close countries are to meeting internationally established targets or, in the absence of agreed-upon targets, how they compare to the range of observed countries.

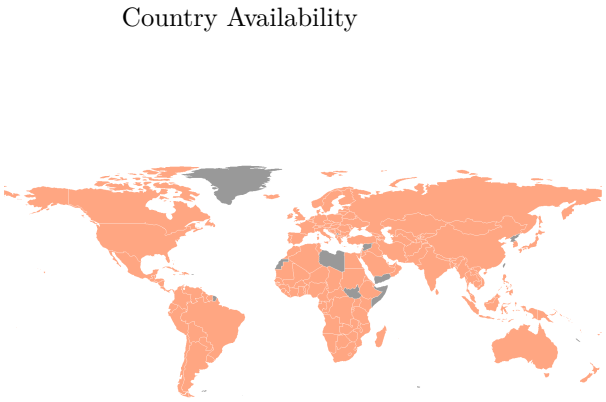
Note: In many cases the EPI variables lack actual observations and rely on imputation. Please refer to the original documentation on more information about this. Also, some values (usually the value 0) are very unlikely, please use your judgement whether to treat these as the value 0 or as "Data missing".

The values on the EPI, Policy Objectives, and Issue Categories are not comparable over time, therefore, this compilation only includes data on these variables from the latest release. The raw data on the 32 indicators, however, are comparable over time and, therefore, time-series are included.

3.16.1 Agriculture Issue Category (epi_agr)

Agriculture Issue Category consists of the Sustainable Nitrogen Management Index, which measures the Euclidean distance from an ideal point with optimal nitrogen use efficiency (NUE) and crop yield. The issue category varies from 0 to 100.





3.16.2 Air Quality Issue Category (epi_air)

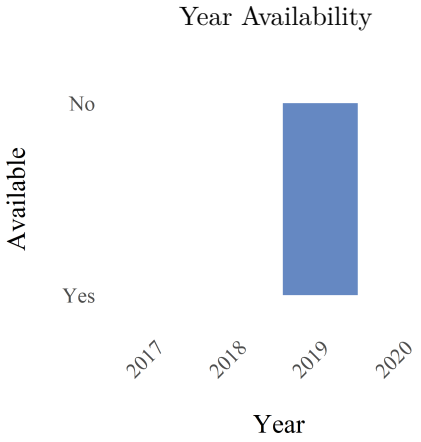
Air Quality Issue Category consists of three indicators:

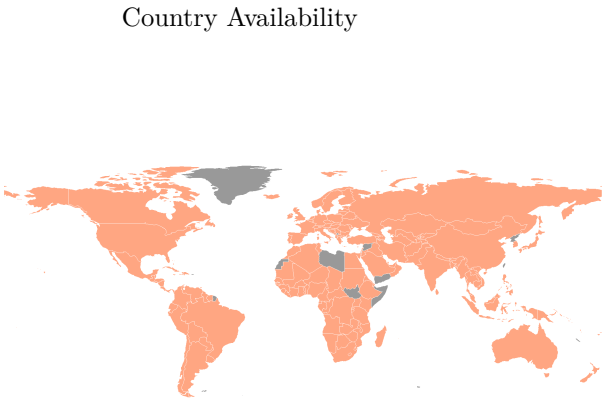
1) Household air pollution (HAP), measured with the number of age-standardized disability-adjusted life-years (DALYs) lost per 100,000 persons due to the health risk posed by the incomplete combustion of solid fuels. It is log-transformed and given 40% weight in the aggregation.

2) Ambient particulate matter pollution, measured as the PM2.5 exposure using the number of age-standardized disability-adjusted life-years lost per 100,000 persons (DALY rate) due to exposure to fine air particulate matter smaller than 2.5 micrometers (PM2.5). It is log-transformed and given 55% weight in the aggregation.

3) Ozone exposure, measured by the number of age-standardized disability-adjusted life-years lost per 100,000 persons (DALY rate) due to exposure to ground-level ozone pollution. It is log-transformed and given 5% weight in the aggregation.

The issue category varies from 0 to 100.





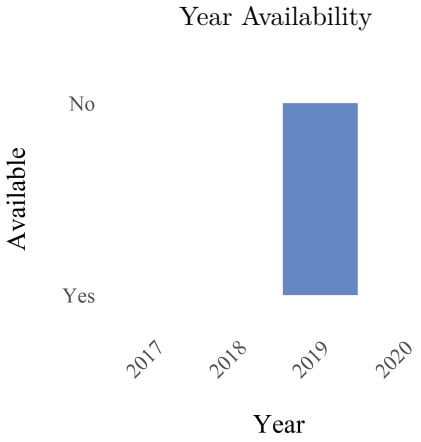
3.16.3 Pollution Emissions Issue Category (epi_ape)

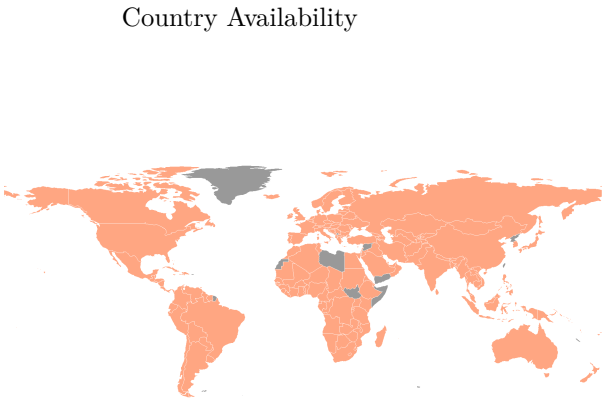
Pollution Emissions Issue Category consists of 2 indicators:

1) The SO2 growth rate, calculated as the average annual rate of increase or decrease in SO2 over the years 2005-2014. It is then adjusted for economic trends to isolate change due to policy rather than economic fluctuation. First, the EPI team calculates Spearman's correlation coefficient between SO2 emissions and GDP over a ten-year period. Second, they regress logged SO2 emissions over ten years to find a slope. Third, they calculate an unadjusted average annual growth rate in SO2 emissions. Fourth, they adjust the negative growth rates by a factor of 1 - the correlation coefficient.

2) The NOX growth rate, calculated as the average annual rate of increase or decrease in NOX over the years 2005-2014. It is then adjusted for economic trends to isolate change due to policy rather than economic fluctuation. First, the EPI team calculates Spearman's correlation coefficient between NOX emissions and GDP over a ten-year period. Second, they regress logged NOX emissions over ten years to find a slope. Third, they calculate an unadjusted average annual growth rate in NOX emissions. Fourth, they adjust the negative growth rates by a factor of 1 - the correlation coefficient.

Both indicators are given equal weight in the aggregation. The issue category varies from 0 to 100.



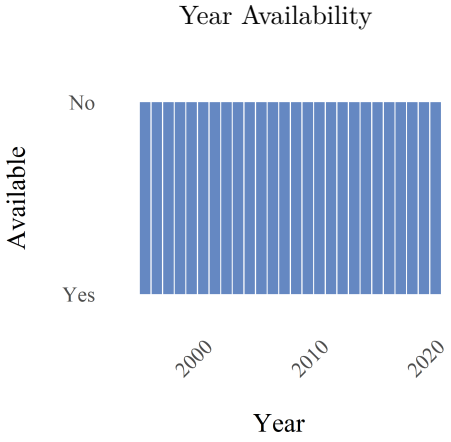


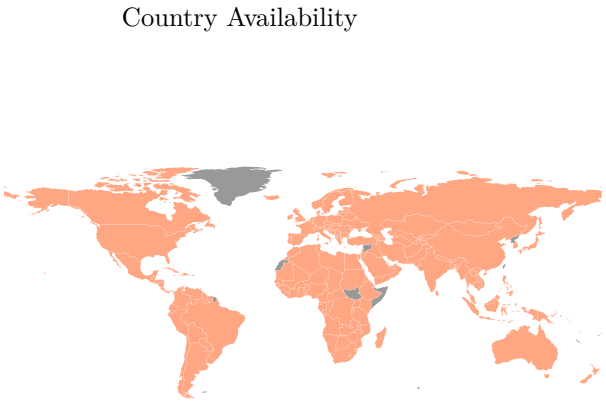
3.16.4 Black carbon growth rate (epi_bca)

The black carbon growth rate, which makes up 5% of the Climate Change Issue Category, is calculated as the average annual rate of increase or decrease in black carbon over the years 2005-2014. It is then adjusted for economic trends to isolate change due to policy rather than economic fluctuation.

Original source: Community Emissions Data Systems.

When using this variable, please cite both EPI and the original source.





3.16.5 Biodiversity and Habitat Issue Category (epi_bdh)

Biodiversity and Habitat Issue Category consists of 7 indicators:

1) The terrestrial biome protection (national weights) indicator. It is calculated by first taking proportions of the area of each of a countrys biome types that are covered by protected areas and then constructing a weighted sum of the protection percentages for all biomes within that country. The protection percentages are weighted according to the prevalence of each biome type within that country. This indicator evaluates a country's efforts to achieve 17% protection for all biomes within its borders, as per Aichi Target 11. It is given 20% weight in the aggregation.

2) The terrestrial biome protection (global weights) indicator, where protection percentages are weighted according to the global prevalence of each biome type. This indicator evaluates a countrys contribution toward the global 17% protection goal. It is given 20% weight in the aggregation.

3) The marine protected areas indicator, measured as a percentage of a countrys total exclusive economic zone (EEZ) designated as marine protected areas (MPAs). Because each country may have multiple EEZs, the summed area of MPAs is divided by the summed EEZ. It is given 20% weight in the aggregation.

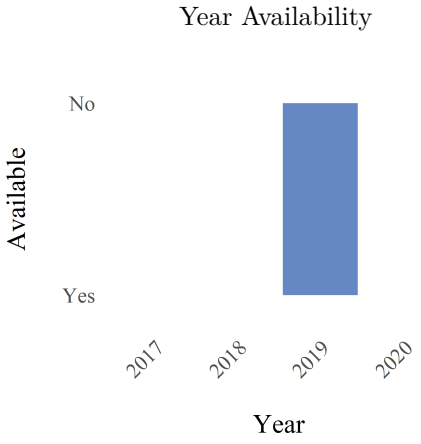
4) The Protected Areas Representativeness Index (PARI), which measures ecological representativeness as the proportion of biologically scaled environmental diversity included in a country's terrestrial protected areas. The measure relies on remote sensing, biodiversity informatics, and global modeling of fine-scaled variation in biodiversity composition for plant, vertebrate, and invertebrate species. It is given 10% weight in the aggregation.

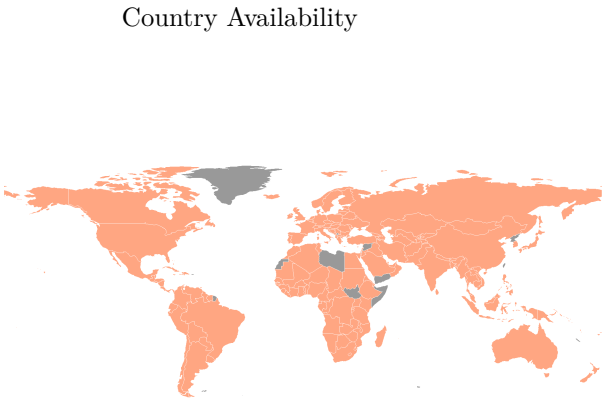
5) Species Habitat Index (SHI) estimates potential population losses, as well as regional and global extinction risks of individual species, using habitat loss as a proxy. The SHI indicator measures the proportion of suitable habitat within a country that remains intact for each species in that country relative to a baseline set in the year 2001. It is given 10% weight in the aggregation.

6) Species Protection Index (SPI) evaluates the species-level ecological representativeness of each country's protected area network. The SPI metric uses remote sensing data, global biodiversity informatics, and integrative models to map suitable habitat for over 30,000 terrestrial vertebrate, invertebrate, and plant species at high resolutions. It is given 10% weight in the aggregation.

7) The Biodiversity Habitat Index (BHI), which estimates the effects of habitat loss, degradation, and fragmentation on the expected retention of terrestrial biodiversity. It is given 10% weight in the aggregation.

The issue category varies from 0 to 100.



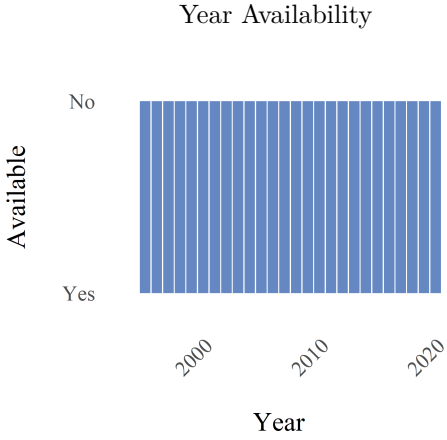


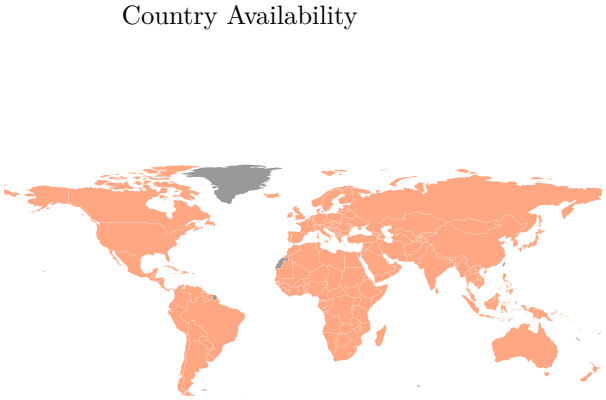
3.16.6 Biodiversity habitat index (epi_bhv)

Biodiversity Habitat Index (BHI) estimates the effects of habitat loss, degradation, and fragmentation on the expected retention of terrestrial biodiversity.

Original source: Commonwealth Scientific and Industrial Research Organization.

When using this variable, please cite both EPI and the original source.





3.16.7 Climate Change Issue Category (epi_cch)

Climate Change Issue Category consists of 8 indicators:

1) The CO2 growth rate, calculated as the average annual rate of increase or decrease in raw carbon

dioxide emissions over the years 2008-2017. It is then adjusted for economic trends to isolate change due to policy rather than economic fluctuation. It is given 55% weight in the aggregation.

2) The CH4 growth rate, calculated as the average annual rate of increase or decrease in raw methane emissions over the years 2008-2017. It is then adjusted for economic trends to isolate change due to policy rather than economic fluctuation. It is given 15% weight in the aggregation.

3) The F-gas growth rate, calculated as the average annual rate of increase or decrease in raw fluorinated gas emissions over the years 2008-2017. It is then adjusted for economic trends to isolate change due to policy rather than economic fluctuation. It is given 10% weight in the aggregation.

4) The N2O growth rate, calculated as the average annual rate of increase or decrease in raw nitrous oxide emissions over the years 2008-2017. It is then adjusted for economic trends to isolate change due to policy rather than economic fluctuation. It is given 5% weight in the aggregation.

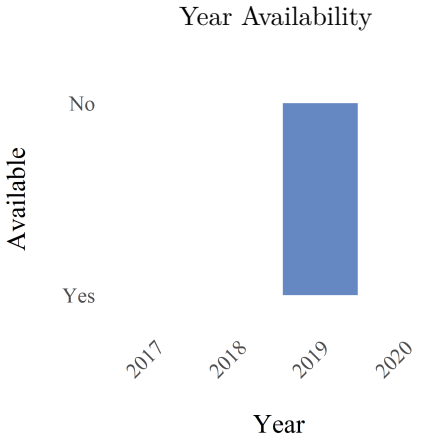
5) The black carbon growth rate, calculated as the average annual rate of increase or decrease in black carbon over the years 2005-2014. It is then adjusted for economic trends to isolate change due to policy rather than economic fluctuation. It is given 5% weight in the aggregation.

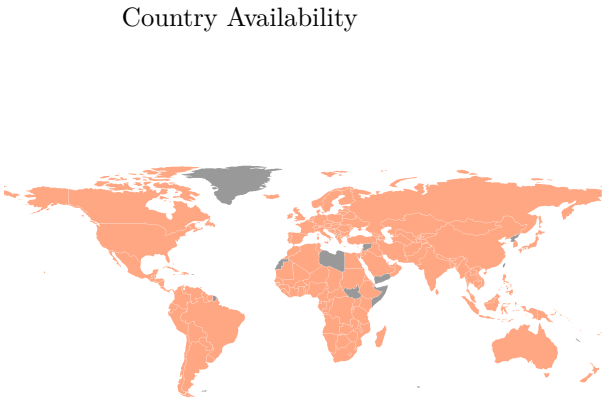
6) Greenhouse gas (GHG) emissions per capita in the year 2017. First, the EPI team calculates total greenhouse gas emissions, applying Global Warming Potentials to convert all units to Gg of CO2-equivalents. Second, they calculate GHG emissions per capita (GHP) as the GHG emissions divided by population (POP). It is log-transformed and given 2.5% weight in the aggregation.

7) CO2 emissions from land cover change, calculated over the years 2001-2015. First, the EPI team regresses logged CO2 emissions from land cover change (LULC) over 15 years to find a slope. Then, they calculate an unadjusted average annual growth rate in these CO2 emissions. It is given 2.5% weight in the aggregation.

8) The greenhouse gas (GHG) intensity growth rate indicator, which serves as a signal of countries' progress in decoupling emissions from economic growth. The EPI team calculates an annual average growth rate in GHG emissions per unit of GDP over the years 2008-2017. This indicator highlights the need for action on climate change mitigation in countries at all income levels. It is given 5% weight in the aggregation.

The issue category varies from 0 to 100.



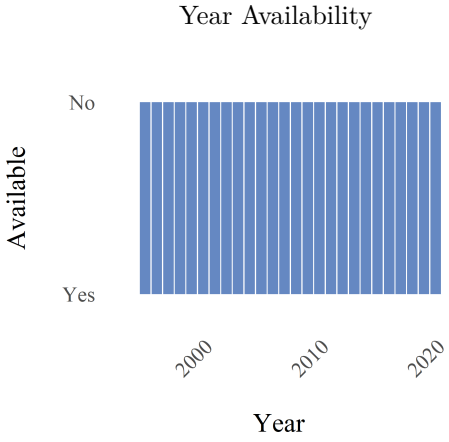


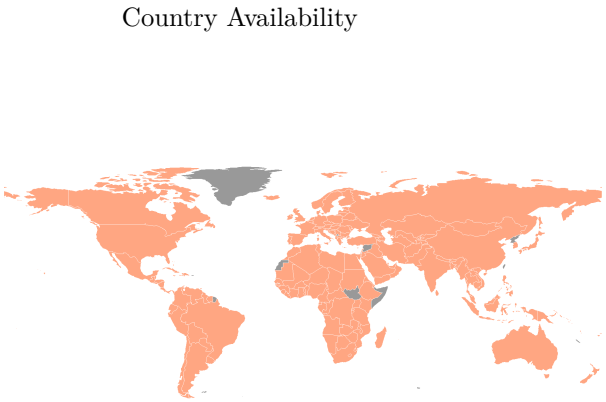
3.16.8 CO2 growth rate (epi_cda)

The CO2 (carbon dioxide) growth rate, which makes up 55% of the Climate Change Issue Category, is calculated as the average annual rate of increase or decrease in raw carbon dioxide emissions over the years 2008-2017. It is then adjusted for economic trends to isolate change due to policy rather than economic fluctuation.

Original source: Potsdam Institute for Climate Impact Research.

When using this variable, please cite both EPI and the original source.





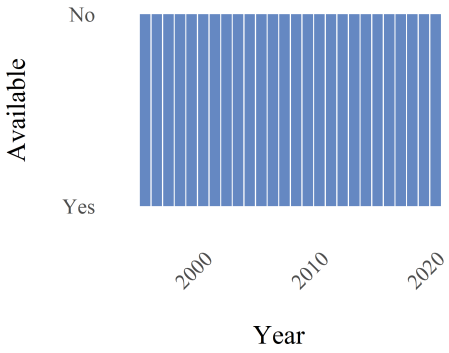
3.16.9 CH4 growth rate (epi_cha)

The CH4 (methane) growth rate, which makes up 15% of the Climate Change Issue Category, is calculated as the average annual rate of increase or decrease in raw methane emissions over the years 2008-2017. It is then adjusted for economic trends to isolate change due to policy rather than economic fluctuation.

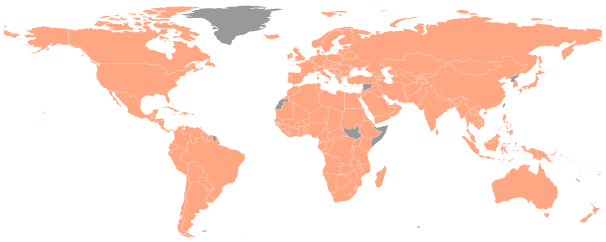
Original source: Potsdam Institute for Climate Impact Research.

When using this variable, please cite both EPI and the original source.

Year Availability



Country Availability



3.16.10 Ecosystem Services Issue Category (epi_ecs)

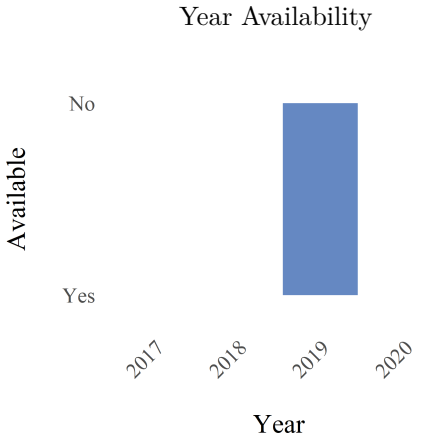
Ecosystem Services Issue Category consists of 3 indicators:

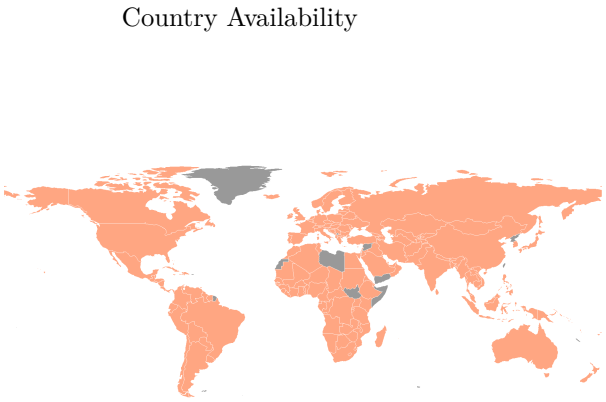
1) Tree cover loss, measured as a five-year moving average of the percentage of forest lost from the extent of forest cover in the reference year 2000. They define a forest as any land area with over 30% canopy cover. It is log-transformed, $\ln(x + \alpha)$, α = 9.70E-07, and given 90% weight in the aggregation.

2) Grassland loss, measured as a five-year moving average of percentage of gross losses in grassland areas compared to the 1992 reference year. It is log-transformed, $\ln(x + \alpha)$, α = 4.45E-06, and given 5% weight in the aggregation.

3) Wetland loss, measured as a five-year moving average of percentage of gross losses in wetland areas compared to the 1992 reference year. It is log-transformed, $\ln(x + \alpha)$, α = 2.47E-06, and given 5% weight in the aggregation.

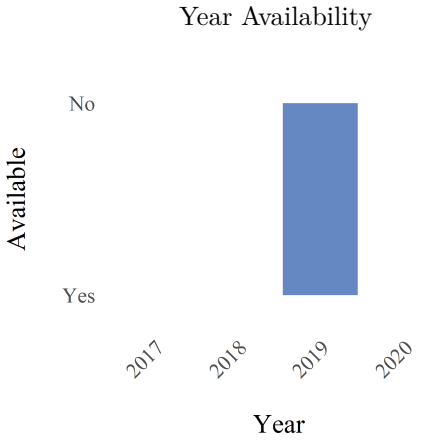
The issue category varies from 0 to 100.

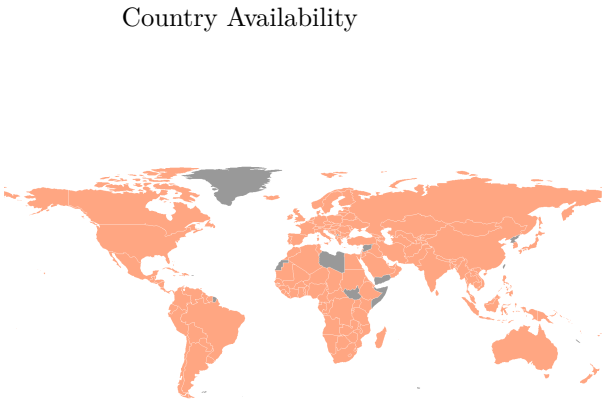




3.16.11 Environmental Health Policy Objective (epi_eh)

Environmental Health Policy Objective measures how well countries are protecting their populations from environmental health risks. It comprises 40% of the total EPI score and consists of 4 issue categories: Air Quality (50%), Sanitation and Drinking Water (40%), Heavy Metals (5%), and Waste Management (5%). The policy objective varies from 0 to 100.





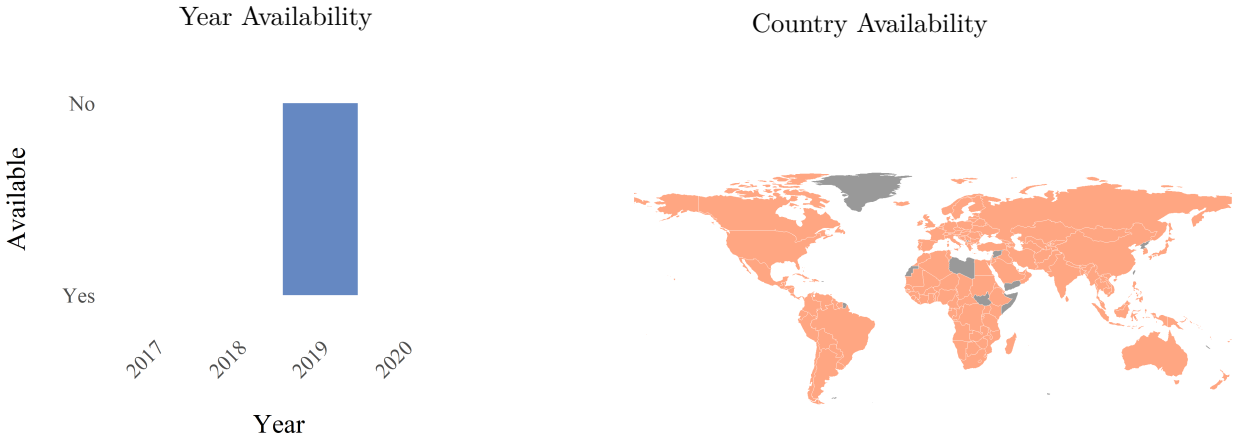
3.16.12 Environmental Performance Index (epi_epi)

The 2020 Environmental Performance Index (EPI) scores 180 countries on 32 performance indicators across 11 issue categories related to environmental health and ecosystem vitality. The 2020 EPI is a composite index. The EPI researchers begin by gathering data on 32 individual metrics of environmental performance. These metrics are aggregated into a hierarchy beginning with 11 issue categories: Air Quality, Sanitation and Drinking Water, Heavy Metals, Waste Management,

Biodiversity and Habitat, Ecosystem Services, Fisheries, Climate Change, Pollution Emissions, Water Resources, and Agriculture.

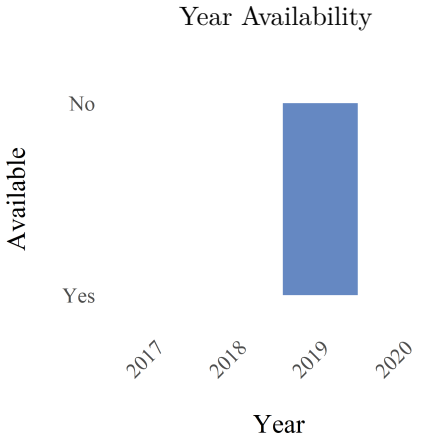
These issue categories are then combined into 2 policy objectives, Environmental Health and Ecosystem Vitality, and then finally consolidated into the overall EPI. To allow for meaningful comparisons, before aggregation the EPI researchers construct scores for each of the 32 indicators, placing them onto a common scale where 0 indicates worst performance and 100 indicates best performance. How far a country is from achieving international targets of sustainability determines its placement on this scale.

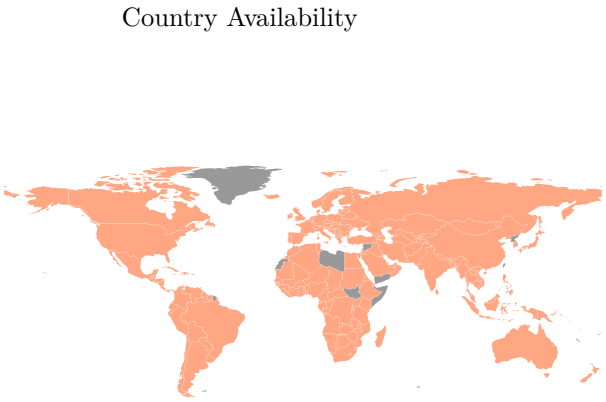
Note: The EPI scores are not comparable over time, therefore, this dataset only includes the EPI scores from the latest release.



3.16.13 Ecosystem Vitality Policy Objective (epi_ev)

Ecosystem Vitality Policy Objective measures how well countries are preserving, protecting, and enhancing ecosystems and the services they provide. It comprises 60% of the total EPI score and consists of 7 issue categories: Biodiversity and Habitat (25%), Ecosystem Services (10%), Fisheries (10%), Climate Change (40%), Pollution Emissions (5%), Agriculture (5%), and Water Resources (5%). The policy objective varies from 0 to 100.



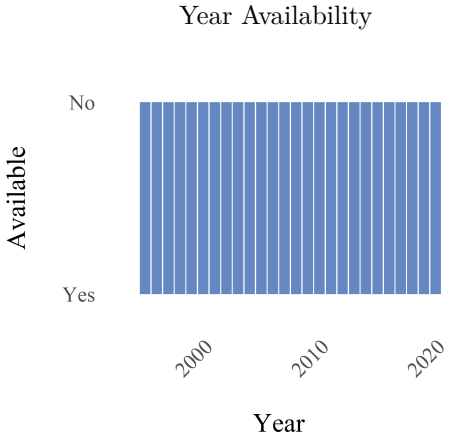


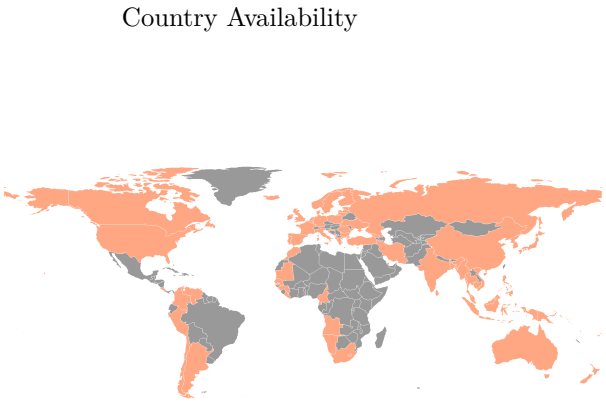
3.16.14 Fish caught by trawling (epi_fct)

Fish caught by trawling measures the percentage of a country's fish caught by bottom or pelagic trawling, where a fishing net is pulled through the water behind a boat. This practice is indiscriminate and wasteful and can severely damage marine ecosystems. The variable is log-transformed according to the formula ln(x+α), where α = 8.40E-08.

Original source: Sea Around Us.

When using this variable, please cite both EPI and the original source.





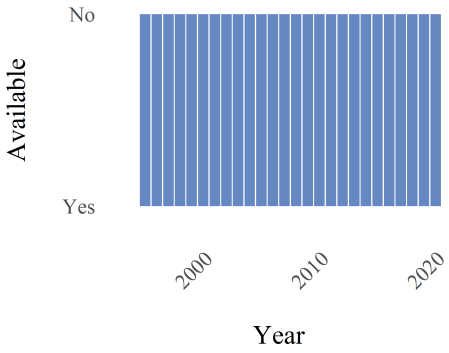
3.16.15 F-gas growth rate (epi_fga)

The F-gas growth rate, which makes up 10% of the Climate Change Issue Category, is calculated as the average annual rate of increase or decrease in raw fluorinated gas emissions over the years 2008-2017. It is then adjusted for economic trends to isolate change due to policy rather than economic fluctuation.

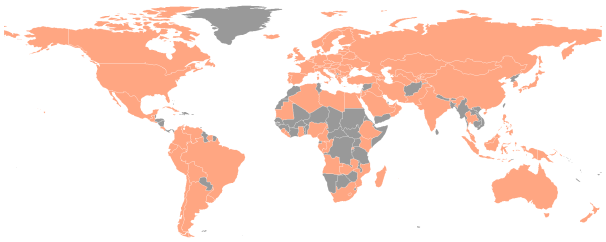
Original source: Potsdam Institute for Climate Impact Research.

When using this variable, please cite both EPI and the original source.

Year Availability



Country Availability



3.16.16 Fisheries Issue Category (epi_fsh)

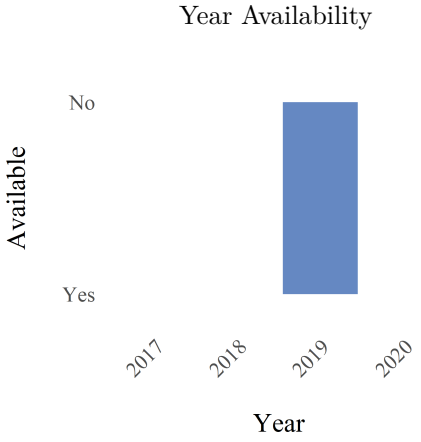
Fisheries Issue Category consists of 3 indicators:

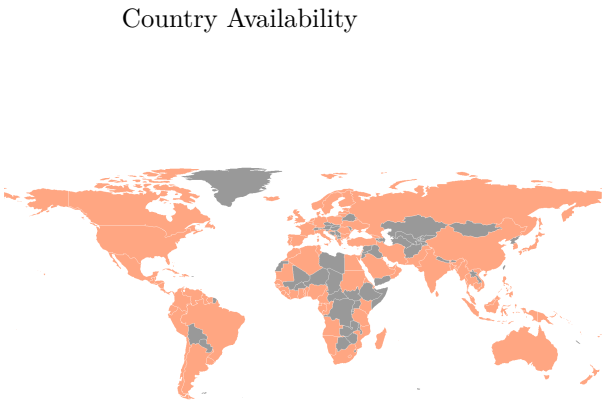
1) Fish stock status, measured as the percentage of a country's total catch that comes from overexploited or collapsed stocks, considering all fish stocks within a country's EEZs. Because continued and increased stock exploitation leads to smaller catches, this indicator sheds light on the impact of a country's fishing practices. The metric is calculated as an average percentage weighted by catch and summed across classes of concern. It is log-transformed, $\ln(x + \alpha)$, α = 1.13E-05, and given 35% weight in the aggregation.

2) Marine Trophic Index (MTI), which measures the health of a country's fishing stock based on expected catch and changes over time. The MTI describes the degree to which a country is depleting species at higher trophic levels and fishing down the food web. It is log-transformed, $\ln(x + \alpha)$, α = 9.51E-07, and given 35% weight in the aggregation.

3) Fish caught by trawling, measured as the percentage of a country's fish caught by bottom or pelagic trawling, where a fishing net is pulled through the water behind a boat. It is log-transformed, $\ln(x + \alpha)$, α = 8.40E-08, and given 30% weight in the aggregation.

The issue category varies from 0 to 100.



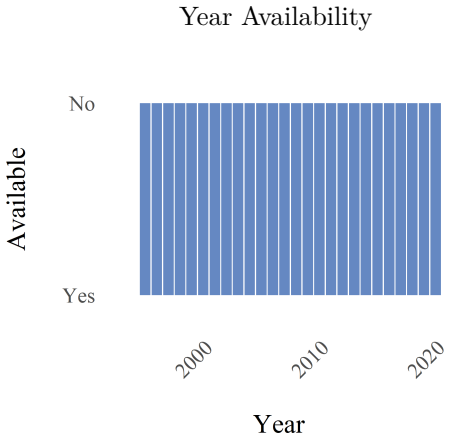


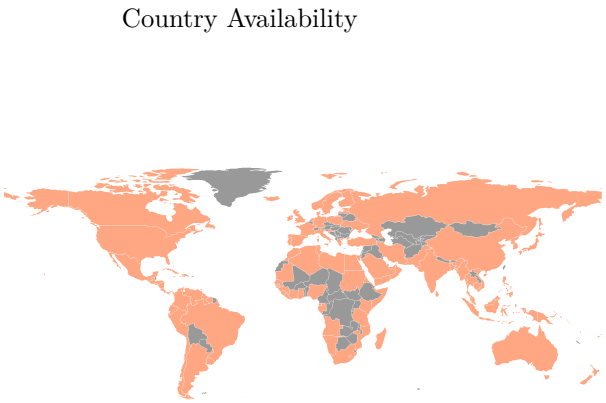
3.16.17 Fish stock status (epi_fss)

Fish stock status measures the percentage of a country's total catch that comes from overexploited or collapsed stocks, considering all fish stocks within a country's EEZs. Because continued and increased stock exploitation leads to smaller catches, this indicator sheds light on the impact of a country's fishing practices. The variable is log-transformed according to the formula $\ln(x+\alpha)$, where α = 1.13E-05.

Original source: Sea Around Us.

When using this variable, please cite both EPI and the original source.



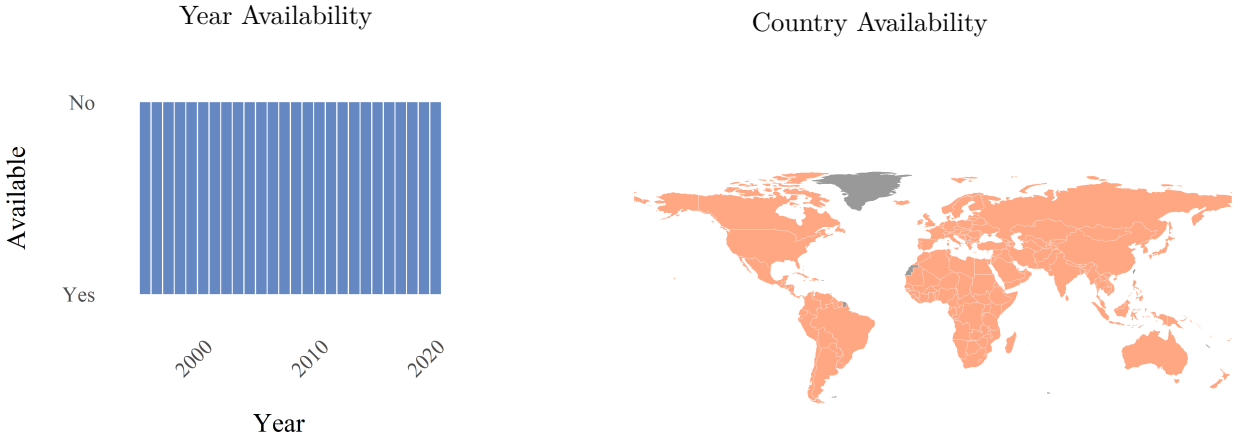


3.16.18 GHG emissions per capita (epi_ghp)

EPI calculates greenhouse gas (GHG) emissions per capita for each country in the year 2017. The variable is log-transformed. The unit of measurement is gigagrams (Gg) of CO2-equivalent per person.

Original source: Potsdam Institute for Climate Impact Research.

When using this variable, please cite both EPI and the original source.

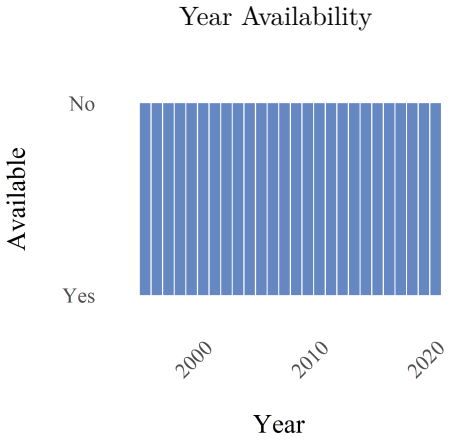


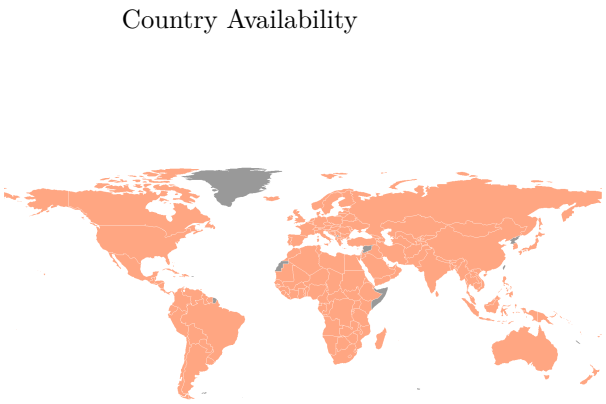
3.16.19 GHG intensity trend (epi_gib)

The greenhouse gas (GHG) intensity growth rate indicator serves as a signal of countries' progress in decoupling emissions from economic growth. EPI calculates an annual average growth rate in GHG emissions per unit of GDP over the years 2008-2017. This indicator highlights the need for action on climate change mitigation in countries at all income levels.

Original source: Potsdam Institute for Climate Impact Research.

When using this variable, please cite both EPI and the original source.



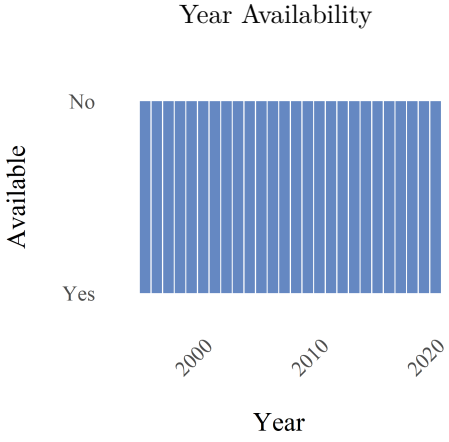


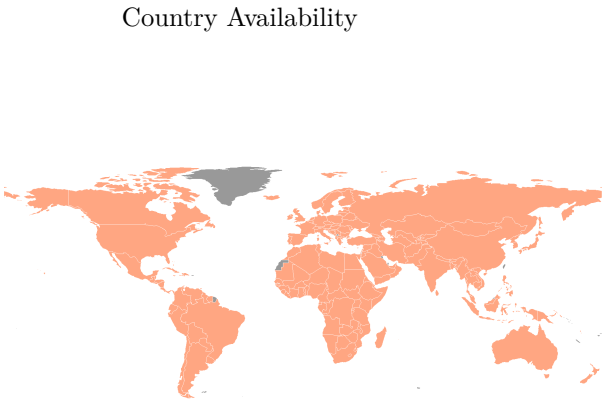
3.16.20 Grassland loss (epi_grl)

Grassland loss is measured using a five-year moving average of percentage of gross losses in grassland areas compared to the 1992 reference year. The variable is log-transformed according to the formula ln(x+α), where α = 4.45E-06.

Original source: European Space Agency.

When using this variable, please cite both EPI and the original source.





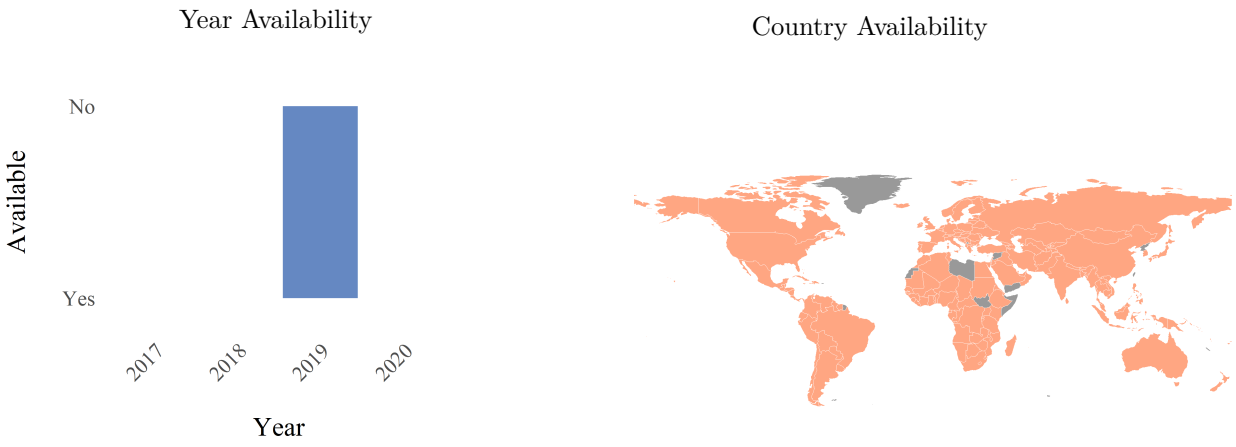
3.16.21 Sanitation and Drinking Water Issue Category (epi_h2o)

Sanitation and Drinking Water Issue Category consists of two indicators:

1) Unsafe sanitation, measured as the proportion of a country's population exposed to health risks from their access to sanitation, defined by the primary toilet type used by households. It is log-transformed and given 40% weight in the aggregation.

2) Unsafe drinking water, measured as the proportion of a country's population exposed to health risks from their access to drinking water, defined by the primary water source used by households and the household water treatment, or the treatment that happens at the point of water collection. It is log-transformed and given 60% weight in the aggregation.

Both indicators are measured using the number of age-standardized disability-adjusted life-years (DALYs) lost per 100,000 persons. The issue category varies from 0 to 100.

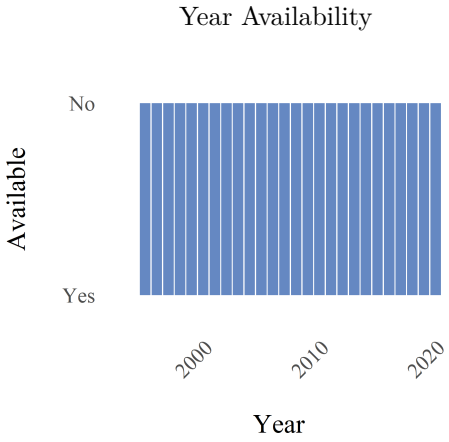


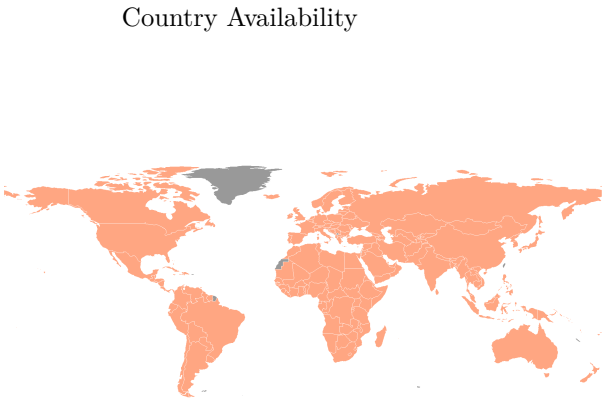
3.16.22 Household solid fuels (epi_had)

EPI measures household solid fuels using the number of age-standardized disability-adjusted life-years lost per 100,000 persons (DALY rate) due to exposure to household air pollution (HAP) from the use of household solid fuels. The variable is log-transformed.

Original source: Institute for Health Metrics and Evaluation.

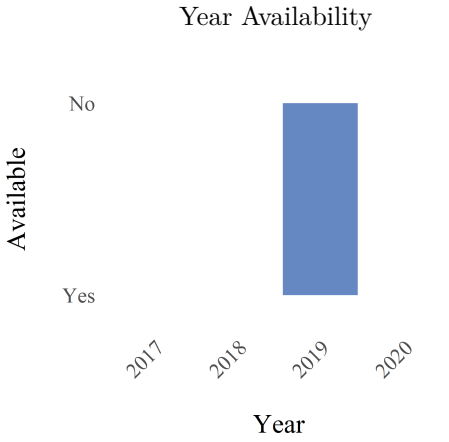
When using this variable, please cite both EPI and the original source.

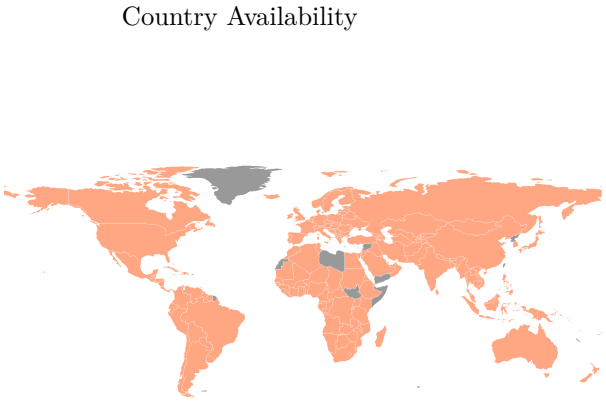




3.16.23 Heavy Metals Issue Category (epi_hmt)

Heavy Metals Issue Category consists of the indicator Lead Exposure, which measures the number of age-standardized disability-adjusted life-years (DALYs) lost per 100,000 persons due to this risk. It is log-transformed. The issue category varies from 0 to 100.



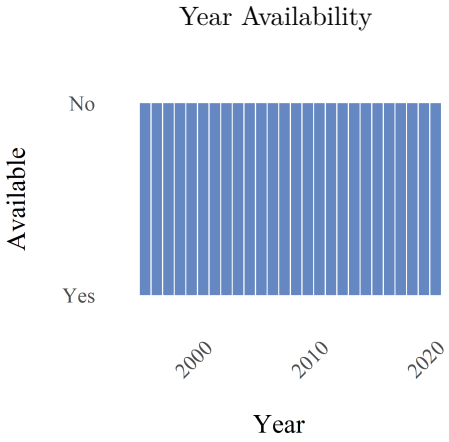


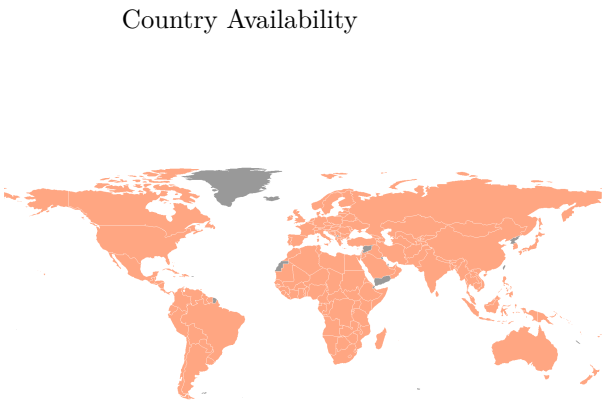
3.16.24 CO2 from land cover (epi_lcb)

This indicator measures CO2 emissions from land cover change and is calculated over the years 2001-2015. The unit of measurement is proportion.

Original source: Mullion Group.

When using this variable, please cite both EPI and the original source.



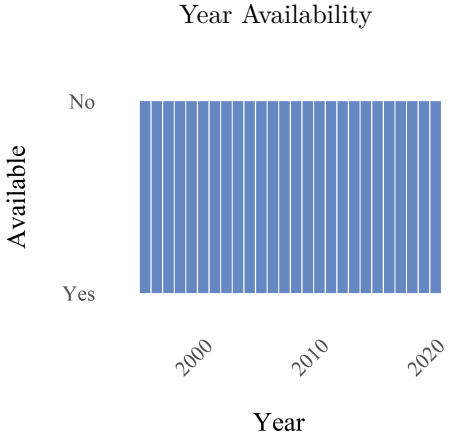


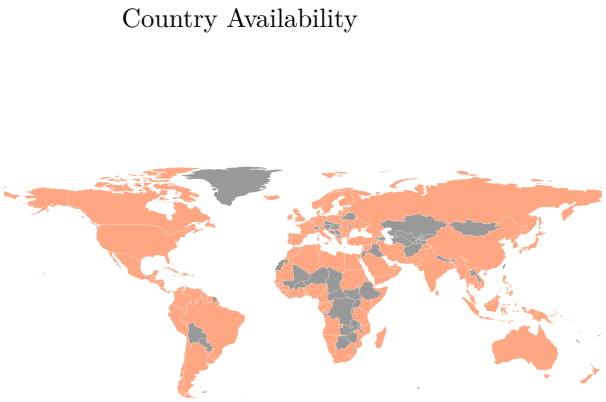
3.16.25 Marine protected areas (epi_mpa)

Marine protected areas indicator is measured as the percentage of a country's total exclusive economic zone (EEZ) designated as marine protected areas (MPAs). MPAs represent a critical tool for protecting marine ecosystems from unsustainable fishing practices, pollution, and human disturbance. Because each country may have multiple EEZs, the summed area of MPAs is divided by the summed EEZ.

Original source: World Database on Protected Areas.

When using this variable, please cite both EPI and the original source.



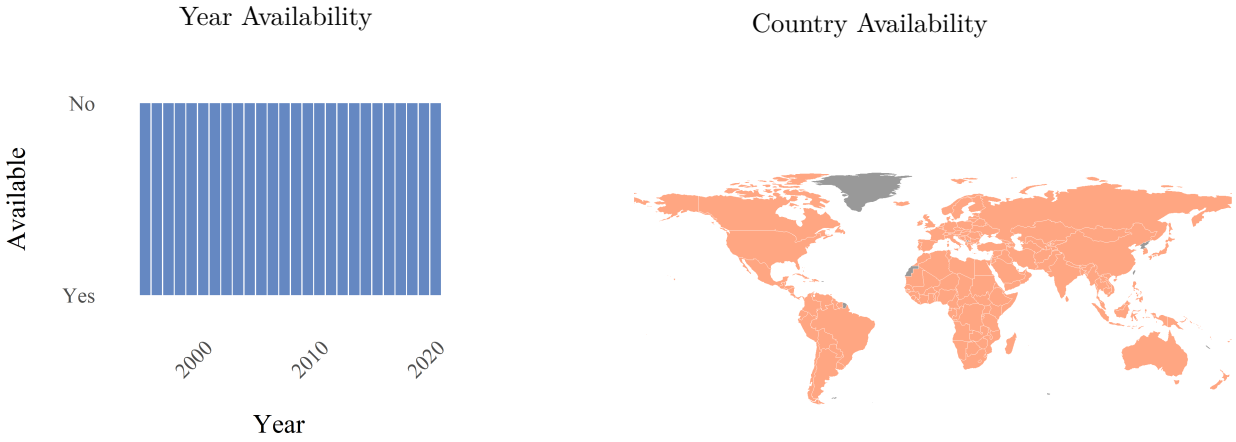


3.16.26 Controlled solid waste (epi_msw)

Controlled solid waste refers to the proportion of household and commercial waste generated in a country that is collected and treated in a manner that controls environmental risks. This metric counts waste as controlled if it is treated through recycling, composting, anaerobic digestion, incineration, or disposed of in a sanitary landfill.

Original source: Wiedinmyer et al. 2014 & Kaza et al. 2018.

When using this variable, please cite both EPI and the original source.

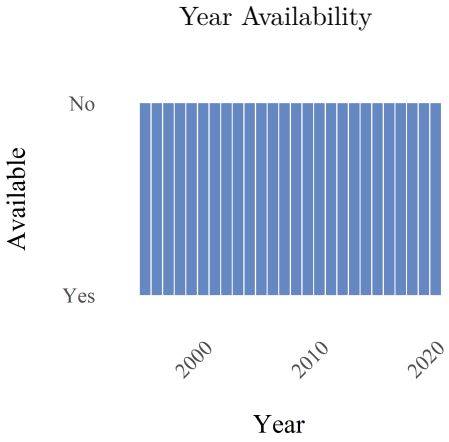


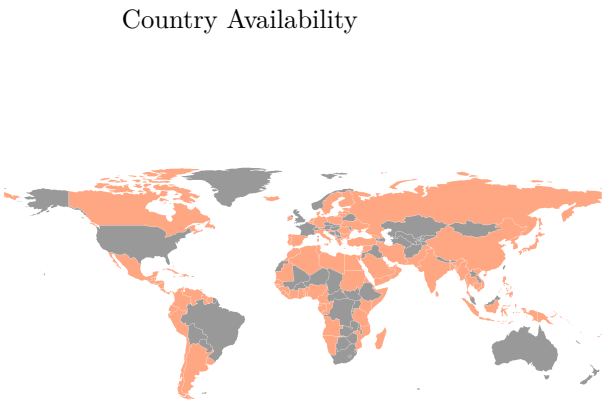
3.16.27 Marine trophic index (epi_mti)

Marine Trophic Index (MTI) measures the health of a country's fishing stock based on expected catch and changes over time. The MTI measures the degree to which a country is depleting species at higher trophic levels and fishing down the food web. The variable is log-transformed according to the formula ln(x+α), where α = 9.51E-07.

Original source: Sea Around Us.

When using this variable, please cite both EPI and the original source.



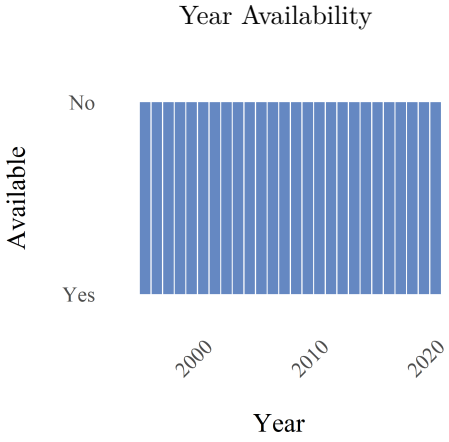


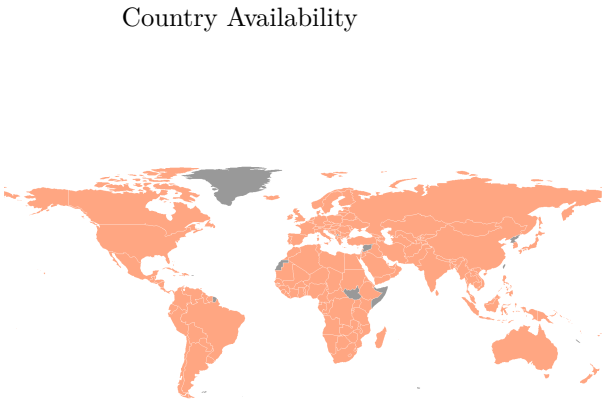
3.16.28 N2O growth rate (epi_noa)

The N2O growth rate, which makes up 5% of the Climate Change issue category, is calculated as the average annual rate of increase or decrease in raw nitrous oxide emissions over the years 2008-2017. It is then adjusted for economic trends to isolate change due to policy rather than economic fluctuation.

Original source: Potsdam Institute for Climate Impact Research.

When using this variable, please cite both EPI and the original source.





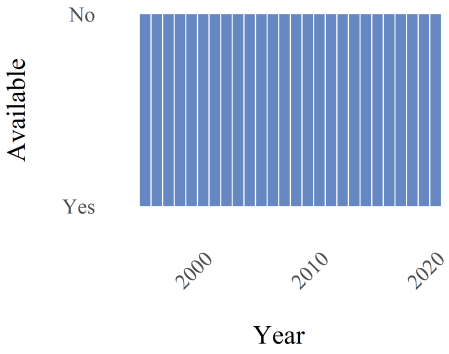
3.16.29 NOx growth rate (epi_nxa)

The NOX growth rate is calculated as the average annual rate of increase or decrease in NOX over the years 2005-2014. It is then adjusted for economic trends to isolate change due to policy rather than economic fluctuation.

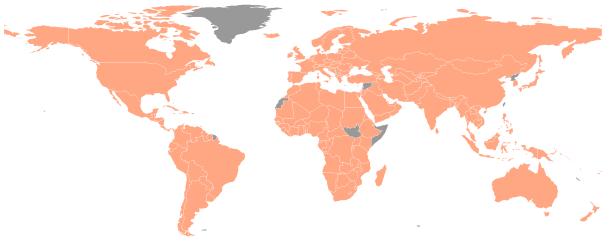
Original source: Community Emissions Data Systems.

When using this variable, please cite both EPI and the original source.

Year Availability



Country Availability

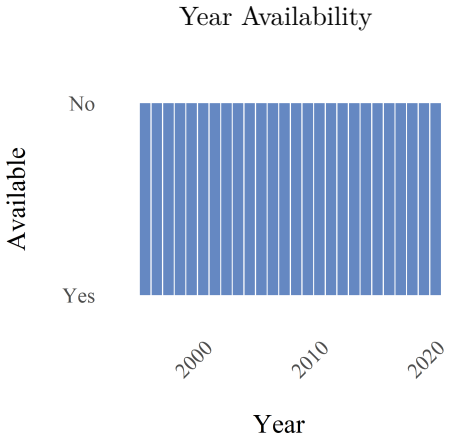


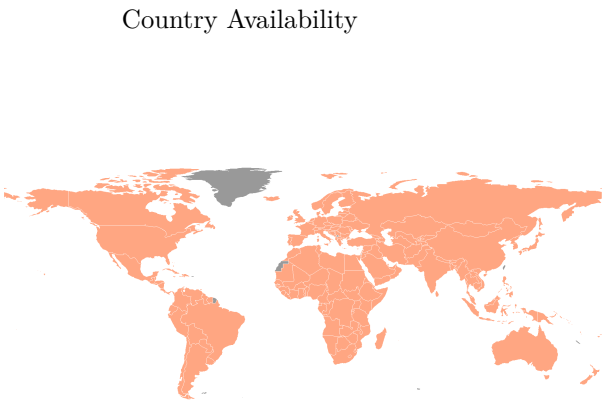
3.16.30 Ozone exposure (epi_ozd)

EPI measures ozone exposure using the number of age-standardized disability-adjusted life-years lost per 100,000 persons (DALY rate) due to exposure to ground-level ozone pollution. The variable is log-transformed.

Original source: Institute for Health Metrics and Evaluation.

When using this variable, please cite both EPI and the original source.



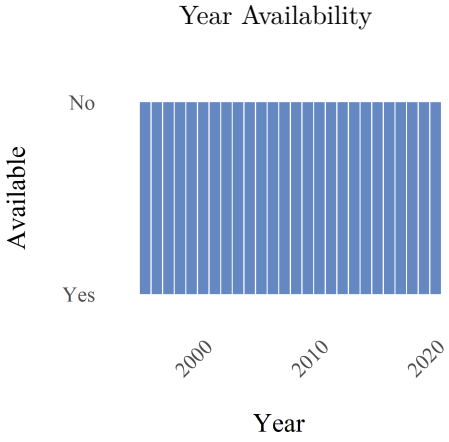


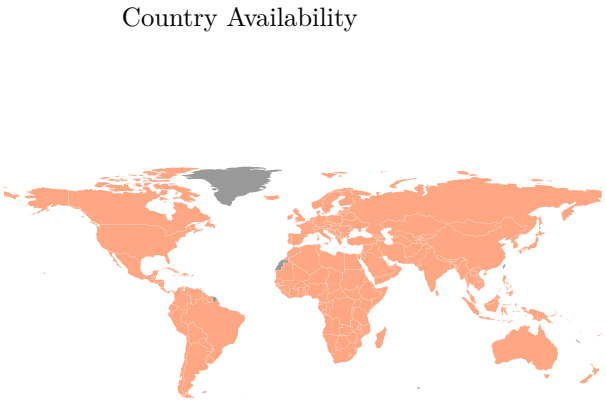
3.16.31 Protected areas representativeness index (epi_par)

The PARI indicator measures ecological representativeness as the proportion of biologically scaled environmental diversity included in a country's terrestrial protected areas. The measure relies on remote sensing, biodiversity informatics, and global modeling of fine-scaled variation in biodiversity composition for plant, vertebrate, and invertebrate species.

Original source: Commonwealth Scientific and Industrial Research Organization.

When using this variable, please cite both EPI and the original source.



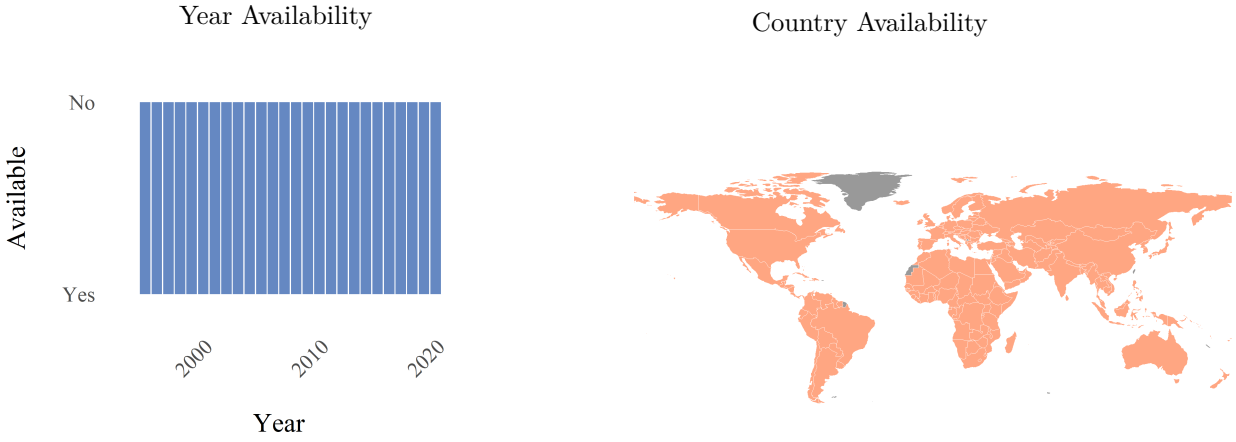


3.16.32 Lead exposure (epi_pbd)

EPI measures lead exposure using the number of age-standardized disability-adjusted life-years lost per 100,000 persons (DALY rate) due to lead contamination in the environment. The variable is log-transformed.

Original source: Institute for Health Metrics and Evaluation.

When using this variable, please cite both EPI and the original source.

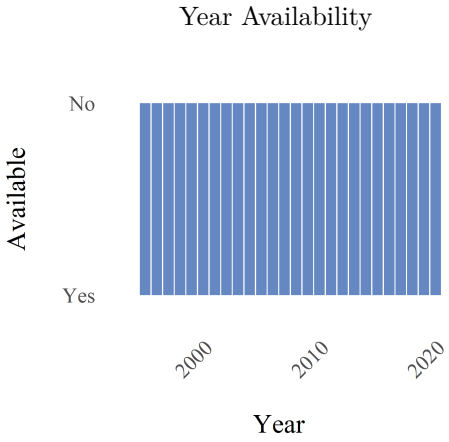


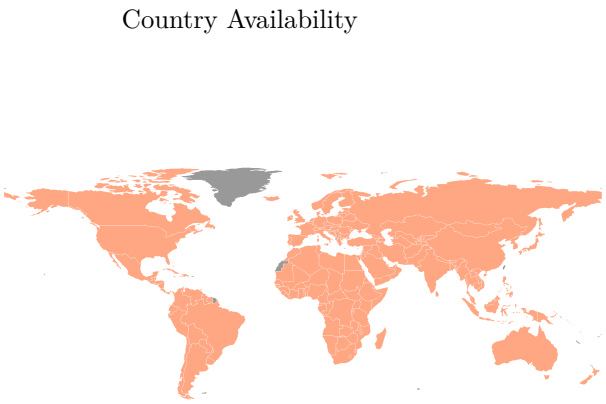
3.16.33 PM2.5 exposure (epi_pmd)

Ambient particulate matter pollution measured with the number of age-standardized disability-adjusted life-years lost per 100,000 persons (DALY rate) due to exposure to fine air particulate matter smaller than 2.5 micrometers (PM2.5). The variable is log-transformed.

Original source: Institute for Health Metrics and Evaluation Transformation.

When using this variable, please cite both EPI and the original source.



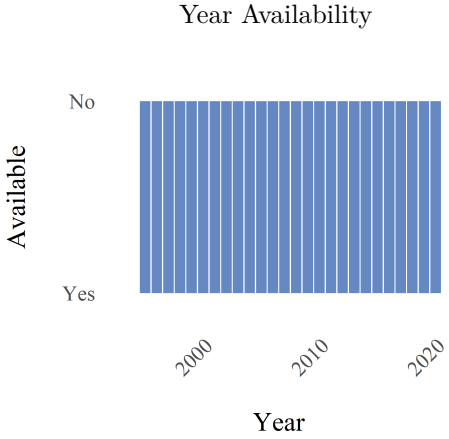


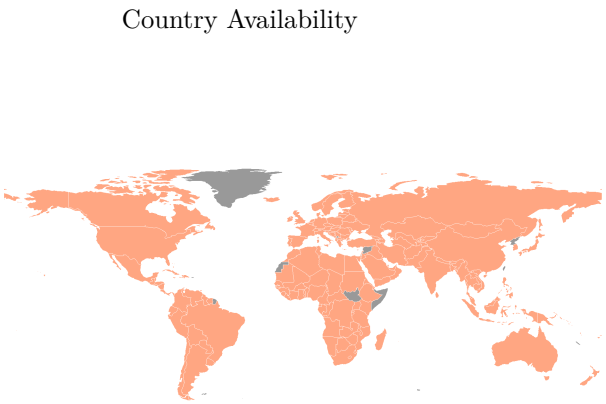
3.16.34 SO2 growth rate (epi_sda)

The SO2 growth rate is calculated as the average annual rate of increase or decrease in SO2 over the years 2005-2014. It is then adjusted for economic trends to isolate change due to policy rather than economic fluctuation.

Original source: Community Emissions Data Systems.

When using this variable, please cite both EPI and the original source.





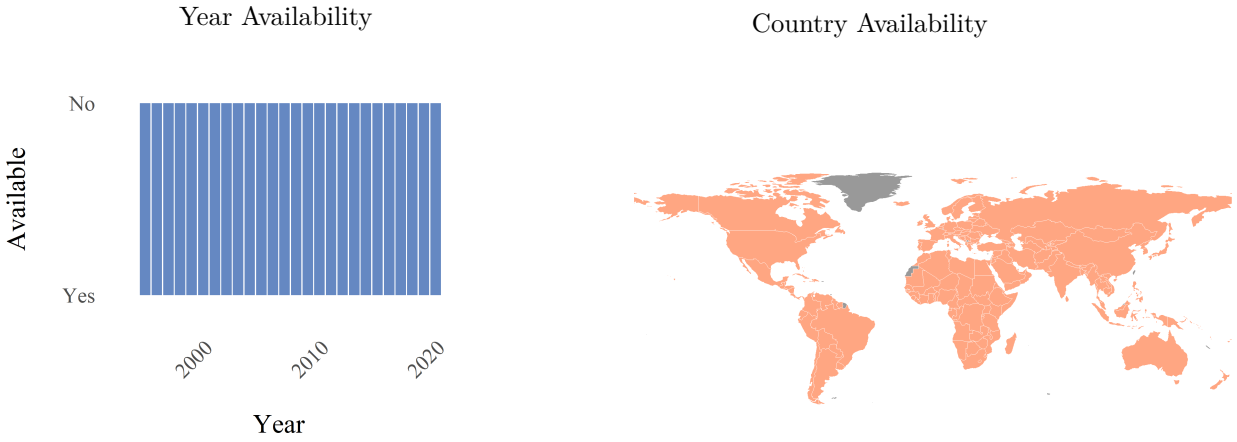
3.16.35 Species habitat index (epi_shi)

Species Habitat Index (SHI) estimates potential population losses, as well as regional and global extinction risks of individual species, using habitat loss as a proxy. The SHI indicator measures the

proportion of suitable habitat within a country that remains intact for each species in that country relative to a baseline set in the year 2001.

Original source: Map of Life.

When using this variable, please cite both EPI and the original source.

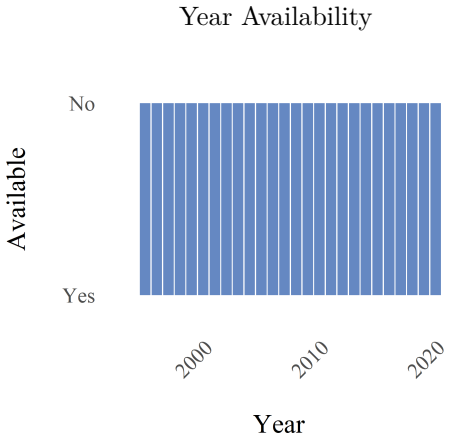


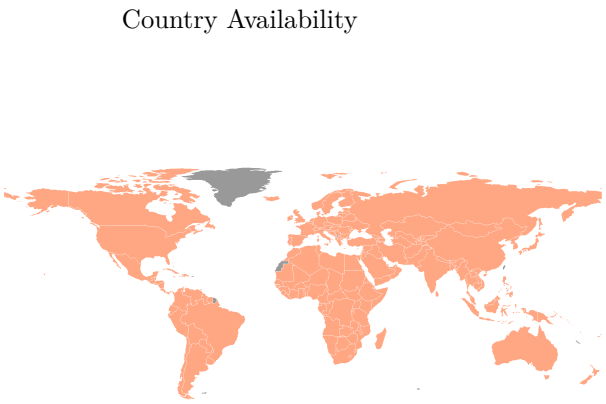
3.16.36 Sustainable nitrogen management index (epi_snm)

The Sustainable Nitrogen Management Index (SNMI) seeks to balance efficient application of nitrogen fertilizer with maximum crop yields as a measure of the environmental performance of agricultural production. The 2020 EPI uses the SNMI as a proxy for agricultural drivers of environmental damage.

Original source: UMCES.

When using this variable, please cite both EPI and the original source.



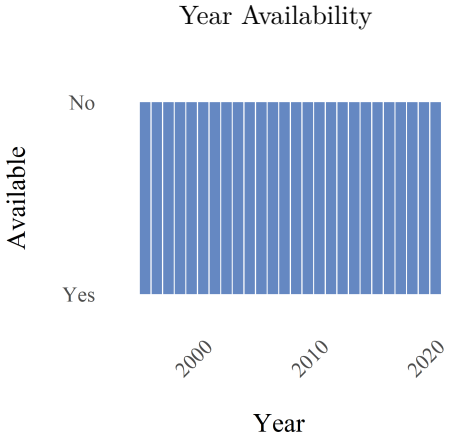


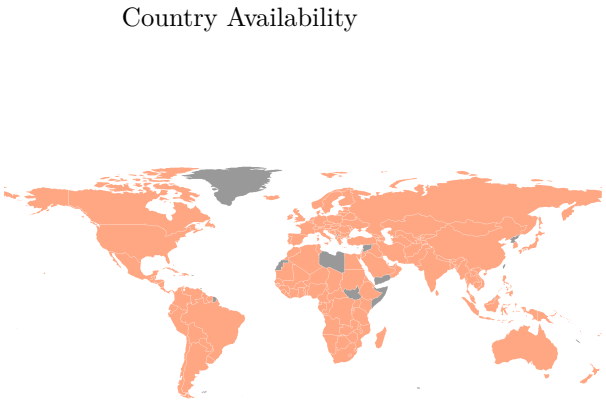
3.16.37 Species protection index (epi_spi)

Species Protection Index (SPI) evaluates the species-level ecological representativeness of each country's protected area network. The SPI metric uses remote sensing data, global biodiversity informatics, and integrative models to map suitable habitat for over 30,000 terrestrial vertebrate, invertebrate, and plant species at high resolutions. The unit of measurement is percentage.

Original source: Map of Life.

When using this variable, please cite both EPI and the original source.



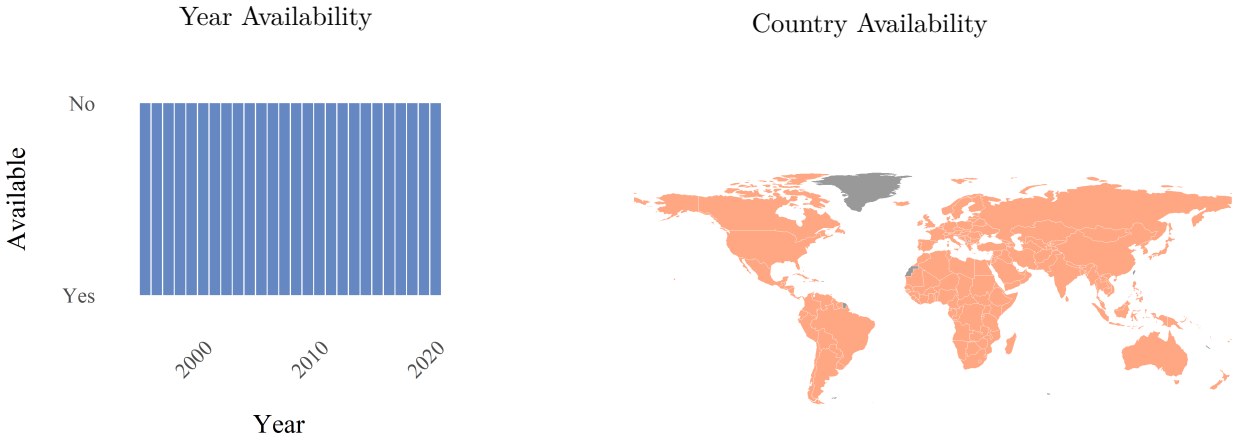


3.16.38 Terrestrial biome protection (Global weights) (epi_tbg)

EPI derives the terrestrial biome protection indicators by first calculating the proportions of the area of each of a country's biome types that are covered by protected areas and then constructing a weighted sum of the protection percentages for all biomes within that country. For the terrestrial biome protection (global weights) indicator, protection percentages are weighted according to the global prevalence of each biome type. This indicator evaluates a country's contribution toward the global 17% protection goal.

Original source: World Database on Protected Areas.

When using this variable, please cite both EPI and the original source.

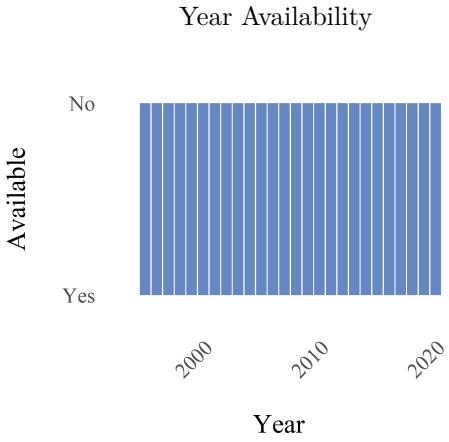


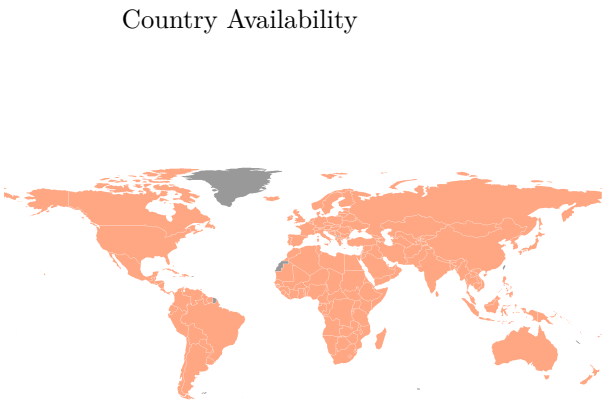
3.16.39 Terrestrial biome protection (National weights) (epi_tbn)

EPI derives the terrestrial biome protection indicators by first calculating the proportions of the area of each of a country's biome types that are covered by protected areas and then constructing a weighted sum of the protection percentages for all biomes within that country. For the terrestrial biome protection (national weights) indicator, protection percentages are weighted according to the prevalence of each biome type within that country. This indicator evaluates a country's efforts to achieve 17% protection for all biomes within its borders, as per Aichi Target 11.

Original source: World Database on Protected Areas.

When using this variable, please cite both EPI and the original source.



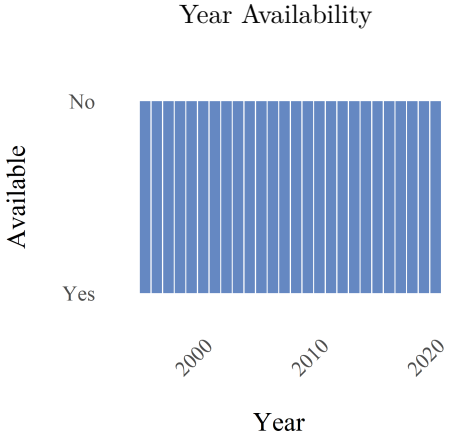


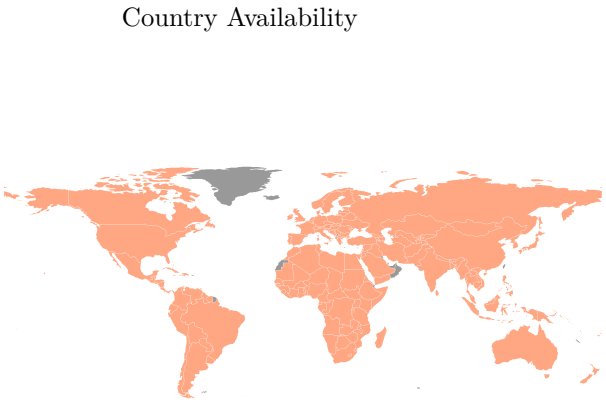
3.16.40 Tree cover loss (epi_tcl)

EPI quantifies tree cover loss by constructing a five-year moving average of the percentage of forest lost from the extent of forest cover in the reference year 2000. A forest is defined as any land area with over 30% canopy cover. The variable is log-transformed.

Original source: Global Forest Watch.

When using this variable, please cite both EPI and the original source.





3.16.41 Unsafe sanitation (epi_usd)

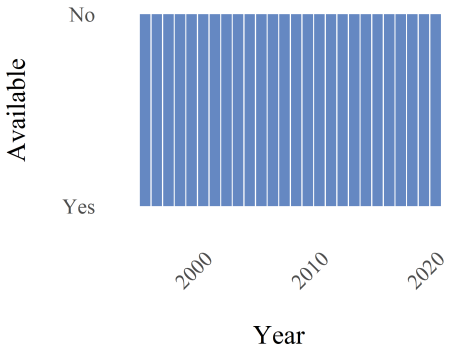
EPI measures unsafe sanitation using the number of age-standardized disability-adjusted life-years lost per 100,000 persons (DALY rate) due to their exposure to inadequate sanitation facilities. The

variable is log-transformed.

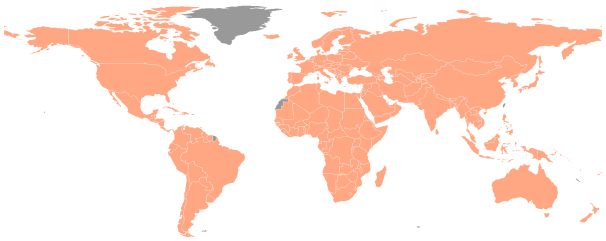
Original source: Institute for Health Metrics and Evaluation.

When using this variable, please cite both EPI and the original source.

Year Availability



Country Availability



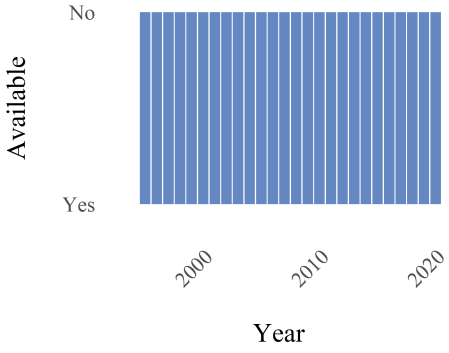
3.16.42 Unsafe drinking water (epi_uwd)

EPI measures unsafe drinking water using the number of age-standardized disability-adjusted life-years lost per 100,000 persons (DALY rate) due to exposure to unsafe drinking water. The variable is log-transformed.

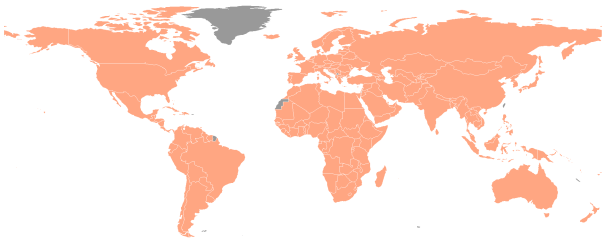
Original source: Institute for Health Metrics and Evaluation.

When using this variable, please cite both EPI and the original source.

Year Availability



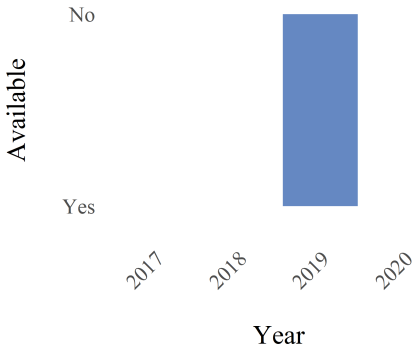
Country Availability



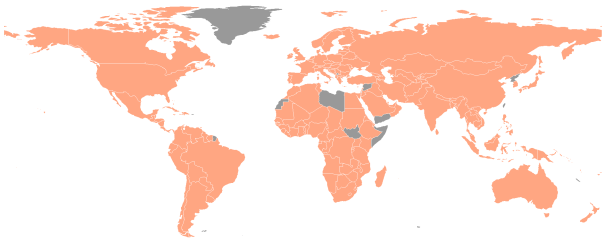
3.16.43 Waste Management Issue Category (epi_wmg)

Waste Management Issue Category consists of the indicator Controlled Solid Waste, which refers to the proportion of household and commercial waste generated in a country that is collected and treated in a manner that controls environmental risks. This metric counts waste as "controlled" if it is treated through recycling, composting, anaerobic digestion, incineration, or disposed of in a sanitary landfill. The issue category varies from 0 to 100.

Year Availability



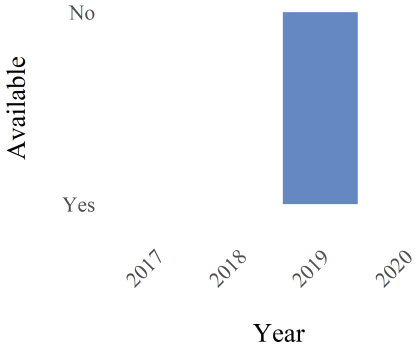
Country Availability



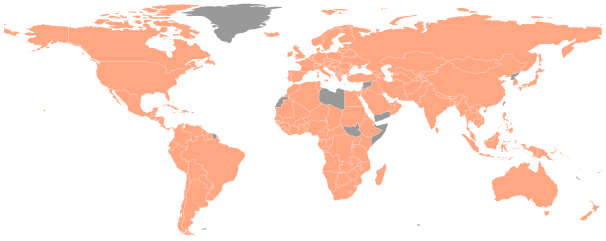
3.16.44 Water Resources Issue Category (epi_wrs)

Water Resources Issue Category consists of the indicator Wastewater Treatment, which measures the percentage of wastewater that undergoes at least primary treatment, normalized by the proportion of the population connected to a municipal wastewater collection system. It is calculated through a straightforward product of wastewater treatment level and sewerage connection rate. The issue category varies from 0 to 100.

Year Availability



Country Availability



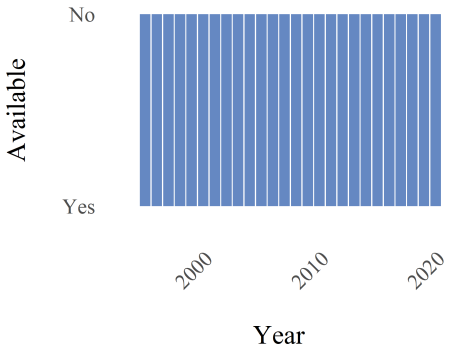
3.16.45 Wetland loss (epi_wtl)

Wetland loss is quantified using a five-year moving average of percentage of gross losses in wetland areas compared to the 1992 reference year. The variable is log-transformed according to the formula ln(x+α), where α = 2.47E-06.

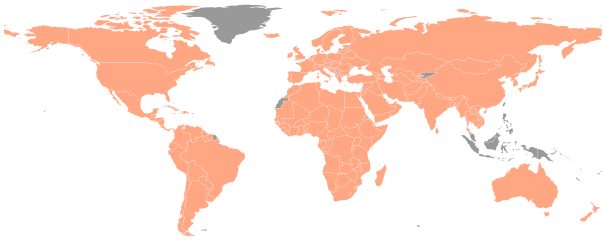
Original source: European Space Agency.

When using this variable, please cite both EPI and the original source.

Year Availability



Country Availability

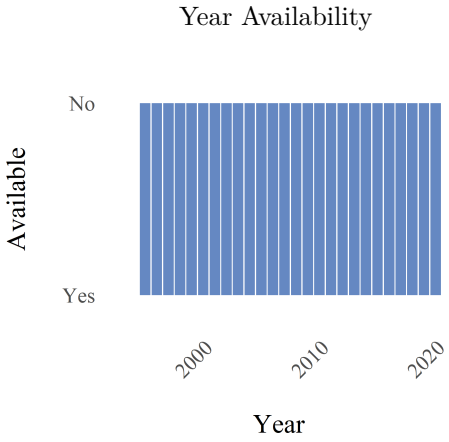


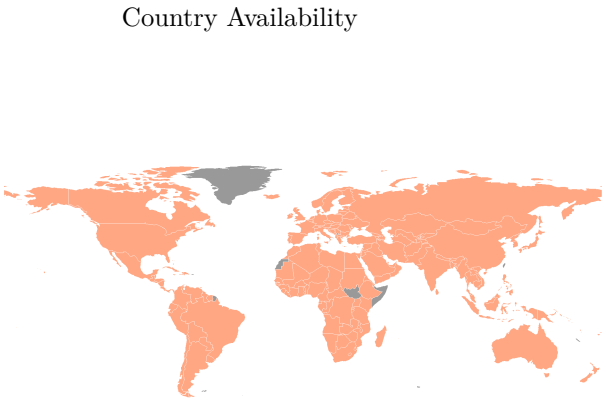
3.16.46 Wastewater treatment (epi_wwt)

The percentage of wastewater that undergoes at least primary treatment in each country, normalized by the proportion of the population connected to a municipal wastewater collection system.

Original source: UNSD, OECD, Eurostat, etc.

When using this variable, please cite both EPI and the original source.


Year Availability
No
Yes
Available
2000
2010
2020
Year


Country Availability

3.17 Environmental Policy Stringency Index

Dataset by: Organisation for Economic Co-operation and Development

If you use any of these variables, make sure to cite the original source and QoG Data. Our suggested citation for this dataset is:

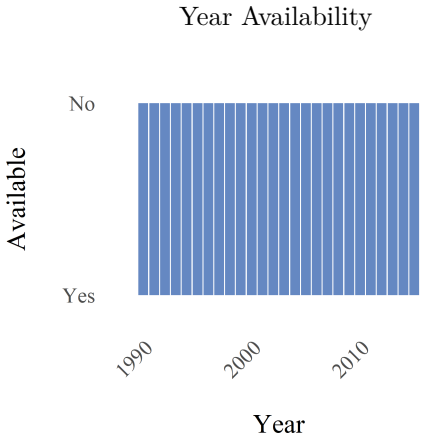
Botta, Enrico and Tomasz Kozluk. 2014. "Measuring environmental policy stringency in OECD countries: A composite index approach". *OECD Economics Department Working Papers, No. 1177, OECD Publishing*

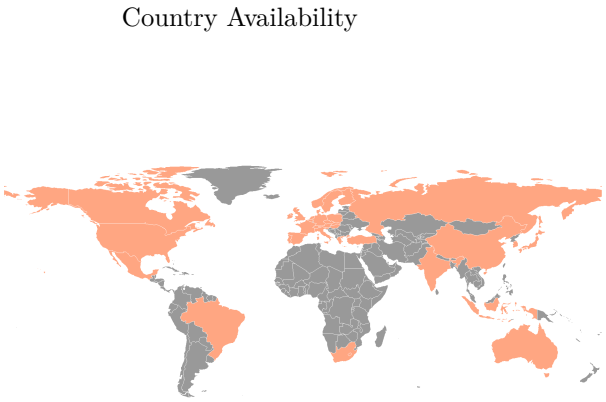
Link to the original source: `https://www.oecd.org/economy/growth/Do-environmental-policies-matter-for-productivity-growth.htm`

The OECD Environmental Policy Stringency Index (EPS) is a country-specific and internationally-comparable measure of the stringency of environmental policy.

3.17.1 Environmental Policy Stringency Index (oecd_eps)

The index measures the degree to which environmental policies put an explicit or implicit price on polluting or environmentally harmful behaviour. The index ranges from 0 (not stringent) to 6 (highest degree of stringency) and is based on the degree of stringency of 14 environmental policy instruments, both market-based and non-market-based, primarily related to climate and air pollution. These policy instruments include environmental taxes on SOx, NOx, diesel, and CO2; trading schemes in CO2; renewable energy and energy efficiency certificates; feed-in tariffs on solar and wind energy; deposit and refund schemes; emission limit values on NOx, SOx, PMx and sulphur content limits in diesel, as well as government expenditure on research and development within renewable energy.


Year Availability
No
Yes
Available
1990
2000
2010
Year


Country Availability

3.18 Environmental Protection Expenditure Accounts (EPEA)

Dataset by: Organisation for Economic Co-operation and Development

If you use any of these variables, make sure to cite the original source and QoG Data. Our suggested citation for this dataset is:

Organisation for Economic Co-operation and Development (OECD). 2020. *Environmental protection expenditure account (EPEA)*. URL: `https://ec.europa.eu/eurostat/web/products-manuals-and-guidelines/-/KS-GQ-17-004`

Link to the original source: `https://ec.europa.eu/eurostat/web/products-manuals-and-guidelines/-/KS-GQ-17-004`

The Environmental Protection Expenditure Account (EPEA) is a monetary description of environmental protection activities in accordance with the System of Environmental-Economic Accounting (SEEA) central framework. It is coherent with the European System of Accounts (ESA 2010) which applies to national accounts and related satellite accounts.

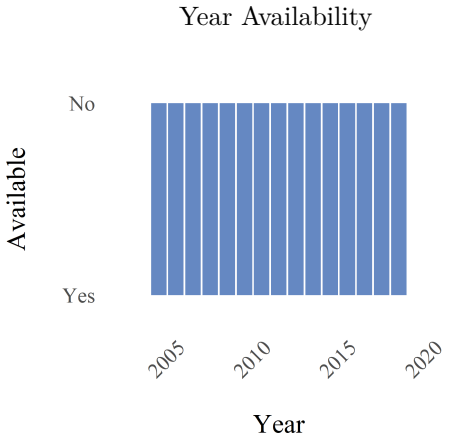
3.18.1 Environmnnetal Protection Expenditure Accounts (EPEA) (oecd_epea)

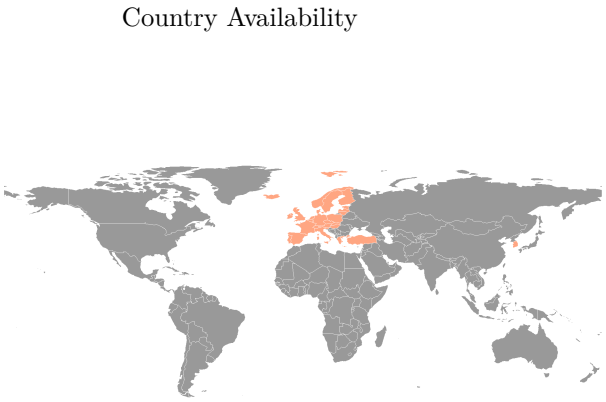
National environmental protection activities in terms of millions in national currency expenditure. This includes all activities with the main purpose of preventing, reducing, or eliminating pollution as well as any other form of environmental degradation.

The EPEA aim to describe all national transactions related to environmental protection, with the purpose of constructing a measure of the national environmental protection expenditure which can be related to, for instance, gross domestic product, in order to assess the importance of these activities as a share of total production. The EPEA show which economic sectors contribute to environmental protection expenditure, both from the producers' side, as from the users' and the financing side.

This data focuses on the production and uses of environmental protection services. Output of these services can be output of market, non-market, and ancillary activities. EPEA is directly linked to the three definitions of GDP: the production measure, the expenditure measure, and the income measure.

EPEA covers (1) expenditure on environmental protection (EP) products by resident units; (2) expenditure related to the production of EP products, including the gross capital formation, and (3) transactions related to the financing of EP expenditure.


Year Availability
No
Yes
Available
2005
2010
2015
2020
Year


Country Availability

3.19 Environmentally Adjusted Multifactor Productivity

Dataset by: Organisation for Economic Co-operation and Development

If you use any of these variables, make sure to cite the original source and QoG Data. Our suggested citation for this dataset is:

Organisation for Economic Co-operation and Development (OECD). 2020. *Environmentally adjusted multifactor productivity.* URL: `oe.cd/eamfp`

Rodríguez, Miguel Cárdenas, Ivan Hai, and Martin Souchier. 2018. "Environmentally adjusted multifactor productivity: methodology and empirical results for OECD and G20 countries". *Ecological Economics.* 153

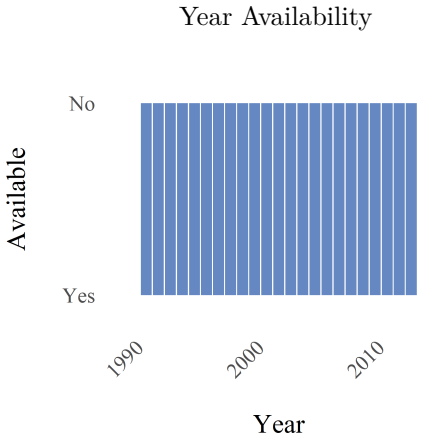
Link to the original source: `https://www.oecd.org/environment/indicators-modelling-outlooks/greening-productivity-measurement.htm`

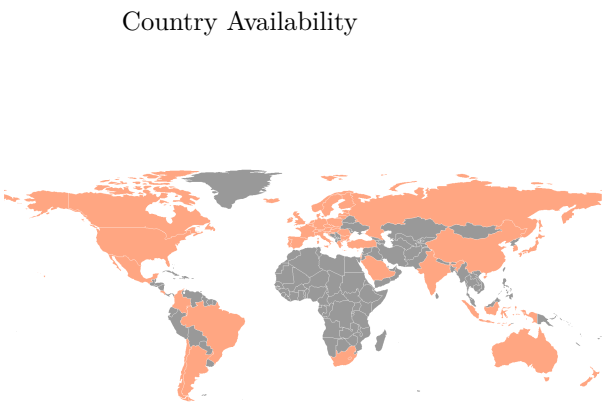
Environmentally adjusted multifactor productivity (EAMFP) takes into account the reliance of national economies on natural resources and national efforts to mitigate environmental damage.

3.19.1 Environmentally adjusted multifactor productivity growth (oecd_eampg)

EAMFP measures a country's ability to generate income from a given set of inputs, while accounting for the consumption of natural resources and production of undesirable environmental by-products. It corresponds to the share of pollution-adjusted output growth that is not explained by changes in the use of inputs (residual growth).

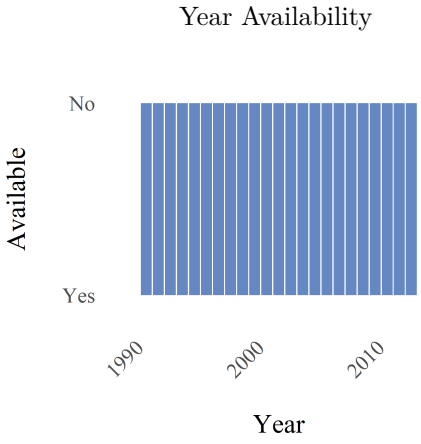
EAMFP growth therefore measures the residual growth in the joint production of both the desirable and the undesirable outputs that cannot be explained by changes in the consumption of factor inputs (including labour, produced capital, and natural capital). Therefore, for a given growth of input use, EAMFP increases when GDP increases or when pollution decreases.

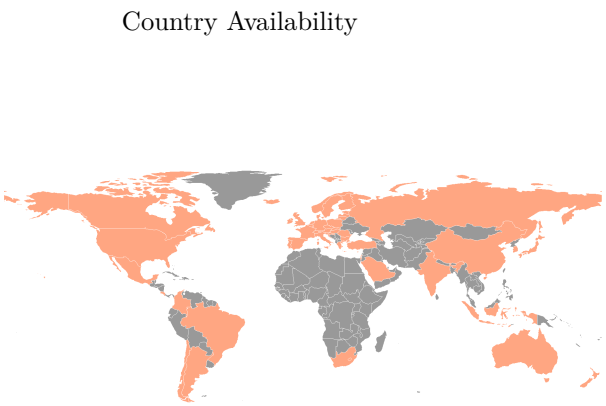




3.19.2 Pollution-adjusted GDP growth (oecd_polagdpg)

Pollution-adjusted GDP growth measures to what extent a country's GDP growth should be corrected for pollution abatement efforts - adding what has been undervalued due to resources being diverted to pollution abatement, or deducing the "excess" growth which is generated at the expense of environmental quality.





3.20 European Social Survey - Wave 1-9

Dataset by: European Social Survey

If you use any of these variables, make sure to cite the original source and QoG Data. Our suggested citation for this dataset is:

NSD - Norwegian Centre for Research Data. 2020. *European Social Survey Cumulative File, ESS 1-9. Data file edition 1.0.* URL: `http://www.europeansocialsurvey.org/`

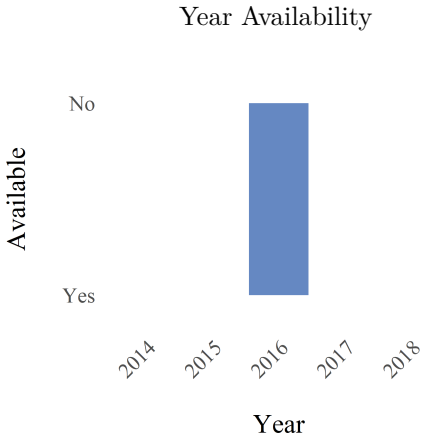
Link to the original source: `http://www.europeansocialsurvey.org/data/round-index.html`

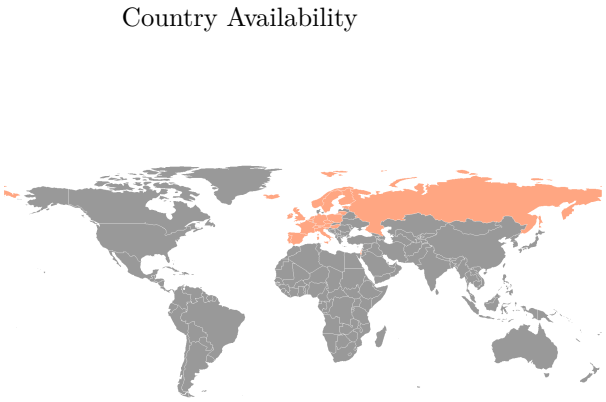
The European Social Survey (ESS) is an academically-driven multi-country survey, which has been administered in over 30 countries to date. Its three aims are: first - to monitor and interpret changing public attitudes and values within Europe and to investigate how they interact with Europe's changing institutions; second - to advance and consolidate improved methods of cross-national survey measurement in Europe and beyond; and third - to develop a series of European social indicators, including attitudinal indicators.

This dataset includes two types of variables: 1) percentage of respondents choosing a particular response option, and 2) average response per country, weighted using design weights (dweight), as recommended by the ESS.

3.20.1 Climate policy support: bans (mean) (ess_banhhap_m)

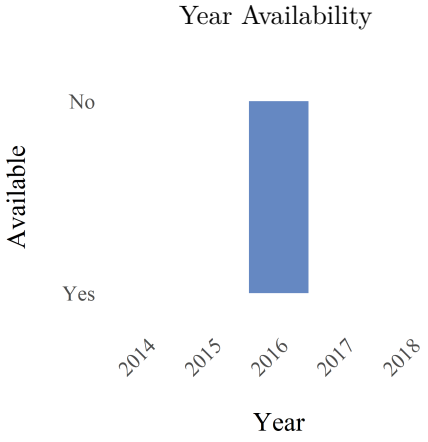
Average reply to D30-32: "To what extent are you in favour or against the following policies in [country] to reduce climate change? A law banning the sale of the least energy-efficient household appliances". (1) Strongly in favor, (2) Somewhat in favor, (3) Neither in favor nor against, (4) Somewhat against, (5) Strongly against. Answers (7) Refusal and (8) Don't know are deleted. A higher score means that there is a higher aversion towards the proposed ban in the general population. A lower score means that there is a higher support towards the ban in the general population.

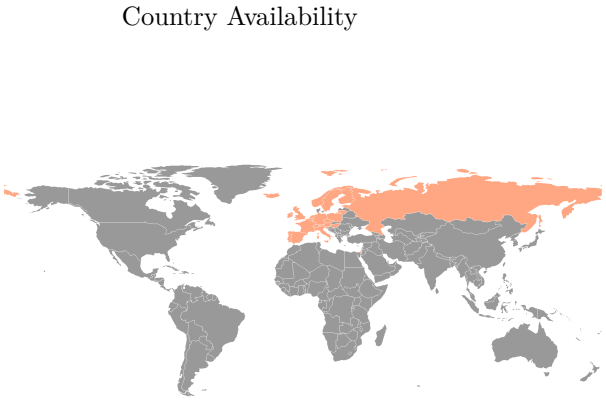




3.20.2 Belief that climate change is natural (%) (ess_ccnthum_p)

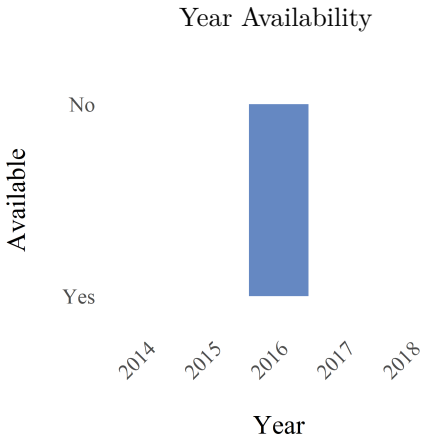
Percent of replies "(1) Entirely by natural processes" and "(2) Mainly by natural processes" to D22: "Do you think that climate change is caused by natural processes, human activity, or both?". (1) Entirely by natural processes, (2) Mainly by natural processes, (3) About equally by natural processes and human activity, (4) Mainly by human activity, (5) Entirely by human activity, (55) I don't think climate change is happening, (77) Refusal, (88) Don't know. A higher score means that there are more people who believe that climate change is happening due to natural rather than human-induced causes. A lower score means that there are fewer people who believe that these are natural processes that are behind climate change.

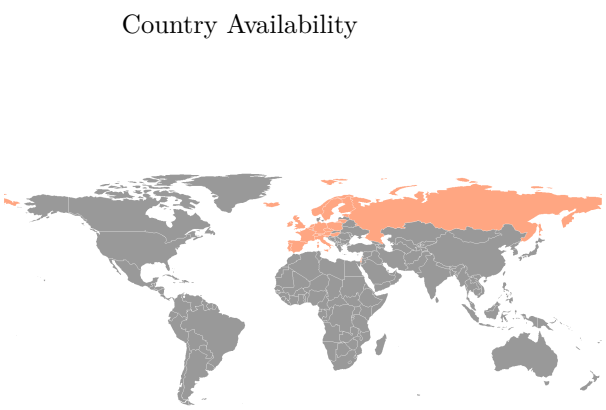




3.20.3 Personal responsibility to reduce climate change (mean) (ess_ccrdprs_m)

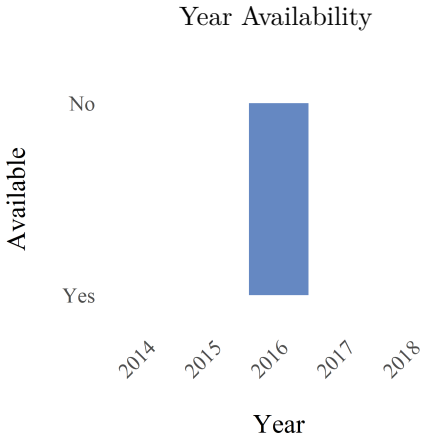
Average reply to D23: "To what extent do you feel a personal responsibility to try to reduce climate change?". (00) Not at all - (10) A great deal. Answers (77) Refusal and (88) Don't know are deleted. The higher the score the more people feel personal responsibility for reducing climate change. The lower the score the fewer people feel personal responsibility for reducing climate change.

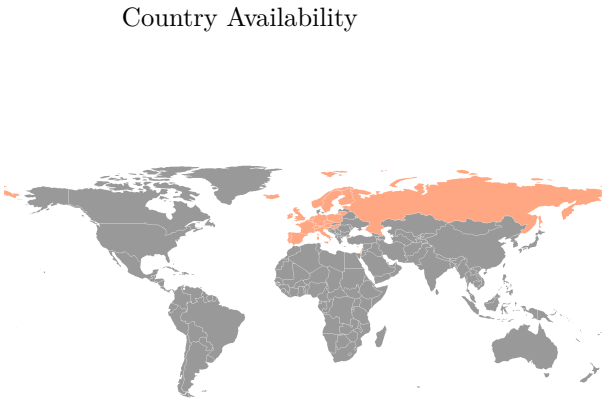




3.20.4 Climate change denial (%) (ess_clmchng_p)

Percent of replies "(3) Probably not changing" and "(4) Definitely not changing" to D19: "You may have heard the idea that the world's climate is changing due to increases in temperature over the past 100 years. What is your personal opinion on this? Do you think the world's climate is changing?". (1) Definitely changing, (2) Probably changing, (3) Probably not changing, (4) Definitely not changing, (7) Refusal, (8) Don't know. A higher score means that more people believe that the climate is not changing. A lower score means that more people believe that the climate is changing.

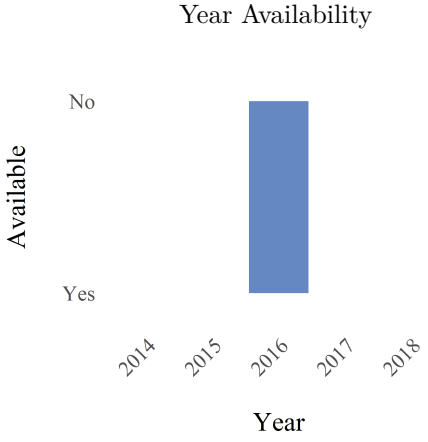


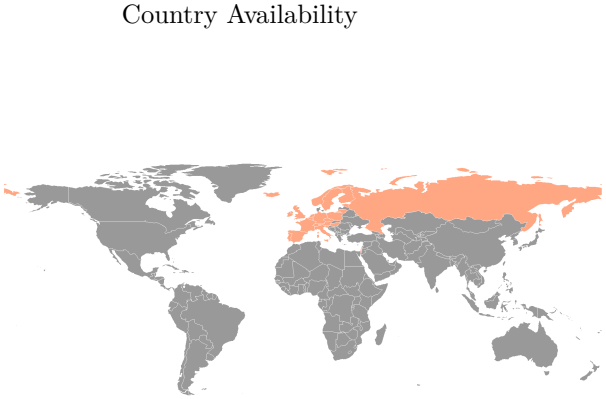


3.20.5 Thinking about climate change (mean) (ess_clmthgt_m)

Average reply to D20 and D21: "How much have you thought about climate change before today?". (1) Not at all, (2) Very little, (3) Some, (4) A lot, (5) A great deal. Answers (7) Refusal and (8) Don't know are deleted.

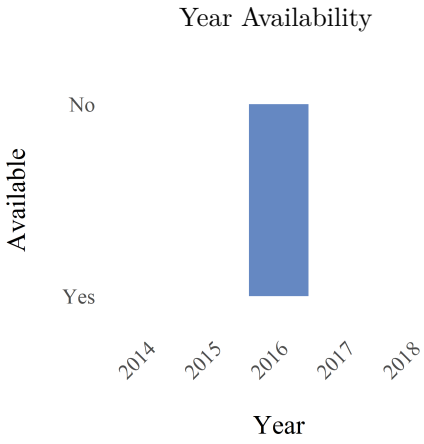
D20 was only asked to those who replied "(4) Definitely not changing" to question D19 "Do you think climate is changing?". D21 is the same question but was asked to everyone else. In this dataset, we combined the replies for D20 and D21 before taking an average. A higher score means that a larger part of the population thought about climate change prior to the survey. A lower score means that a smaller part of the population thought about climate change prior to the survey.

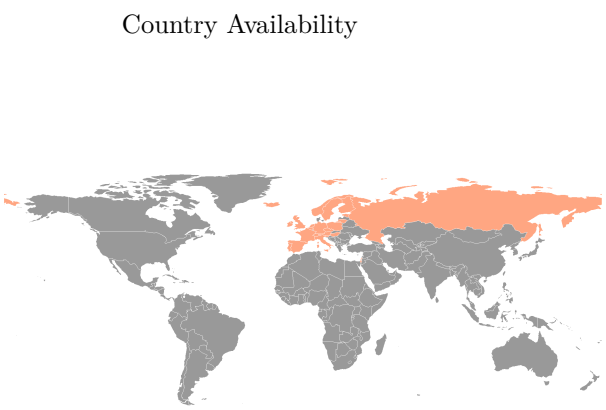




3.20.6 Belief in climate action: governments (mean) (ess_gvsrdcc_m)

Average reply to D28: "And how likely do you think it is that governments in enough countries will take action that reduces climate change?". (00) Not likely at all - (10) Extremely likely. Answers (77) Refusal and (88) Don't know are deleted. A higher score means that larger parts of the population believe that enough governments will take action towards climate change. A lower score means that fewer people believe that enough governments will take action towards climate change.





3.20.7 Important to care for the environment (mean) (ess_impenv_m)

Average reply to CARD 76: "Now I will briefly describe some people. Please listen to each description and tell me how much each person is or is not like you. Use this card for your answer;

She/he strongly believes that people should care for nature. Looking after the environment is important to her/him".

(1) Very much like me

(2) Like me

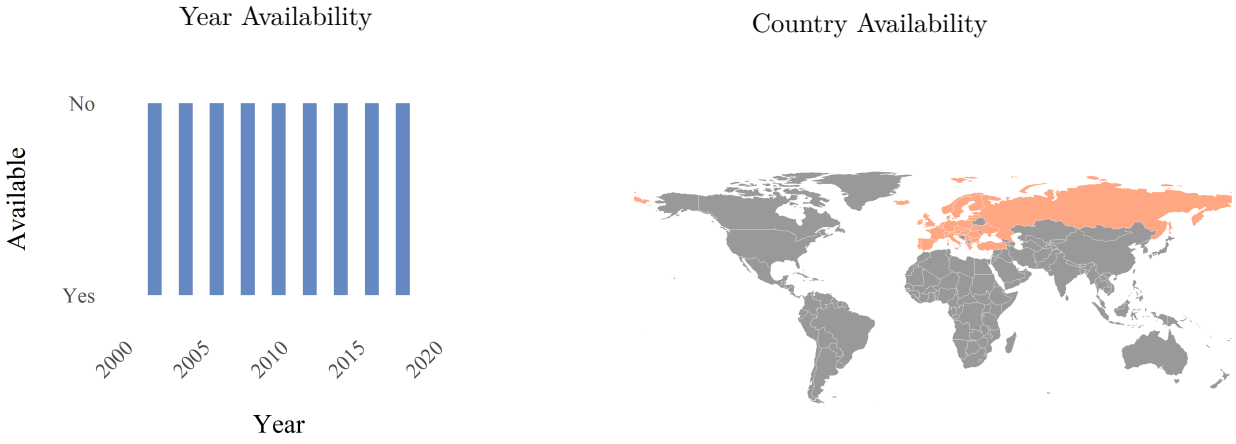
(3) Somewhat like me

(4) A little like me

(5) Not like me

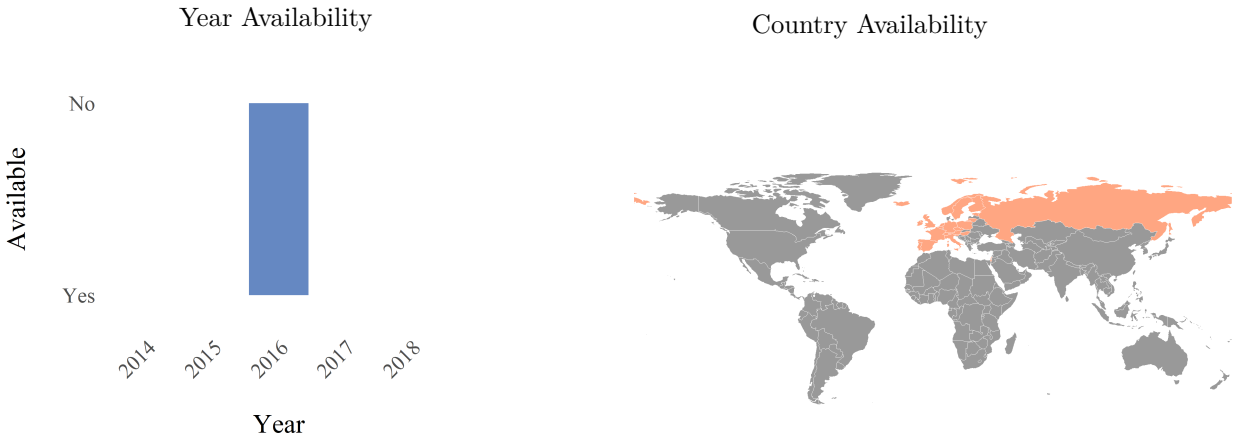
(6) Not like me at all

Answers "Don't know" are deleted. A higher score means that fewer people think that it is important to care about nature/environment. A lower score means that more people think that it is important to care about nature/environment.



3.20.8 Climate policy support: taxes (mean) (ess_inctxff_m)

Average reply to D30-32: "To what extent are you in favour or against the following policies in [country] to reduce climate change? Increasing taxes on fossil fuels, such as oil, gas and coal".(1) Strongly in favor, (2) Somewhat in favor, (3) Neither in favor nor against, (4) Somewhat against, (5) Strongly against. Answers (7) Refusal and (8) Don't know are deleted. A higher score means that the aversion towards a fossil fuel tax is higher in the population. A lower score means that there is more support towards a fossil fuel tax in the population.

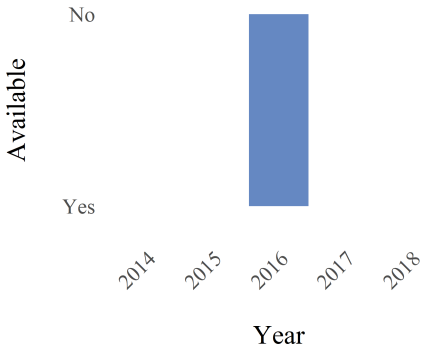


3.20.9 Belief in climate action: individuals (mean) (ess_lklmten_m)

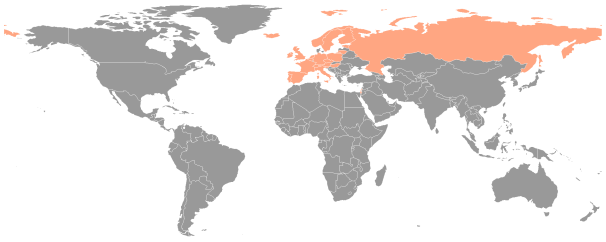
Average reply to D27: "How likely do you think it is that large numbers of people will actually limit their energy use to try to reduce climate change?". (00) Not likely at all - (10) Extremely likely. Answers (77) Refusal and (88) Don't know are deleted. A higher score means that more people

believe that a large number of people are likely to limit energy consumption to reduce climate change. A lower score means that fewer people believe that a large number of people are likely to reduce energy consumption to reduce climate change.

Year Availability



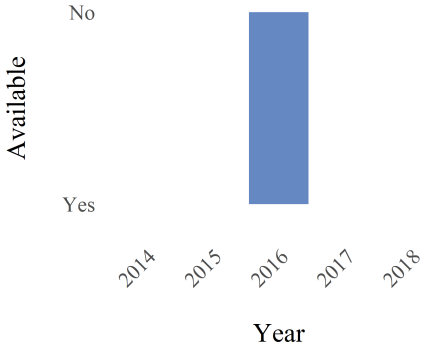
Country Availability



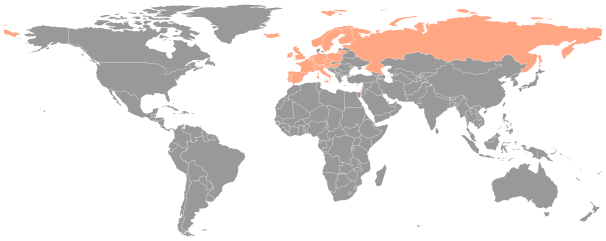
3.20.10 Climate policy support: subsidies (mean) (ess_sbsrnen_m)

Average reply to D30-32: "To what extent are you in favour or against the following policies in [country] to reduce climate change? Using public money to subsidise renewable energy such as wind and solar power". (1) Strongly in favor, (2) Somewhat in favor, (3) Neither in favor nor against, (4) Somewhat against, (5) Strongly against. Answers (7) Refusal and (8) Don't know are deleted. A higher score means that there is more aversion in the population towards government subsidies towards renewable energy. A lower score means that there is more support for renewable energy subsidies.

Year Availability



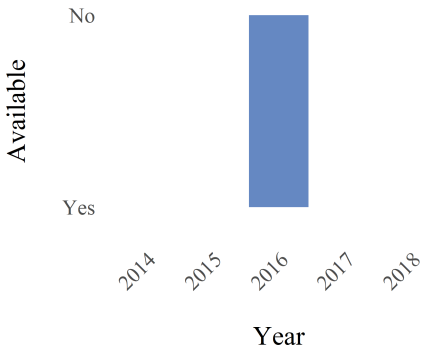
Country Availability



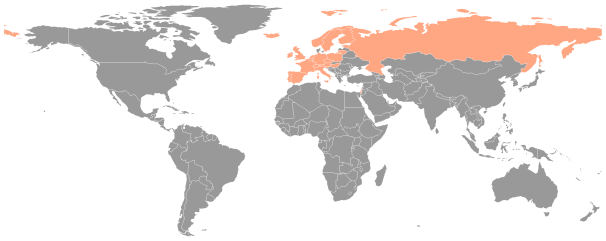
3.20.11 Worry about climate change (mean) (ess_wrclmch_m)

Average reply to D24: "How worried are you about climate change?". (1) Not at all worried, (2) Not very worried, (3) Somewhat worried, (4) Very worried, (5) Extremely worried. Answers (7) Refusal and (8) Don't know are deleted. A higher score means that there is a higher degree of worry in the population about climate change. A lower score means that there is less worry in the population about climate change.

Year Availability



Country Availability



3.21 Exposure to PM2.5 in Countries and Regions

Dataset by: Organisation for Economic Co-operation and Development

If you use any of these variables, make sure to cite the original source and QoG Data. Our suggested citation for this dataset is:

Organisation for Economic Co-operation and Development (OECD). 2020. *Exposure to PM2.5 in countries and regions (Edition 2018).* URL: `https://www.oecd-ilibrary.org/environment/data/oecd-environment-statistics_env-data-en`

Shaddick, Gavin et al. 2018. "Data integration for the assessment of population exposure to ambient air pollution for global burden of disease assessment". *Environmental Science & Technology.* 52. 16

Link to the original source: `https://www.oecd-ilibrary.org/environment/data/oecd-environment-statistics_env-data-en`

The underlying PM2.5 concentration estimates are taken from the Global Burden of Disease (GBD) 2019 project. They are derived by integrating satellite observations, chemical transport models, and measurements from ground monitoring station networks.

The concentration estimates are population-weighted using gridded population datasets from the Joint Research Center Global Human Settlement project. These are produced by distributing census-derived population estimates from the Gridded Population of the World, version 4 from the NASA Socioeconomic Data and Applications Center according to the density and distribution of built-up areas.

For political and administrative boundaries, OECD (2020) territorial grid units are used where available, for the remaining countries, the FAO (2015) Global Administrative Unit Layers (GAUL 2014) are used (see below for details). The OECD (2020) Functional Urban Area definition is used for cities.

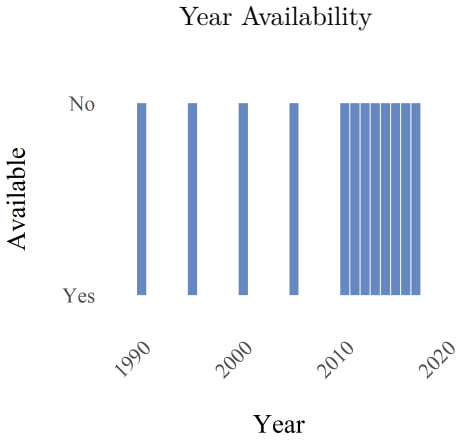
The accuracy of these exposure estimates varies considerably by location. Accuracy is poorer in areas with few monitoring stations and in areas with very high concentrations such as Africa, the Middle-East and South Asia. Accuracy is generally good in regions with dense monitoring station networks (such as most advanced economies). See Shaddick et al. (2018) for further details.

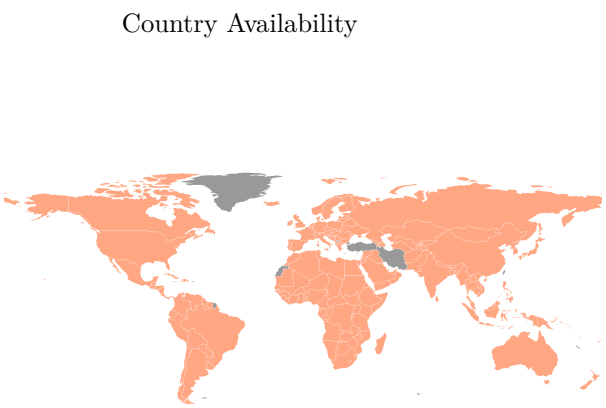
See Green Growth dataset for further measures of PM exposure.

3.21.1 Percentage of population exposed to more than 15 μg/m3 of PM2.5 (oecd_-pm25ex15p)

Percentage of population exposed to a fine particulate matter (PM2.5) concentration greater than 15 micrograms (μg) per cubic meter (m3).

The World Health Organization (WHO) provides air quality guidelines based on scientific evidence and expert advice. 15 μg/m3 is interim target-3. In addition to other health benefits, these levels reduce the mortality risk by approximately 6% [2-11%] relative to the IT-2 level (25 μg/m3).

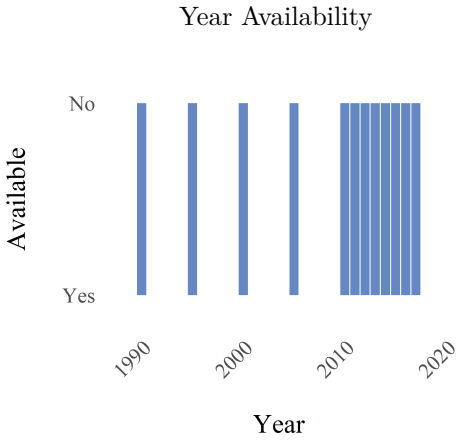


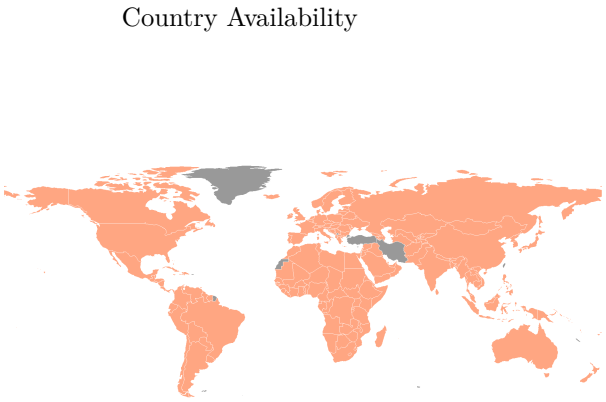


3.21.2 Percentage of population exposed to more than 25 μg/m3 of PM2.5 (oecd_-pm25ex25p)

Percentage of population exposed to a fine particulate matter (PM2.5) concentration greater than 25 micrograms (μg) per cubic meter (m3).

WHO provides air quality guidelines based on scientific evidence and expert advice. 25 μg/m3 is interim target-2: In addition to other health benefits, these levels lower the risk of premature mortality by approximately 6% [211%] relative to the IT-1 level (35 μg/m3). Data on exposure to more than 35 μg/m3 is included in the Green Growth dataset.


Year Availability
No
Yes
Available
1990
2000
2010
2020
Year


Country Availability

3.22 Global Footprint Data

Dataset by: Global Footprint Network

If you use any of these variables, make sure to cite the original source and QoG Data. Our suggested citation for this dataset is:

Global Footprint Network. 2019. *National Footprint and Biocapacity Accounts (1961-2016), 2019 Edition.* URL: `https://data.footprintnetwork.org`

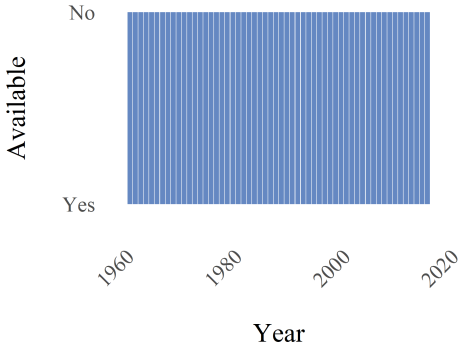
Link to the original source: `http://www.footprintnetwork.org/en/index.php/GFN/page/footprint_data_and_results/`

The National Footprint Accounts (NFAs) measure the ecological resource use and resource capacity of nations over time. Based on approximately 15,000 data points per country per year, the Accounts calculate the Footprints of 232 countries, territories, and regions from 1961 to the present, providing the core data needed for all Ecological Footprint analysis worldwide.

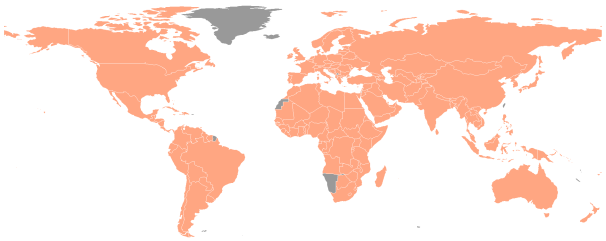
3.22.1 Total Biocapacity (gha per capita) (ef_bcpc)

Total biocapacity divided by the population size. Units are global hectares (gha) per capita.

Year Availability



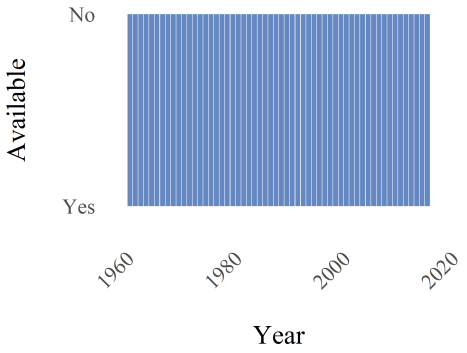
Country Availability



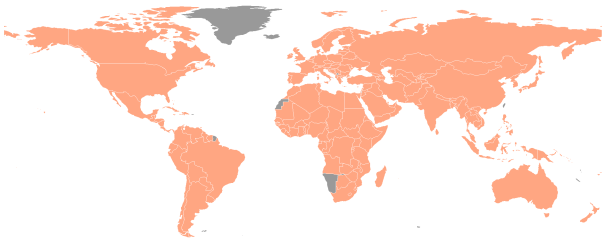
3.22.2 Total Biocapacity (total gha) (ef_bct)

Biocapacity is the capacity of ecosystems to regenerate what people demand from those surfaces. It is an aggregate measure of the amount of area available, weighted by the productivity of that area. It represents the ability of a biosphere to produce crops, livestock (pasture), timber products (forest) and seafood as well as the biosphere's ability to uptake CO2 in forests. It also measures how much of this regenerative capacity is occupied by infrastructure (built-up land). In essense, it measures the ability of the available terrestrial and aquatic areas to provide ecological services. The units are global hectares.

Year Availability



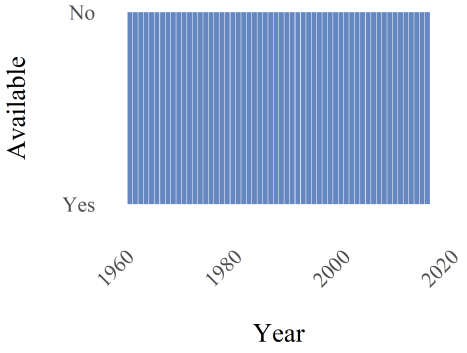
Country Availability



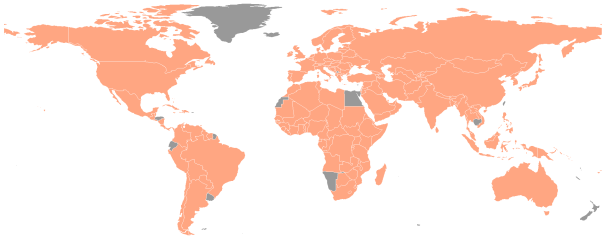
3.22.3 Built-up land footprint of consumption (gha per person) (ef_bul)

The built-up land footprint is calculated based on the area of land covered by human infrastructure: transportation, housing, and industrial structures. Built-up land may occupy what would previously have been cropland. Measured in global hectares (gha) per person.

Year Availability



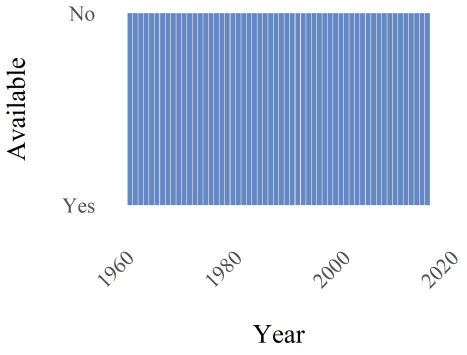
Country Availability



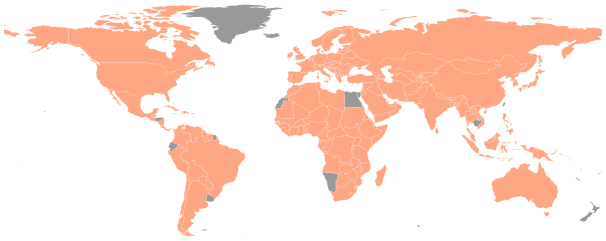
3.22.4 Built-up land biocapacity per capita (ef_bul_bc)

Built-up land biocapacity measures how much of the regenerative capacity is occupied by infrastructure (built-up land). Regenerative capacity is an aggregate measure of the amount of area available, weighted by the productivity of that area. It represents the ability of a biosphere to produce crops, livestock (pasture), timber products (forest) and seafood as well as the biosphere's ability to uptake CO2 in forests. The measure of built-up land biocapacity is divided by the population size.

Year Availability



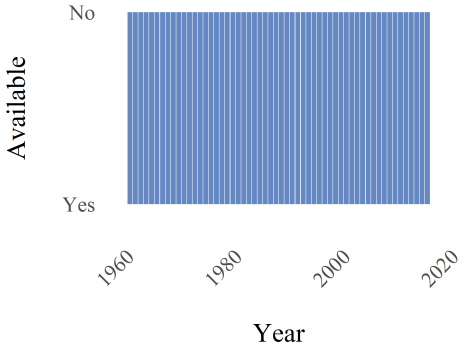
Country Availability



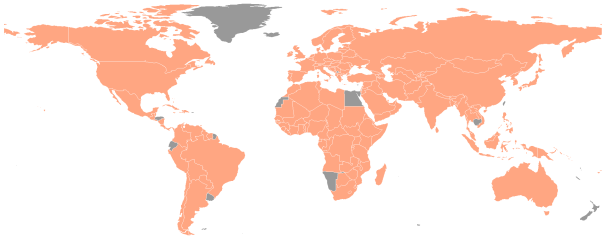
3.22.5 Built-up land footprint of production (gha per person) (ef_bulp)

The countrys built-up area (roads, factories, cities), divided by the population size. The measurement units are global hectares (gha) per person.

Year Availability



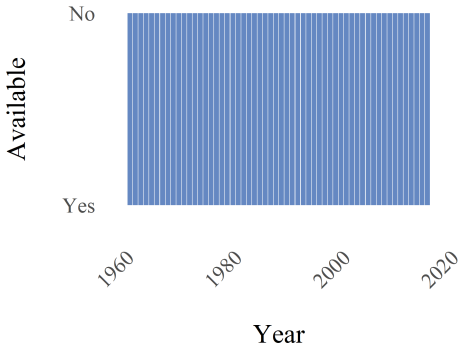
Country Availability



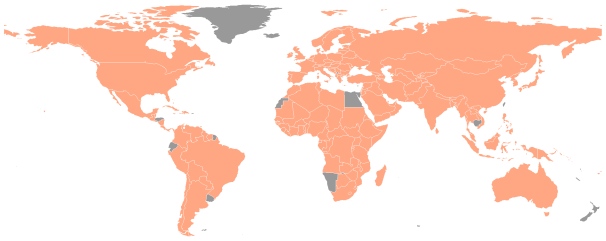
3.22.6 Carbon footprint of consumption (gha per person) (ef_carb)

The carbon footprint represents the carbon dioxide emissions from burning fossil fuels in addition to the embodied carbon in imported goods. The carbon Footprint component is represented by the area of forest land required to sequester these carbon emissions. Currently, the carbon footprint is the largest portion of humanity's footprint.

Year Availability



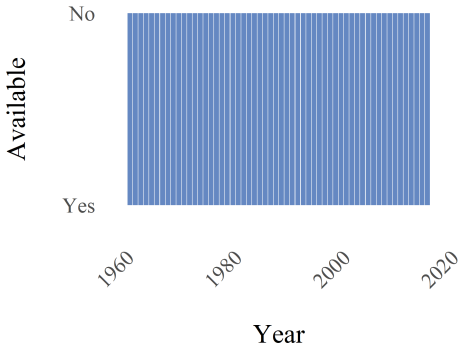
Country Availability



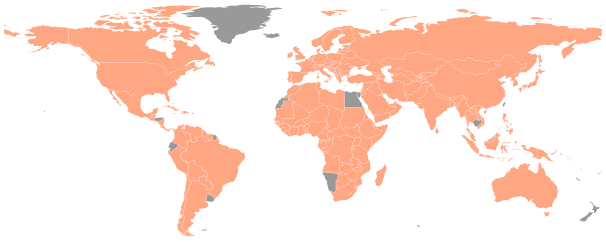
3.22.7 Carbon biocapacity per capita (ef_carb_bc)

The biospheres ability to uptake CO2, divided by the population size.

Year Availability



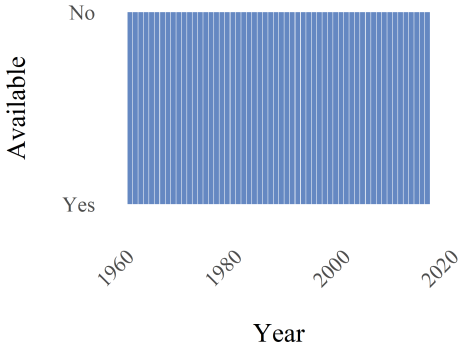
Country Availability



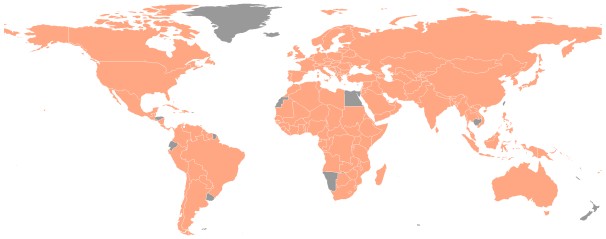
3.22.8 Carbon footprint of production (gha per person) (ef_carbp)

The area needed to absorb all fossil fuel carbon emissions generated within the country, divided by the population size. The measurement units are global hectares (gha) per capita.

Year Availability



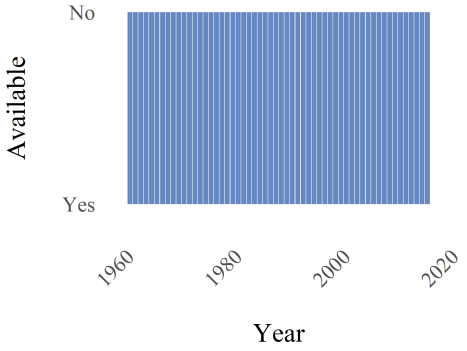
Country Availability



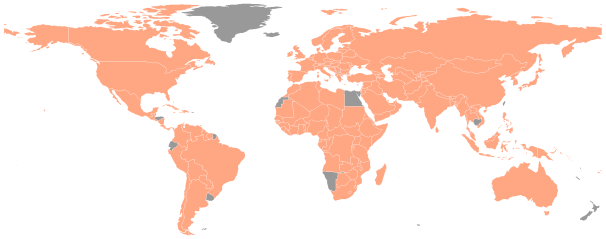
3.22.9 Cropland footprint of consumption (gha per person) (ef_crop)

Cropland is the most bioproductive of all the land-use types and consists of areas used to produce food and fibre for human consumption, feed for livestock, oil crops, and rubber. The cropland Footprint includes crop products allocated to livestock and aquaculture feed mixes, and those used for fibres and materials. Due to lack of globally consistent data sets, current cropland Footprint calculations do not yet take into account the extent to which farming techniques or unsustainable agricultural practices may cause long-term degradation of soil.

Year Availability



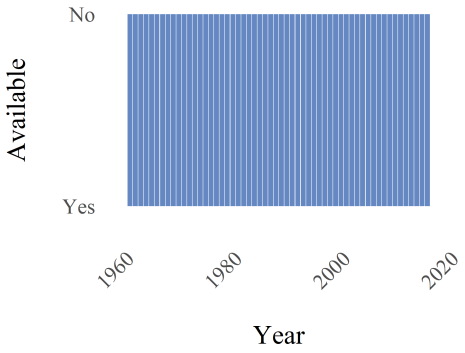
Country Availability



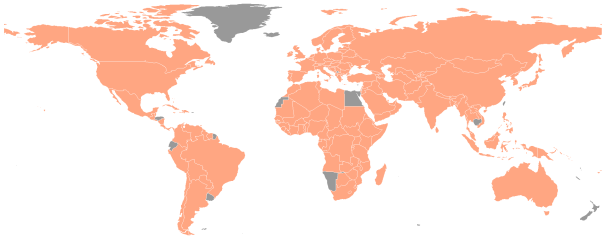
3.22.10 Cropland biocapacity per capita (ef_crop_bc)

The ability of a biosphere to produce crops (the total cropland area available, weighted by the productivity of this area), divided by the population size.

Year Availability



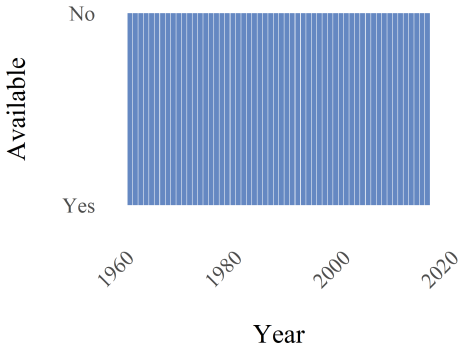
Country Availability



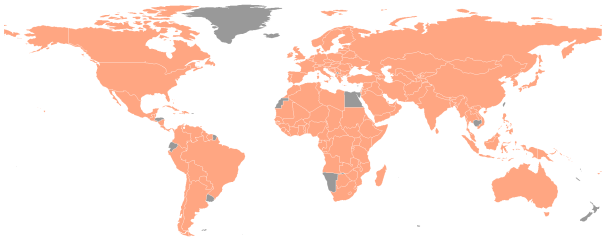
3.22.11 Cropland footprint of production (gha per person) (ef_cropp)

The area within a country necessary for supporting the harvest of primary products on the cropland. The indicator is divided by the population size and is measured in global hectares (gha) per capita.

Year Availability



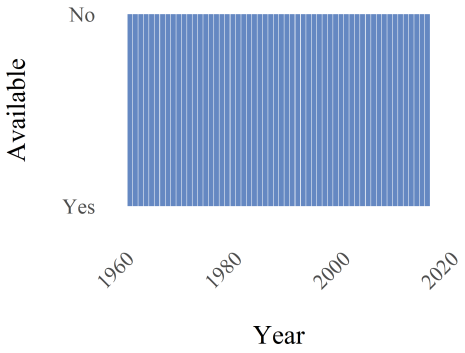
Country Availability



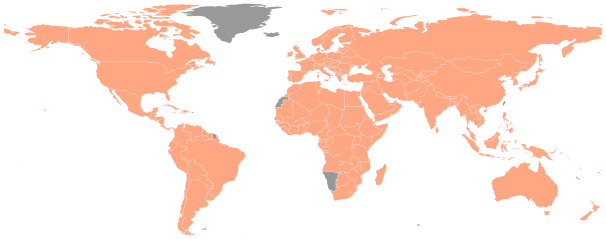
3.22.12 Total Ecological Footprint of Consumption (gha per person) (ef_ef)

Total ecological footprint of consumption divided by the population size. Measured in global hectares (gha) per person.

Year Availability



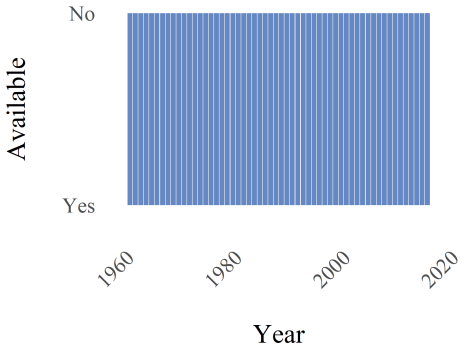
Country Availability



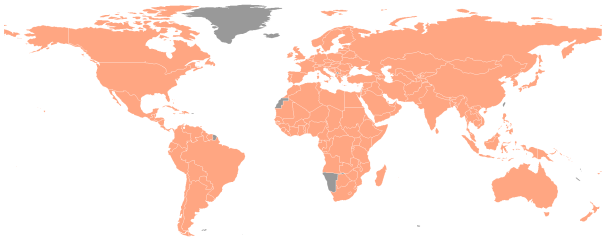
3.22.13 Total Ecological Footprint of Production (gha per person) (ef_efp)

Ecological footprint of production divided by the population size. The units are global hectares (gha) per capita.

Year Availability



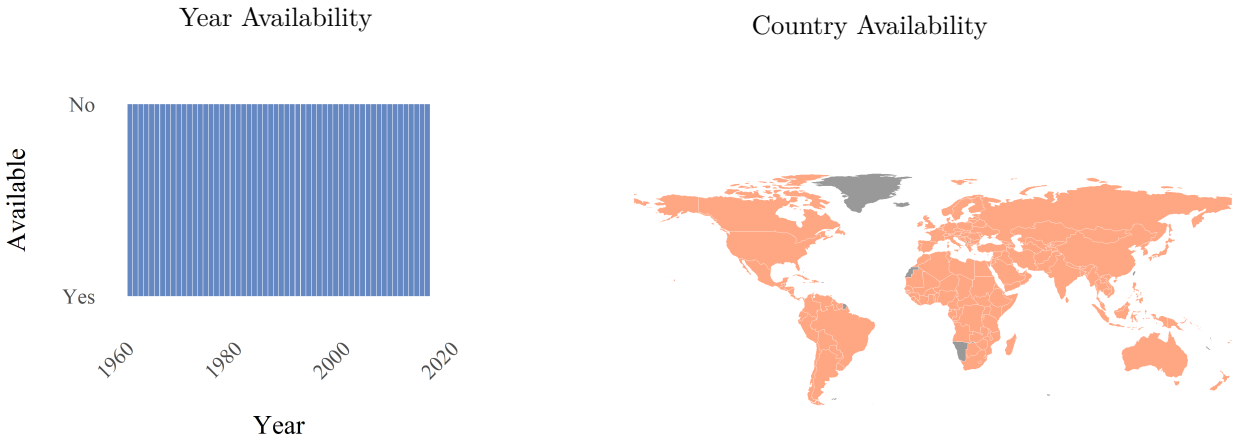
Country Availability



3.22.14 Total Ecological Footprint of Consumption (total area) (ef_eft)

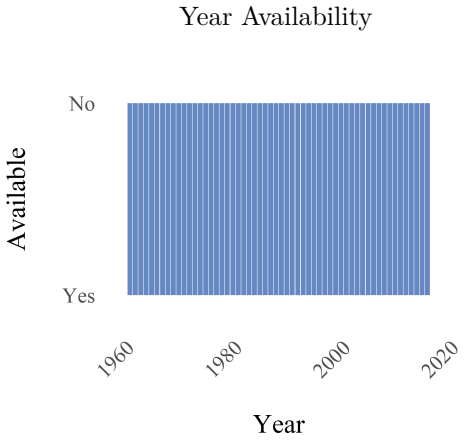
The total ecological footprint of consumption is measured in global hectares (gha) and includes the area needed to produce the materials consumed and the area needed to absorb the carbon dioxide emissions. The consumption Footprint of a nation is calculated as a nation's primary production Footprint plus the Footprint of imports minus the Footprint of exports.

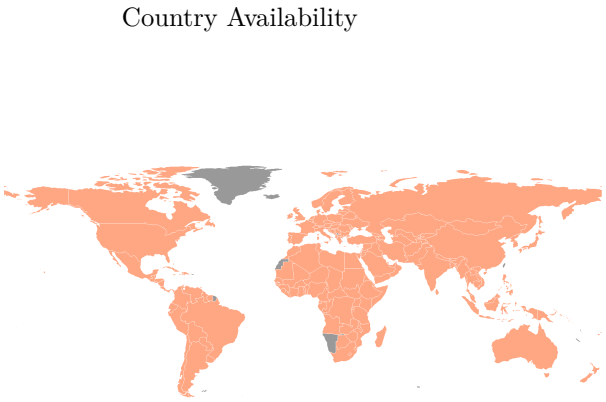
For example, if a country grows cotton for export, the ecological resources required are not included in that country's consumption Footprint. Rather, they are included in the consumption Footprint of the country that imports the T-shirts. However, these ecological resources are included in the exporting country's primary production Footprint.



3.22.15 Total Ecological Footprint of Production (total area) (ef_eftp)

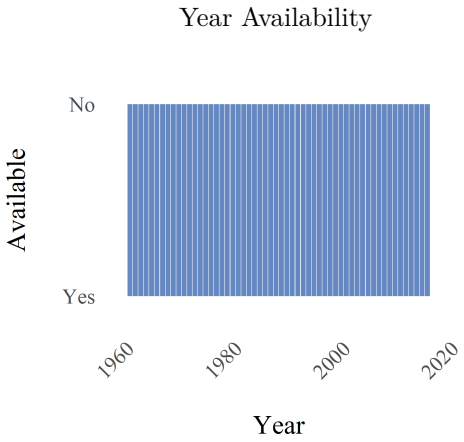
A nation's productive footprint is the sum of the footprints for all of the resources harvested and all of the waste generated within the defined geographical region. This includes all the area within a country necessary for supporting the actual harvest of primary products (cropland, pasture land, forestland, and fishing grounds), the countrys built-up area (roads, factories, cities), and the area needed to absorb all fossil fuel carbon emissions generated within the country. If a country grows a crop for export, it is included in the ecological footprint of production of this country and the ecological footprint of consumption of the importing country. The indicator is measured in global hectares (gha).

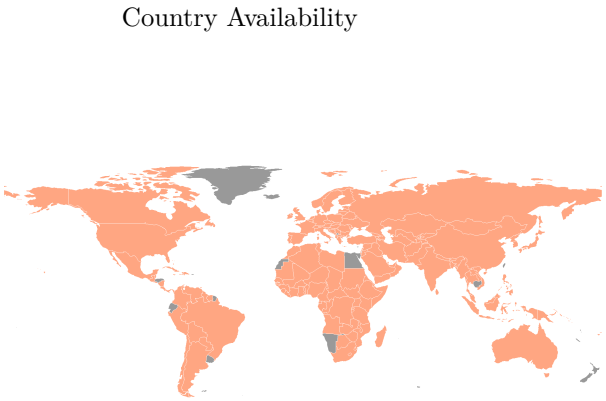




3.22.16 Fish footprint of consumption (gha per person) (ef_fg)

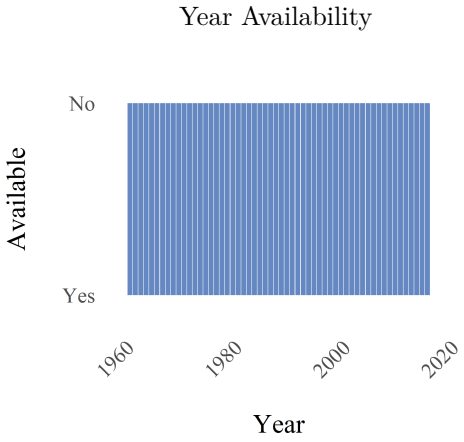
The fishing grounds Footprint is calculated based on estimates of the maximum sustainable catch for a variety of fish species. These sustainable catch estimates are converted into an equivalent mass of primary production based on the various species' trophic levels. This estimate of maximum harvestable primary production is then divided amongst the continental shelf areas of the world. Fish caught and used in aquaculture feed mixes are included. Measured in global hectares (gha) per person.

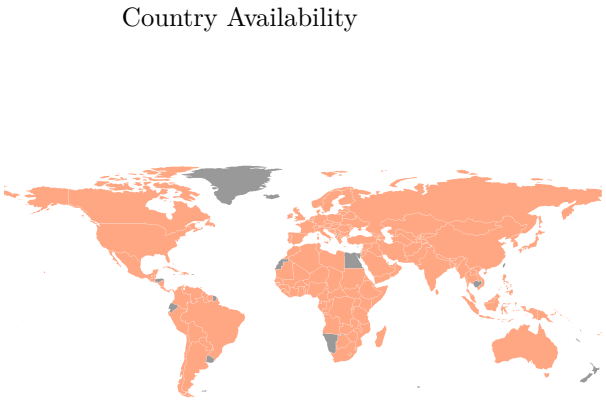




3.22.17 Fishing ground biocapacity per capita (ef_fg_bc)

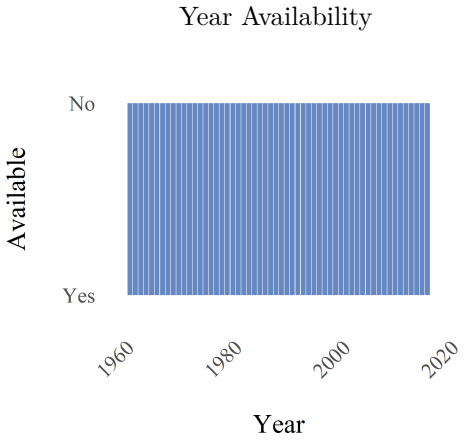
The ability of a biosphere to produce seafood (the amount of fishing grounds available, weighted by the productivity of fishing grounds). The measure is divided by the population size.

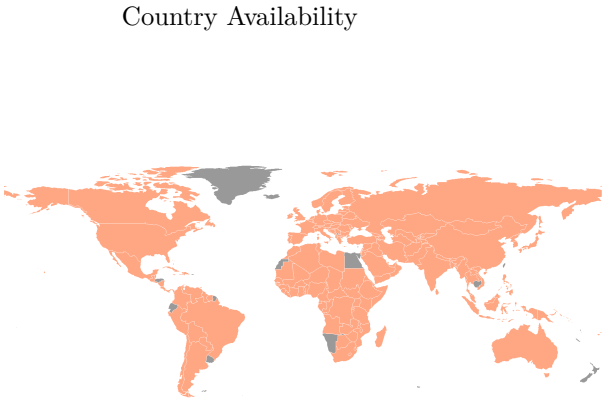




3.22.18 Fish footprint of production (gha per person) (ef_fgp)

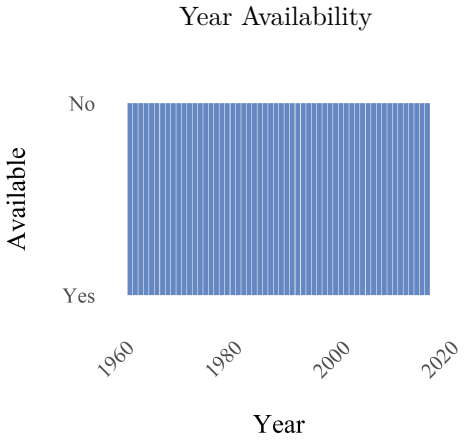
The area within a country necessary for supporting the harvest of primary products on fishing grounds. The indicator is divided by the population size and is measured in global hectares (gha) per capita.

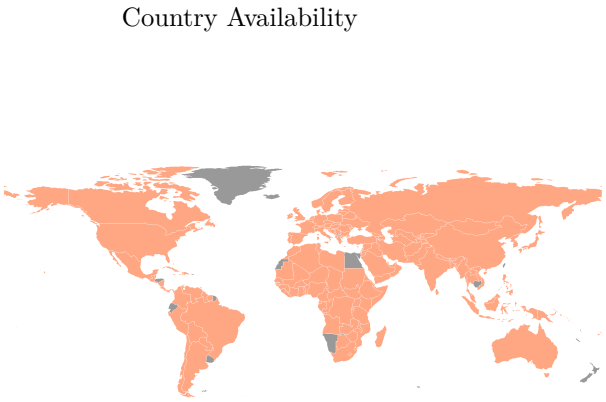




3.22.19 Forest product footprint of consumption (gha per person) (ef_for)

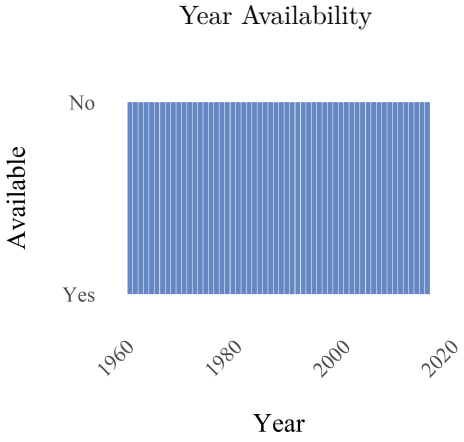
The forest product Footprint is calculated based on the amount of lumber, pulp, timber products, and fuel wood consumed by a population on a yearly basis. Measured in global hectares (gha) per person.

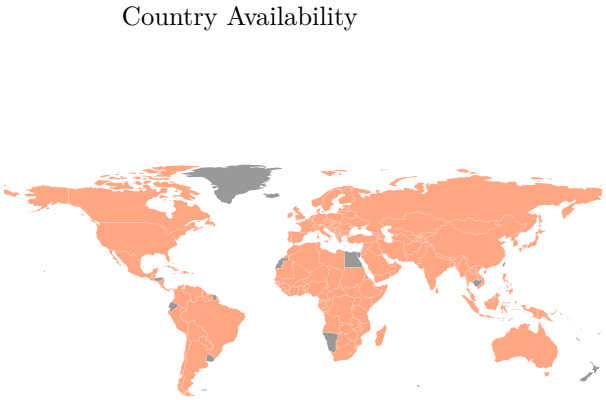




3.22.20 Forest land biocapacity per capita (ef_for_bc)

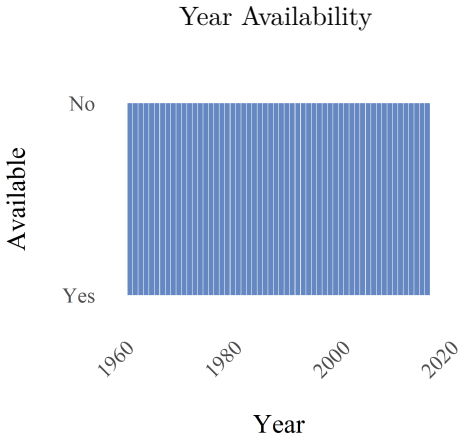
The ability of a biosphere to produce timber products (the total forest area available, weighted by the productivity of this area), divided by the population size.

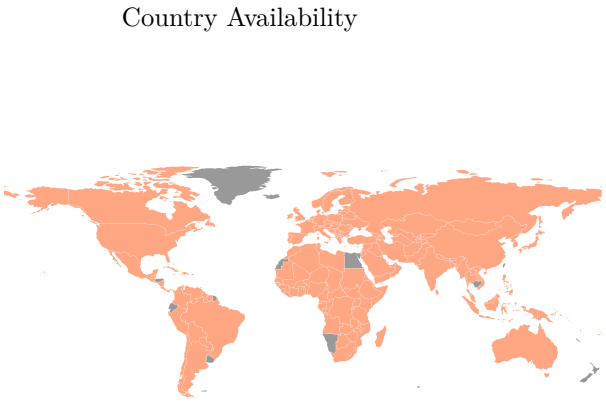




3.22.21 Forest product footprint of production (gha per person) (ef_forp)

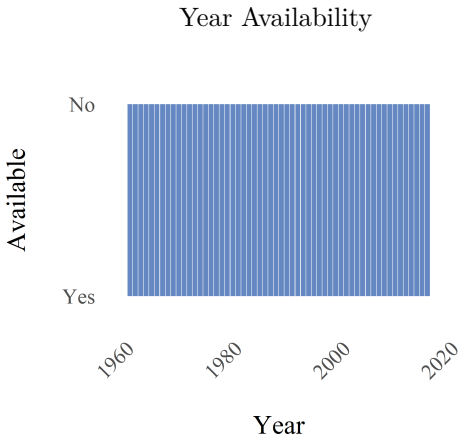
Forest Footprint represents the area necessary to regenerate all the timber harvested (hence, depending on harvest rates, this area can be bigger or smaller than the forest area that exists within the country). The indicator is divided by the population size and measured in global hectares (gha) per person.

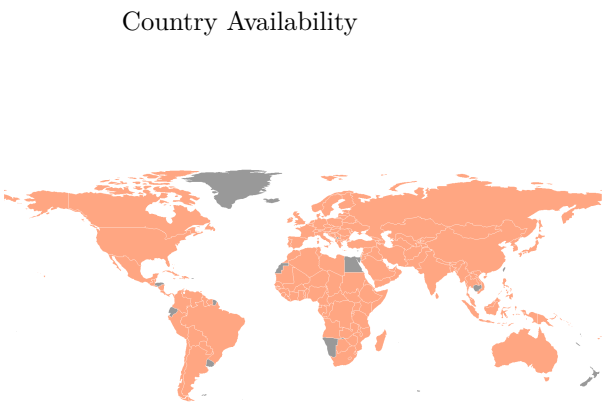




3.22.22 Grazing footprint of consumption (gha per person) (ef_gl)

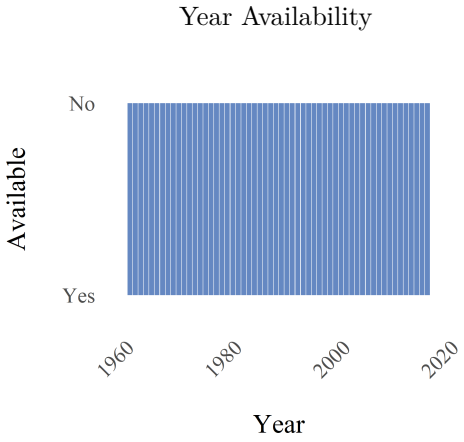
Grazing land is used to raise livestock for meat, dairy, hide, and wool products. The grazing land Footprint is calculated by comparing the amount of livestock feed available in a country with the amount of feed required for all livestock in that year, with the remainder of feed demand assumed to come from grazing land. Measured in global hectares (gha) per person.

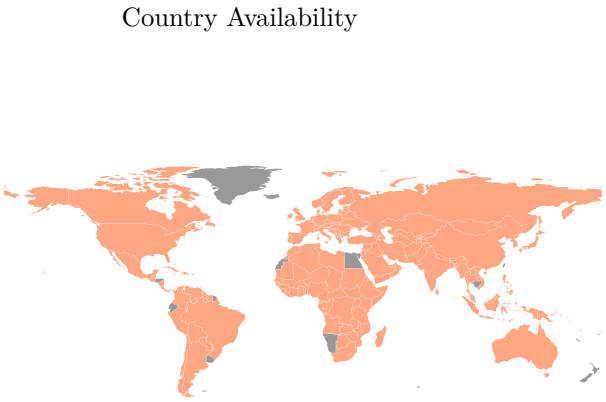




3.22.23 Grazing land biocapacity per capita (ef_gl_bc)

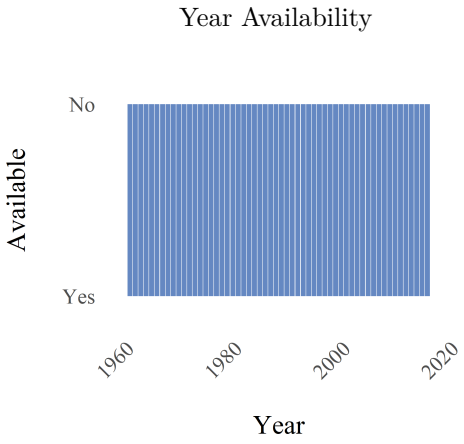
The ability of a biosphere to produce pasture lands (the total pasture area available, weighted by the productivity/yield of these pastures), divided by the population size.

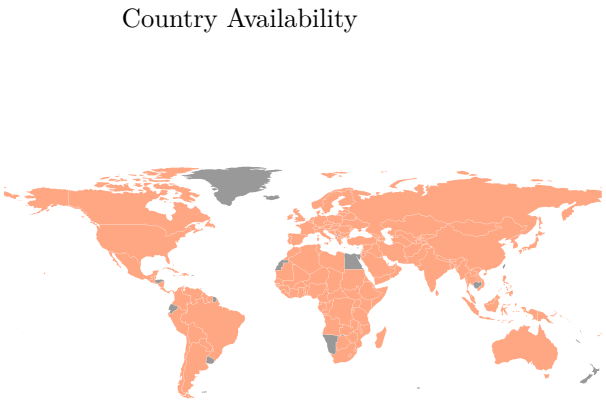




3.22.24 Grazing footprint of production (gha per person) (ef_glp)

The area within a country necessary for supporting the harvest of primary products on pastures. The indicator is divided by the population size and measured in global hectares (gha) per person.





3.23 Green Growth

Dataset by: Organisation for Economic Co-operation and Development

If you use any of these variables, make sure to cite the original source and QoG Data. Our suggested citation for this dataset is:

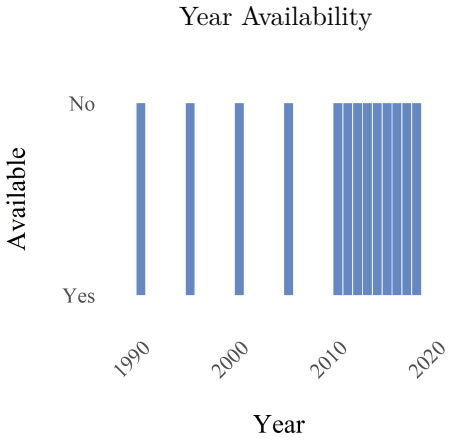
Organisation for Economic Co-operation and Development (OECD). 2020. *Green Growth Indicators Database.* URL: `https://stats.oecd.org/`

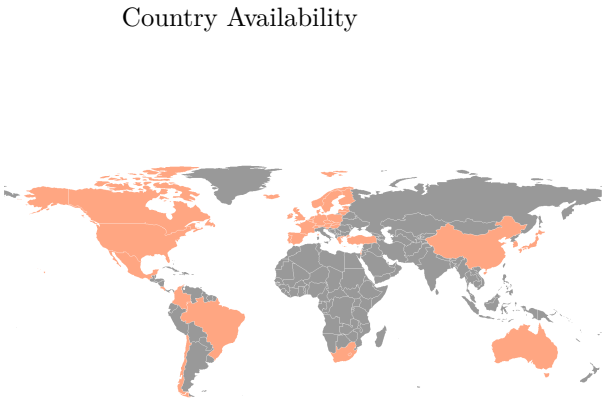
Link to the original source: `https://stats.oecd.org/`

The OECD Green Growth database contains selected indicators for monitoring progress towards green growth to support policy making and inform the public at large. The database synthesises data and indicators across a wide range of domains including a range of OECD databases as well as external data sources. The database covers OECD member and accession countries, key partners (including Brazil, China, India, Indonesia and South Africa) and other selected non-OECD countries. The indicators have been selected according to well-specified criteria and embedded in a conceptual framework, which is structured around four groups to capture the main features of green growth: (1) Environmental and resource productivity: indicate whether economic growth is becoming greener with more efficient use of natural capital and to capture aspects of production which are rarely quantified in economic models and accounting frameworks; (2) The natural asset base: indicate the risks to growth from a declining natural asset base; (3) Environmental dimension of quality of life: indicate how environmental conditions affect the quality of life and wellbeing of people; (4) Economic opportunities and policy responses: indicate the effectiveness of policies in delivering green growth and describe the societal responses needed to secure business and employment opportunities.

3.23.1 Population connected to public sewerage, % total population (gg_asew_pop)

The percentage of the total population with access to public sewerage.

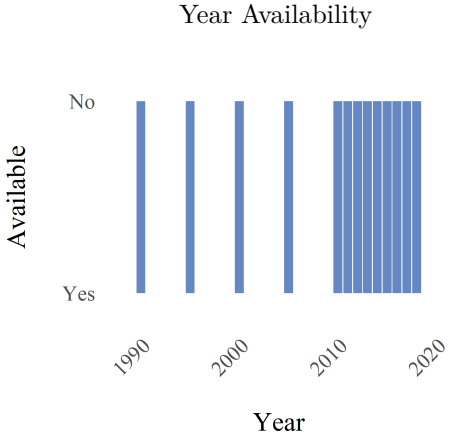


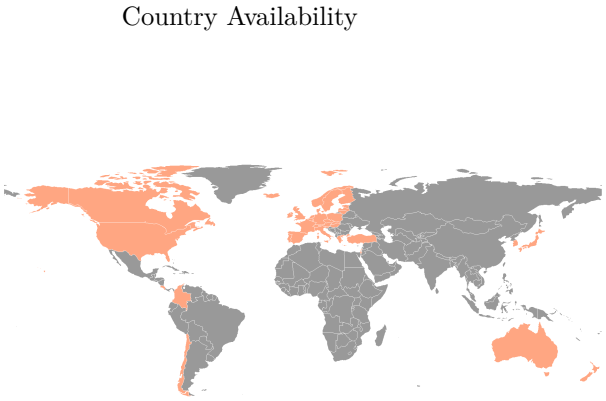


3.23.2 Population connected to sewerage with primary treatment, % total population (gg_asewp)

The percentage of the total population with access to public sewerage that includes a primary treatment process.

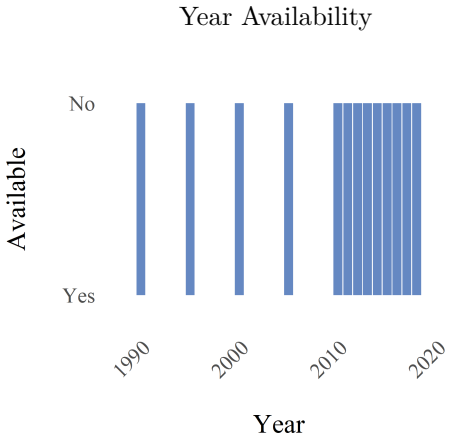
Warning: this variable has some negative values, which falls outside the expected range for percentage variables. Check the original dataset for explanations or updates.

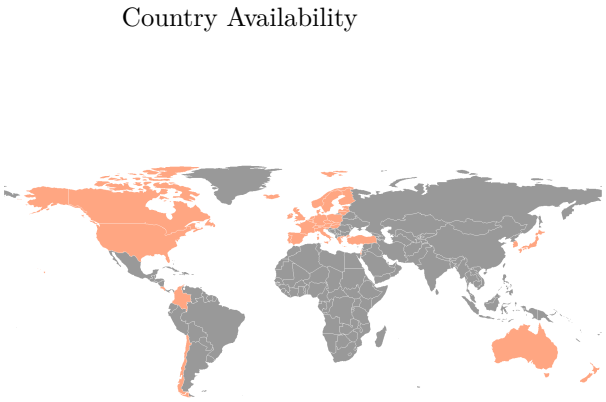




3.23.3 Population connected to sewerage with secondary treatment, % total population (gg_asews)

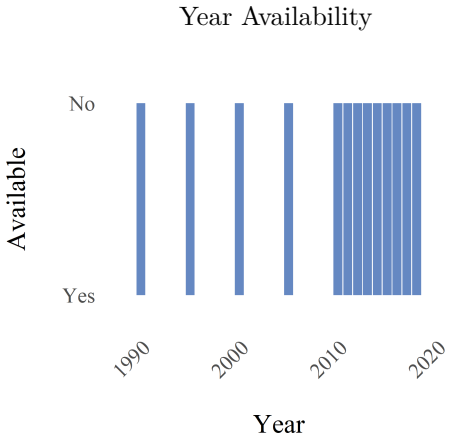
The percentage of the total population with access to public sewerage that includes a secondary treatment process.

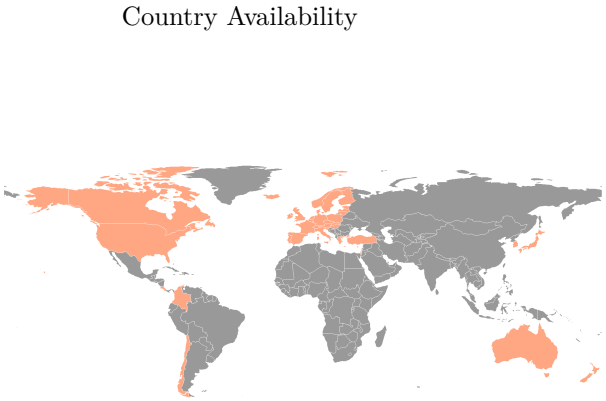




3.23.4 Population connected to sewerage with tertiary treatment, % total population (gg_asewt)

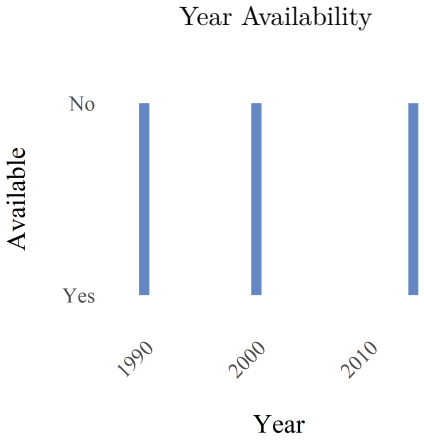
The percentage of the total population with access to public sewerage that includes a tertiary treatment process.

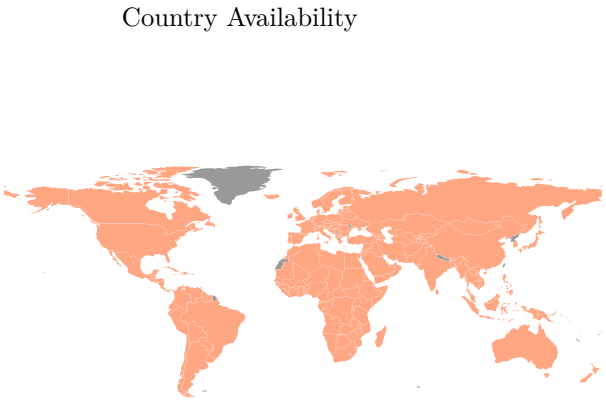




3.23.5 Built up area per capita (gg_buapc)

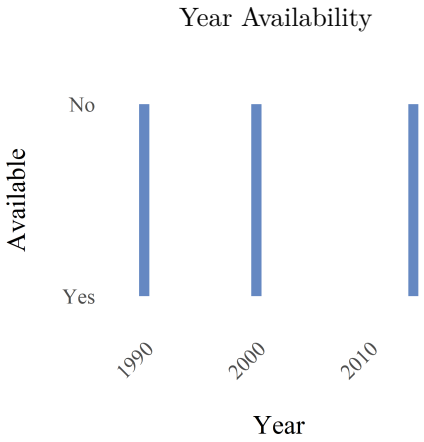
The number of square meters of built-up area per inhabitant (m2/person).

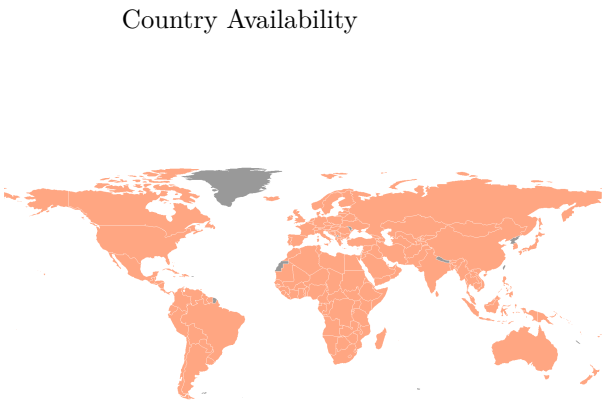




3.23.6 Built up area, % total land (gg_buapt)

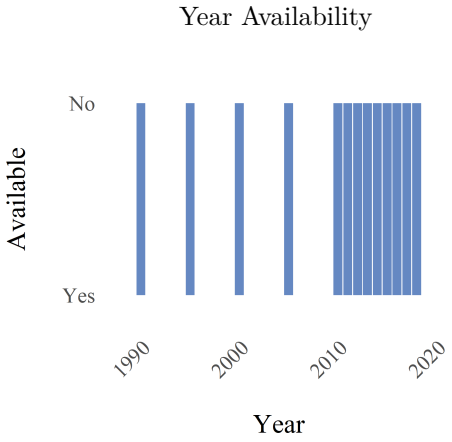
The built up area expressed as a percentage of total land area.

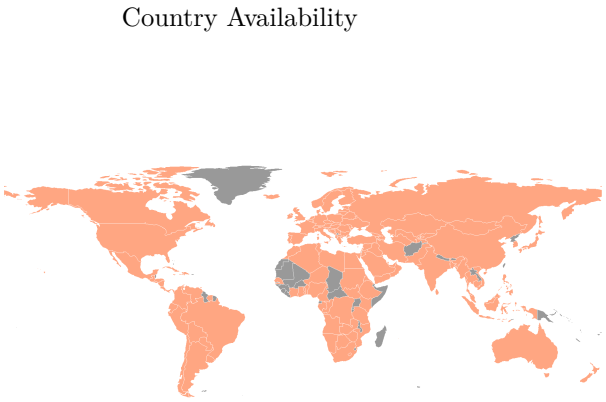




3.23.7 Energy intensity, TPES per capita (gg_ei)

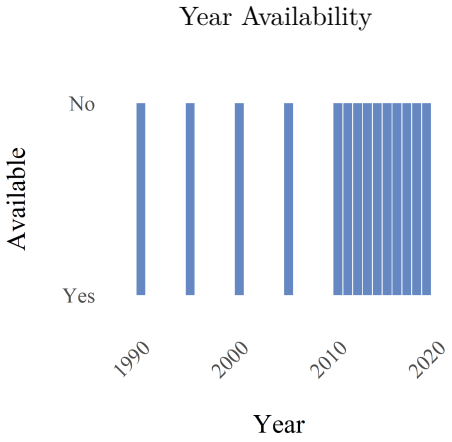
The energy intensity calculated as TPES (Total Primary Energy Supply) per capita (toe/person).

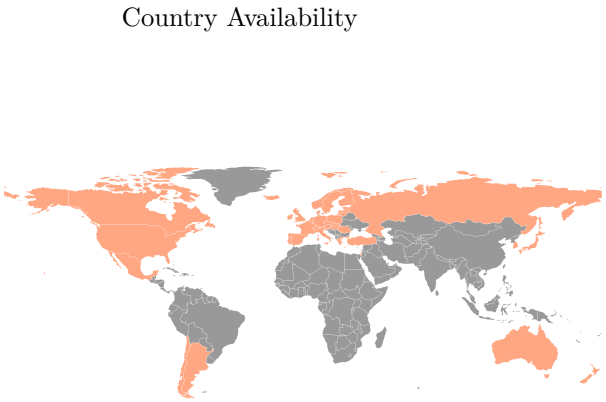




3.23.8 Environmentally related government R&D budget, % total government R&D (gg_envrd_gbaord)

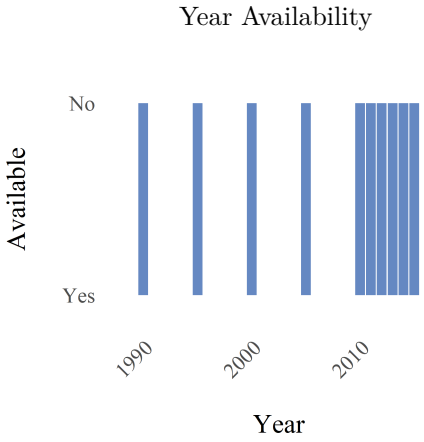
Environmentally related government R&D budget measures government budget appropriations or outlays for environmentally related research and development (R&D). It is expressed as a percentage of total government R&D expenditure.

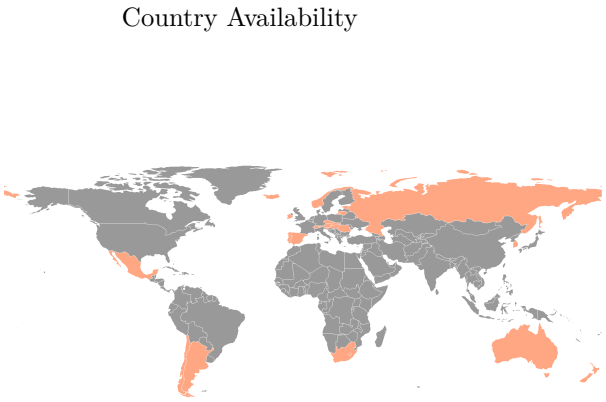




3.23.9 Environmentally related R&D expenditure, % GDP (gg_envrd_gdp)

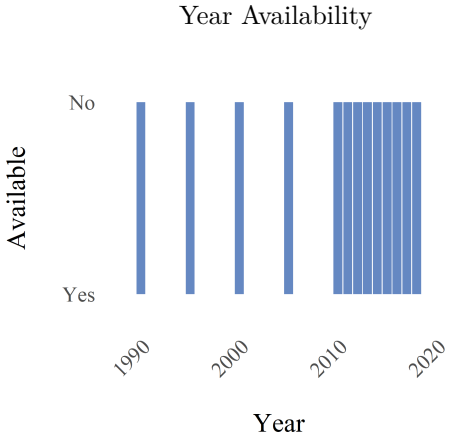
The environmentally related research and development (R&D) expenditure, expressed as a percentage of gross domestic product (GDP).

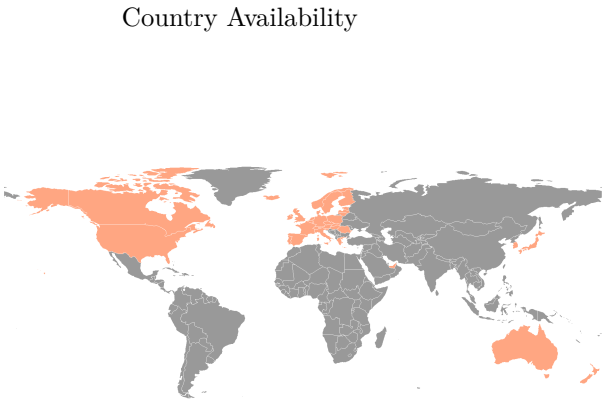




3.23.10 Environmentally related ODA, % total ODA (gg_eoda)

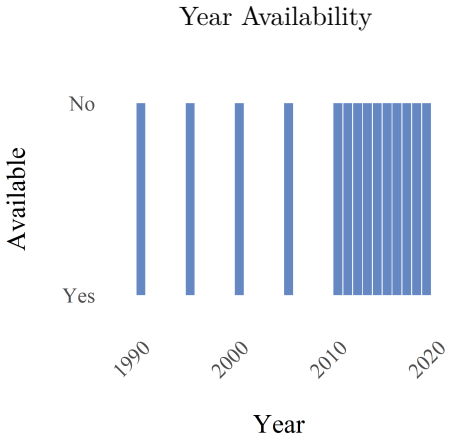
The environmentally related Official Development Assistance (ODA) expressed as a percentage of total ODA.

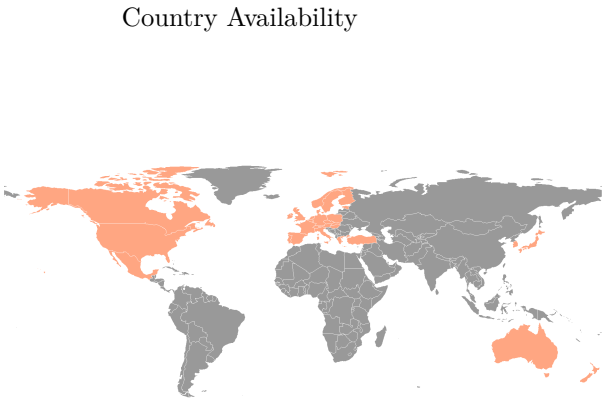




3.23.11 Energy public RD&D budget, % GDP (gg_erdgdp)

The public budget for energy related research, development, and demonstration as a percentage of national gross domestic product (GDP).

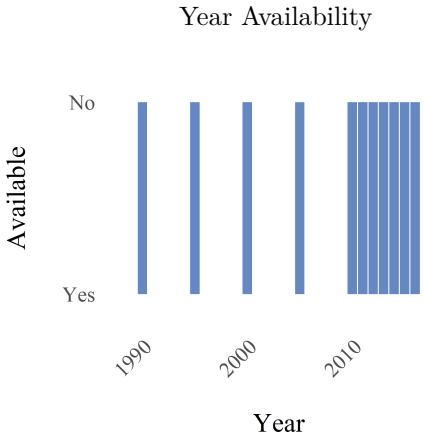


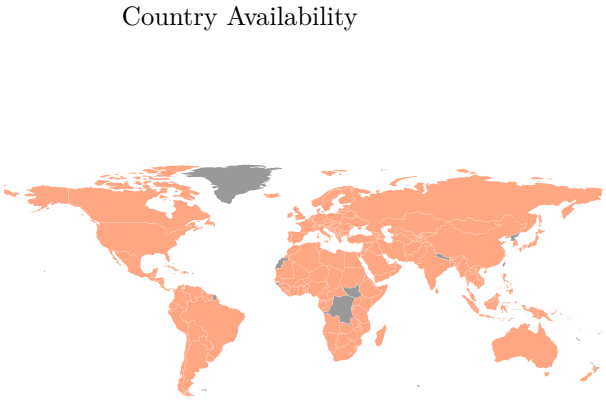


3.23.12 Development of environment-related technologies, % all technologies (gg_-etp)

The number of environment-related inventions expressed as a percentage of all domestic inventions (in all technologies).

Indicators of technology development are constructed by measuring inventive activity using patent data across a wide range of environment-related technological domains (ENV-TECH, see link below), including environmental management, water-related adaptation, and climate change mitigation technologies. The counts used here include only higher-value inventions (with patent family size = 2).

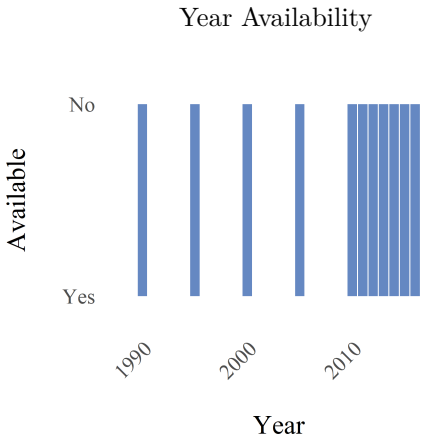


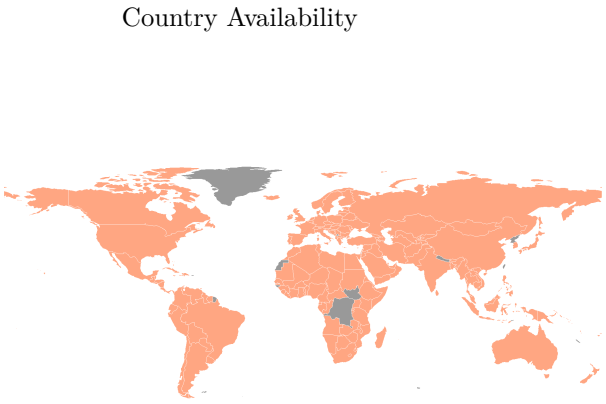


3.23.13 Development of environment-related technologies, % inventions worldwide (gg_etpw)

The number of environment-related inventions expressed as a percentage of environment-related inventions worldwide.

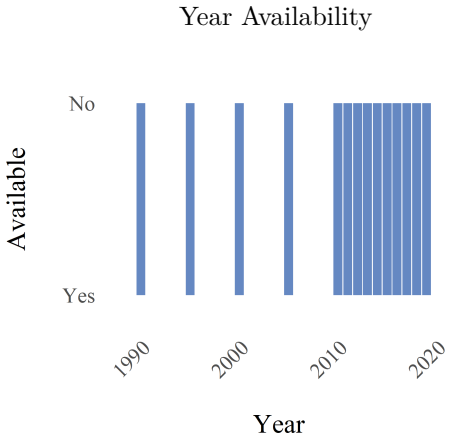
Indicators of technology development are constructed by measuring inventive activity using patent data across a wide range of environment-related technological domains (ENV-TECH), including environmental management, water-related adaptation, and climate change mitigation technologies. The counts used here include only higher-value inventions (with patent family size = 2, meaning inventions filed in two or more jurisdictions).

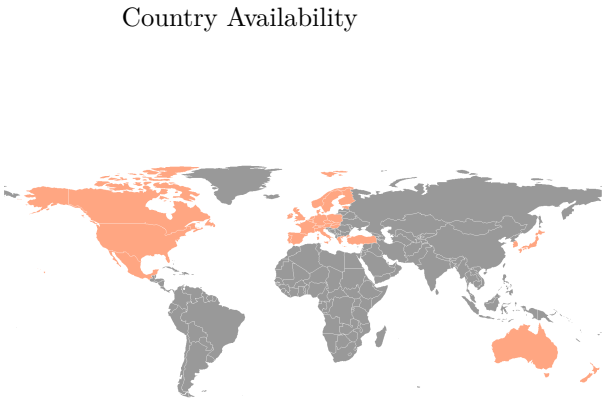




3.23.14 Fossil fuel public RD&D budget (excluding CCS), % total energy public RD&D (gg_ffrd)

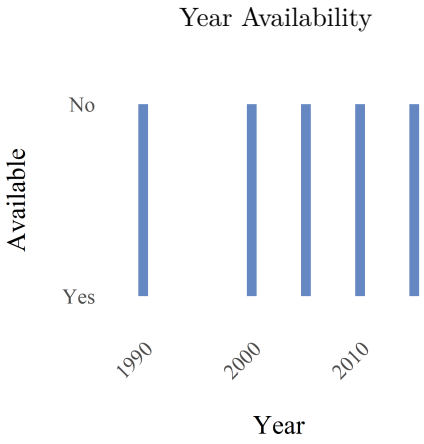
The public budget directed at research, development, and demonstration (RD&D) related to fossil fuels, including oil, gas, and coal and excluding RD&D related to CO2 capture and storage (CCS), expressed as a percentage of total energy RD&D public budgets (directed at all forms of energy).

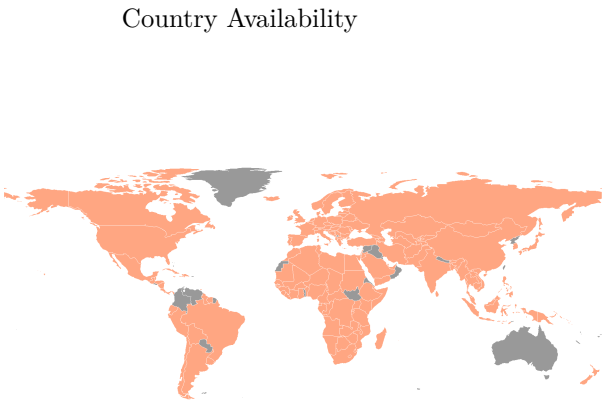




3.23.15 Forest resource stocks (gg_frs)

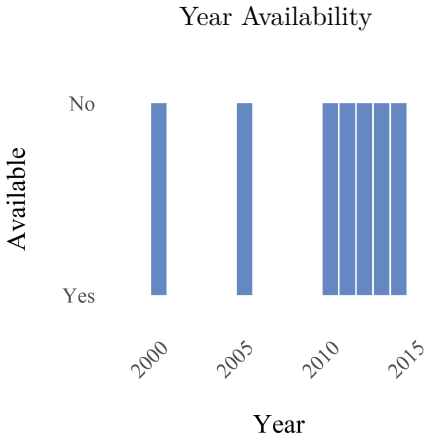
The growing stock of standing trees expressed in million cubic meters (m3).

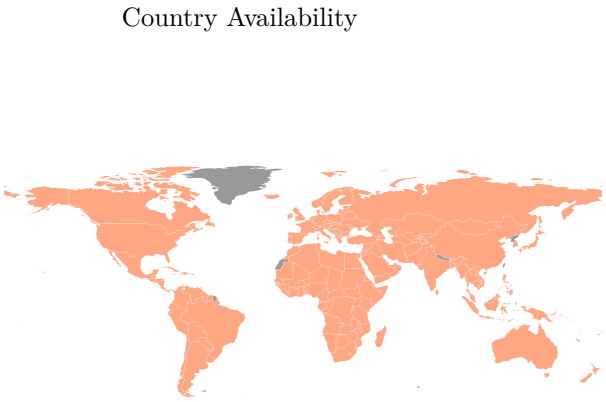




3.23.16 Forests under sustainable management certification FSC, % total forest area (gg_fsmc)

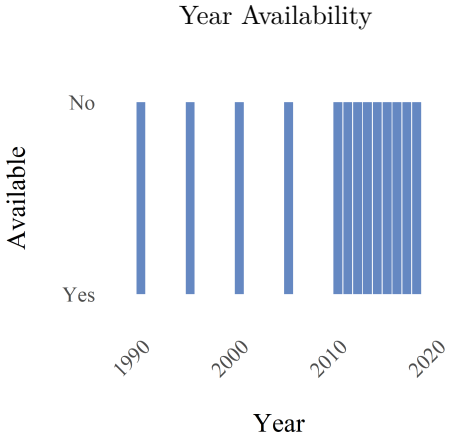
The share of forest area with a long-term management plan under the Forest Stewardship Council (FSC) certification expressed as a percentage of the total forest area.

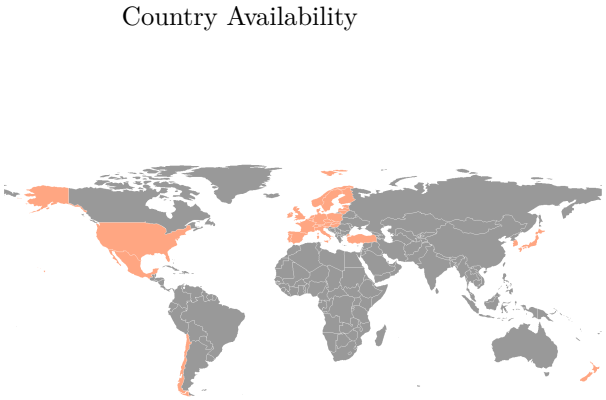




3.23.17 Intensity of use of forest resources (gg_iufr)

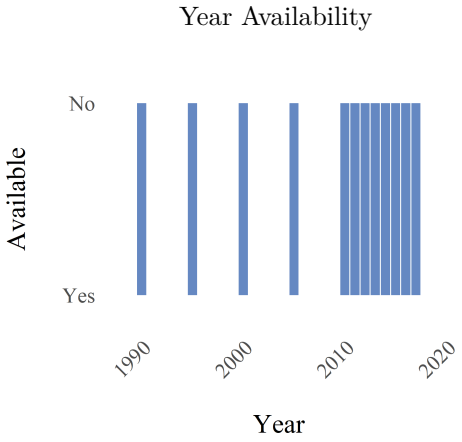
The intensity of use of forest resources measured as the ratio of actual fellings over annual productive capacity (i.e. gross increment).

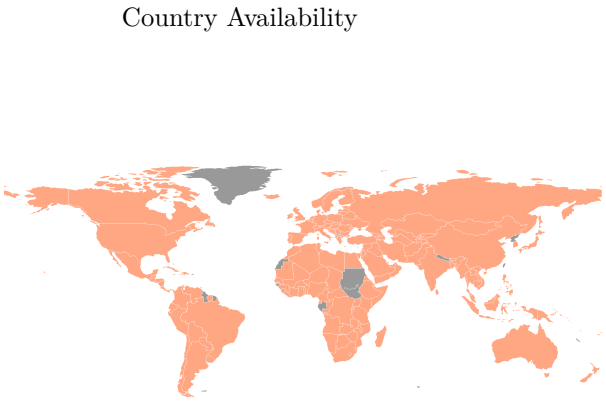




3.23.18 Mortality from exposure to ambient ozone (gg_mao)

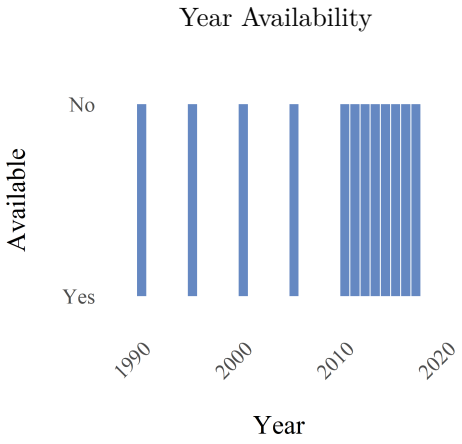
The mortality from exposure to ambient ozone expressed in deaths per million inhabitants.

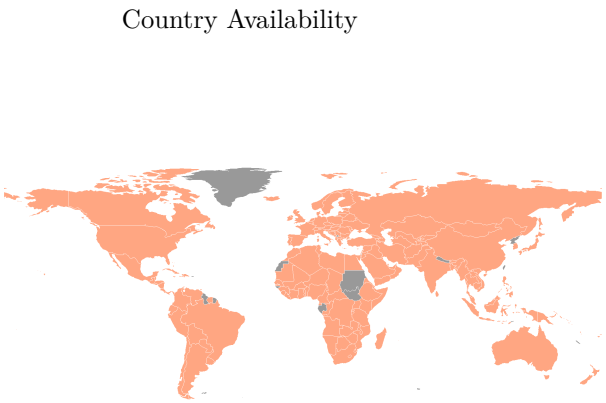




3.23.19 Mortality from exposure to lead (gg_ml)

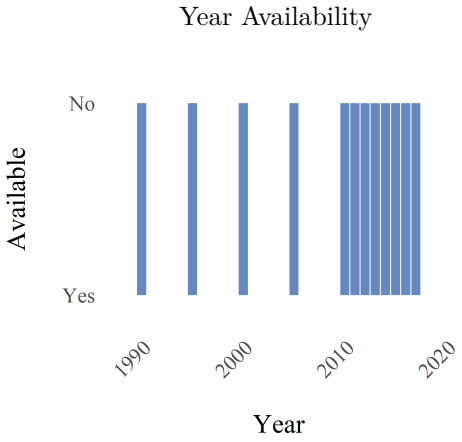
The mortality from exposure to lead expressed in deaths per million inhabitants.

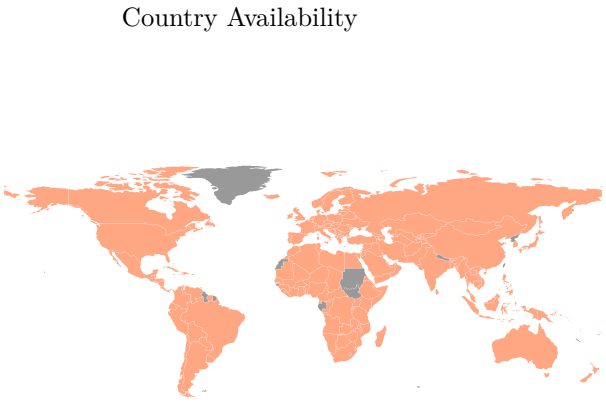




3.23.20 Mortality from exposure to ambient PM2.5 (gg_mpm)

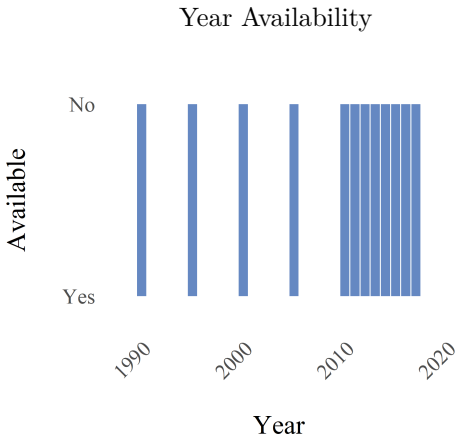
The mortality from exposure to ambient PM2.5 expressed in deaths per million inhabitants.

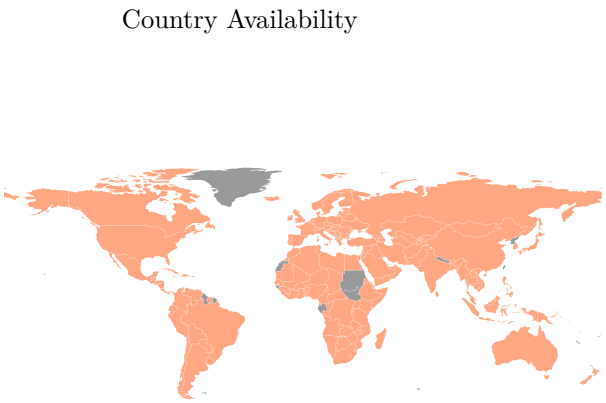




3.23.21 Mortality from exposure to residential radon (gg_mr)

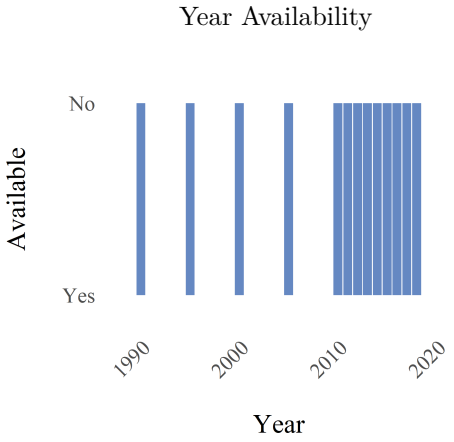
The mortality from exposure to residential radon expressed in deaths per million inhabitants.

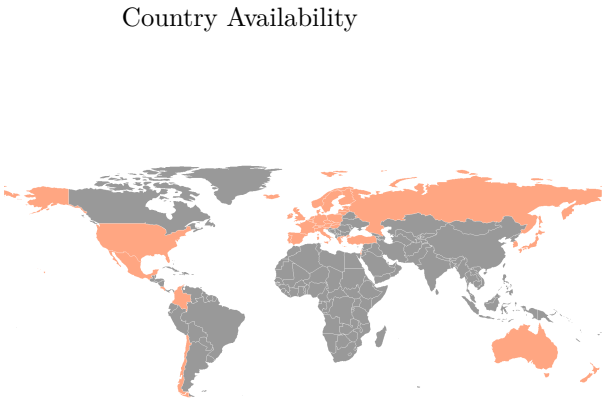




3.23.22 Municipal waste generated, kg per capita (gg_mwgpc)

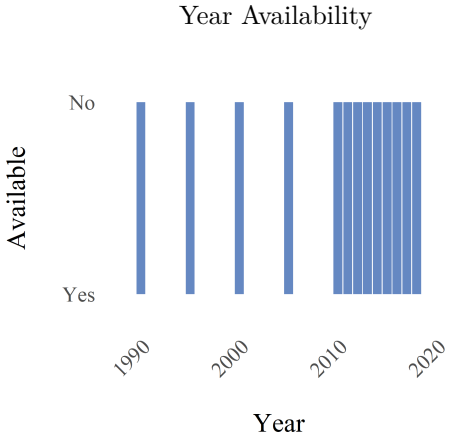
The waste collected by or on behalf of municipalities expressed in kilograms (kg) per person.

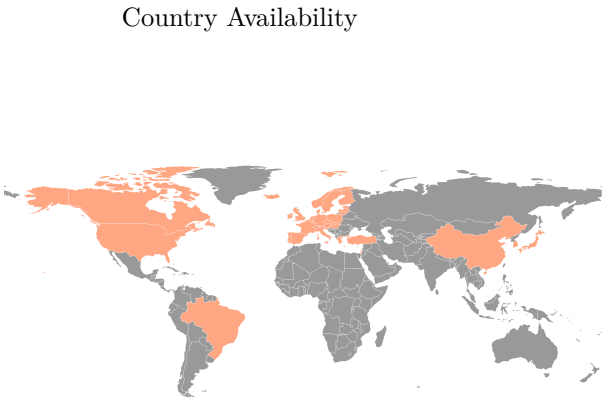




3.23.23 Municipal waste incinerated, % treated waste (gg_mwipt)

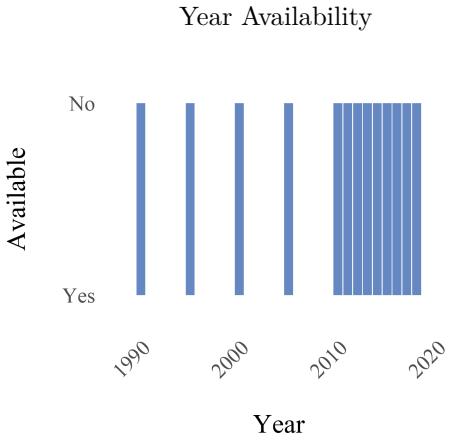
The municipal waste incinerated expressed as a percentage of all waste treated.

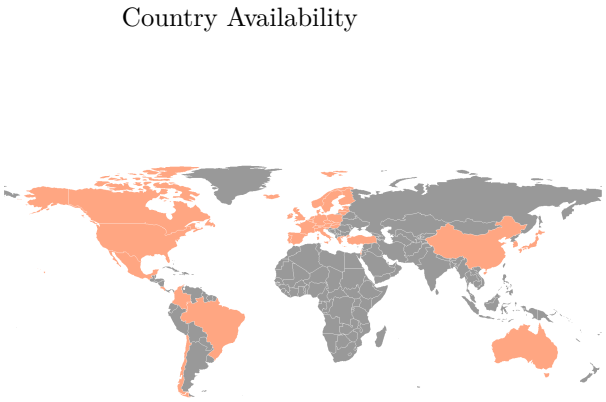




3.23.24 Municipal waste disposed to landfills, % treated waste (gg_mwlpt)

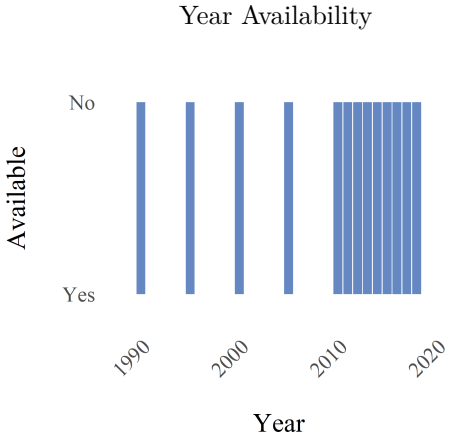
The municipal waste disposed to landfills expressed as a percentage of all waste treated.

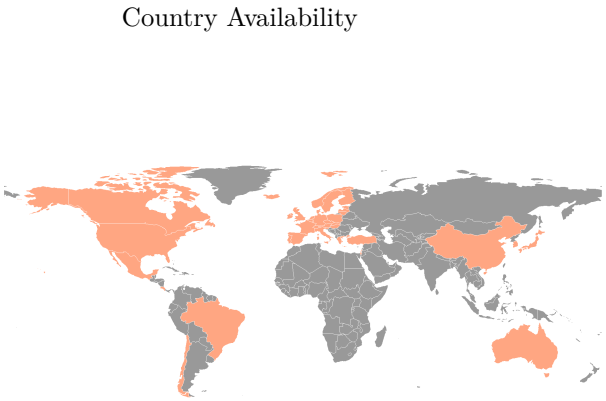




3.23.25 Municipal waste recycled or composted, % treated waste (gg_mwrpt)

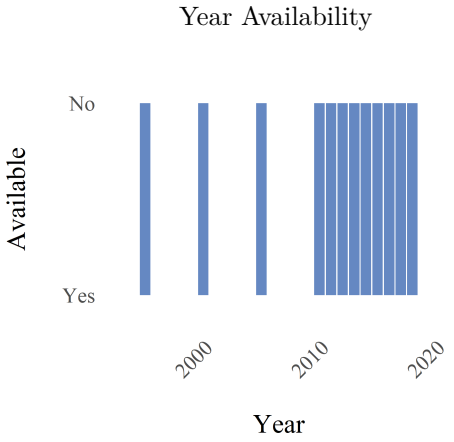
The municipal waste recycled or composted expressed as a percentage of all waste treated.

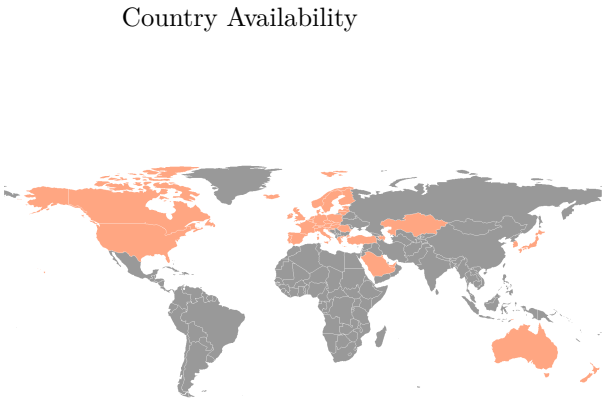




3.23.26 ODA - all sectors - climate change mitigation, % total ODA (gg_oda_ccm)

The Official Development Assistance (ODA) targeting climate change mitigation expressed as a percentage of total ODA.

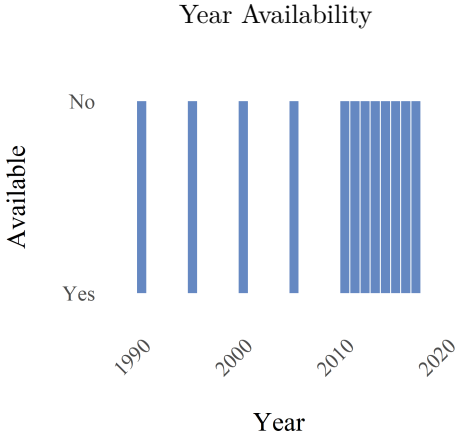


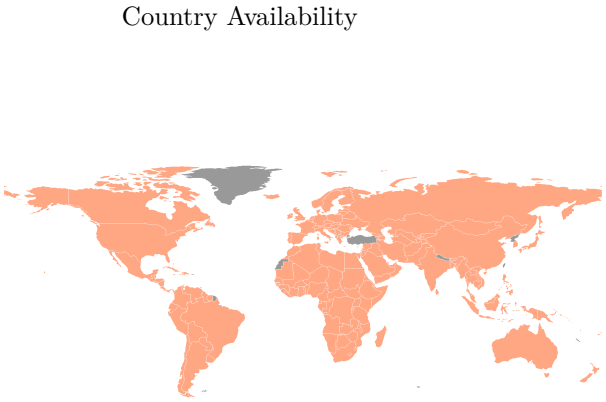


3.23.27 Percentage of population exposed to more than 10 μg/m3 of PM2.5 (gg_-pm25ex10p)

The percentage of population exposed to a fine particulate matter (PM2.5) concentration greater than 10 micrograms (μg) per cubic meter (m3).

The World Health Organization (WHO) provides air quality guidelines based on scientific evidence and expert advice. 10 μg/m3 is the air quality guideline (AQG): These are the lowest levels at which total, cardiopulmonary and lung cancer mortality have been shown to increase with more than 95% confidence in response to long-term exposure to PM2.5.

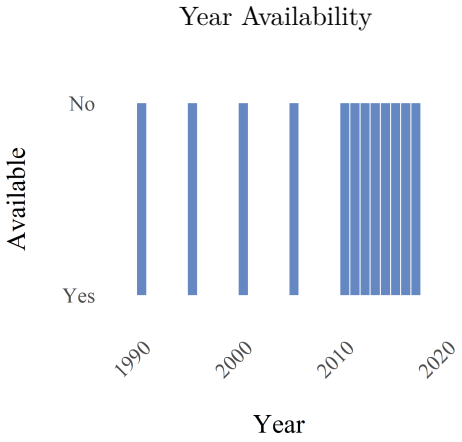


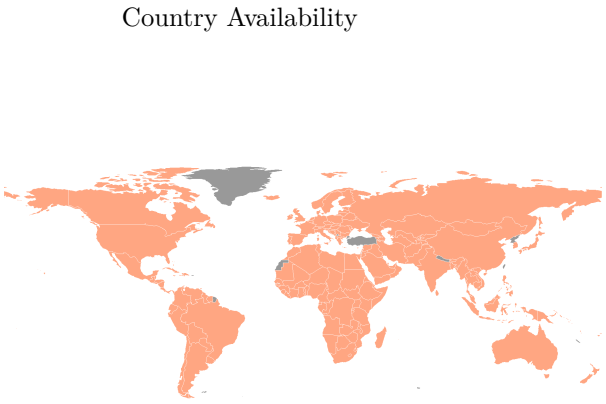


3.23.28 Percentage of population exposed to more than 35 μg/m3 of PM2.5 (gg_-pm25ex35p)

The percentage of population exposed to a fine particulate matter (PM2.5) concentration greater than 35 micrograms (μg) per cubic meter (m3).

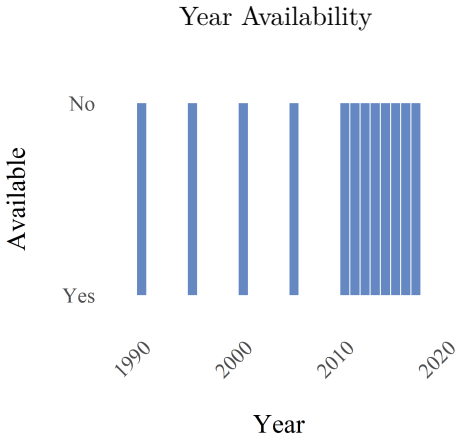
The World Health Organization (WHO) provides air quality guidelines based on scientific evidence and expert advice. 35 μg/m3 is interim target-1: These levels are associated with about a 15% higher long-term mortality risk relative to the Air Quality Guideline (AQG) level, which is 10 μg/m3.

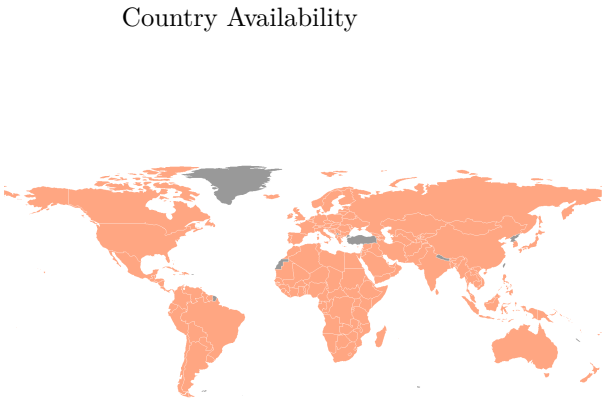




3.23.29 Mean population exposure to PM2.5 (gg_pm25exm)

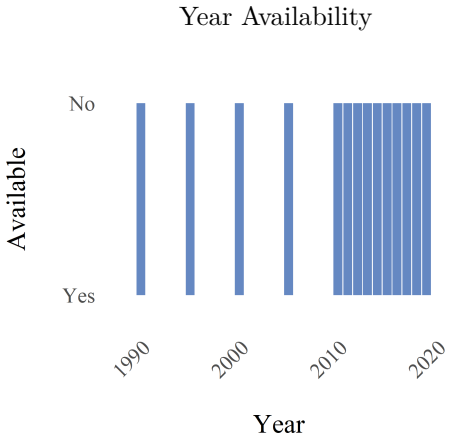
The average mirogram concentration of fine particulate matter (PM2.5) per cubic meter exposed to the population. This environmental and health hazard is measured by population-weighted concentration estimates (See OECD dataset "Exposure to PM2.5 in countries and regions").

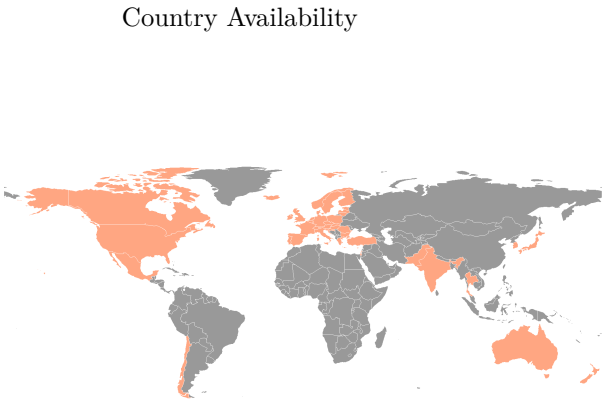




3.23.30 Petrol tax, USD per litre (gg_pt)

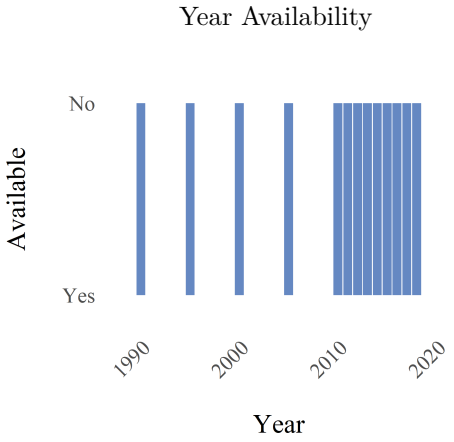
The tax rates per litre of petrol expressed at constant 2015 US dollars using purchasing power parity (PPP). The tax rates are calculated as the arithmetic average of the household excise tax for the unleaded premium 95, unleaded premium 98, and unleaded regular petrol, and are deflated using the Consumer Price Index.

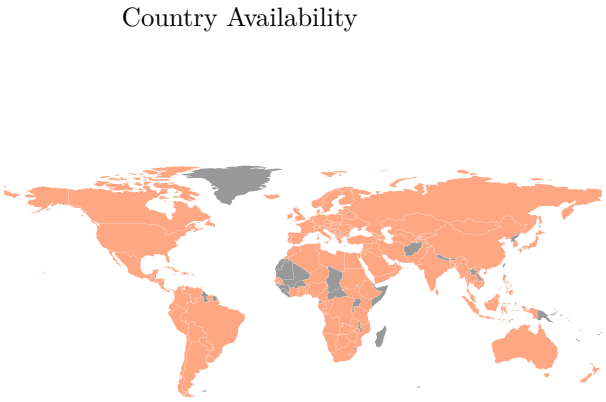




3.23.31 Renewable energy supply, % TPES (gg_re_tpes)

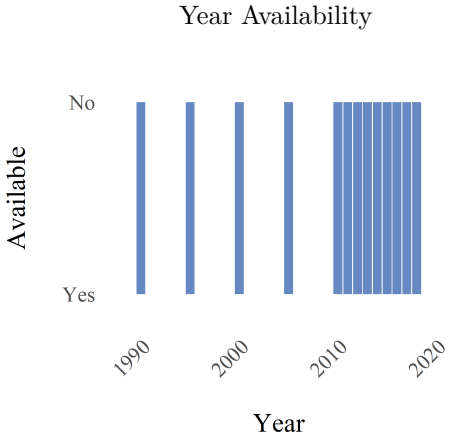
Renewable energy supply is defined as the contribution of renewables to the total primary energy supply (TPES).

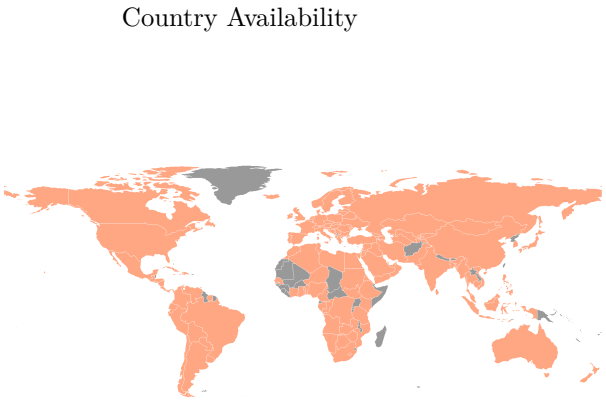




3.23.32 Renewable electricity, % total electricity generation (gg_reperegen)

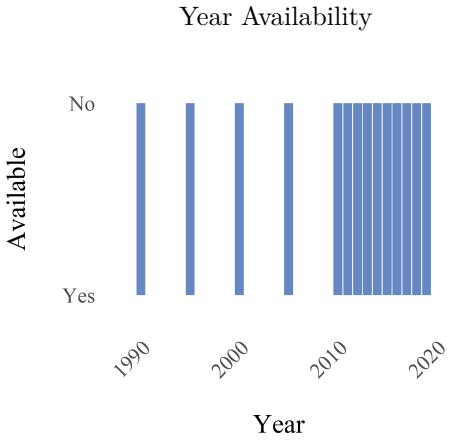
The percentage of the national electrical supply generated from renewable sources.

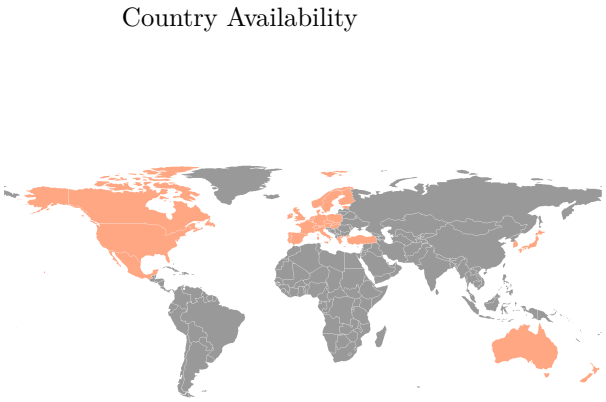




3.23.33 Renewable energy public RD&D budget, % total energy public RD&D (gg_rerd_erd)

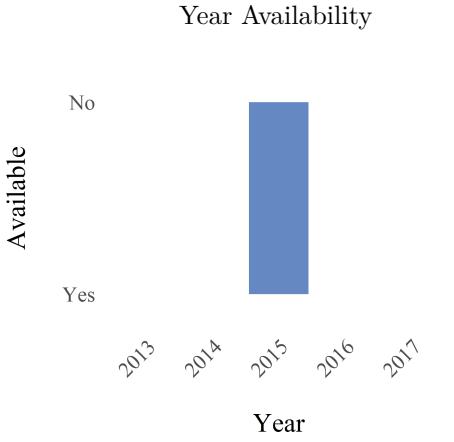
The percentage of all public energy related research, development, and demonstration (RD&D) that is directed towards renewable energy.

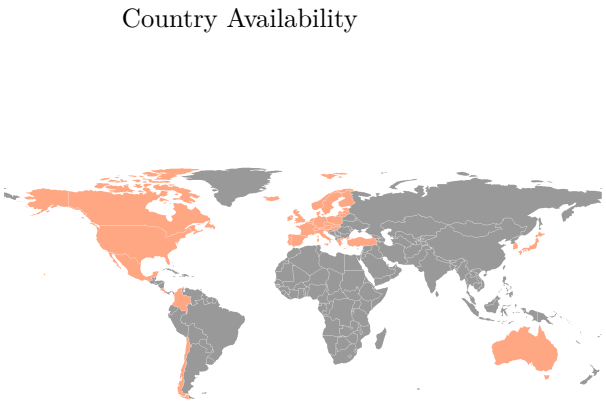




3.23.34 Threatened bird species, % total known species (gg_tbs)

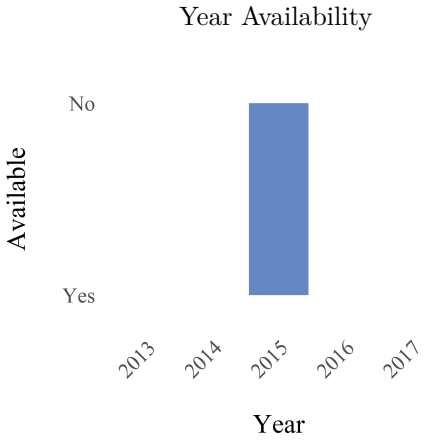
The number of threatened bird species expressed as a percentage of total known species within a country.

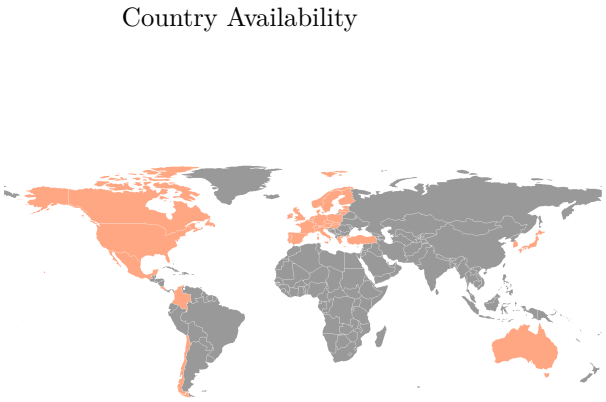




3.23.35 Threatened mammal species, % total known species (gg_tms)

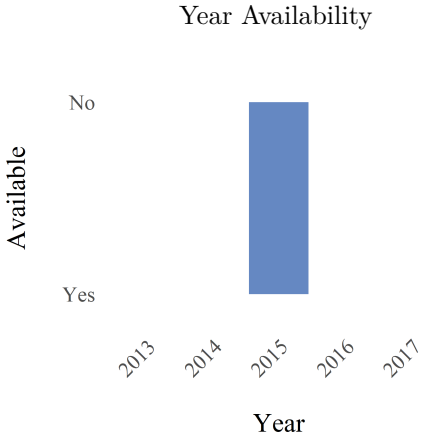
The number of threatened mammal species expressed as a percentage of total known species within a country.

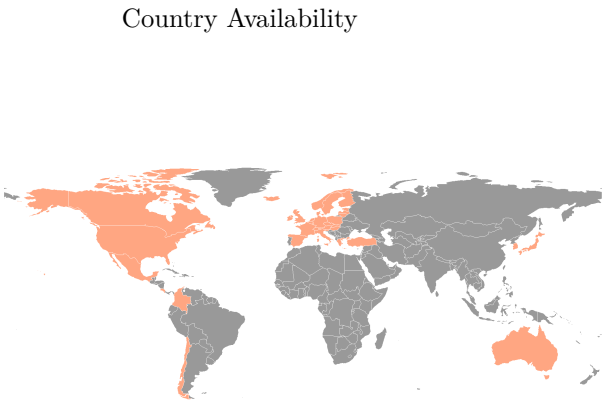




3.23.36 Threatened vascular plant species, % total known species (gg_tps)

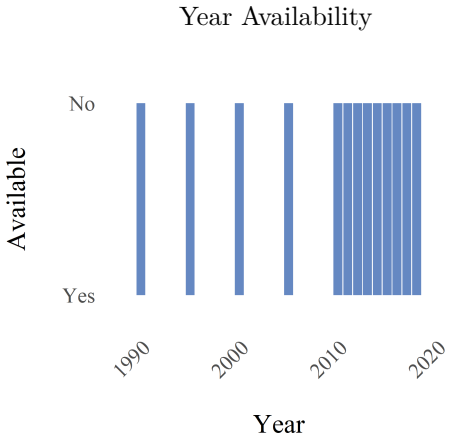
The number of threatened vascular plant species expressed as a percentage of total known species within a country.

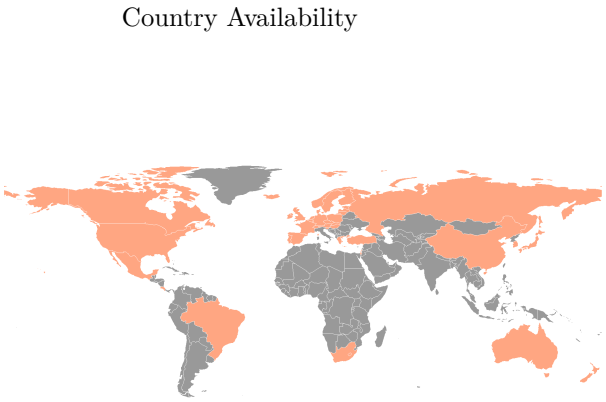




3.23.37 Water stress, total freshwater abstraction as % total available renewable resources (gg_wsa)

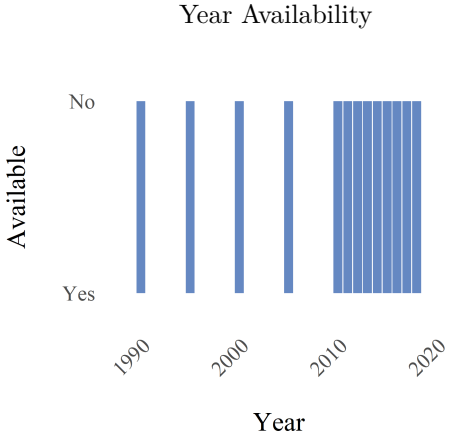
The total freshwater abstraction as a percentage of available renewable sources, as a proxy for water stress (scarcity). Abstraction refers to any process of water removal, extraction, or diversion for human use. A higher percentage indicates greater water stress.

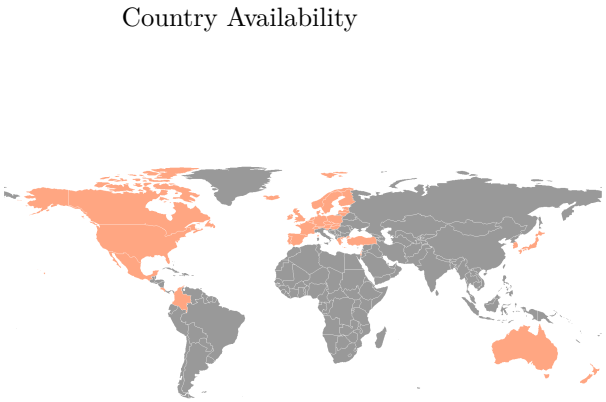




3.23.38 Water stress, total freshwater abstraction as % total internal renewable resources (gg_wsi)

The total freshwater abstraction as a percentage of available internal renewable sources, as a proxy for water stress. Internal resources refer only to river flows and groundwater from rainfall within the country. Abstraction refers to any process of water removal, extraction, or diversion for human use. A higher percentage, therefore, indicates greater water stress.





3.24 International Environmental Agreements Database Project

Dataset by: International Environmental Agreements Database Project

If you use any of these variables, make sure to cite the original source and QoG Data. Our suggested citation for this dataset is:

Mitchell, Ronald B. 2020. *International Environmental Agreements Database Project (Version 2020.1).* URL: `http://iea.uoregon.edu/`

Mitchell, Ronald B et al. 2020. "What we know (and could know) about international environmental agreements". *Global Environmental Politics.* 20. 1

Link to the original source: `https://iea.uoregon.edu/`

International Environmental Agreements (IEA) include efforts to regulate human interactions with the environment that involve legally binding commitments ("agreements") among governments ("international") that have environmental protection as a primary objective ("environmental").The IEAs include:

- instruments designated as convention, treaty, agreement, accord, or their non-English equivalents, and protocols and amendments to such instruments;

- instruments, regardless of designation, establishing intergovernmental commissions;

- instruments, regardless of designation, identified as binding by reliable sources (e.g., by a secretariat, UNEP, or published legal analysis); or

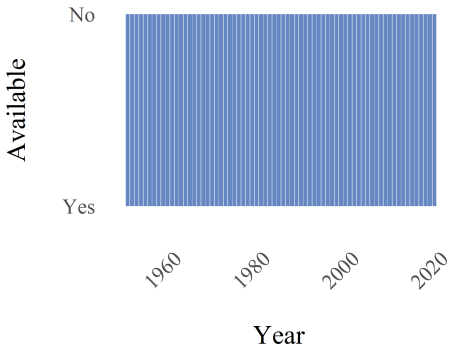
- instruments, regardless of designation, whose texts fit accepted terminologies of legally-binding agreements.

Intergovernmental "soft laws," such as action plans, agreed measures, codes of conduct, declarations, resolutions, and similar policies that are not binding are excluded. European Union (EU) directives are also excluded due to their unique status.

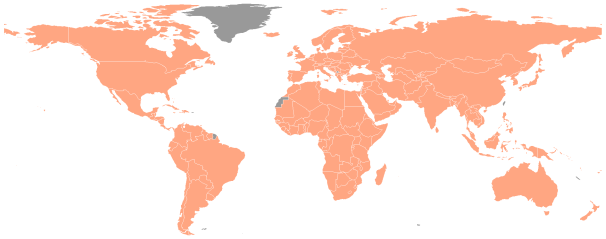
3.24.1 Number of IEAs entered into force for the first time (iead_eif1)

The number of international environmental agreements, amendments, and protocols that entered into force for the first time (before any withdrawals), in the recorded year.

Year Availability



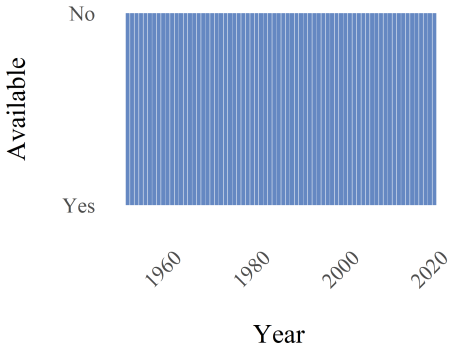
Country Availability



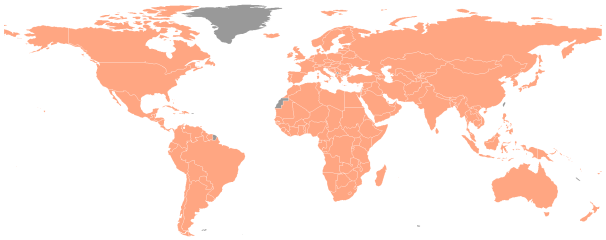
3.24.2 Number of IEAs entered into force for the second time (iead_eif2)

The number of international environmental agreements, amendments, and protocols that entered into force after the first withdrawal, in the recorded year.

Year Availability



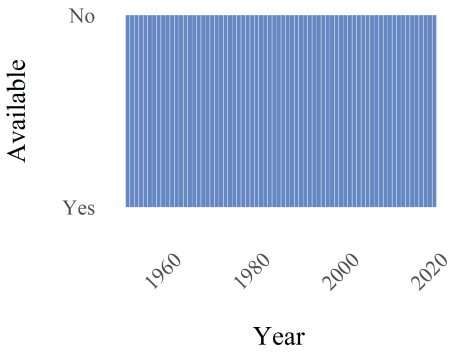
Country Availability



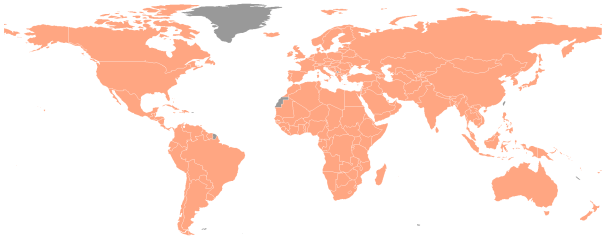
3.24.3 Number of IEAs entered into force for the third time (iead_eif3)

The number of international environmental agreements, amendments, and protocols that entered into force after the second withdrawal, in the recorded year.

Year Availability



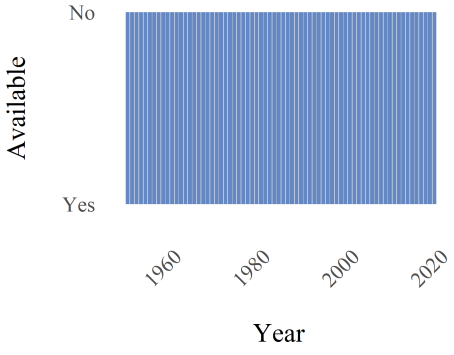
Country Availability



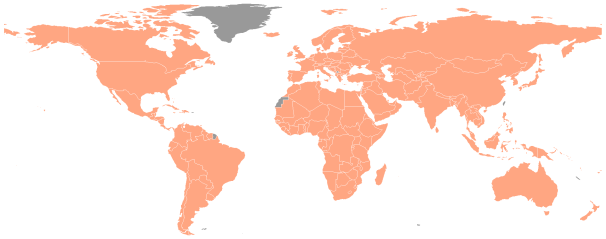
3.24.4 Number of IEAs in force, counting terminated IEAs (iead_inforce)

The number of international environmental agreements, amendments, and protocols in force, including international environmental agreements that have been terminated.

Year Availability



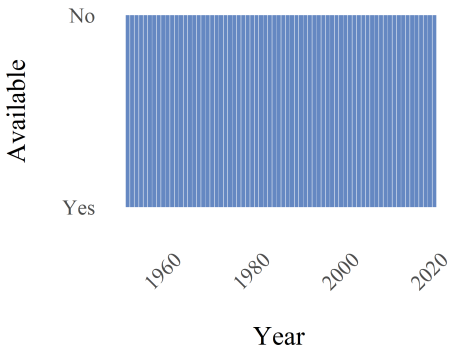
Country Availability



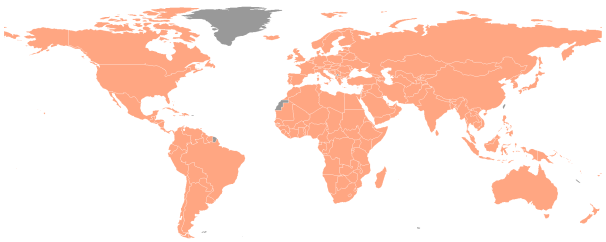
3.24.5 Number of IEAs in force, not counting terminated IEAs (iead_inforce_noterm)

The number of international environmental agreements, amendments, and protocols in force, not counting terminated international environmental agreements.

Year Availability



Country Availability

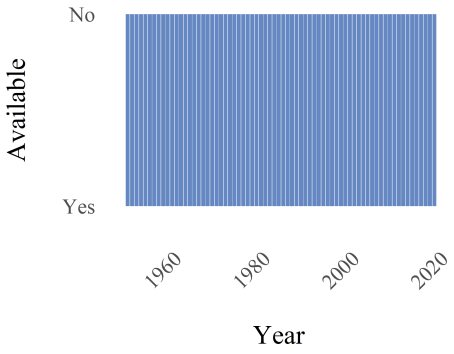


3.24.6 Number of IEAs ratified per year (iead_rat)

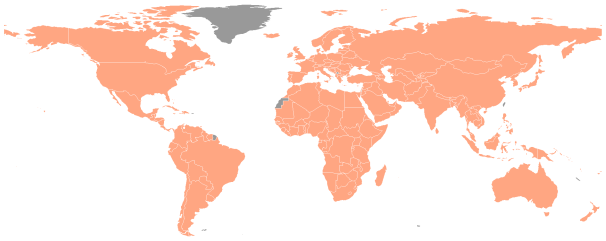
The number of international environmental agreements, amendments, and protocols ratified in the recorded year.

The users are encouraged to use "entry into force" instead of signatures and ratifications.

Year Availability



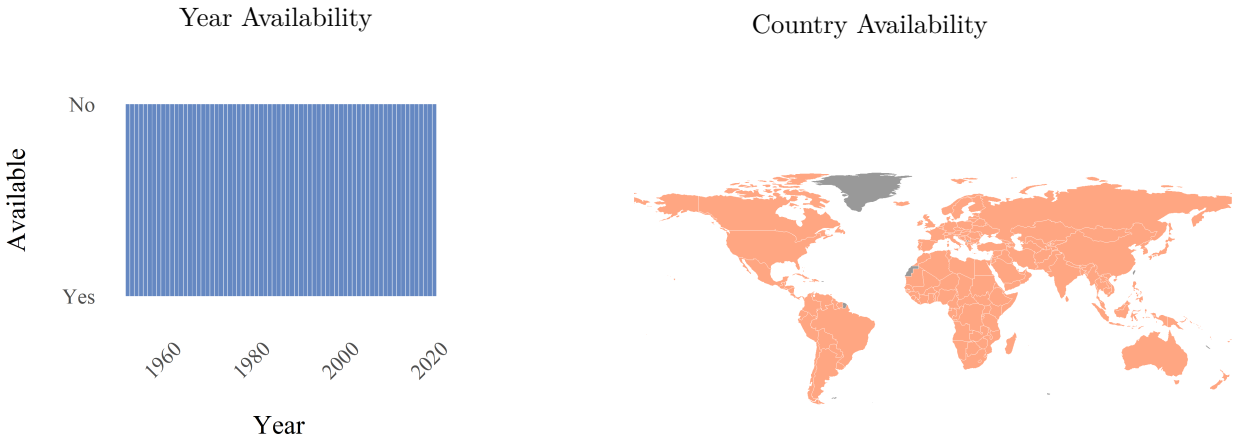
Country Availability



3.24.7 Number of IEAs signed per year (iead_sig)

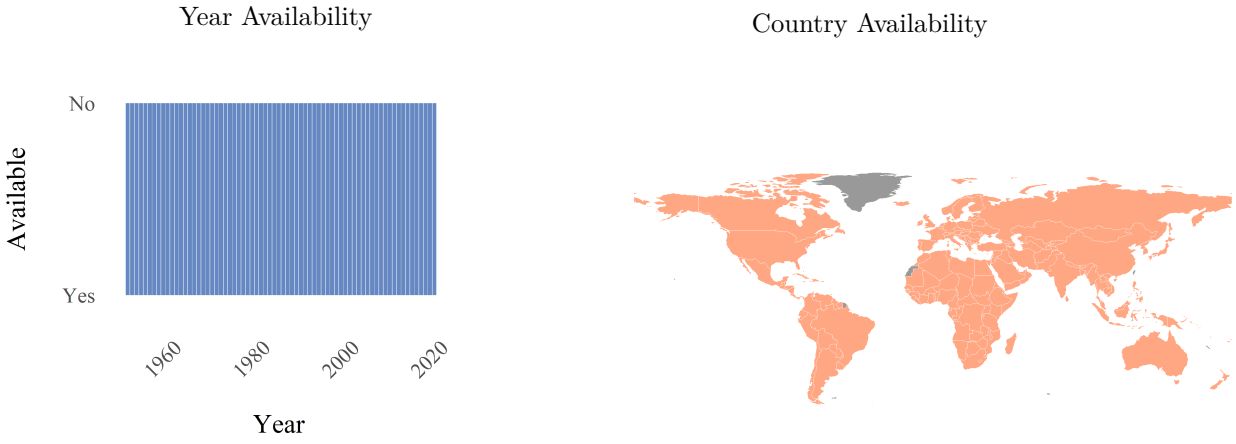
The number of international environmental agreements, amendments, and protocols signed in the recorded year.

The data on signatures are incomplete. Signatures are fewer than ratifications or entry into force because secretariats, e.g., the UN Treaty Series, often do not keep track of signatures. The users are encouraged to use "entry into force" instead of signatures and ratifications.



3.24.8 Number of terminated IEAs per year (iead_term)

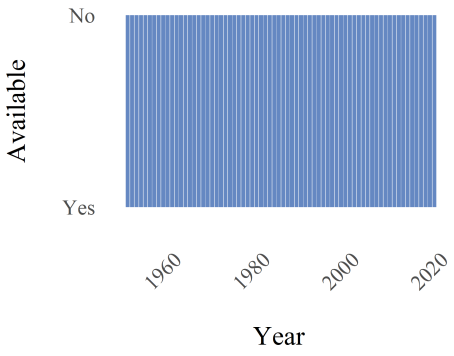
The number of international environmental agreements, amendments, and protocols terminated in the recorded year.



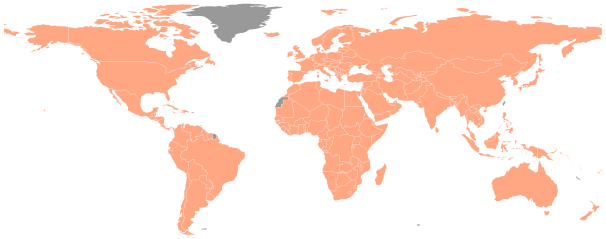
3.24.9 Number of first withdrawals from IEAs per year (iead_withdraw1)

The number of first-time withdrawals from international environmental agreements, amendments, and protocols in the recorded year.

Year Availability



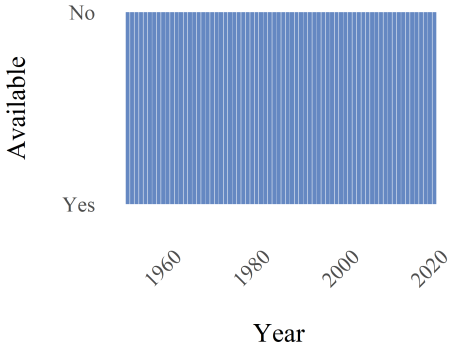
Country Availability



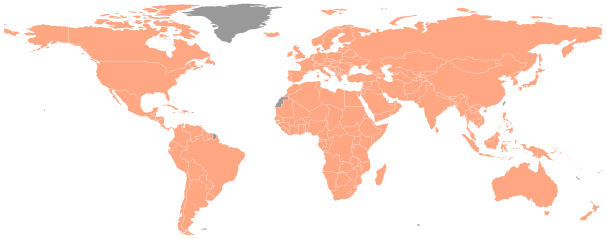
3.24.10 Number of second withdrawals from IEAs per year (iead_withdraw2)

The number of second-time withdrawals from international environmental agreements, amendments, and protocols in the recorded year.

Year Availability



Country Availability



3.25 Natural Resource Management Index Data

Dataset by: Natural Resource Management Index

If you use any of these variables, make sure to cite the original source and QoG Data. Our suggested citation for this dataset is:

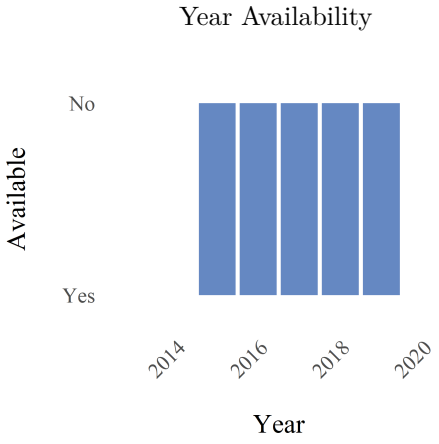
Center for International Earth Science Information Network - CIESIN - Columbia University. 2019. *Natural Resource Protection and Child Health Indicators, 2019 Release.* URL: `https://doi.org/10.7927/r6mv-sv82`

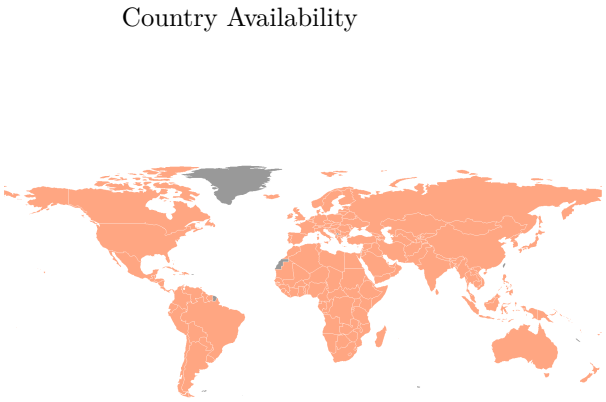
Link to the original source: `http://sedac.ciesin.columbia.edu/data/collection/nrmi`

The Natural Resource Protection and Child Health Indicators, 2019 Release, is produced in support of the U.S. Millennium Challenge Corporation (MCC) as selection criteria for funding eligibility. The Natural Resource Protection Indicator (NRPI) and Child Health Indicator (CHI) are based on proximity-to-target scores ranging from 0 to 100 (at target). The NRPI covers 234 countries and is calculated based on the weighted average percentage of biomes under protected status. The CHI is a composite index for 195 countries derived from the average of three proximity-to-target scores for access to at least basic water and sanitation, along with child mortality. The 2019 release includes a consistent time series of NRPI scores for 2015 to 2019 and CHI scores for 2010 to 2018.

3.25.1 Natural Resource Protection Indicator (nrmi_nrpi)

Natural Resource Protection Indicator assesses whether a country is protecting at least 17% of all of its biomes (e.g. deserts, forests, grasslands, aquatic, and tundra). It is designed to capture the comprehensiveness of a government's commitment to habitat preservation and biodiversity protection. The World Wildlife Fund provides the underlying biome data, and the United Nations Environment Program World Conservation Monitoring Center provides the underlying data on protected areas.


Year Availability
No
Yes
Available
2014
2016
2018
2020
Year


Country Availability

3.26 Oil and Gas Data, 1932-2014

Dataset by: Michael L Ross

If you use any of these variables, make sure to cite the original source and QoG Data. Our suggested citation for this dataset is:

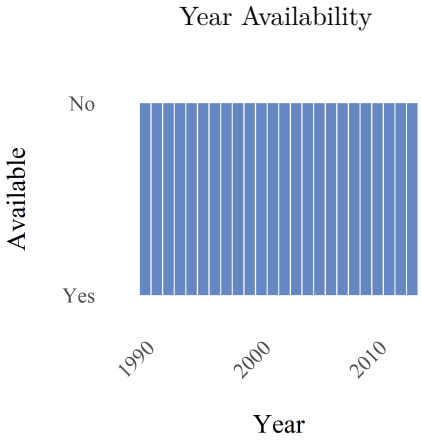
Ross, Michael and Paasha Mahdavi. 2015. *Oil and Gas Data, 1932-2014*. URL: `http://dx.doi.org/10.7910/DVN/ZTPW0Y`

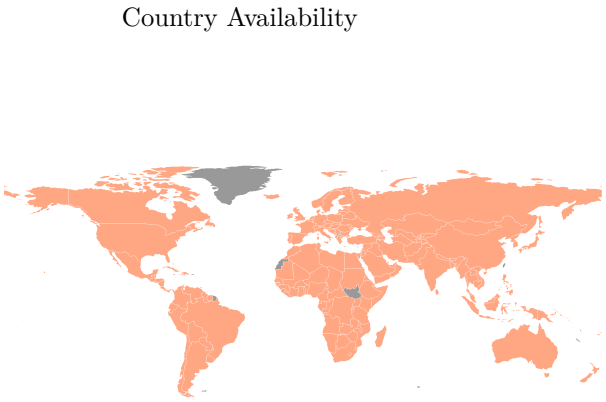
Link to the original source: `https://dataverse.harvard.edu/dataset.xhtml?persistentId=doi:10.7910/DVN/ZTPW0Y`

Global dataset of oil and natural gas production, prices, exports, and net exports. These data are based on the best available information about the volume and value of oil and natural gas production in all countries from 1932 to 2014. The volume figures are from the documents listed in the original source; to calculate the total value of production, the author multiplies the volume by the world price for oil or gas. Since these are world prices for a single (benchmark) type of oil/gas, they only approximate the actual price - which varies by country according to the quality, the terms of contracts, the timing of the transactions, and other factors. These figures do not tell how much revenues were collected by governments or companies - only the approximate volume and value of production. Data on oil production from 1946 to 1969, and gas production from 1955 (when it first was reported) to 1969, are from the US Geological Survey Minerals Yearbook, for various years.

3.26.1 Gas exports, billion cubic feet per year (ross_gas_exp)

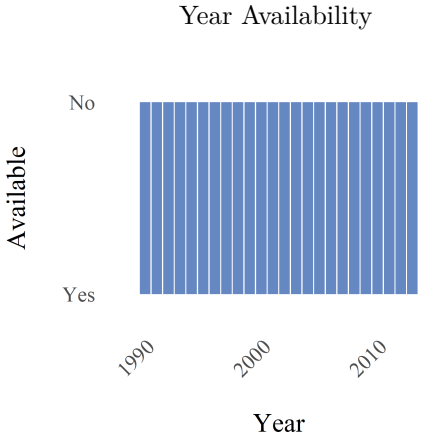
Gas exports, billion cubic feet per year.

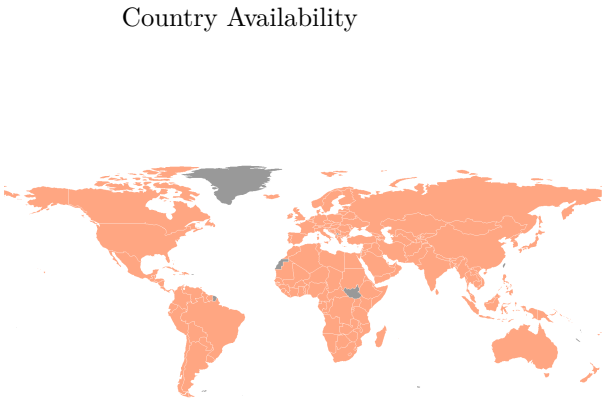




3.26.2 Net gas exports value, constant 2000 dollars (ross_gas_netexp)

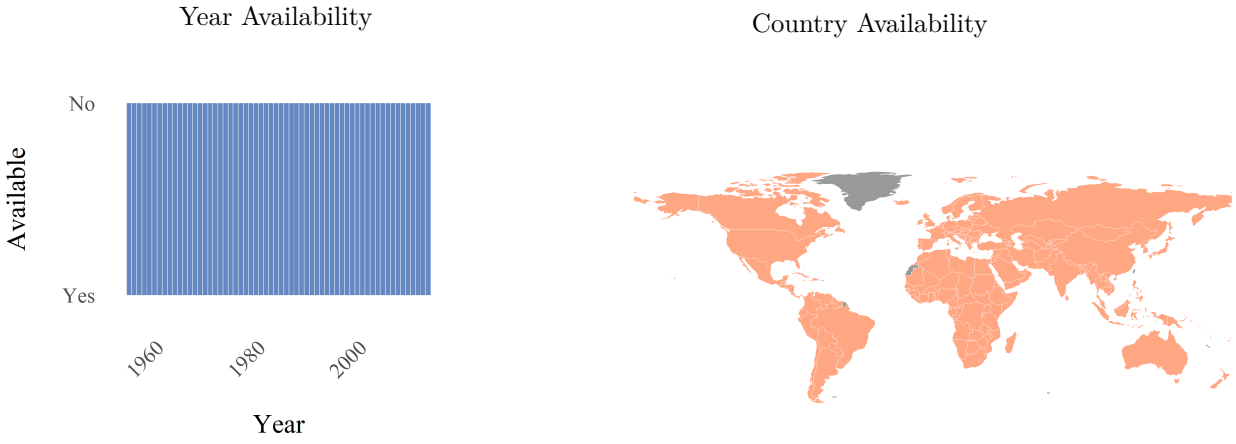
Net gas exports value, measured in constant 2000 US dollars to adjust for inflation.





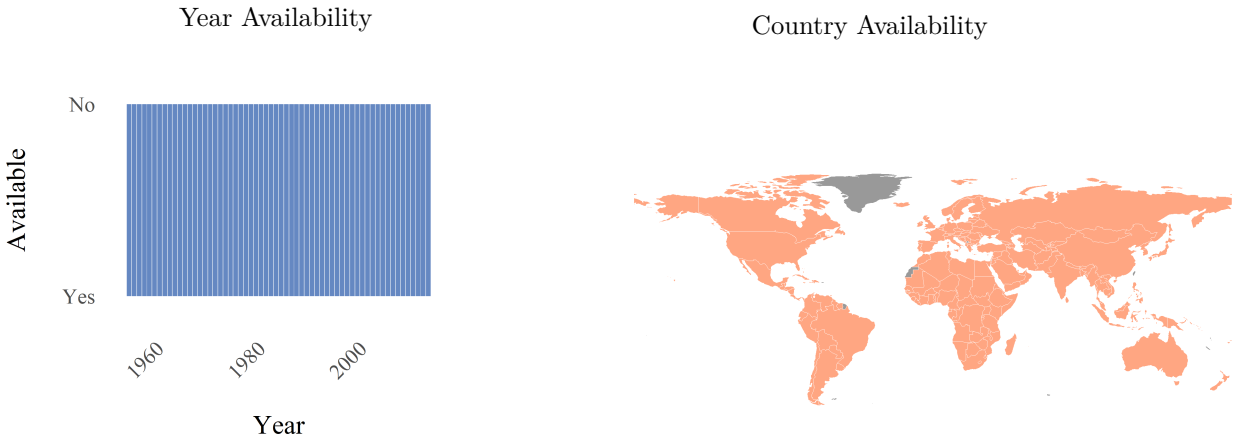
3.26.3 Gas production, million barrels oil equiv. (ross_gas_prod)

Gas production measured in million barrels of oil equivalent.



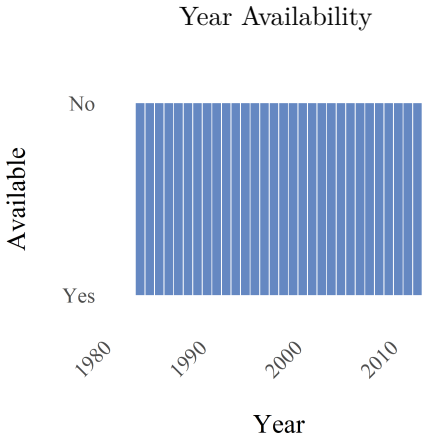
3.26.4 Gas production value in 2014 dollars (ross_gas_value_2014)

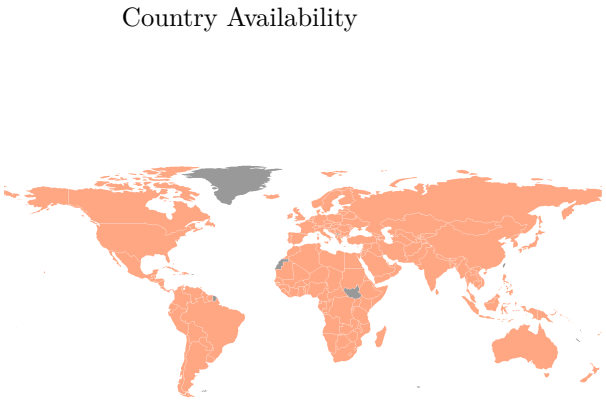
Gas production value in constant 2014 US dollars to adjust for inflation.



3.26.5 Oil exports, thousands of barrels per day (ross_oil_exp)

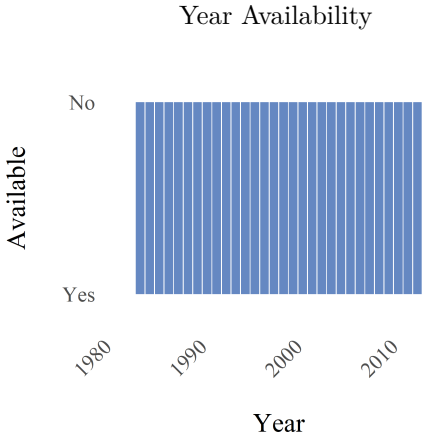
Oil exports, thousands of barrels per day.

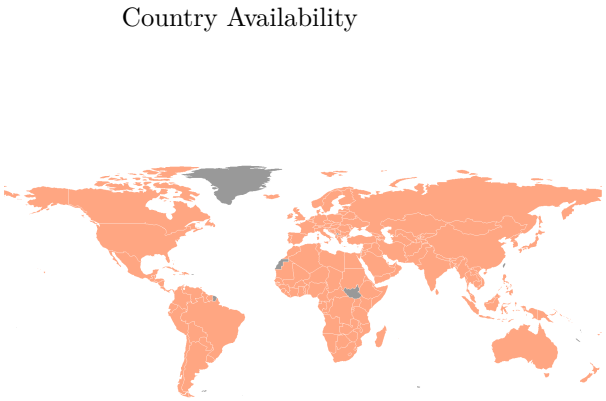




3.26.6 Net oil exports value, constant 2000 dollars (ross_oil_netexp)

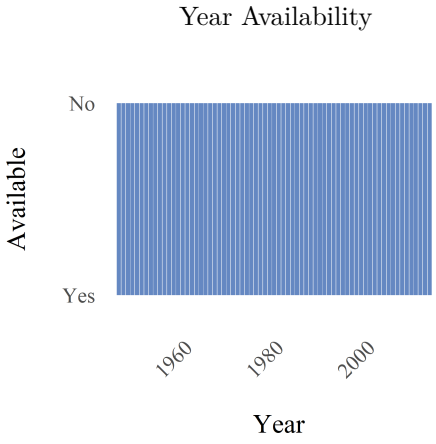
Net oil exports value measured in constant 2000 US dollars to adjust for inflation.

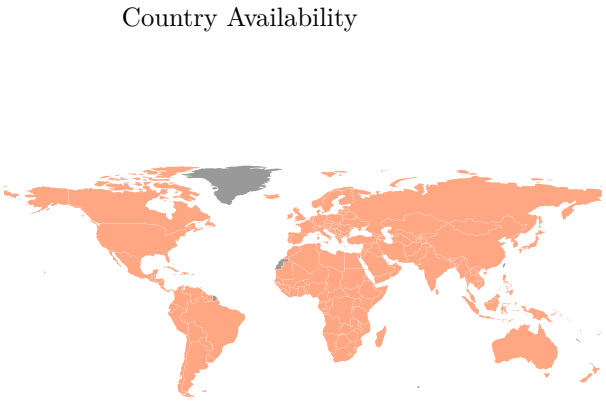




3.26.7 Oil production in metric tons (ross_oil_prod)

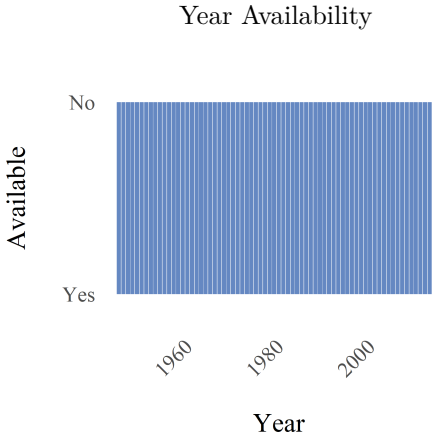
Oil production in metric tons.

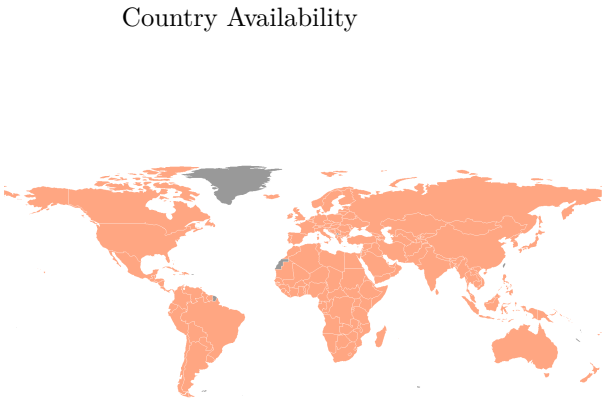




3.26.8 Oil production value in 2014 dollars (ross_oil_value_2014)

Oil production value in constant 2014 US dollars to adjust for inflation.





3.27 Policy Instruments for the Environment

Dataset by: Organisation for Economic Co-operation and Development

If you use any of these variables, make sure to cite the original source and QoG Data. Our suggested citation for this dataset is:

Organisation for Economic Co-operation and Development (OECD). 2020. *Policy Instruments for the Environment (PINE)*. URL: `oe.cd/pine`

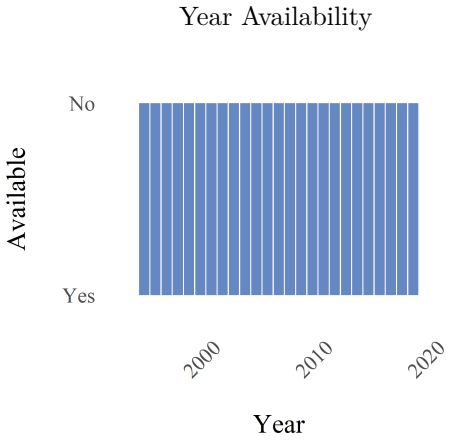
Link to the original source: `http://oe.cd/pine`

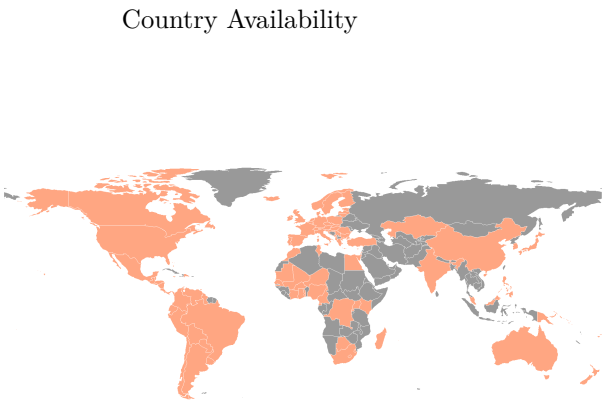
Policy Instruments for the Environment (PINE) is originally developed by OECD in co-operation with the European Environment Agency (EEA). The database contains detailed qualitative and quantitative information on environmentally related taxes, fees and charges, tradable permits, deposit-refund systems, environmentally motivated subsidies, and voluntary approaches used for environmental policy.

The dataset covers OECD member countries, accession countries and selected non-OECD countries since the year 1994, and it has been cross-validated and complemented with Revenue statistics from the OECD Tax statistics database and official national sources.

3.27.1 Climate change related tax revenue (% of GDP) (oecd_cctr_gdp)

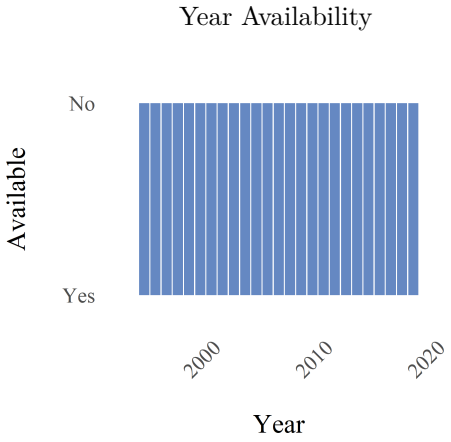
Climate change-related tax revenue as a percentage of gross domestic product (GDP). Includes taxes, fees and charges, tradable permits, deposit-refund systems, subsidies, and voluntary approaches related to the domain of climate change.

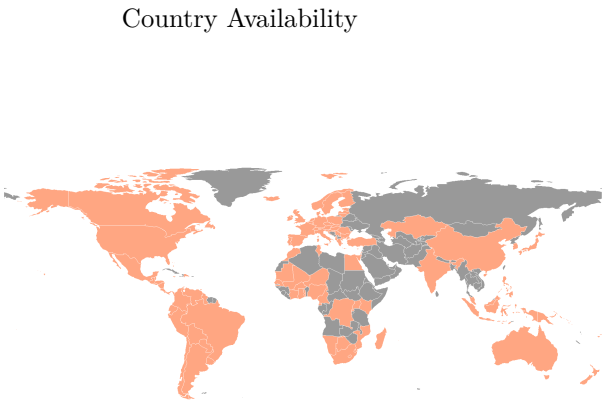




3.27.2 Climate change related tax revenue (% of total tax revenue) (oecd_cctr_tot)

Climate change-related tax revenue as a percentage of total tax revenue. Includes taxes, fees and charges, tradable permits, deposit-refund systems, subsidies, and voluntary approaches related to the domain of climate change.





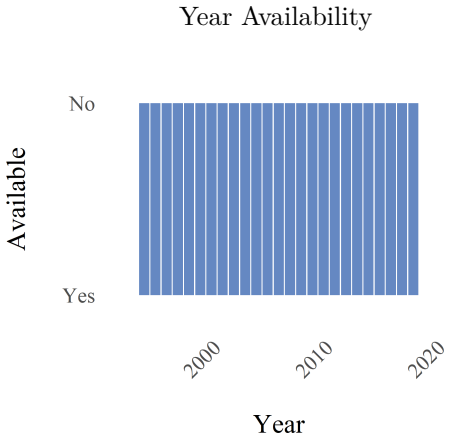
3.27.3 Environmentally related tax revenue (% of GDP) (oecd_etr_gdp)

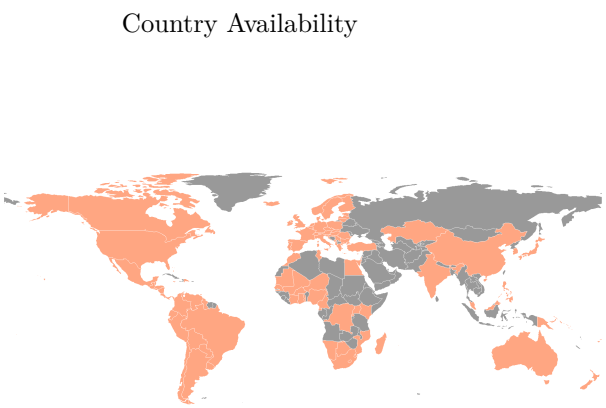
Total revenue gathered from environmentally-related taxes, fees, charges, tradable permits, deposit-refund systems, environmentally motivated subsidies, and voluntary approaches used for environmental policy, as a percent of gross domestic product (GDP). The tax bases covered include:

- Energy products (including vehicle fuels);

- Motor vehicles and transport services;

- Measured or estimated emissions to air and water, ozone depleting substances, certain non-point sources of water pollution, waste management and noise, as well as management of water, land, soil, forests, biodiversity, wildlife, and fish stocks.





3.27.4 Environmentally related tax revenue (% total tax revenue) (oecd_etr_tot)

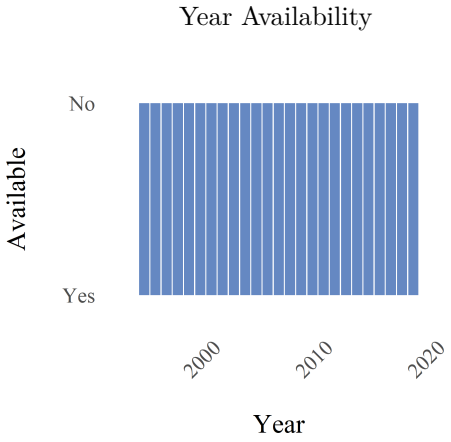
Total revenue gathered from environmentally-related taxes, fees, charges, tradable permits, deposit-refund systems, environmentally motivated subsidies, and voluntary approaches used for environmental policy, as a percentage of total tax revenue.

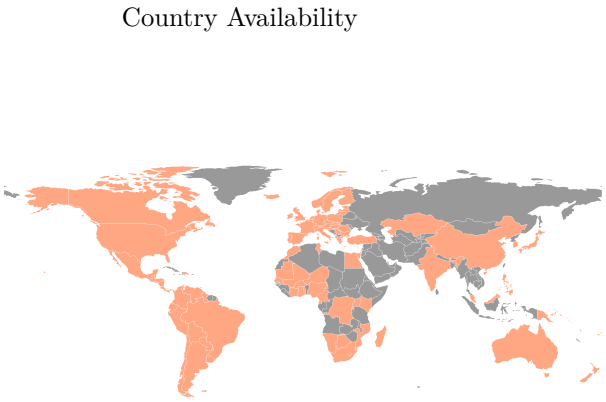
The tax bases covered include:

- Energy products (including vehicle fuels);

- Motor vehicles and transport services;

- Measured or estimated emissions to air and water, ozone depleting substances, certain non-point sources of water pollution, waste management and noise, as well as management of water, land, soil, forests, biodiversity, wildlife, and fish stocks.


Year Availability
No
Yes
Available
2000
2010
2020
Year


Country Availability

3.28 Stock of Climate Laws and Policies

Dataset by: Eskander and Fankhauser

If you use any of these variables, make sure to cite the original source and QoG Data. Our suggested citation for this dataset is:

Eskander, S. and Fankhauser S. 2020. "Reduction in greenhouse gas emissions from national climate legislation". *Nature Climate Change*. 10. URL: `https://github.com/smsu1979/Eskander-Fankhauser-NCC-2020-`

Link to the original source: `https://github.com/smsu1979/Eskander-Fankhauser-NCC-2020-`

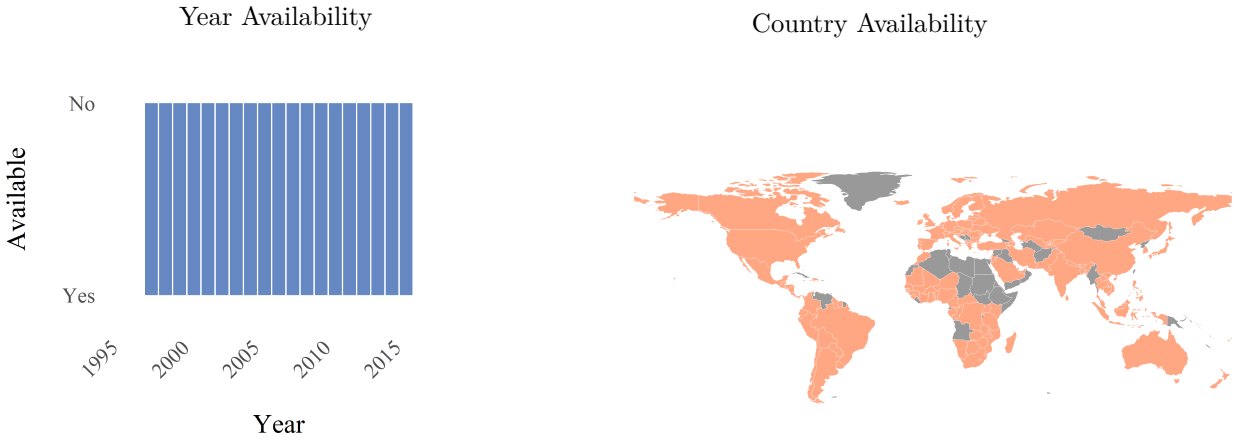
Data on the stock of climate change mitigation laws and policies used in the paper:

Eskander, S.M. and Fankhauser, S., 2020. Reduction in greenhouse gas emissions from national climate legislation. Nature Climate Change, 10(8), pp.750-756.

Mitigation laws and policies refer to a legislative or executive disposition focused on curbing a country's greenhouse gases emissions in one sector or more. Measures can be directly related to emissions reductions, such as laws establishing a national carbon budget or cap and trade system, or indirectly related, such as laws or policies establishing relevant institutions or providing additional funding for research and development into low carbon technologies. Laws and policies addressing forests and land use are included as long as they explicitly support climate change mitigation through activities that reduce emissions and increase carbon removals. General forest management and conservation laws are not included, even if they may have implicit consequences for climate change mitigation.

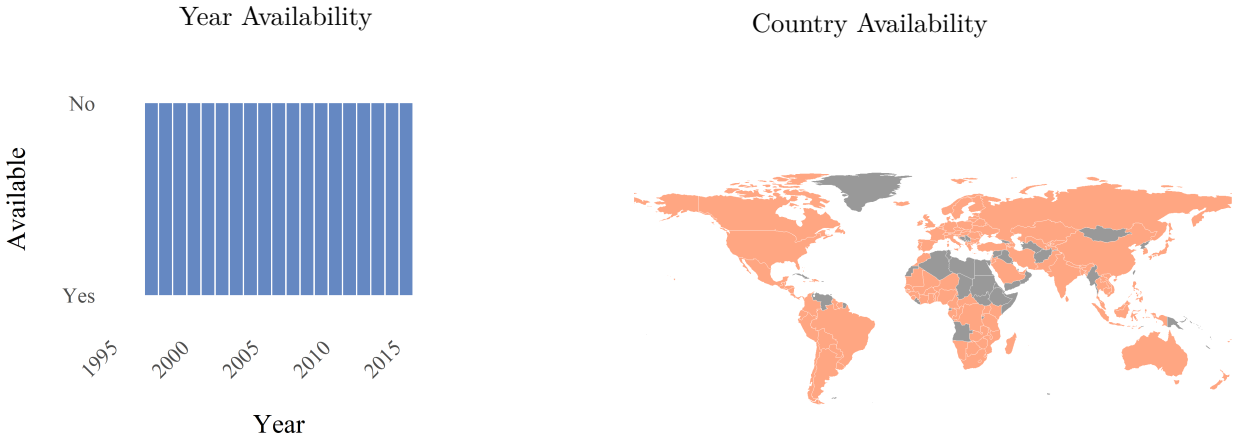
3.28.1 Stock of executive orders/policies on mitigation for the past 3 years (slaws_mit_ex_l3)

Number of policies addressing climate mitigation that were enacted by the national executive branch for the previous 3 years, rolling. These include presidential decrees, executive orders, or department regulations.



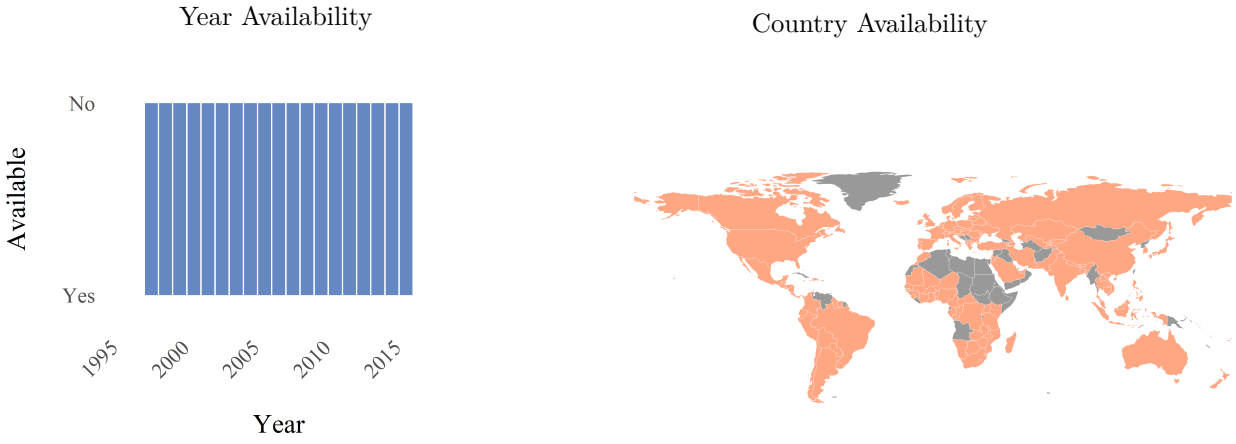
3.28.2 Stock of older executive orders/policies on mitigation (slaws_mit_ex_lt)

Number of policies addressing climate mitigation that were enacted by the national executive branch until three years back, rolling. These policies include presidential decrees, executive orders, or department regulations.



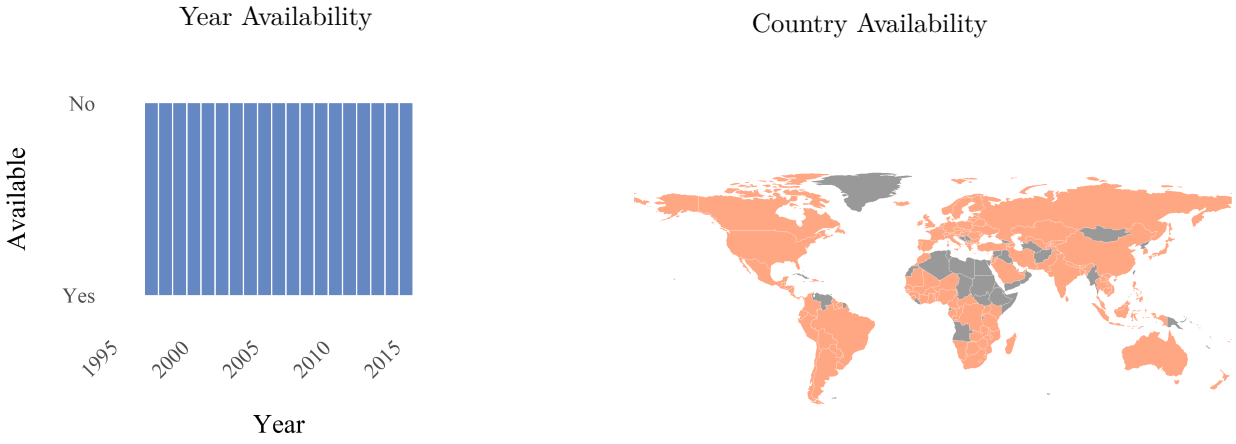
3.28.3 Stock of mitigation laws and policies for the past 3 years (slaws_mit_l3)

Number of laws and policies addressing climate mitigation that were adopted by the national government in the previous 3 years, rolling.



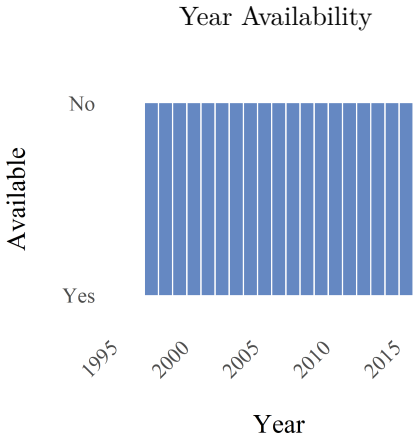
3.28.4 Stock of legislative mitigation laws for the past 3 years (slaws_mit_leg_l3)

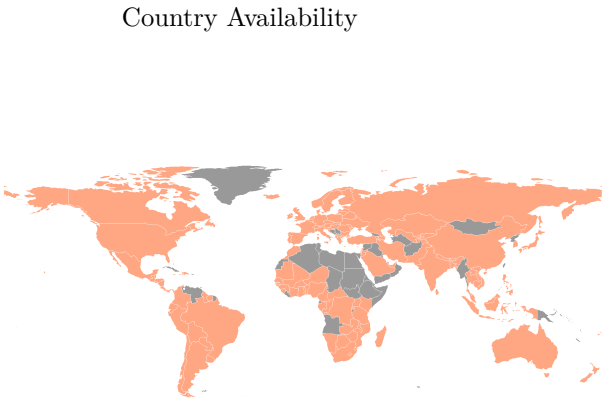
Number of laws addressing climate mitigation that were passed by the national legislature in the previous three years, rolling. Laws are passed by the parliament, congress, or equivalent legislative authority.



3.28.5 Stock of older legislative mitigation laws (slaws_mit_leg_lt)

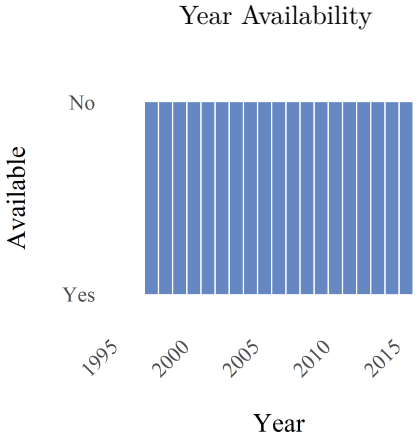
Total number of laws addressing climate mitigation that were passed by the national legislature until three years back, rolling. Laws are passed by the parliament, congress, or equivalent legislative authority.

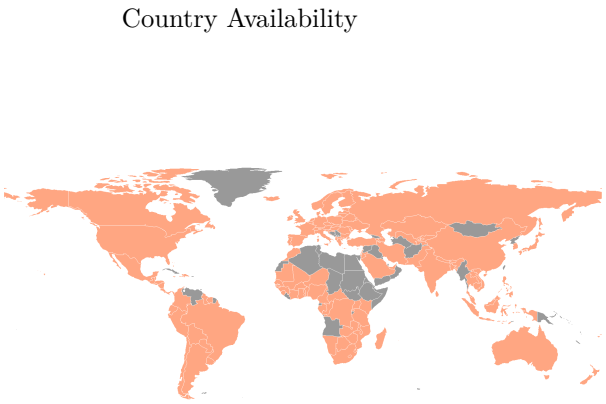




3.28.6 Stock of older mitigation laws and policies (slaws_mit_lt)

Total number of laws and policies addressing climate mitigation that were adopted by the national government until three years back, rolling.





3.29 Sustainable Governance Indicators

Dataset by: Bertelsmann Stiftung

If you use any of these variables, make sure to cite the original source and QoG Data. Our suggested citation for this dataset is:

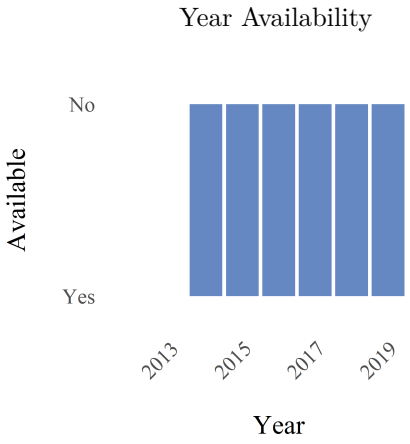
Schiller, Christof, Thorsten Hellmann, and Pia Paulini. 2020. "Sustainable Governance Indicators 2020". *Bertelsmann Stiftung.* URL: `https://www.sgi-network.org/2020/Downloads`

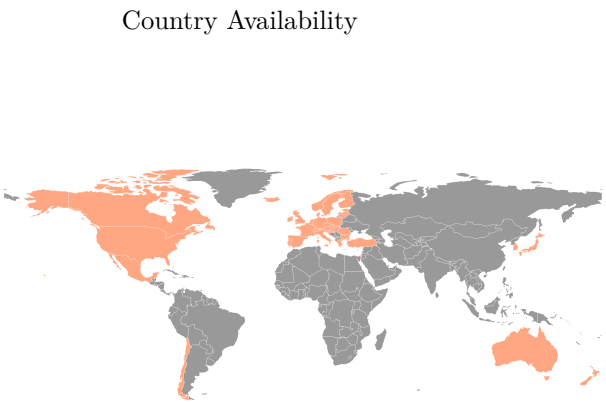
Link to the original source: `https://www.sgi-network.org/2020/`

The Sustainable Governance Indicators (SGI) is a platform built on a cross-national survey of governance that identifies reform needs in 41 EU and OECD countries. SGI explores how governments target sustainable development and advocate for more sustainable governance built on three pillars: 1) Policy Performance; 2) Democracy; and 3) Governance.

3.29.1 Environmental Policy Performance Index (sgi_en)

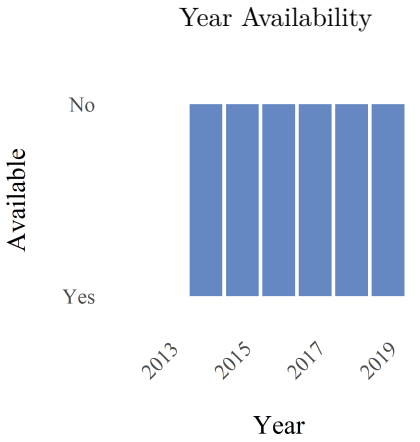
The index consists of two parts: Environment Index and Global Environmental Protection Index, weighted equally. The variable varies between 0 and 10.

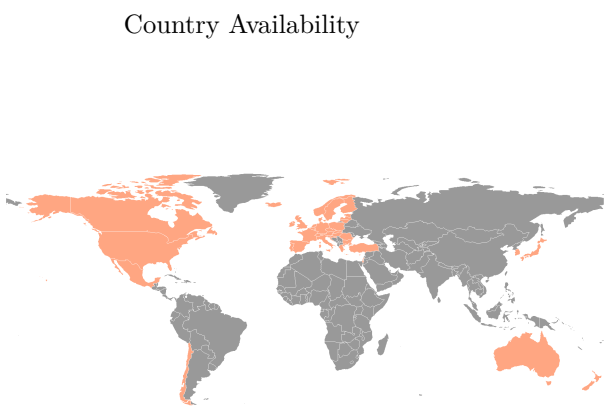




3.29.2 Environmental Policy Performance - Environment (sgi_enen)

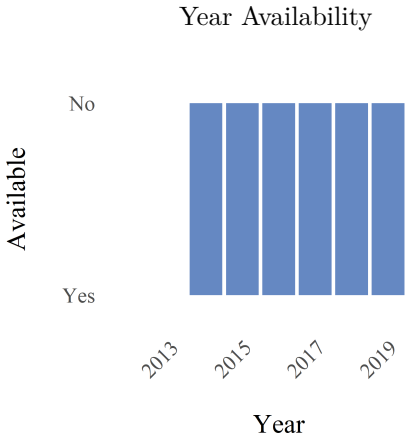
The Environment index consists of the "Environmental Policy" indicator (50%), based on expert assessments of environmental policy effectiveness, and nine indicators related to observable environmental performance, including Energy Productivity (5,56%), Greenhouse Gas Emissions (5,56%), Particulate Matter (5,56%), Biocapacity (5,56%), Waste Generation (5,56%), Material Recycling (5,56%), Biodiversity (5,56%), Renewable Energy (5,56%), and Material footprint (5,56%). The index varies from 0 to 10.

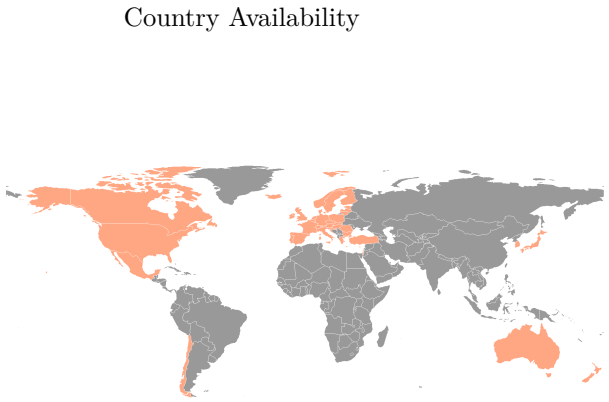




3.29.3 Environmental Policy Performance - Global Environmental Protection (sgi_enge)

The Global Environmental Protection index consists of "Global Environmental Policy Indicator" (50%), based on expert assessments of countries' participation in global environmental protection regimes, the rate of participation in Multilateral Environmental Agreements (25%), and Kyoto Participation and Achievements indicator, measuring to what extent the Kyoto emission reduction targets were met (25%). The index varies from 0 to 10.





3.29.4 Environmental policy effectiveness (sgi_epe)

The indicator measures how effectively a national environmental policy protects and preserves the sustainability of natural resources and the quality of the environment.

Effective environmental policies will help promote and incentivize goal-driven technological progress and environmentally friendly behavior and ensure sufficient resources are allocated for implementation. In assessing the effectiveness of environmental policies, the experts were invited to draw on the following guiding questions:

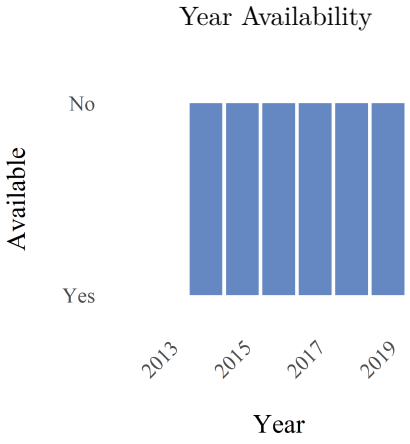
1. Are environmental policy goals ambitious (i.e., do they target more than improvements to efficiency)?

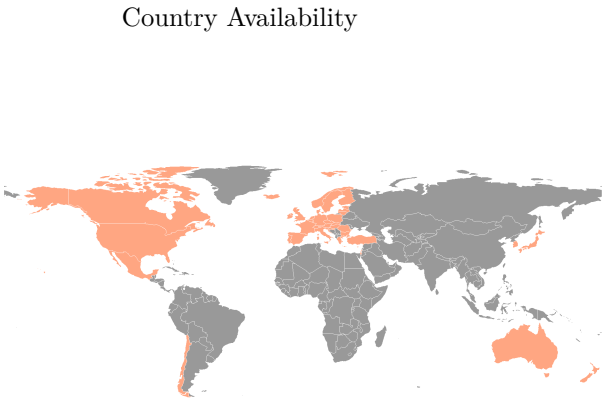
2. Are environmental policies implemented with tangible impact?

3. Are environmental concerns integrated effectively across relevant policy sectors (i.e., energy, housing, transport, manufacturing industry, research and innovation, tourism, fisheries, agriculture)?

As environmental performance may be issue-specific, the experts were invited to provide a short paragraph for each of the four key targets of protection: resource use (land, water, materials, energy), environmental pollution (water, air, soil), climate and biodiversity protection."

The indicator is based on expert answers to these questions and varies from 0 to 10, where 0-1 is "Environmental concerns have been largely abandoned" and 9-10 is "Environmental policy goals are ambitious and effectively implemented as well as monitored within and across most relevant policy sectors that account for the largest share of resource use and emissions".





3.29.5 Participation in global environmental regimes (sgi_ger)

The indicator measures the extent to which governments actively contribute to the design and advancement of global environmental protection regimes.

Protecting the climate and preserving natural resources worldwide depends on effective collective action carried out on a global level. Examples of active contribution include demonstrating initiative and responsibility, acting as an agenda-setter within international frameworks, and/or achieving an alignment of purpose among conflicting interests in international negotiations.

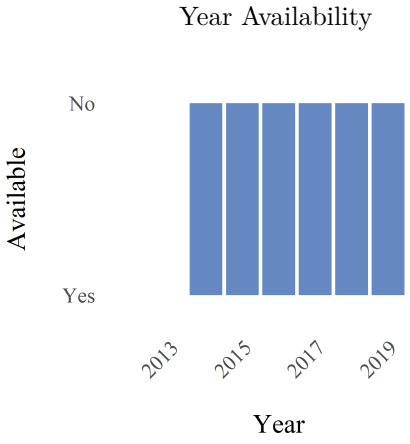
The experts were invited to provide a paragraph addressing the following three aspects:

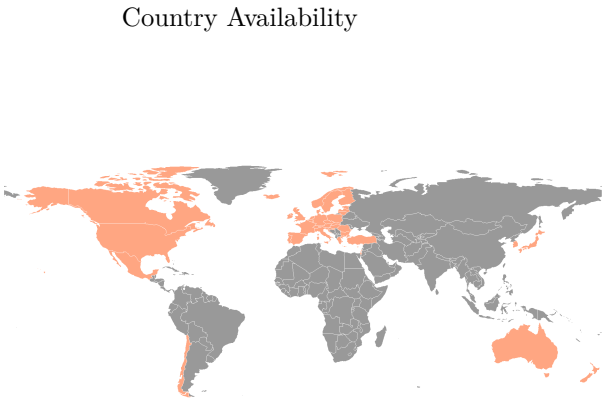
1. Which issues are treated as global common goods rather than domestic environmental problems (e.g., chemical pollution, biodiversity conservation, forest protection, climate protection, etc.)?

2. Which of these global issues or goals does the government address, and has it formulated and implemented action plans targeting these goals?

3. Are countries targeting the preservation of global common goods by contributing funds either through international facilities or official development assistance?"

The indicator is based on the expert answers to these questions and varies from 0 to 10, where 1-2 is "The government does not contribute to international efforts to strengthen global environmental protection regimes," and 9-10 is "The government actively contributes to international efforts to design and advance global environmental protection regimes. In most cases, it demonstrates commitment to existing regimes, contributes to their being advanced and has introduced appropriate reforms".


Year Availability
No
Yes
Available
2013
2015
2017
2019
Year


Country Availability

3.30 The Environmental Democracy Index

Dataset by: The Access Initiative (TAI) and World Resources Institute (WRI)

If you use any of these variables, make sure to cite the original source and QoG Data. Our suggested citation for this dataset is:

World Resource Institute and the Access Initiative. 2015. *Environmental Democracy Index.* URL: `https://environmentaldemocracyindex.org/`

Link to the original source: `https://www.environmentaldemocracyindex.org/node/12732.html`

The Environmental Democracy Index measures the degree to which countries have enacted legally binding rules that provide for environmental information collection and disclosure, public participation across a range of environmental decisions, and fair, affordable, and independent avenues for seeking justice and challenging decisions that impact the environment. The index evaluates 70 countries across 75 legal indicators, based on objective and internationally recognized standards established by the United Nations Environment Programmes (UNEP) Bali Guidelines. EDI also includes a supplemental set of 24 limited practice indicators that provide insight on a country's performance in implementation.

3.30.1 Environmental Democracy Index (edi_edi)

EDI measures to which degree countries have enacted legally binding rules that provide for environmental information collection and disclosure, public participation across a range of environmental decisions, and fair, affordable, and independent avenues for seeking justice and challenging decisions that impact the environment.

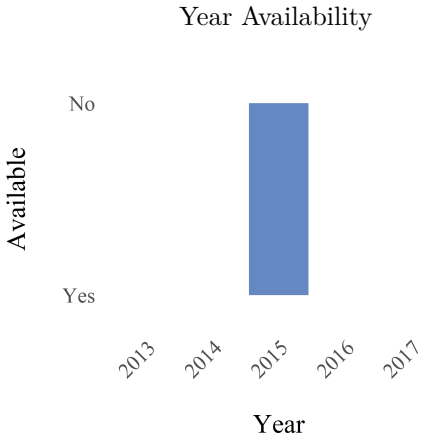
It is an average of 3 pillars that measure:

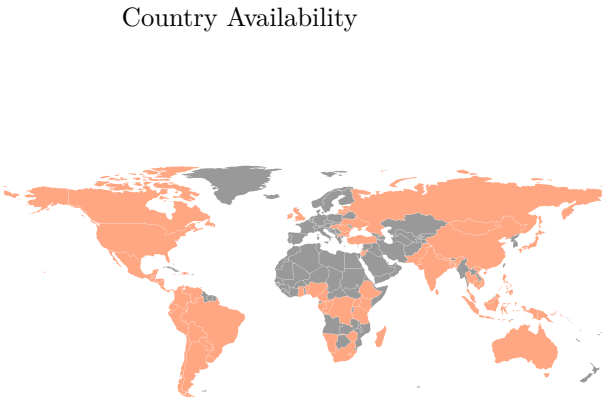
1) the right to freely access information on environmental quality and problems (Access to information pillar);

2) the right to participate meaningfully in decision-making (Participation pillar);

3) the right to seek enforcement of environmental laws or compensation for harm (Justice pillar).

The pillars are calculated by combining 75 legal indicators that are scored from 0 (worst) to 3 (best), producing an overall score that falls within this same range. The pillars are given equal weight when creating an average.

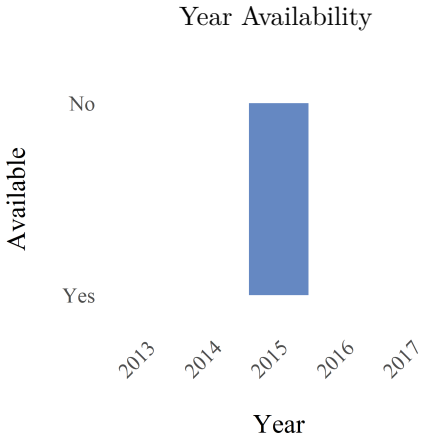


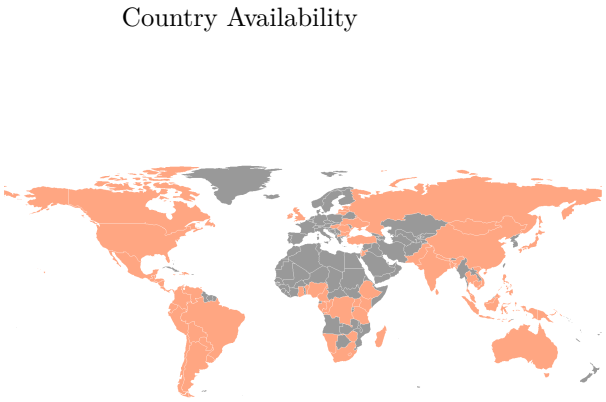


3.30.2 Affordable access to relief and remedy (Guideline 20) (edi_gaarr)

The indicator measures to which extent states ensure that the access of members of the public concerned to review procedures relating to the environment is not prohibitively expensive and to which extent they consider the establishment of appropriate assistance mechanisms to remove or reduce financial and other barriers to access to justice.

This indicator is an arithmetic average of expert answers to questions on a scale from 0 (worst) to 3 (best): (20.1) To what extent are there legal mechanisms in place to ensure that access to review procedures relating to the environment for members of the public concerned is not prohibitively expensive?; (20.2) To what extent does the law provide assistance mechanisms to reduce financial barriers to access to justice?; (20.3) To what extent does the law provide assistance mechanisms to reduce gender-related non-financial barriers to access to justice?; (20.4) To what extent does the law provide assistance mechanisms to reduce other non-financial and non-gender barriers to access to justice?; (P20.1) In the last 5 years, has a public interest case relating to the environment or natural resources been filed which was supported by government legal aid?; (P20.2) In the last 10 years, have there been cases relating to the environment or natural resources where the costs of proceedings was awarded against a public interest complainant/plaintiff/petitioner (c/p/p)?; (P20.3) In the last 5 years have there been cases related to the environment or natural resources where the costs of proceedings were awarded in favor of a public interest complainant/plaintiff/petitioner (c/p/p)?

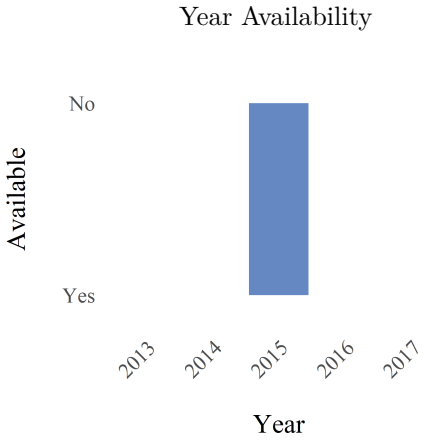


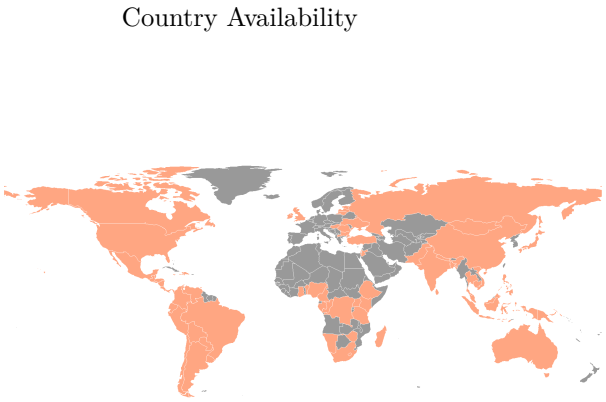


3.30.3 Alternative dispute resolution for environmental issues (Guideline 26) (edi_-gadrei)

The indicator measures to which extent the states encourage the development and use of alternative dispute resolution mechanisms where these are appropriate. In scoring this indicator, alternate dispute resolution mechanisms include mediation, conciliation, or arbitration adopted by institutions as a means of resolving environmental disputes.

This indicator is an arithmetic average of expert answers to questions on a scale from 0 (worst) to 3 (best): (26.1) To what extent does the law provide for the possibility to use alternative dispute resolution mechanisms to address violations of the right of access to environmental information, public participation or cases of environmental harm?; (26.2) To what extent does the law provide incentives for the use of alternative dispute resolution mechanisms where these are appropriate?; (P26.1) In the last 5 years, has a public interest case relating to the environment or natural resources been solved by an alternate conflict resolution method (such as mediation, arbitration and conciliation)?

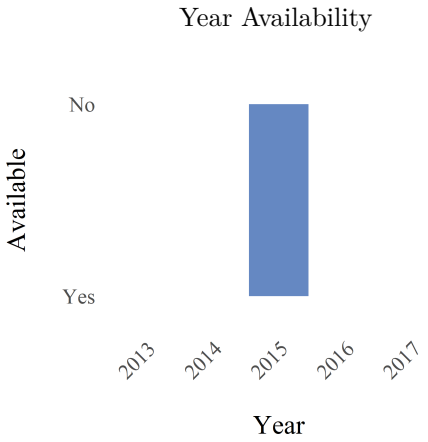


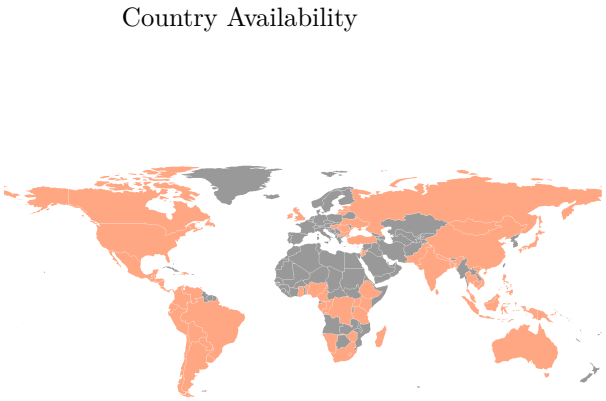


3.30.4 Awareness and education about remedies and relief (Guideline 23) (edi_gaerr)

The indicator measures to which extent the states provide adequate information to the public about the procedures operated by courts of law and other relevant bodies in relation to environmental issues.

This indicator is an arithmetic average of expert answers to questions on a scale from 0 (worst) to 3 (best): (23.1) To what extent does the law require the State or State agencies or institutions to provide information to the public about court procedures relating to environmental issues?; (23.2) To what extent does the law require the State or State agencies or institutions to provide information to the public about review procedures relating to environmental issues provided by bodies other than courts of law?; (P23.1) Is there an easily understandable explanation of court procedures in the national language(s) on the website or office of the highest national court or the apex national environmental agency?

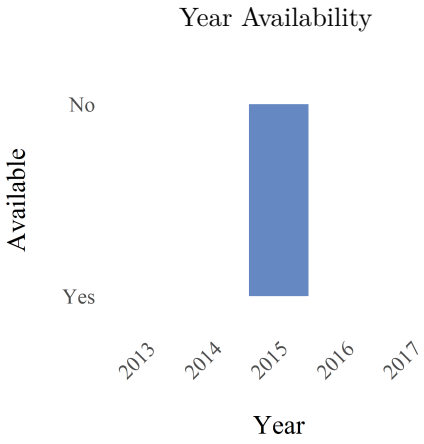


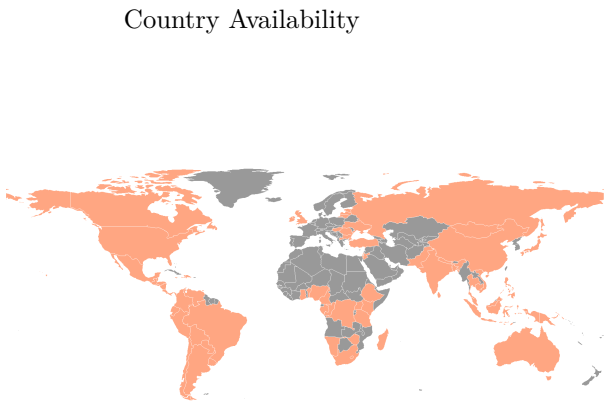


3.30.5 Accessibility of information requests (Guideline 1) (edi_gair)

The indicator measures the existence of a clear positive legal mandate that gives the public the right to access environmental information upon request.

This indicator is an arithmetic average of expert answers to questions on a scale from 0 (worst) to 3 (best): (1.1) To what extent does the law mandate access to environmental information to be provided upon request?; (1.2) To what extent does the law provide for natural or legal persons' access to environmental information?; (1.3) To what extent does the law make access to environmental information affordable?; (1.4)To what extent does the law provide for timely access to environmental information?; (1.5) To what extent does the law include public authorities under access to environmental information provisions?; (1.6) To what extent does the law not require proof of legal or other interest for access to environmental information?

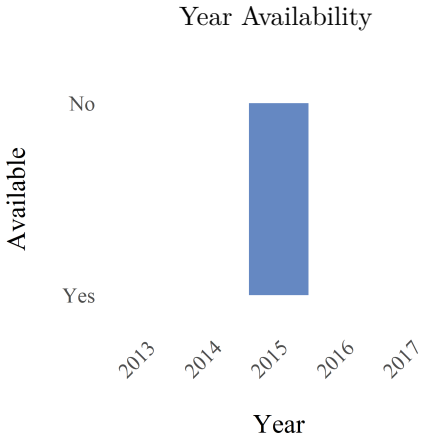


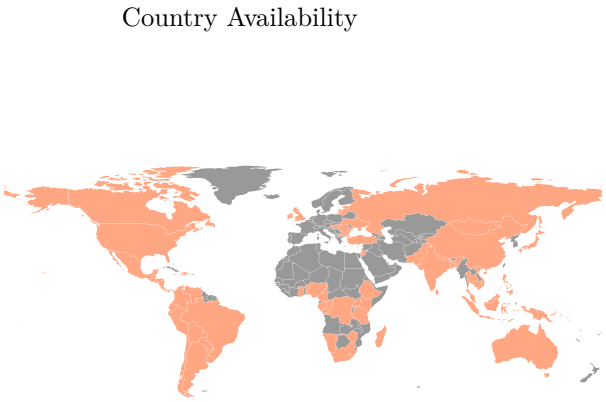


3.30.6 Due account of public comments (Guideline 11) (edi_gapc)

The indicator measures to which extent the states ensure that due account is taken of the comments of the public in the decision-making process and that the decisions are made public.

This indicator is an arithmetic average of expert answers to questions on a scale from 0 (worst) to 3 (best): (11.1) To what extent do the laws concerning environmental impact assessments, pollution control standards and permits, forest concessions, extractive industries, biodiversity and terrestrial protected areas, and environmental policy-making require the State or State agencies at the national level to take due account of the public's comments in decision-making relating to the environment?; (11.2) To what extent do the laws concerning environmental impact assessments, pollution control standards and permits, forest concessions, extractive industries, biodiversity and terrestrial protected areas, and environmental policy-making require that decisions relating to the environment are made public?; (P11.1) In the three most recent large-scale extractive or development projects, did the relevant agency respond to public comments on the environmental impact assessment and make the responses available to the public?

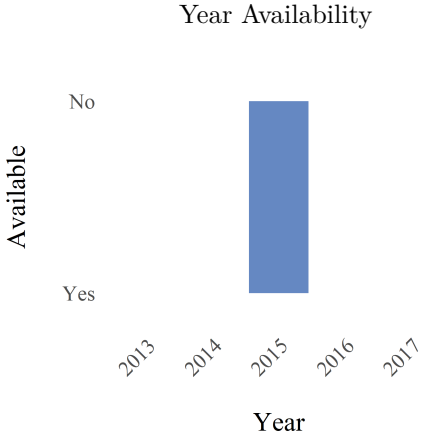


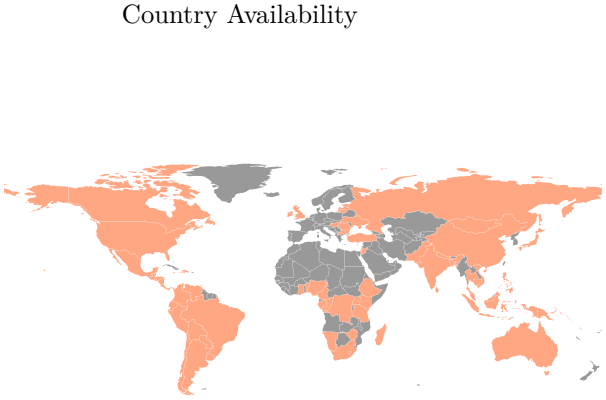


3.30.7 Broad standing (Guideline 18) (edi_gbs)

The indicator measures to which extent the states provide broad interpretation of standing in proceedings concerned with environmental matters with a view to achieving effective access to justice.

This indicator is an arithmetic average of expert answers to questions on a scale from 0 (worst) to 3 (best): (18.1) To what extent does the law recognize broad legal standing in proceedings concerned with environmental matters?; (P18.1) In the last 5 years, have NGOs been granted legal standing by national courts in public interest environmental cases?

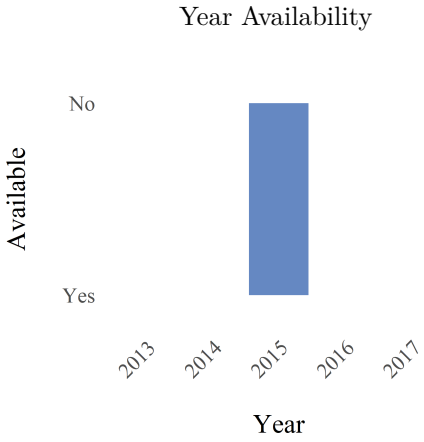


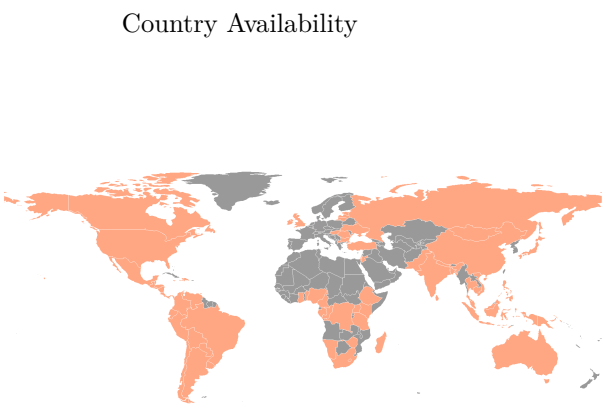


3.30.8 Effective enforcement (Guideline 22) (edi_gee)

The indicator measures to which extent the states ensure the timely and effective enforcement of decisions in environmental matters taken by courts of law and by administrative and other relevant bodies.

This indicator is an arithmetic average of expert answers to questions on a scale from 0 (worst) to 3 (best): (22.1) To what extent does the law provide for the effective enforcement of criminal court decisions relating to the environment?; (22.2) To what extent does the law require the enforcement of criminal court decisions relating to the environment to be timely?; (22.3) To what extent does the law provide for the effective enforcement of civil court decisions relating to the environment?; (22.4) To what extent does the law require the enforcement of civil court decisions relating to the environment to be timely?; (22.5) To what extent does the law provide for effective enforcement of decisions relating to the environment taken by administrative and other relevant bodies?; (22.6) To what extent does the law ensure the enforcement of administrative decisions relating to the environment will be timely?



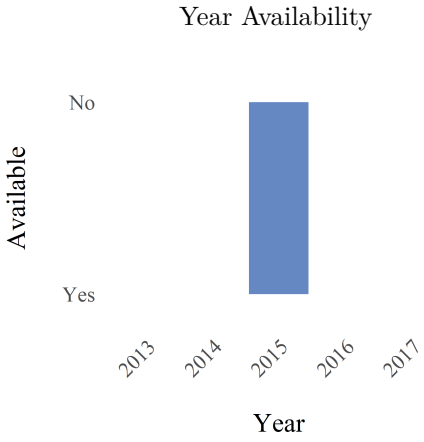


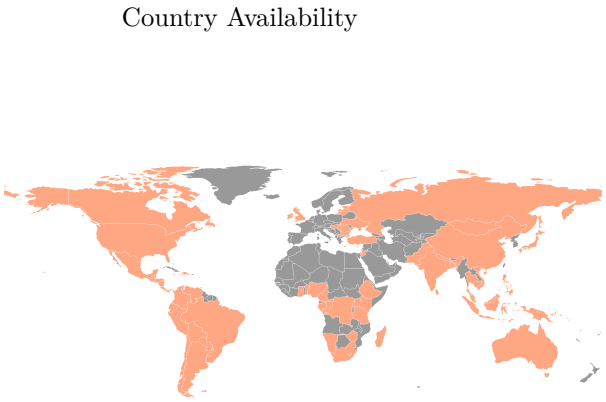
3.30.9 Environmental information in the public domain (Guideline 2) (edi_gepd)

The indicator measures to which extent the states provide environmental information in the public domain that include, among other things, information about environmental quality, environmental impacts on health and factors that influence them, in addition to information about legislation and policy, and advice about how to obtain information.

This indicator is an arithmetic average of expert answers to questions on a scale from 0 (worst) to 3 (best): (2.1) To what extent does the law require information on environmental quality to be made proactively available to the public?; (2.2) To what extent does the law require environmental information on environmental factors that influence health be placed in the public domain?; (2.3) To what extent does the law require information on environmental laws and policy be placed in the public domain?; (2.4) To what extent does the law require publicly available information and advice

on how to obtain environmental information?; (P2.1) Are real time air quality data for the capital city of your country made available online by the government?; (P2.2) In the last two years, has annual drinking water quality data for water services in your capital city been proactively provided to consumers either by mail (post) or online and do they meet the minimum standards established by the regulatory agency?

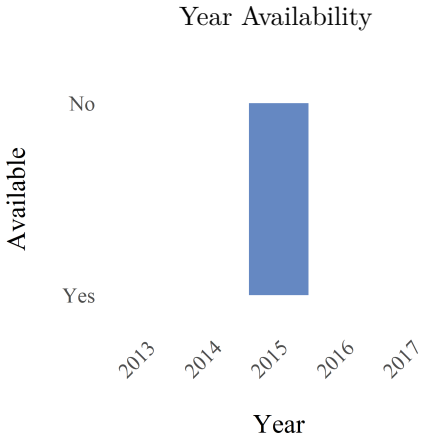


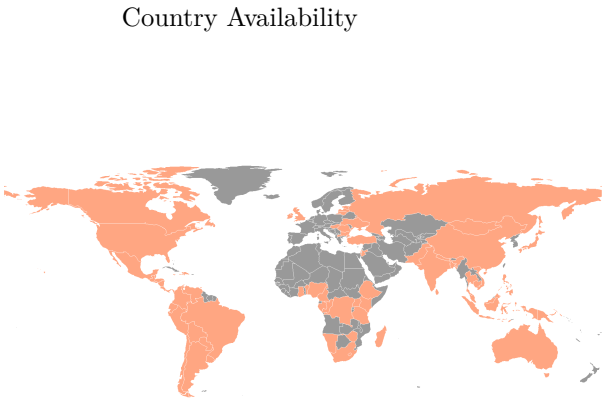


3.30.10 Early public participation (Guideline 8) (edi_gepp)

The indicator measures to which extent the states states ensure opportunities for early and effective public participation in decision-making related to the environment.

This indicator is an arithmetic average of expert answers to questions on a scale from 0 (worst) to 3 (best): (8.1) To what extent does the law require the public concerned to have opportunities to participate in decision making related to the environment?; (8.2) To what extent does the law require public participation opportunities to be provided early in the decision-making process?; (8.3) To what extent does the law require that the public concerned be provided with information about its opportunities to participate early in the decision-making process?; (P8.1) Choose three recent controversial development projects (in terms of press coverage and potential cost and/or revenue of project) that were approved through an Environmental Impact Assessment (EIA) process under national law. Were public notices given seeking comments on the EIA or its terms of reference?

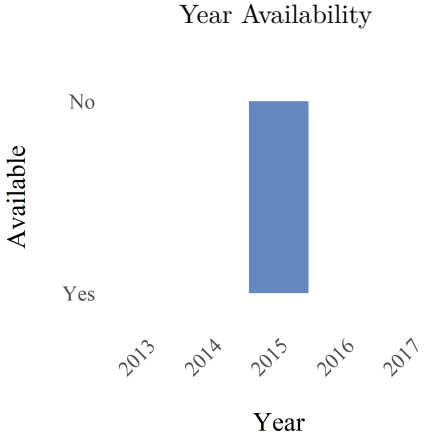


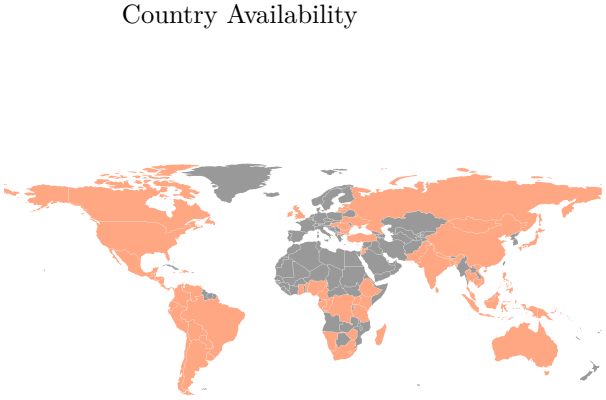


3.30.11 Early warning information (Guideline 6) (edi_gewi)

The indicator measures to which extent the states ensure that all information that would enable the public to take measures to prevent imminent threat of harm to human health or the environment is disseminated immediately.

This indicator is an arithmetic average of expert answers to question on a scale from 0 (worst) to 3 (best): (6.1) When there is an imminent threat of harm to human health or the environment, to what extent does the law obligate or mandate the government agencies to immediately disseminate information to the public that enables it to take preventive action?

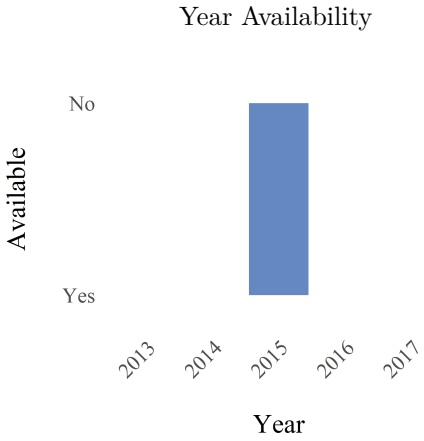


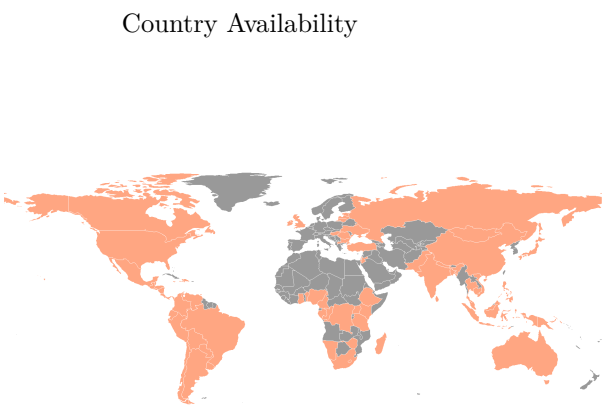


3.30.12 Fair, timely, and independent review (Guideline 19) (edi_gftir)

The indicator measures to which extent the states provide effective procedures for timely review by courts of law or other independent and impartial bodies, or administrative procedures, of issues relating to the implementation and enforcement of laws and decisions pertaining to the environment.

This indicator is an arithmetic average of expert answers to questions on a scale from 0 (worst) to 3 (best): (19.1) To what extent does the law provide procedures for the review of issues relating to the implementation and enforcement of laws and decisions pertaining to the environment by courts or other bodies, or administrative procedures?; (19.2) To what extent does the law require review procedures regarding the implementation and enforcement of laws and decisions pertaining to the environment to be decided by impartial and independent courts or bodies?; (19.3) To what extent does the law require review procedures regarding the implementation and enforcement of laws and decisions pertaining to the environment to be timely?; (19.4) To what extent does the law require review procedures regarding the implementation and enforcement of laws and decisions pertaining to the environment to be fair and equitable?; (19.5) To what extent does the law require review procedures regarding the implementation and enforcement of laws and decisions pertaining to the environment to be open and transparent? (P19.1) In the last 5 years have there been sanctions or corrective actions imposed by a national court of law or other independent and impartial body, for violation of laws and decisions pertaining to the environment?



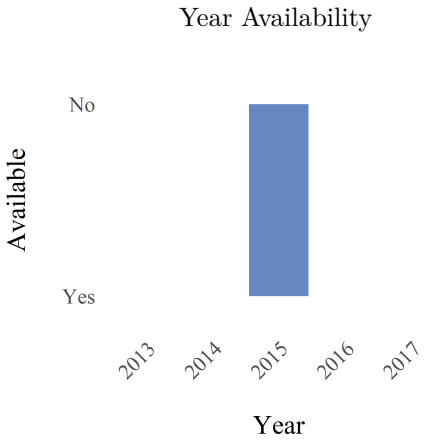


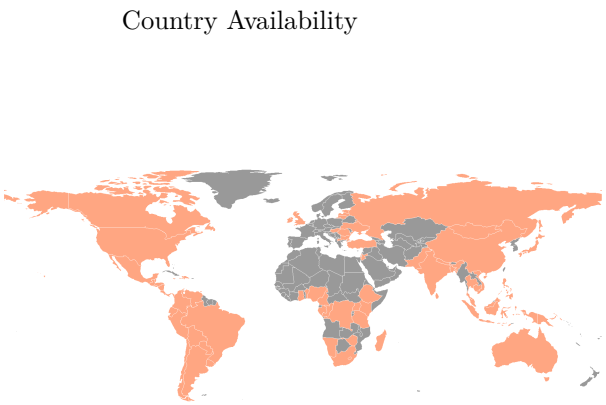
3.30.13 Grounds for refusal (Guideline 3) (edi_ggr)

The indicator measures to which extent the states clearly define in their law the specific grounds on which a request for environmental information can be refused. The grounds for refusal are to be interpreted narrowly, taking into account the public interest served by disclosure.

This indicator is an arithmetic average of expert answers to questions on a scale from 0 (worst) to 3 (best): (3.1) To what extent does the law clearly define specific grounds on which a request for environmental information can be refused?; (3.2) To what extent does the law require environmental

information that is covered by a ground for refusal to be severed (separated) from the rest of the information before being released to the requester?; (3.3) To what extent does the law require the decision-maker to take into account the public interest served by disclosure when considering exemptions (grounds for refusal)?

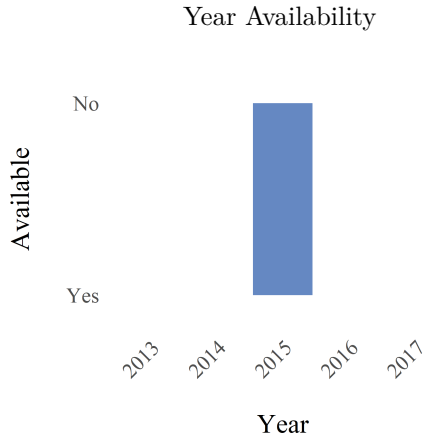


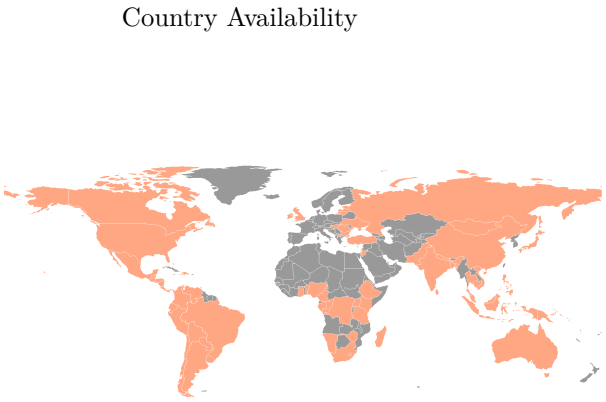


3.30.14 Information collection and management (Guideline 4) (edi_gicm)

The indicator measures to which extent the states ensure that their competent public authorities regularly collect and update relevant environmental information, including information on environmental performance and compliance by operators of activities potentially affecting the environment.

This indicator is an arithmetic average of expert answers to questions on a scale from 0 (worst) to 3 (best): (4.1) To what extent are competent public authorities mandated by law to regularly collect and update relevant environmental information?; (4.2) To what extent does the law mandate the public authorities to comprehensively monitor the environmental performance and compliance by operators of activities potentially affecting the environment, and to collect and update such information?; (4.3) To what extent is there a system established by the law ensuring adequate public information about proposed and existing activities that may significantly affect the environment?; (P4.1) Does a national agency in your country ensure that daily air emission and waste water discharges by large-scale industries at a facility level are proactively made publicly available either online, through a public register or at a library; if so, is that information comparable to a national standard?

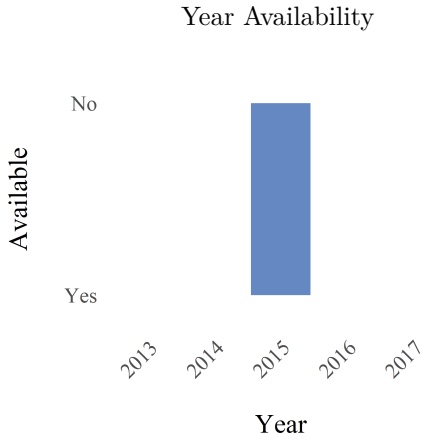


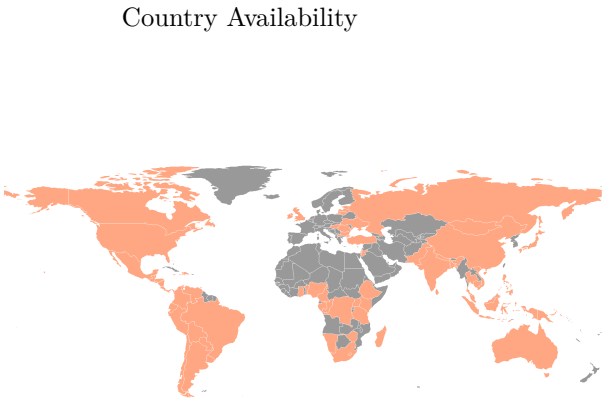


3.30.15 Informed participation (Guideline 10) (edi_gip)

The indicator measures to which extent the states ensure that all information relevant for decision-making related to the environment is made available, in an objective, understandable, timely, and effective manner, to the members of the public concerned.

This indicator is an arithmetic average of expert answers to questions on a scale from 0 (worst) to 3 (best): (10.1) To what extent do the laws concerning: environmental impact assessments, pollution control permits, forest concessions, extractive industries, protected areas and terrestrial biodiversity, and environmental policy-making require all information relevant to decision-making processes relating to the environment to be made available to the public concerned, without the public having to make an official information request?; (10.2) To what extent do the laws concerning environmental impact assessments, pollution control permits, forest concessions, extractive industries, protected areas and terrestrial biodiversity, and environmental policy-making require that proactively released information relevant to decision-making be understandable to the public concerned?; (10.3) To what extent do the laws concerning environmental impact assessments, pollution control permits, forest concessions, extractive industries, biodiversity and terrestrial protected areas, and environmental policy-making require the information relevant to decision-making to be provided in a timely fashion to the public concerned?; (P10.1) Are the Environmental Impact Assessments for development projects accessible to the public online or at a national government agency?; (P10.2) Is information on wastewater discharge and air emission permit violations available to the public online or at a government agency?; (P10.3) Are extractive industry licenses/permits available to the public online or at a government agency?; (P10.4) During the past three years, in the process of granting forest use contracts, has the relevant agency made publicly available information related to such contracts?; (P10.5) Are the forest use contracts, once finalized, made available to the public online or at a government agency?

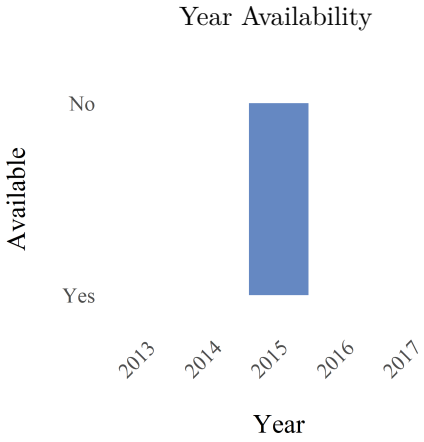


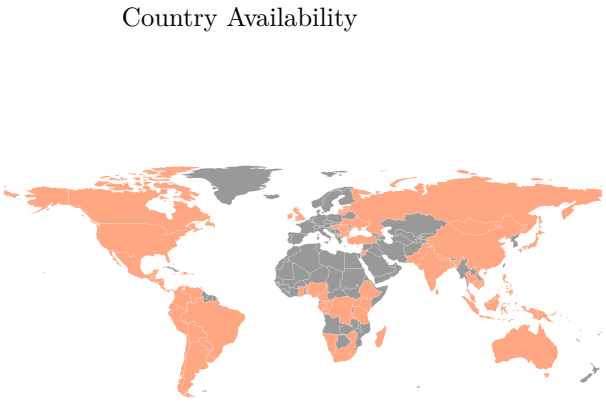


3.30.16 Integrating public input for rule-making (Guideline 13) (edi_gipirm)

The indicator measures to which extent the states consider appropriate ways of ensuring, at an appropriate stage, public input into the preparation of legally binding rules that might have a significant effect on the environment and into the preparation of policies, plans and programmes relating to the environment.

This indicator is an arithmetic average of expert answers to questions on a scale from 0 (worst) to 3 (best): (13.1) To what extent does the law require opportunities for public input at an appropriate stage during preparation of legally binding rules (rule-making or preparation of subsidiary legislation, regulations, etc.) that might have a significant effect on the environment?; (13.2) To what extent do the laws concerning environmental impact assessments, pollution control standards and permits, forest concessions, extractive industries, protected areas and terrestrial biodiversity, and environmental policy-making require the State or state agencies to provide opportunities for public input at an appropriate stage of the preparation of policies?; (13.3) To what extent do the laws concerning environmental impact assessments, pollution control standards and permits, forest concessions, extractive industries, protected areas and terrestrial biodiversity, and environmental policy-making require there to be opportunities for public input at an appropriate stage of the preparation of plans relating to the environment?; (13.4) To what extent does the law require there to be opportunities for public input at an appropriate stage of the preparation of programs relating to the environment?

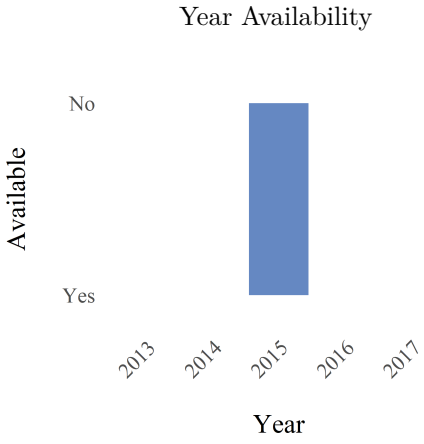


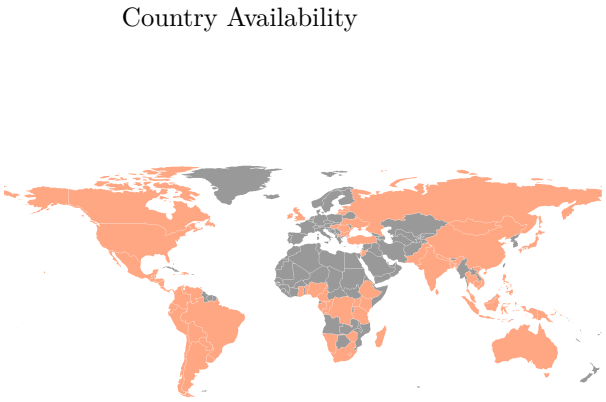


3.30.17 Information request appeals (Guideline 15) (edi_gira)

The indicator measures to which extent the states ensure that any natural or legal person who considers that his or her request for environmental information has been unreasonably refused, in part or in full, inadequately answered or ignored, or in any other way not handled in accordance with applicable law, has access to a review procedure before a court of law or other independent and impartial body to challenge such a decision, act or omission by the public authority in question.

This indicator is an arithmetic average of expert answers to questions on a scale from 0 (worst) to 3 (best): (15.1) To what extent do the laws concerning environmental impact assessments, pollution control standards and permits, forest concessions, extractive industries, protected areas and terrestrial biodiversity, and environmental policy-making provide for access to a review procedure in cases where environmental information request have been denied?; (15.2) To what extent does the law make the review available to all natural or legal persons?; (15.3) To what extent does the law provide access to a review procedure before a court of law or other independent and impartial body in cases when an environmental information request has been denied?; (P15.1) Is there a court, tribunal or other independent or impartial body at the national level with a physical office to receive and process public complaints about the refusal of environmental information?

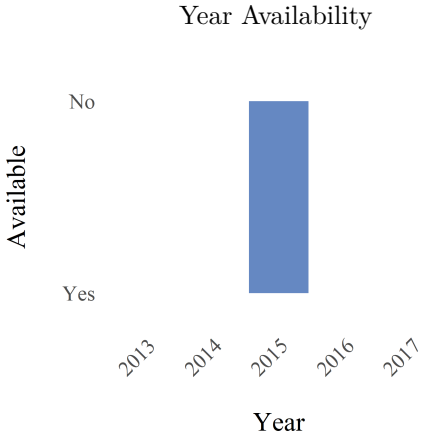


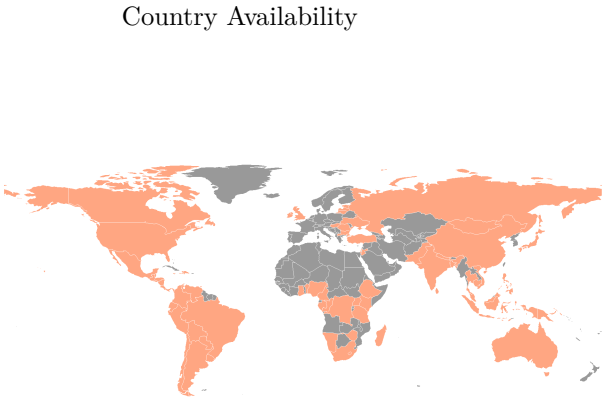


3.30.18 Public access to judicial and administrative decisions (Guideline 24) (edi_-gpajad)

The indicator measures to which extent the states ensure that decisions relating to the environment taken by a court of law, other independent and impartial or administrative body, are publicly available, as appropriate and in accordance with national law.

This indicator is an arithmetic average of expert answers to questions on a scale from 0 (worst) to 3 (best): (24.1) To what extent does the law require judicial decisions relating to the environment to be made publicly available?; (24.2) To what extent does the law require decisions relating to the environment taken by administrative bodies to be made publicly available?; (24.3) To what extent does the law require decisions relating to the environment taken by other independent and impartial bodies to be made publicly available?; (P24.1) Are the decisions of the last three environmental or natural resource cases decided by a national court, tribunal or other judicial body available to the public online or at the office of that court, tribunal or body?

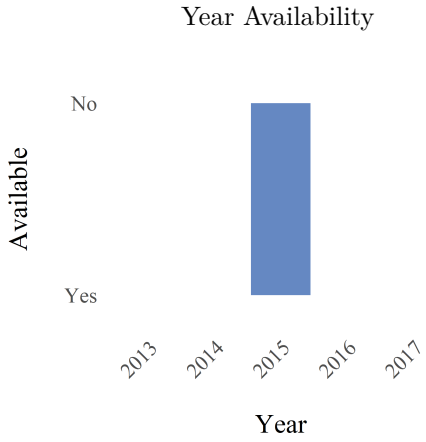


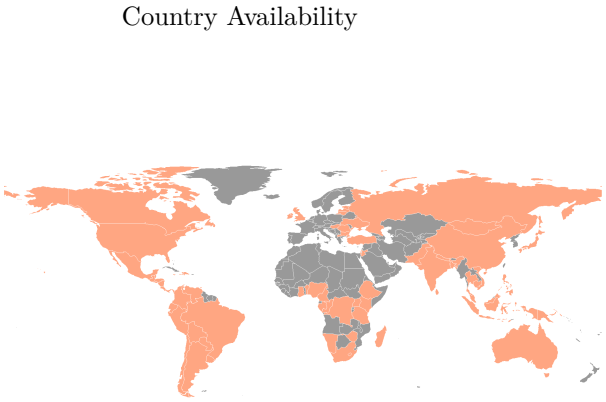


3.30.19 Prompt, effective remedies (Guideline 21) (edi_gper)

The indicator measures to which extent the states provide a framework for prompt, adequate and effective remedies in cases relating to the environment, such as interim and final injunctive relief.

This indicator is an arithmetic average of expert answers to questions on a scale from 0 (worst) to 3 (best): (21.1) To what extent does the law require adequate and effective remedies in cases relating to the environment?; (21.2) To what extent does the law require remedies in cases relating to the environment to be provided promptly?; (21.3) To what extent is interim and/or final injunctive relief available under the law?; (21.4) To what extent is compensation available as a remedy under the law?; (21.5) To what extent is restitution available as a remedy under the law?; (21.6) To what extent is restoration of the environment available as a remedy under the law?; (P21.1) In the last 5 years, have there been injunctions/stay orders/interdicts issued by a court, tribunal or other judicial body in environmental or natural resource cases?



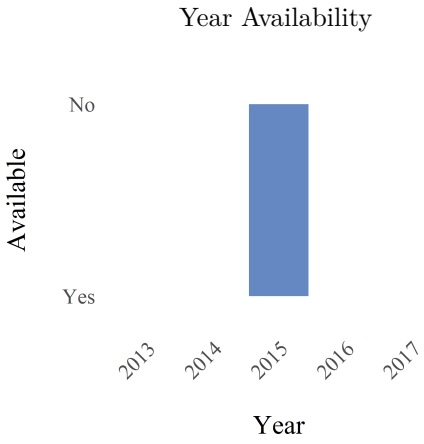


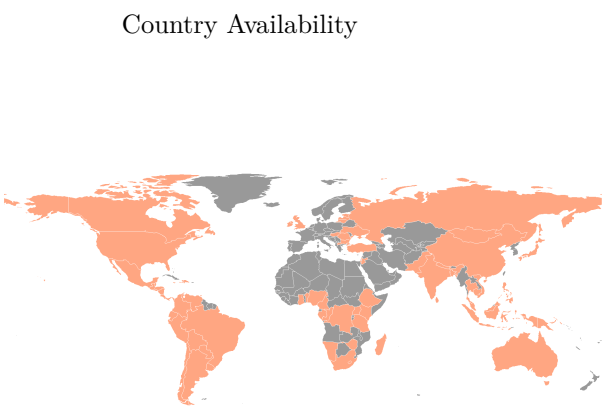
3.30.20 Public participation appeals (Guideline 16) (edi_gppa)

The indicator measures to which extent the states ensure that the members of the public concerned have access to a court of law or other independent and impartial body to challenge the substantive and procedural legality of any decision, act or omission relating to public participation in decision-making in environmental matters.

This indicator is an arithmetic average of expert answers to questions on a scale from 0 (worst) to 3 (best): (16.1) To what extent does the law entitle members of the public concerned to challenge the substantive legality of any decision, act or omission relating to decision-making in environmental matters which is subject to public participation?; (16.2) To what extent does the law entitle members of the public concerned to challenge the procedural legality of any decision, act or omission relating to decision-making in environmental matters subject to public participation?; (16.3) To what extent does the law require that a court of law or other independent and impartial body hear challenges to substantive and/or procedural legality?; (P16.1) In the last 5 years, have public

interest environmental or natural resource cases been filed before a court, tribunal or other body? If court records are not public information, check media reports.

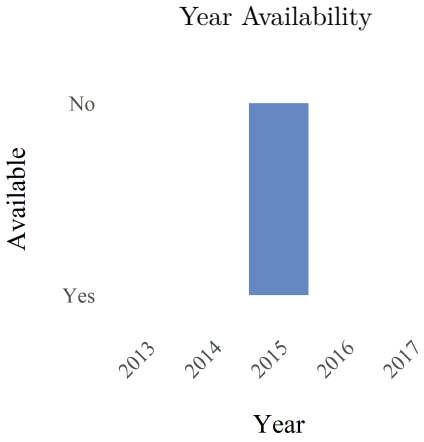


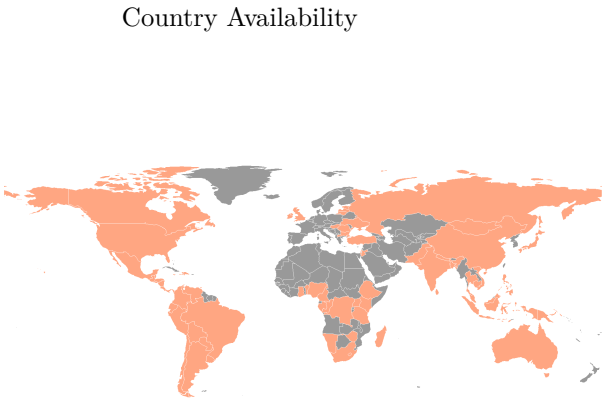


3.30.21 Proactive public consultation (Guideline 9) (edi_gppc)

The indicator measures to which extent the states make efforts to seek proactively public participation in a transparent and consultative manner, including efforts to ensure that members of the public concerned are given an adequate opportunity to express their views.

This indicator is an arithmetic average of expert answers to questions on a scale from 0 (worst) to 3 (best): (9.1) To what extent do the laws concerning environmental impact assessments, pollution control permits, forest concessions, extractive industries, biodiversity and terrestrial protected areas, and environmental policy-making obligate the State or state agencies at the national level to proactively seek public participation?; (9.2) To what extent do the laws concerning: environmental impact assessments, pollution control permits, forest concessions, extractive industries, biodiversity and terrestrial protected areas, and environmental policy-making obligate the State or State agencies at the national level to give members of the public concerned an adequate opportunity to express their views?

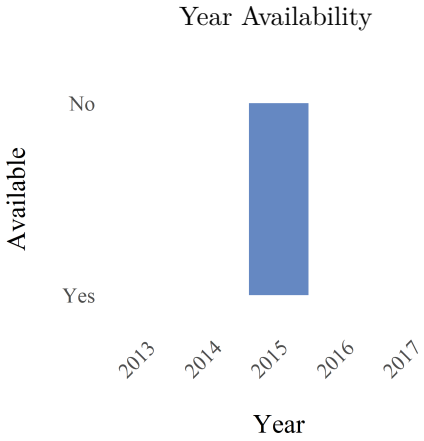


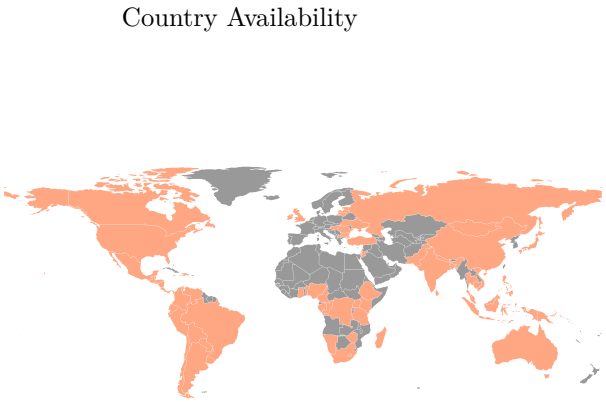


3.30.22 Public participation review (Guideline 12) (edi_gppr)

The indicator measures to which extent the states ensure that when a review process is carried out where previously unconsidered environmentally significant issues or circumstances have arisen, the public should be able to participate in any such review process to the extent that circumstances permit.

This indicator is an arithmetic average of expert answers to question on a scale from 0 (worst) to 3 (best): (12.1) To what extent do the laws concerning: environmental impact assessments, pollution control standards and permits, forest concessions, extractive industries, biodiversity and terrestrial protected areas, and environmental policy-making require the State or state agencies to provide for a public review process for decisions relating to the environment if previously unconsidered environmental impacts become apparent?

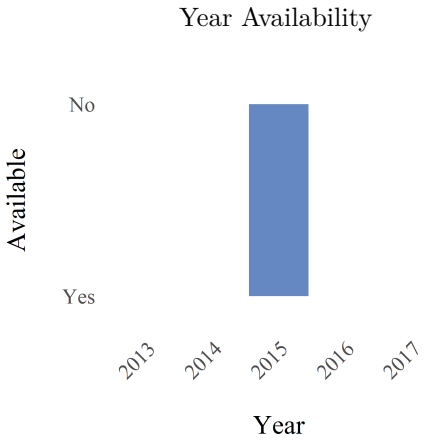


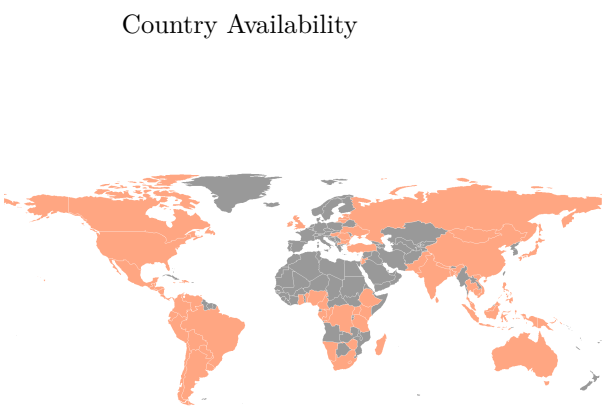


3.30.23 Right of public to challenge state or private actors (Guideline 17) (edi_grpcspa)

The indicator measures to which extent the states ensure that the members of the public concerned have access to a court of law or other independent and impartial body or administrative procedures to challenge any decision, act or omission by public authorities or private actors that affects the environment or allegedly violates the substantive or procedural legal norms of the State related to the environment.

This indicator is an arithmetic average of expert answers to questions on a scale from 0 (worst) to 3 (best): (17.1) To what extent does the law give rights to the public concerned to challenge any decision, act or omission by public authorities that allegedly violates the procedural legal norms of the state relating to the environment?; (17.2) To what extent does the law give rights to the public concerned to challenge any decision, act or omission by private actors that allegedly violates the substantive legal norms of the state relating to the environment?; (17.3) To what extent does the law give rights to the public concerned to challenge any decision, act or omission by private actors that allegedly violates the procedural legal norms of the State relating to the environment?; (17.4) To what extent does the law require the challenges referred to in indicators 1-3 to be heard by an independent and impartial body?; (P17.1) Have there been cases in the last 5 years when civil society filed a lawsuit against a polluter in a national court?; (P17.2) Have there been cases in the last 5 years when civil society filed a lawsuit in a national court challenging a government decision, policy, or rule affecting the environment?



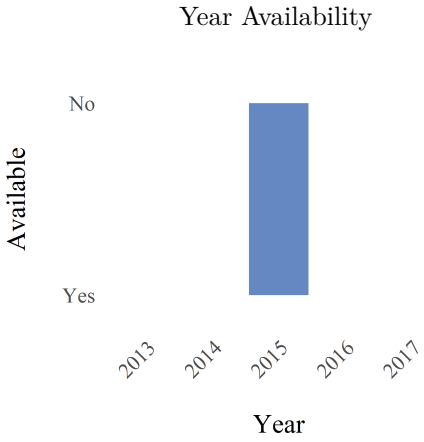


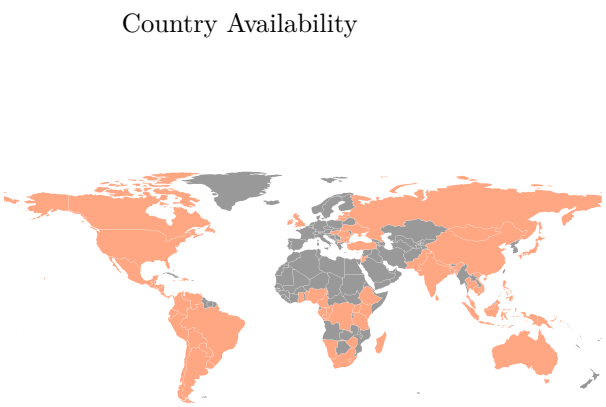
3.30.24 State of the environment report (Guideline 5) (edi_gser)

The indicator measures to which extent the states periodically prepare and disseminate at reasonable intervals up-to-date information on the state of the environment, including information on its quality and on pressures on the environment.

This indicator is an arithmetic average of expert answers to questions on a scale from 0 (worst) to 3

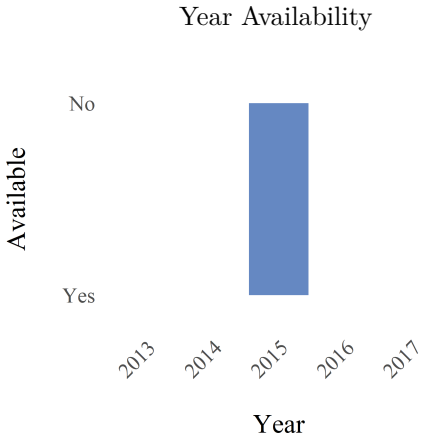
(best): (5.1) To what extent does the law mandate the government to publish reports on the state of the environment (i.e. a State of the Environment report)?; (5.2) To what extent does the law require the publication of a State of the Environment report to be periodic at reasonable intervals?; (5.3) Does the law require the report to be comprehensive in the information that it provides?; (5.4) To what extent does the law require the report to contain up-to date information?; (P5.1) In the last 10 years has a national government agency regularly published State of the Environment Reports? (Regular is at fixed intervals of five years or less)

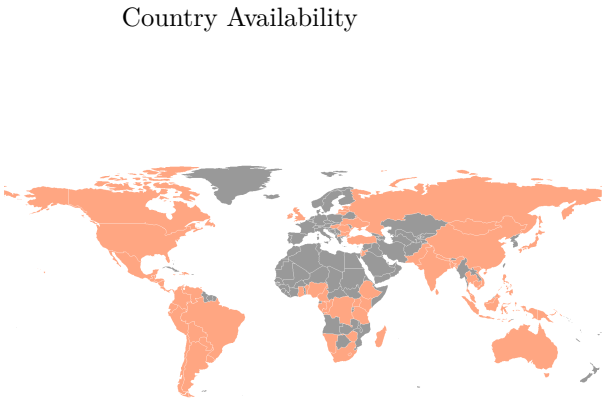




3.30.25 Justice Pillar Score (edi_jp)

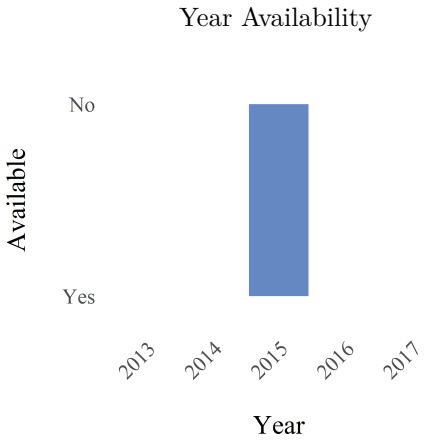
The Justice Pillar Score combines guidelines "Information request appeals", "Public participation appeals", "Right of public to challenge state or private actors", "Broad standing", "Fair, timely, and independent review", "Affordable access to relief and remedy", "Prompt, effective remedies", "Effective enforcement", "Awareness and education about remedies and relief", "Public access to judicial and administrative decisions", and "Alternative dispute resolution for environmental issues", using an arithmetic average on a scale from 0 (worst) to 3 (best).

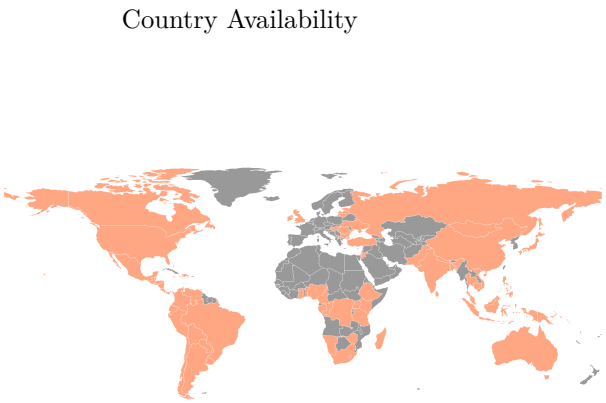




3.30.26 Access to Information Pillar Score (edi_pati)

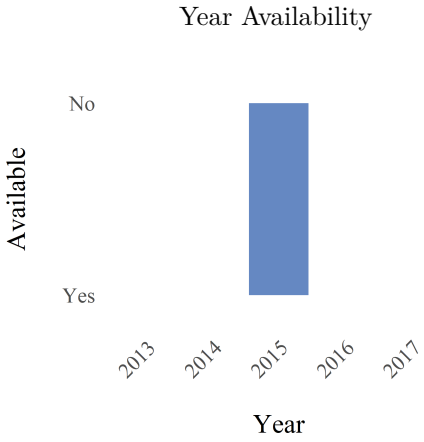
The Access to Information Pillar Score combines guidelines "Accessibility of information requests", "Environmental information in the public domain", "Ground for refusal", "Information collection and management", "State of the environment report", and "Early warning information", using an arithmetic average on a scale from 0 (worst) to 3 (best).

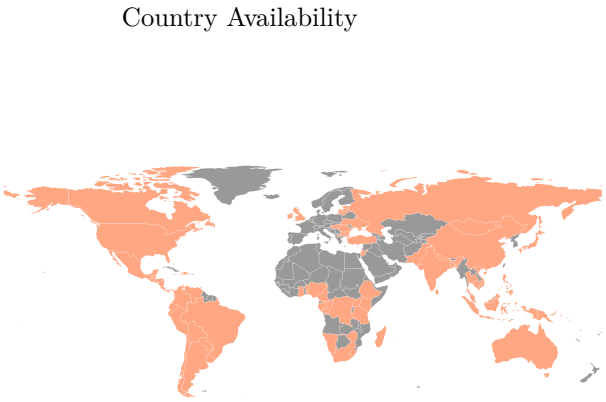




3.30.27 Participation Pillar Score (edi_pp)

The Participation Pillar Score combines guidelines "Early public participation", "Proactive public consultation", "Informed participation", "Due account of public comments", "Public participation review", and "Integrating public input for rule-making", using an arithmetic average on a scale from 0 (worst) to 3 (best).


Year Availability
No
Yes
Available
2013
2014
2015
2016
2017
Year


Country Availability

3.31 The International Social Survey Programme. Environment Module

Dataset by: International Social Survey Programme

If you use any of these variables, make sure to cite the original source and QoG Data. Our suggested citation for this dataset is:

ISSP Research Group (1995). International Social Survey Programme: Environment I - ISSP 1993. GESIS Data Archive, Cologne. ZA2450 Data file Version 1.0.0, https://doi.org/10.4232/1.2450.

ISSP Research Group (2003). International Social Survey Programme: Environment II - ISSP 2000. GESIS Data Archive, Cologne. ZA3440 Data file Version 1.0.0, https://doi.org/10.4232/1.3440.

ISSP Research Group (2019). International Social Survey Programme: Environment III - ISSP 2010. GESIS Data Archive, Cologne. ZA5500 Data file Version 3.0.0, https://doi.org/10.4232/1.13271.

Link to the original source: `https://www.gesis.org/en/issp/modules`

The International Social Survey Programme (ISSP) is an annual program of cross-national survey collaboration, covering a wide range of topics important for social science research. Since 1985 the ISSP provides international data sets, enabling cross-cultural and cross-temporal research. "Environment" is one of the eleven ISSP topic modules. Central themes are attitudes towards environment-related issues, such as environmental protection, respondents' behavior, and respondents' preferences regarding governmental measures on environmental protection.

This dataset includes two types of variables: 1) percentage of respondents choosing a particular response option, and 2) average response per country, unweighted, primarily because weights are unavailable for some countries. Correlation between weighted and unweighted means for countries that do provide weights is above .95 for most of the included variables and does not go below .89.

3.31.1 Worry about environment vs jobs (mean) (issp_10am)

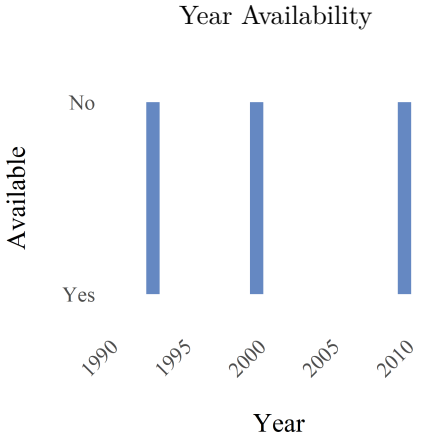
Average reply to the question: "How much do you agree or disagree with this statement? We worry too much about the future of the environment and not enough about prices and jobs today". (1) Agree strongly, (2) Agree, (3) Neither agree nor disagree, (4) Disagree, (5) Disagree strongly. Replies (8) Can't choose are deleted.

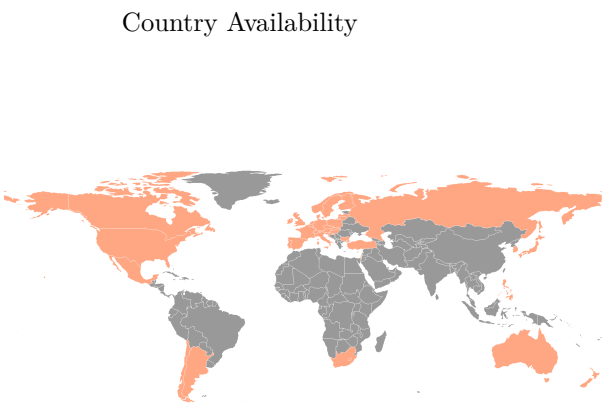
In Environment III (2010) - question 10a.

In Environment II (2000) - question 4a.

In Environment I (1993) - question 5a.

A higher score means that smaller parts of the population think that there is too much worry about the environment. A lower score means that larger parts of the population think that there is too much worry about the environment and too little worry about prices and jobs.





3.31.2 Unwillingness to pay higher prices (%) (issp_12ap)

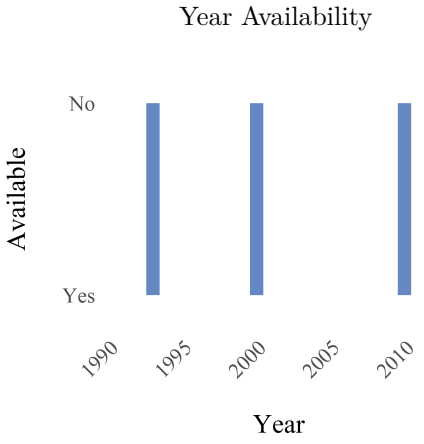
Percent of replies "fairly unwilling" and "very unwilling" to 12a: "How willing would you be to pay much higher prices in order to protect the environment?". Original replies include: (1) Very willing, (2) Fairly willing, (3) Neither willing nor unwilling, (4) Fairly unwilling, (5) Very unwilling, (8) Can't choose.

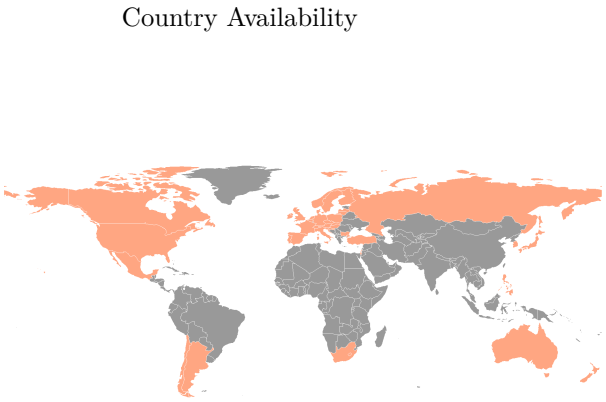
In Environment III (2010) - question 12a.

In Environment II (2000) - question 7a.

In Environment I (1993) - question 8a.

A higher score means that fewer people are willing to pay higher prices for environmental protection. A lower score means that more people are willing to pay higher prices for environmental protection.





3.31.3 Unwillingness to pay higher taxes (%) (issp_12bp)

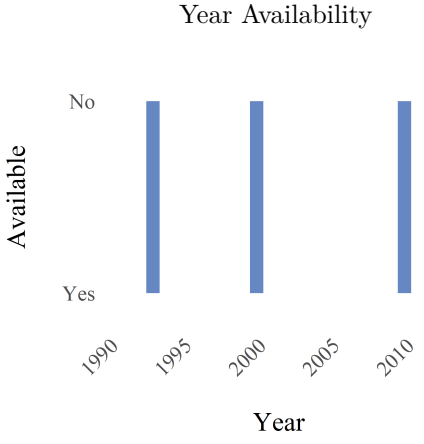
Percent of replies "fairly unwilling" and "very unwilling" to 12b: "And how willing would you be to pay much higher taxes in order to protect the environment?". Original replies include: (1) Very willing, (2) Fairly willing, (3) Neither willing nor unwilling, (4) Fairly unwilling, (5) Very unwilling, (8) Can't choose.

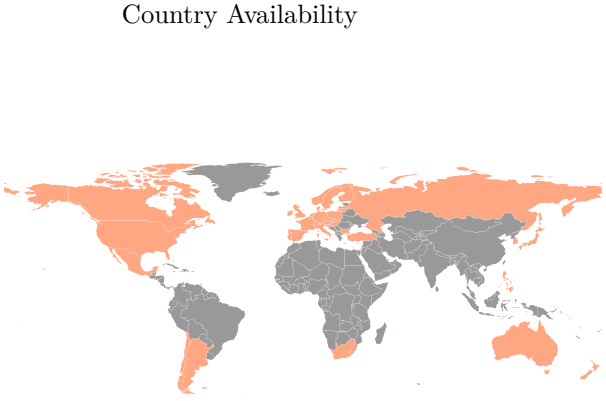
In Environment III (2010) - question 12b.

In Environment II (2000) - question 7b.

In Environment I (1993) - question 8b.

A higher score means that fewer people are willing to pay more taxes for environmental protection. A lower score means that more people are willing to pay higher taxes for environmental protection.





3.31.4 Unwillingness to cut in standard of living (%) (issp_12cp)

Percent of replies "fairly unwilling" and "very unwilling" to 12c: "And how willing would you be to accept cuts in your standard of living in order to protect the environment?". Original replies include: (1) Very willing, (2) Fairly willing, (3) Neither willing nor unwilling, (4) Fairly unwilling, (5) Very unwilling, (8) Can't choose.

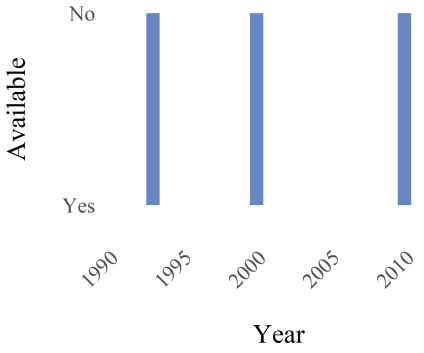
In Environment III (2010) - question 12c.

In Environment II (2000) - question 7c.

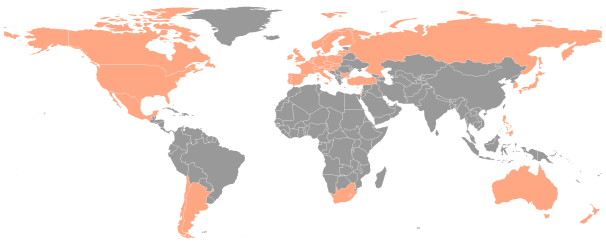
In Environment I (1993) - question 8c.

A higher score means that fewer people are willing to accept cuts in the standard of living for environmental protection. A lower score means that more people are willing to accept cuts in the standard of living for environmental protection.

Year Availability



Country Availability



3.31.5 Individual action is insufficient (mean) (issp_13am)

Average reply to 13a: "How much do you agree or disagree with this statement? It is just too difficult for someone like me to do much about the environment". (1) Agree strongly, (2) Agree, (3) Neither agree nor disagree, (4) Disagree, (5) Disagree strongly. Replies (8) Can't choose are deleted.

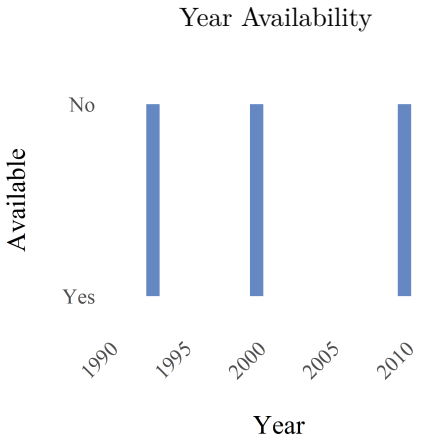
In Environment III (2010) - question 13a.

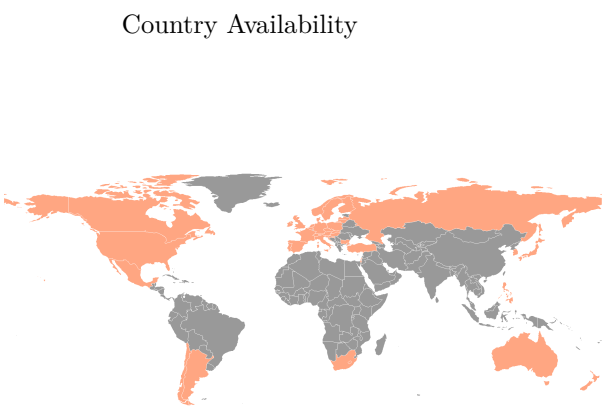
In Environment II (2000) - question 8a.

In Environment I (1993) - question 9a.

A higher score means that fewer people believe that it is too difficult to do something about the

environment as an individual. A lower score means that more people believe that it is too difficult to do something about the environment as an individual.





3.31.6 Environmental behavior (mean) (issp_13bm)

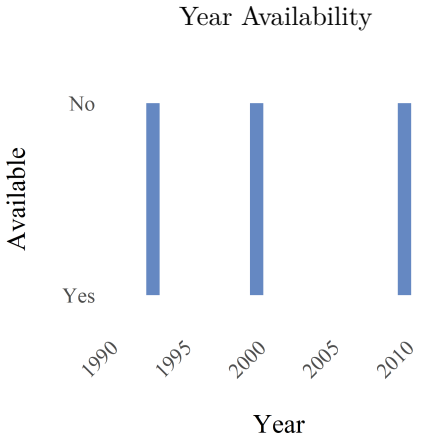
Average reply to 13b: "How much do you agree or disagree with this statement? I do what is right for the environment, even when it costs more money or takes more time". (1) Agree strongly, (2) Agree, (3) Neither agree nor disagree, (4) Disagree, (5) Disagree strongly. Replies (8) Can't choose are deleted.

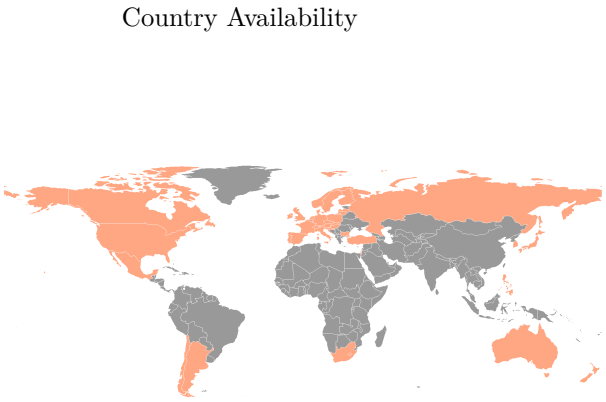
In Environment III (2010) - question 13b.

In Environment II (2000) - question 8b.

In Environment I (1993) - question 9b.

A higher score means that fewer people are willing to spend more money/time to do what is best for the environment. A lower score means that more people are willing to spend more money/time to do what is right for the environment.





3.31.7 Claims about environmental threats are exaggerated (mean) (issp_13em)

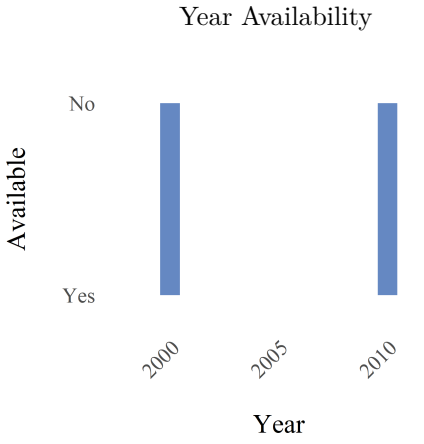
Average reply to 13e: "How much do you agree or disagree with this statement? Many of the claims about environmental threats are exaggerated". (1) Agree strongly, (2) Agree, (3) Neither agree nor disagree, (4) Disagree, (5) Disagree strongly. Answers (8) Can't choose are deleted.

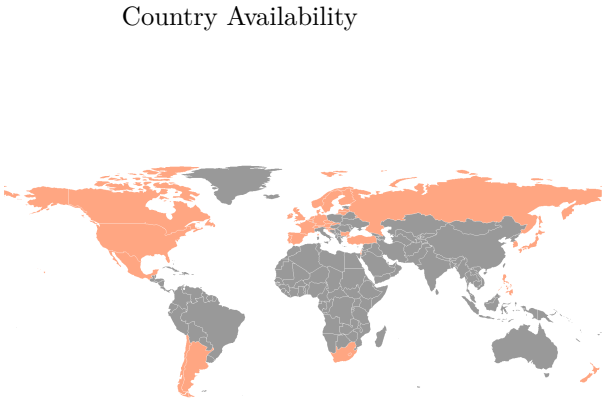
In Environment III (2010) - question 13e.

In Environment II (2000) - question 8e.

In Environment I (1993) - question not part of the survey.

A higher score means that fewer people think that environmental treats are exaggerated. A lower score means that more people think that environmental threats are exaggerated.





3.31.8 Perceived vulnerability to environmental problems (mean) (issp_13gm)

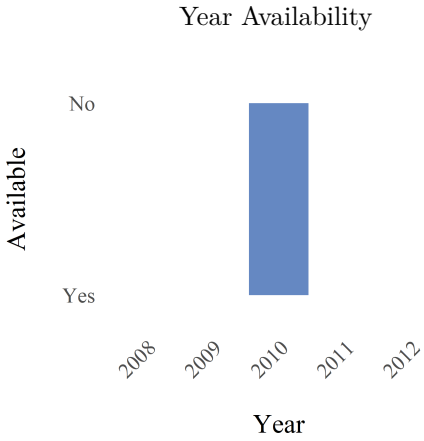
Average reply to 13g: "How much do you agree or disagree with this statement? Environmental problems have a direct effect on my everyday life". (1) Agree strongly, (2) Agree, (3) Neither agree nor disagree, (4) Disagree, (5) Disagree strongly. Replies (8) Can't choose are deleted.

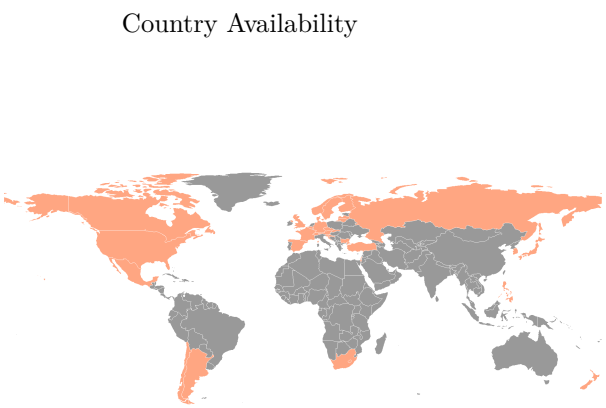
In Environment III (2010) - question 13g.

In Environment II (2000) - question not part of the survey.

In Environment I (1993) - question not part of the survey.

A higher score means that fewer people think that environmental problems affect everyday life. A lower score means that more people think that environmental problems affect everyday life.





3.31.9 Support for government action to make people comply (%) (issp_15ap)

Percent of replies for 15a: "If you had to choose, which one of the following would be closest to your views? (2) Government should pass laws to make ordinary people protect the environment, even if it interferes with peoples rights to make their own decisions". Other replies include (1) Government should let ordinary people decide for themselves how to protect the environment, even if it means they dont always do the right thing, and (8) Can't choose.

In Environment III (2010) - question 15a.

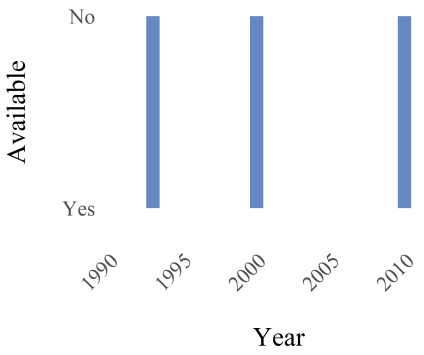
In Environment II (2000) - question 13a.

In Environment I (1993) - question 18a.

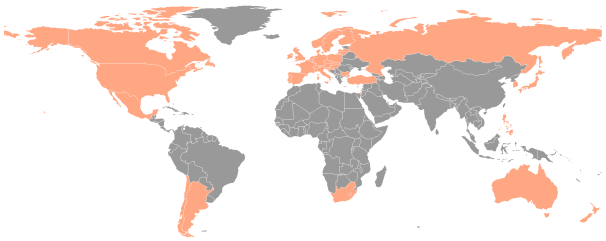
The higher the score the higher the belief that the government should pass laws to make people protect the environment. The lower the score the lower the belief that the government should pass

laws to make people protect the environment.

Year Availability



Country Availability



3.31.10 Priority of future energy sources - fossil fuels (%) (issp_18p)

Percent of replies (1) Coal, oil and natural gas to 18: "To which of the following should [COUNTRY] give priority in order to meet its future energy needs?". Other replies include: (2) Nuclear power, (3) Solar, wind or water power, (4) Fuels made from crop, (5) None of them.

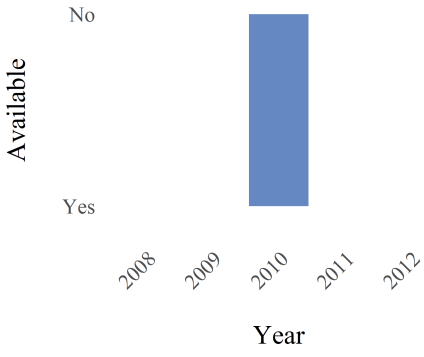
In Environment III (2010) - question 18.

In Environment II (2000) - question not part of the survey.

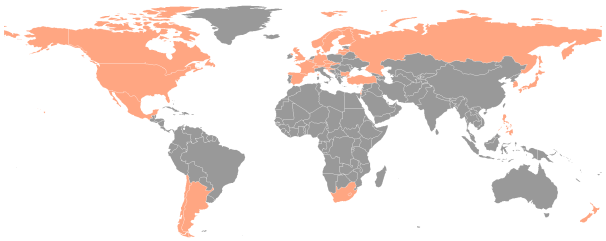
In Environment I (1993) - question not part of survey.

The higher the score the higher the percentage of people that prefers fossil fuels over other sources. The lower the score the lower the percentage of people that prefers fossil fuels over other sources.

Year Availability



Country Availability



3.31.11 Attitudes on international environmental agreements (mean) (issp_19am)

Average reply to 19a: "How much do you agree or disagree with each of these statements? For environmental problems, there should be international agreements that [COUNTRY] and other countries should be made to follow". (1) Agree strongly, (2) Agree, (3) Neither agree nor disagree, (4) Disagree, (5) Disagree strongly. Replies (8) Can't choose are deleted.

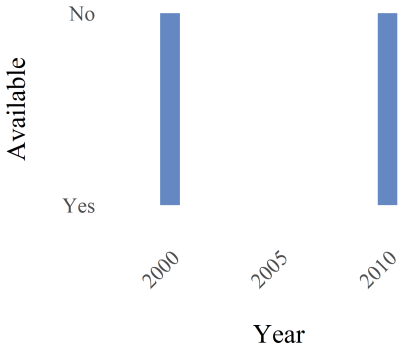
In Environment III (2010) - question 19a.

In Environment II (2000) - question 16a.

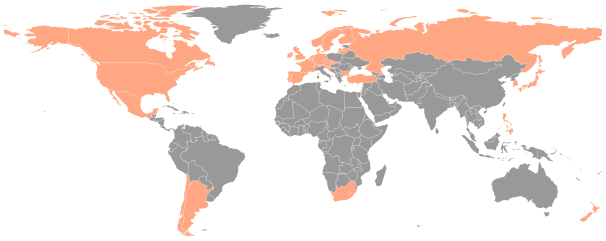
In Environment I (1993) - question not part of the survey.

A higher score means that there is less support in the population for international agreements. A lower score means that there is more support in the population towards international agreements.

Year Availability



Country Availability



3.31.12 Attitudes towards global environmental justice (mean) (issp_19bm)

Average reply to 19b: "How much do you agree or disagree with each of these statements? Poorer countries should be expected to make less effort than richer countries to protect the environment". (1) Agree strongly, (2) Agree, (3) Neither agree nor disagree, (4) Disagree, (5) Disagree strongly. Replies (8) Can't choose are deleted.

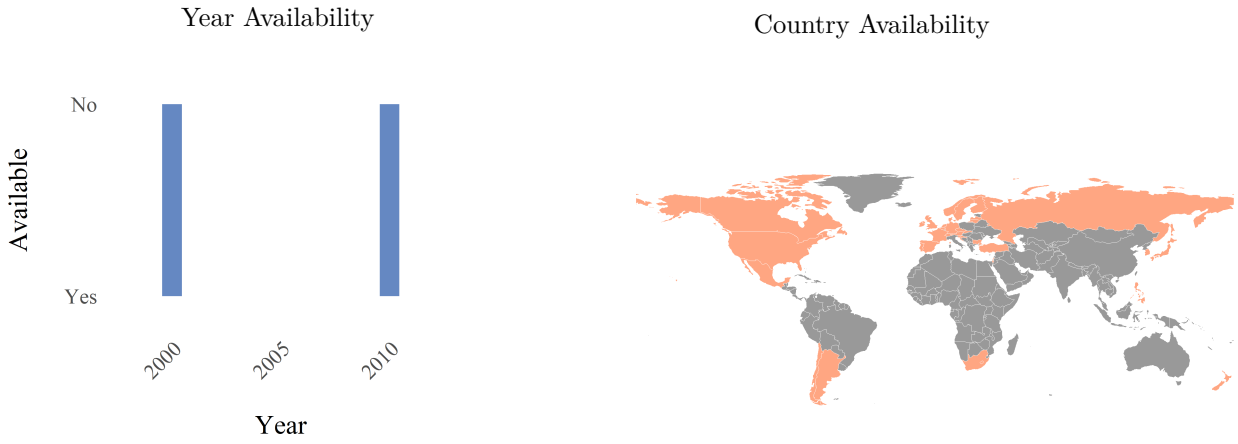
In Environment III (2010) - question 19b.

In Environment II (2000) - question 16b.

In Environment I (1993) - question not part of the survey.

A higher score means that fewer people think that poorer countries should do less than rich countries to protect the environment. A lower score means that more people think that poorer countries

should do less than rich countries to protect the environment.



3.31.13 Environment is most or next most important issue (%) (issp_1ap)

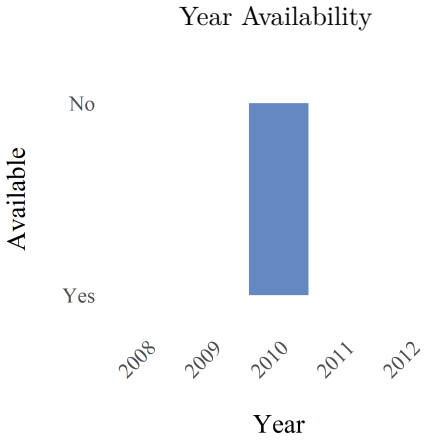
Percent replying "The environment" to 1a: "Which of these issues is the most important for [COUNTRY] today?" plus percent replying "The environment" to 1b: "Which of these issues is the next most important for [COUNTRY] today?". The issues in the list include: (1) Health care, (2) Education, (3) Crime, (4) The environment, (5) Immigration, (6) The economy, (7) Terrorism, (8) Poverty, (9) None of these, (98) Can't choose.

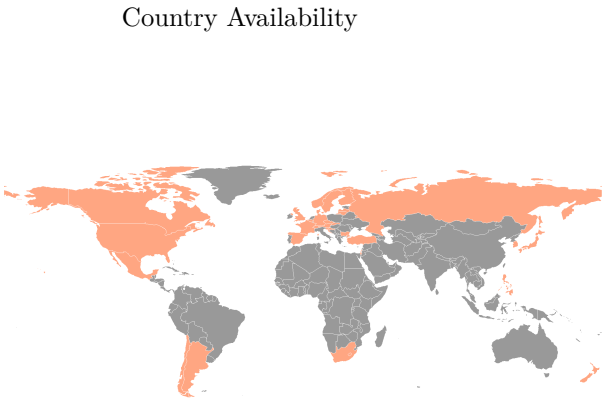
In Environment III (2010) - questions 1a and 1b.

In Environment II (2000) - question not part of the survey.

In Environment I (1993) - question not part of the survey.

The higher the score the higher the percentage of the population that prioritizes the environment as the most or second most important issue. The lower the score the smaller the percentage of the population that prioritizes the environment as the most or second most important issue.





3.31.14 Reported extent of recycling (mean) (issp_20am)

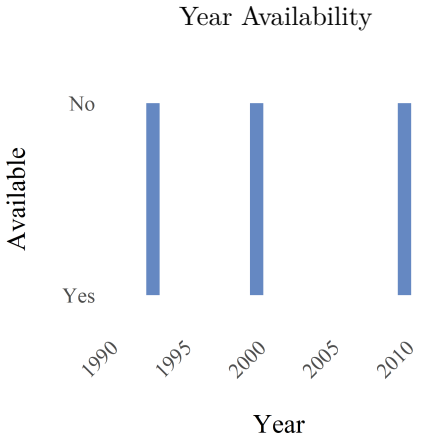
Average reply to 20a: "How often do you make a special effort to sort glass or tins or plastic or newspapers and so on for recycling?". (1) Always, (2) Often, (3) Sometimes, (4) Never. Responses (8) Recycling not available where I live are deleted.

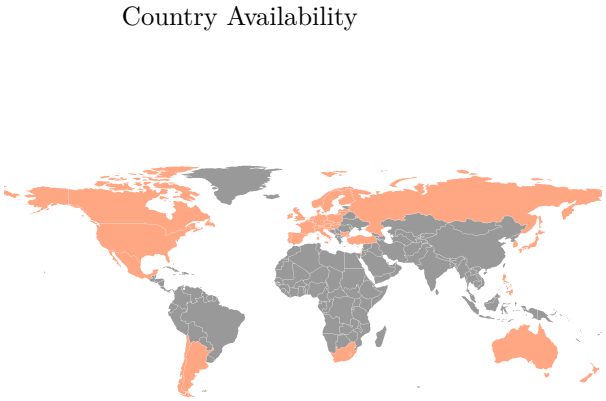
In Environment III (2010) - question 20a.

In Environment II (2000) - question 19a.

In Environment I (1993) - question 19a.

A higher score means that fewer people make an effort to recycle correctly. A lower score means that more people make an effort to recycle correctly.





3.31.15 Recycling not available (%) (issp_20ap)

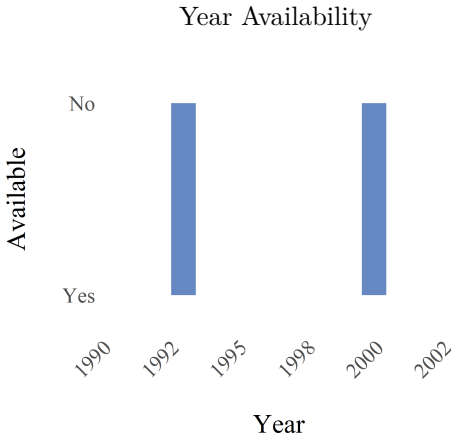
Percent of replies (8) Recycling not available where I live to 20a: "How often do you make a special effort to sort glass or tins or plastic or newspapers and so on for recycling?".

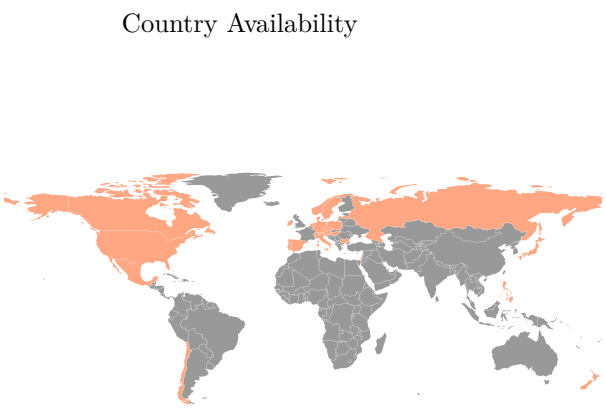
In Environment III (2010) - answer not included.

In Environment II (2000) - question 19a.

In Environment I (1993) - question 19a.

A higher score means that more people have access to recycling facilities. A lower score means that fewer people have access to recycling facilities.





3.31.16 Reducing energy use for the environment (mean) (issp_20dm)

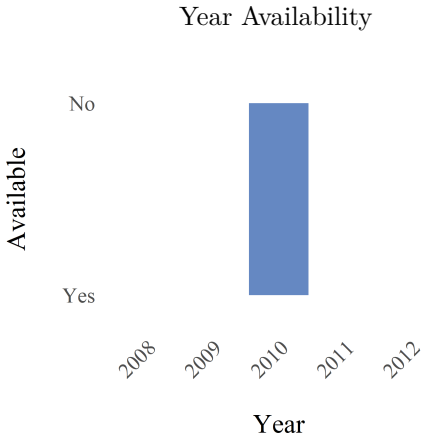
Average reply to 20d: "How often do you reduce the energy or fuel you use at home for environmental reasons?". (1) Always, (2) Often, (3) Sometimes, (4) Never.

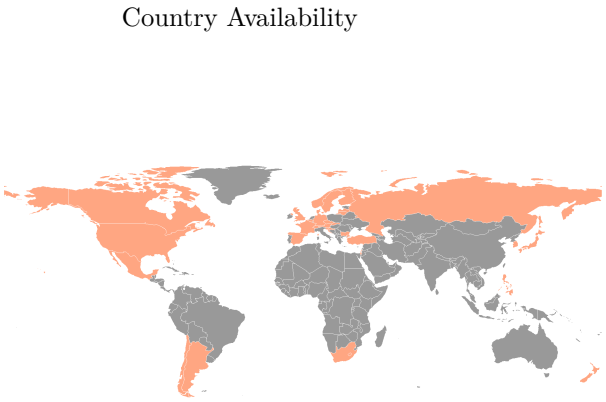
In Environment III (2010) - question 20d.

In Environment II (2000) - question not part of the survey.

In Environment I (1993) - question not part of the survey.

A higher score means that fewer people make a special effort to reduce energy consumption for environmental reasons. A lower score means that more people make a special effort to reduce energy consumption for environmental reasons.





3.31.17 Membership in environmental groups (%) (issp_21p)

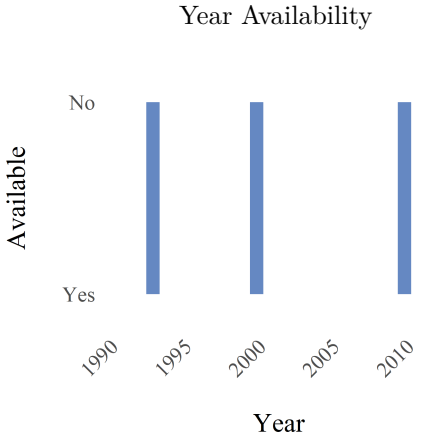
Percent of "yes"-replies to 21: "Are you a member of any group whose main aim is to preserve or protect the environment?".

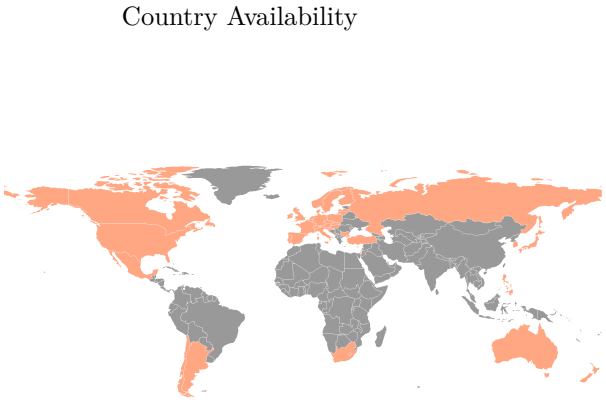
In Environment III (2010) - question 21.

In Environment II (2000) - question 20.

In Environment I (1993) - question 20.

A higher score means that more people are members of environmental groups. A lower score means that fewer people are members of environmental groups.





3.31.18 Signed petitions about environmental issues (%) (issp_22ap)

Percent of "yes"-replies to 22a: "In the last five years, have you signed a petition about an environmental issue?".

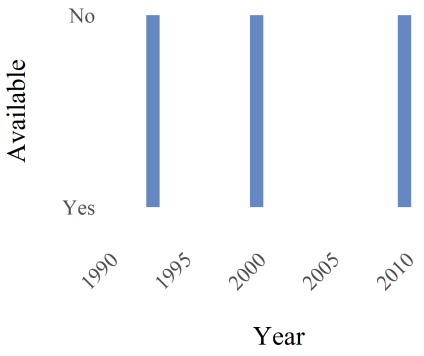
In Environment III (2010) - question 22a.

In Environment II (2000) - question 21a.

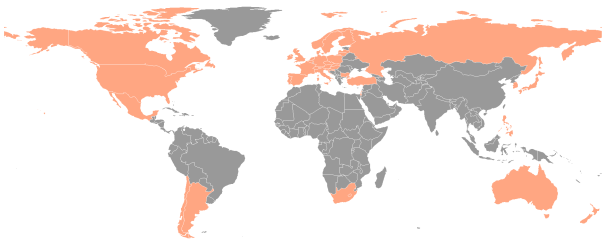
In Environment I (1993) - question 21a.

A higher score means that more people signed petitions for environmental issues in the 2 years prior to the survey. A lower score means that fewer people signed petitions for environmental issues in the 2 years prior to the survey.

Year Availability



Country Availability



3.31.19 Given money to an environmental group (%) (issp_22bp)

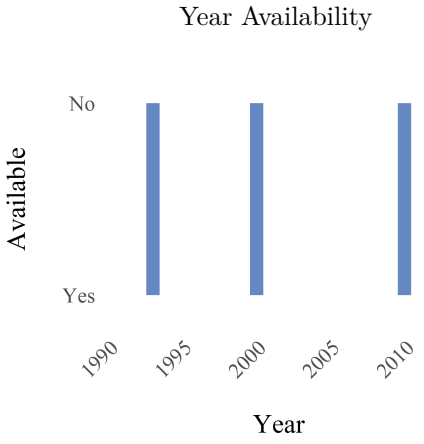
Percent of "yes"-replies to 22b: "In the last five years, have you given money to an environmental group (including NGOs and lobby groups)?".

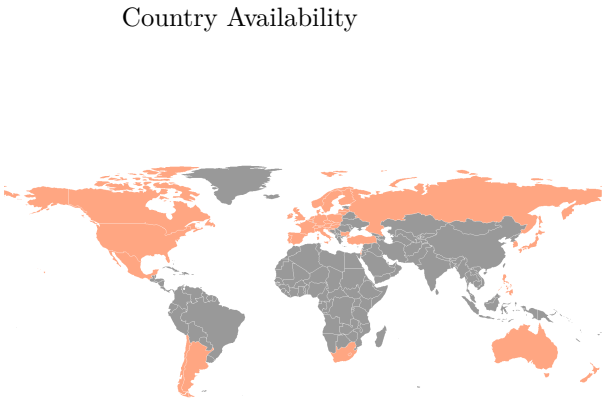
In Environment III (2010) - question 22b.

In Environment II (2000) - question 21b.

In Environment I (1993) - question 21b.

A higher score means that more people gave money to environmental groups in the 5 years prior to the survey. A lower score means that fewer people gave money to environmental groups in the 5 years prior to the survey.





3.31.20 Taken part in a protest/demonstration about environmental issues (%) (issp_22cp)

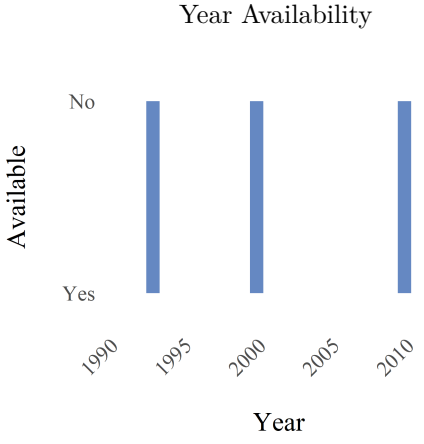
Percent of "yes"-replies to 22c: "In the last five years, have you taken part in a protest or demonstration about an environmental issue?".

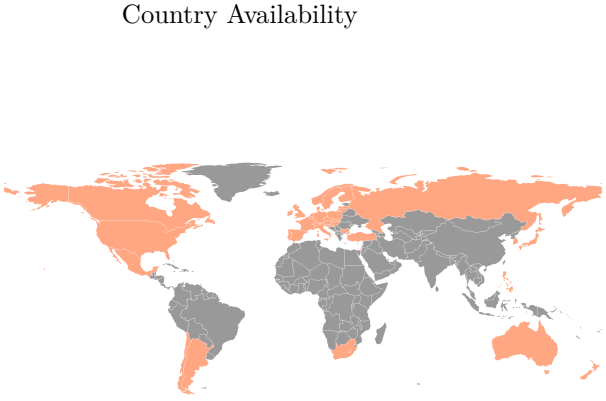
In Environment III (2010) - question 22c.

In Environment II (2000) - question 21c.

In Environment I (1993) - question 21c.

A higher score means that more people participated in environmental protests in the 5 years prior to the survey. A lower score means that fewer people participated in environmental protests in the 5 years prior to the survey.





3.31.21 Environmental concern (mean) (issp_6m)

Average reply to the question: "Generally speaking, how concerned are you about environmental issues?". (1) Not at all concerned - (5) Very concerned. Replies (8) Can't choose are deleted.

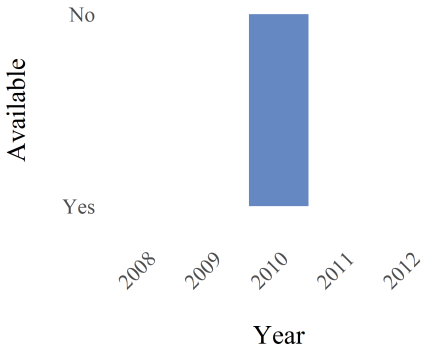
In Environment III (2010) - question 6.

In Environment II (2000) - question not part of the survey.

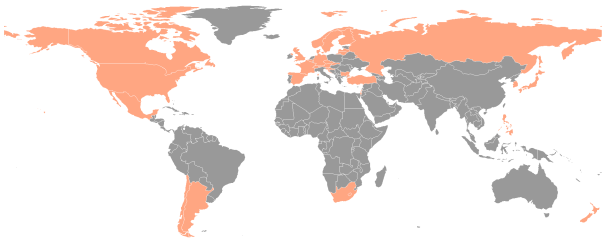
In Environment I (1993) - question not part of the survey.

A higher score means that more people are concerned about environmental issues. A lower score means that fewer people are concerned about environmental issues.

Year Availability



Country Availability



3.31.22 Knowledge about causes of environmental problems (mean) (issp_8am)

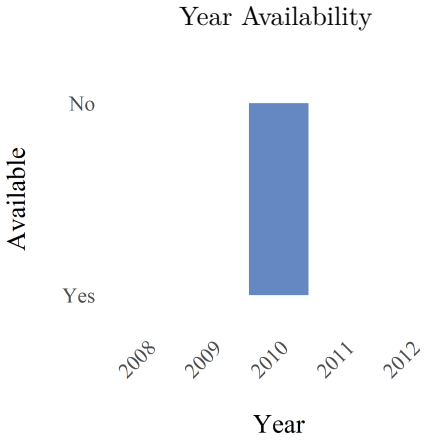
Average reply to 8a: "How much do you feel you know about the causes of these sorts of environmental problems?". (1) Know nothing at all - (5) Know a great deal. Replies (8) Can't choose are deleted. "These sorts of environmental problems" refer to (1) Air pollution, (2) Chemicals and pesticides, (3) Water shortage, (4) Water pollution, (5) Nuclear waste, (6) Domestic waste disposal, (7) Climate change, (8) Genetically modified foods, (9) Using up our natural resources.

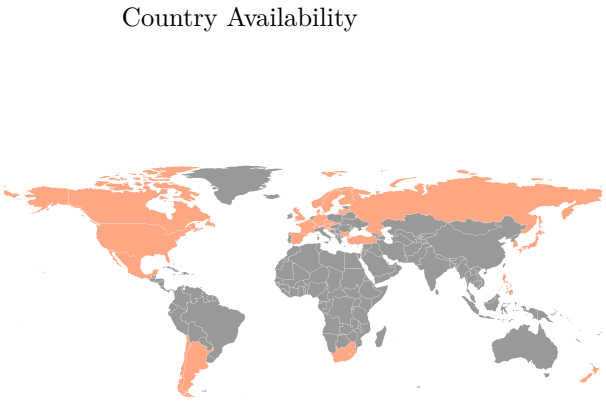
In Environment III (2010) - question 8a.

In Environment II (2000) - question not part of the survey.

In Environment I (1993) - question not part of the survey.

A higher score means that more people feel that they know about the causes of environmental problems. A lower score means that fewer people feel that they know about the causes of environmental problems.





3.31.23 Knowledge about solutions to environmental problems (mean) (issp_8bm)

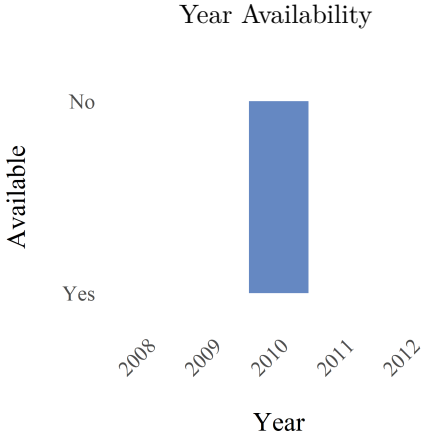
Average reply to 8b: "And how much do you feel you know about solutions to these sorts of environmental problems?". (1) Know nothing at all - (5) Know a great deal. Replies (8) Can't choose are deleted.

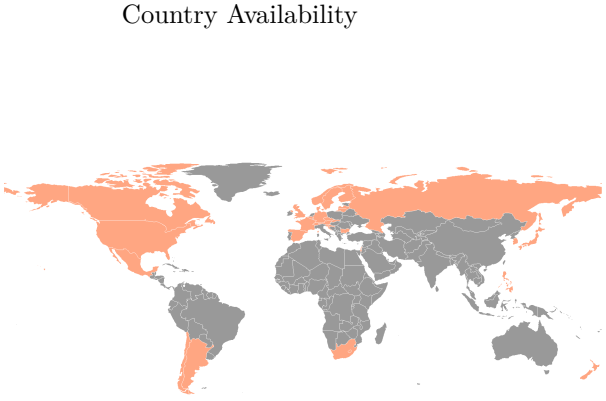
In Environment III (2010) - question 8b.

In Environment II (2000) - question not part of the survey.

In Environment I (1993) - question not part of the survey.

A higher score means that more people feel that they know about the solutions to environmental problems. A lower score means that fewer people feel that they know about the solutions to environmental problems.





3.31.24 Belief in science (mean) (issp_9am)

Average reply to 9a: "How much do you agree or disagree with this statement? We believe too often in science, and not enough in feelings and faith". (1) Agree strongly, (2) Agree, (3) Neither agree nor disagree, (4) Disagree, (5) Disagree strongly. Replies (8) Can't choose are deleted.

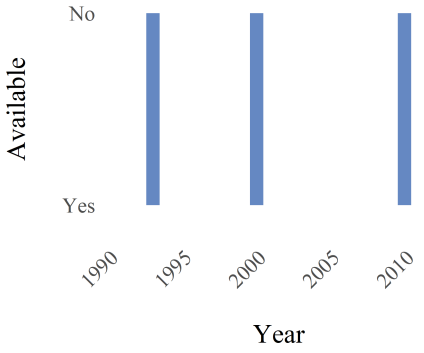
In Environment III (2010) - question 9a.

In Environment II (2000) - question 3a.

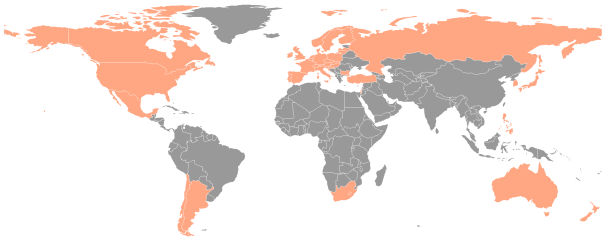
In Environment I (1993) - question 4a.

A higher score means that there are fewer people who think that we believe in science too often and not enough in feelings and faith. A lower score means that there are more people who think that we believe in science too often and not enough in feelings and faith.

Year Availability



Country Availability



3.32 The Ocean Health Index Data

Dataset by: The Ocean Health Index

If you use any of these variables, make sure to cite the original source and QoG Data. Our suggested citation for this dataset is:

Halpern, Benjamine et al. 2018. *Ocean Health Index. National Center for Ecological Analysis and Synthesis, University of California, Santa Barbara.* URL: `https://github.com/OHI-Science/ohi-global/releases`

Halpern, Benjamine et al. 2012. "An index to assess the health and benefits of the global ocean". *Nature.* 488

Link to the original source: `http://www.oceanhealthindex.org`

The Ocean Health Index is a valuable tool for the ongoing assessment of ocean health. By providing a means to advance comprehensive ocean policy and compare future progress, the Index can inform decisions about how to use or protect marine ecosystems. The Index is a collaborative effort, made possible through contributions from more than 65 scientists/ocean experts and partnerships between organizations including the National Center for Ecological Analysis and Synthesis, Sea Around Us, Conservation International, National Geographic, and the New England Aquarium. The Index assesses the ocean based on 10 widely-held public goals for a healthy ocean. They are: Food Provision, Artisanal Fishing Opportunities, Natural Products, Carbon Storage, Coastal Protection, Sense of Place, Coastal Livelihoods & Economies, Tourism & Recreation, Clean Waters, Biodiversity.

3.32.1 Fisheries management effectiveness and opportunity (ohi_aoacc)

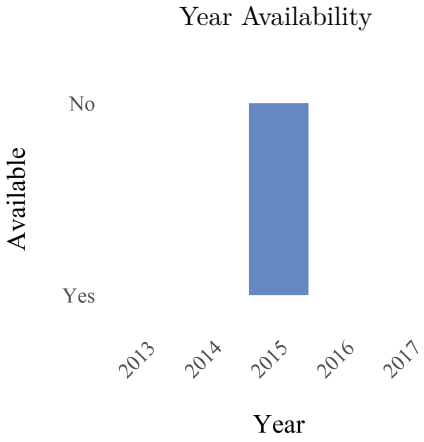
Fisheries management effectiveness and opportunity. The effectiveness of fisheries management in all countries with coastal areas is assessed by using a combination of surveys, empirical data, and enquiries to fisheries experts. They evaluated six aspects of each management regime: Scientific Robustness, Policy Transparency, Implementation Capacity, Subsidies, Fishing Effort, and Foreign Fishing, scoring each category from 0 to 100.

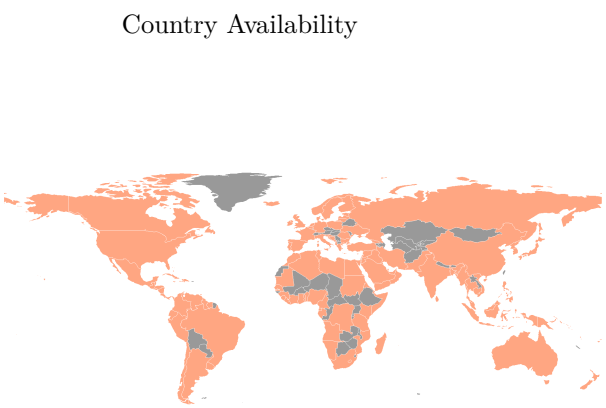
For more details on the variable construction, see the original source:

Mora, C., Myers, R.A., Coll, M., Libralato, S., Pitcher, T.J., Sumaila, R.U., Worm, B. (2009).

Management Effectiveness of the World's Marine Fisheries. PLoS Biol, 7(6), e1000131.

When using this variable, please cite both the OHI project and the original source.





3.32.2 Ocean acidification (ohi_caacid)

Ocean acidification. The Ocean acidification layer models the difference in global distribution changes in the aragonite saturation state (Ωarag) between pre-industrial (∼1870) and modern times (2000-2009) as a proxy for ocean acidification due to human influences.

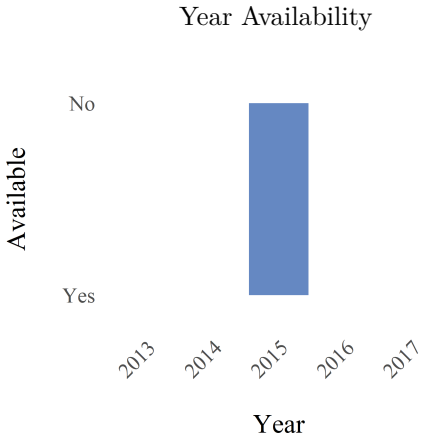
For more details on the variable construction, see the original sources:

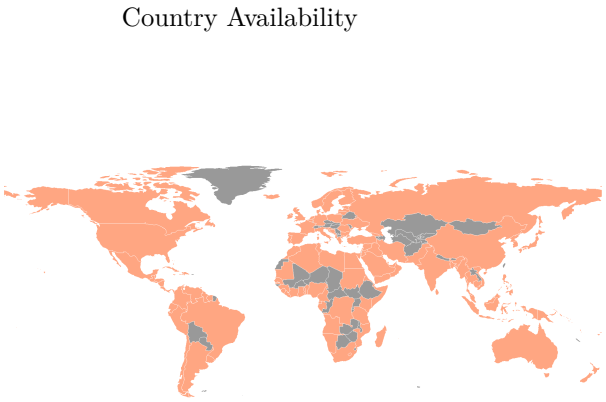
Feely, R., Doney, S. & Cooley, S. (2009) Ocean acidification: present conditions and future changes in a high-CO2 world. Oceanography 22:36-47.

and

J. Afflerbach et al. (2015). https://github.com/OHI-Science/ohiprep/tree/master/globalprep/Pressures_-OceanAcidification/v2015

When using this variable, please cite both the OHI project and the original sources.



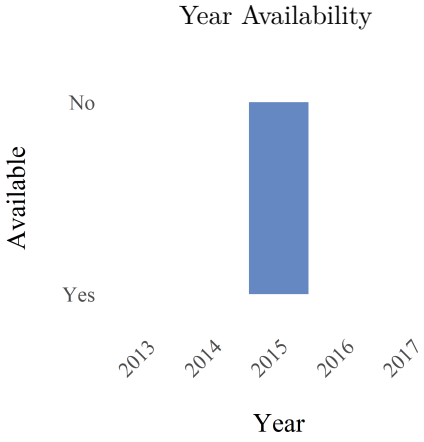


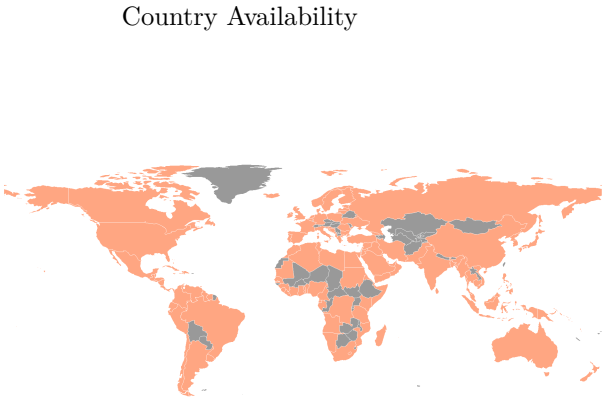
3.32.3 Coastal human population as a proxy for trend in trash (ohi_chp)

Coastal human population as a proxy for trend in trash. For more details on the variable construction, see the original source:

CIESIN & CIAT (Center for International Earth Science Information Network / Columbia University, & Centro Internacional de Agricultura Tropical) (2005). Gridded Population of the World, Version 3 (GPWv3): Population Density Grid, Future Estimates. Palisades, NY. [NASA Socioeconomic Data and Applications Center (SEDAC)].

When using this variable, please cite both the OHI project and the original source.





3.32.4 Sea level rise (ohi_csslr)

Sea level rise. For more details on the variable construction, see the original sources:

Nicholls R. J. and Cazenave A. (2010). Sea-level rise and its impact on coastal zones. Science 328: 1517-1520.

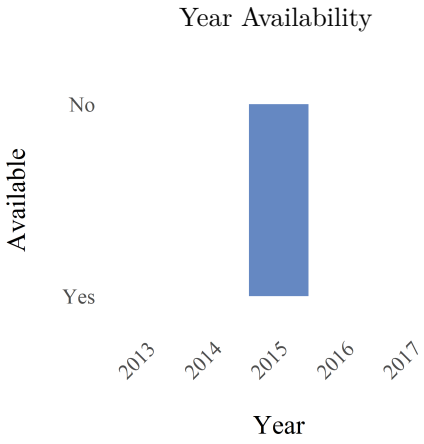
and

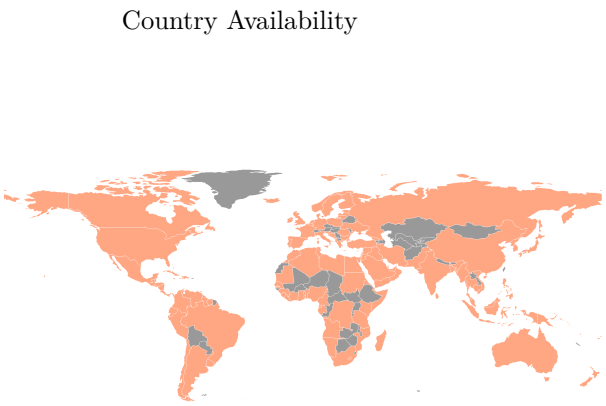
AVISO Satellite Altimetry Data.

and

J. Afflerbach et al. (2015). (https://github.com/OHI-Science/ohiprep/tree/master/globalprep/Pressures_-SeaLevelRise/v2015)

When using this variable, please cite both the OHI project and the original sources.





3.32.5 Sea surface temperature (SST) anomalies (ohi_csst)

Sea surface temperature (SST) anomalies. SST of the ocean is indicated by measurements taken at depths that range from 1 millimeter to 20 meters. This measurement does not indicate absolute temperature at a location, but instead determines the number of positive temperature deviations (anomalies) that exceed the natural range of variation for a given location, i.e. the frequency with which a location experiences unnaturally warm temperature.

For more details on the variable construction, see the original sources:

AVHRR Pathfinder Version 5.0 SST data.

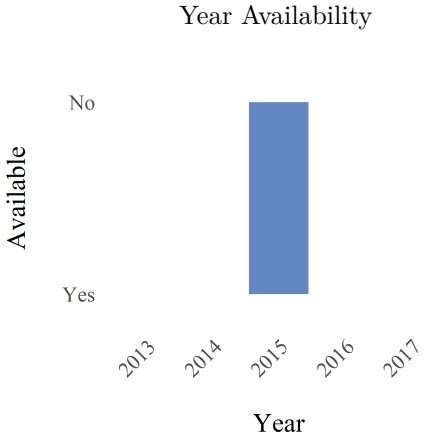
and

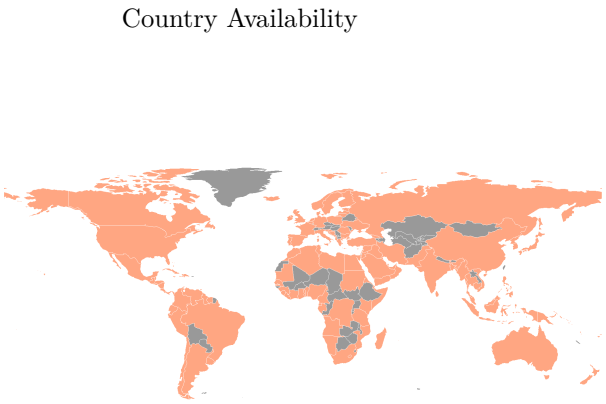
Casey, K. S., Brandon, T. B., Cornillon, P., and Evans, R. (2010). The past, present and future of the AVHRR Pathfinder SST Program, Oceanography from Space: Revisited, eds. V. Barale, J.F.R. Gower, and L. Alberotanza, Springer.

and

J. Afflerbach et al. (2015). (https://github.com/OHI-Science/ohiprep/tree/master/globalprep/Pressures_-SST)

When using this variable, please cite both the OHI project and the original source.





3.32.6 UV radiation (ohi_cuv)

UV radiation. Ultraviolet radiation (UVR) is the portion of solar radiation with wavelengths of 200-400 nanometers (nm). UV Radiation was measured as the number of times in each 1-degree cell that the monthly average exceeded the climatological mean +1 standard deviation. These values were summed across the 12 months to provide a single value, ranging from 0-19.

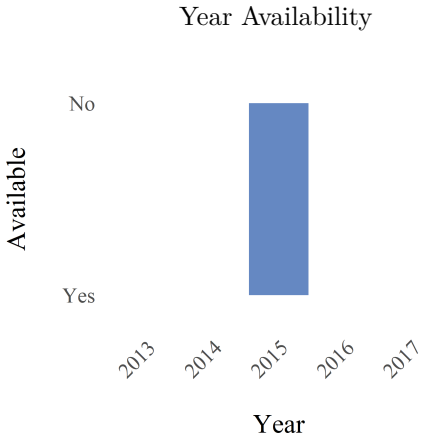
For more details on the variable construction, see the original sources:

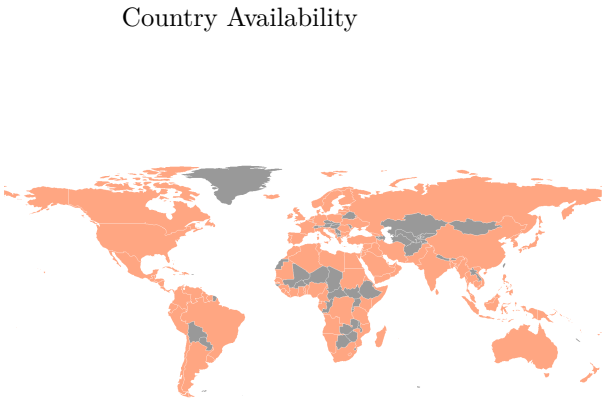
Goddard Earth Sciences Data and Information Services Center (GES DISC).

and

J. Afflerbach et al. (2015). (https://github.com/OHI-Science/ohiprep/tree/master/globalprep/Pressures_-UV)

When using this variable, please cite both the OHI project and the original sources.



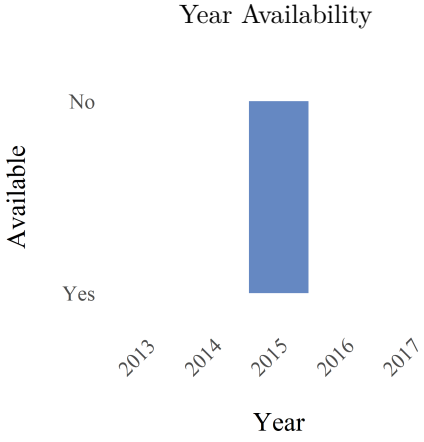


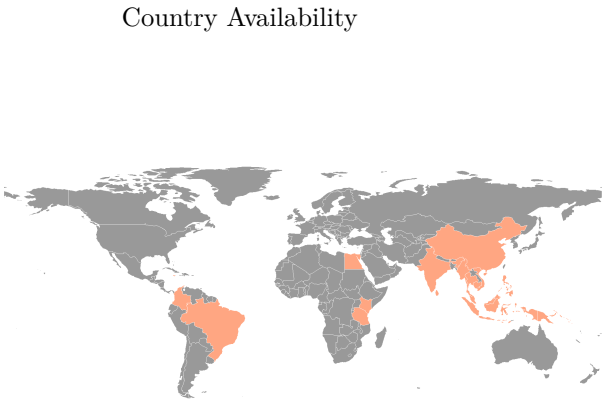
3.32.7 High bycatch caused by artisanal fishing (ohi_fah)

High bycatch caused by artisanal fishing. For more details on the variable construction, see the original source:

Reefs at Risk Revisited (http://www.wri.org/publication/reefs-at-risk-revisited).

When using this variable, please cite both the OHI project and the original source.



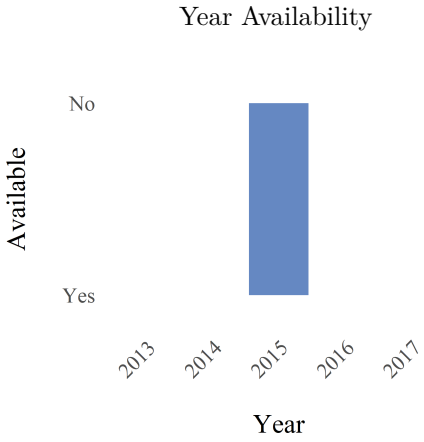


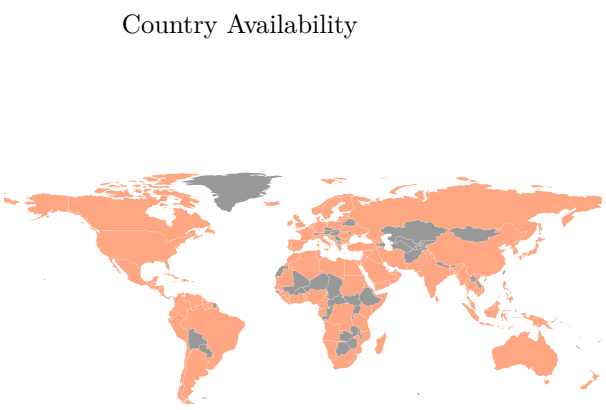
3.32.8 High bycatch caused by commercial fishing (ohi_fchb)

High bycatch caused by commercial fishing. For more details on the variable construction, see the original source:

Halpern, B. S. et al. (2008) A global map of human impact on marine ecosystems. Science, 3199(5865): 948-952.

When using this variable, please cite both the OHI project and the original source.



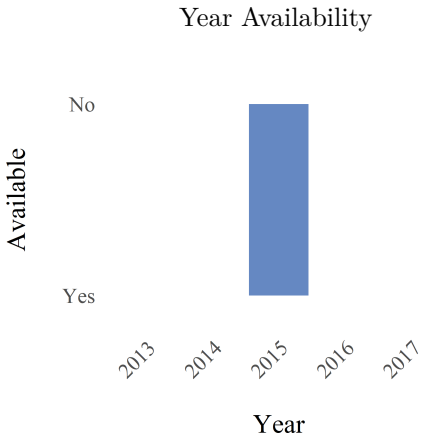


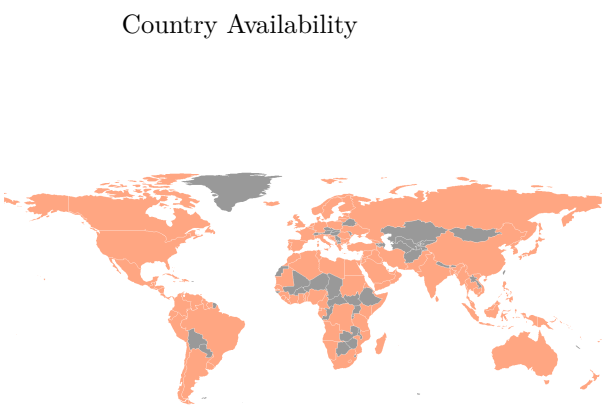
3.32.9 Low bycatch caused by commercial fishing (ohi_fclb)

Low bycatch caused by commercial fishing. For more details on the variable construction, see the original source:

Halpern, B. S. et al. (2008) A global map of human impact on marine ecosystems. Science, 3199(5865): 948-952.

When using this variable, please cite both the OHI project and the original source.





3.32.10 CBD survey: habitat (ohi_hab)

CBD survey: habitat. A resilience measure based on questions 153(a,b,c,e,g) and 158(a,b,c,f,g,h) from The Convention on Biological Diversity country questionnaire (Third National Report to the CBD, from 2005).

Question 153: Do your country's strategies and action plans include the following:

a) Developing new marine and coastal protected areas;

b) Improving the management of existing marine and coastal protected areas;

c) Building capacity within the country for management of marine and coastal resources, including through educational programmes and targeted research initiatives;

e) Protection of areas important for reproduction, such as spawning and nursery areas;

g) Controlling excessive fishing and destructive fishing practices?

Question 158: Which of the following statements can best describe the current status of marine and coastal protected areas in your country:

a) Marine and coastal protected areas have been declared and gazetted;

b) Management plans for these marine and coastal protected areas have been developed with involvement of all stakeholders;

c) Effective management with enforcement and monitoring has been put in place;

f) The national system of marine and coastal protected areas includes areas managed for purpose of sustainable use, which may allow extractive activities;

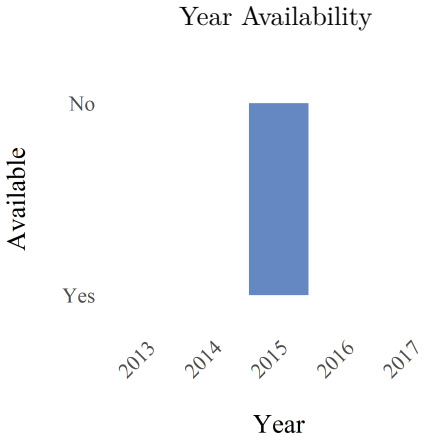
g) The national system of marine and coastal protected areas includes areas which exclude extractive uses;

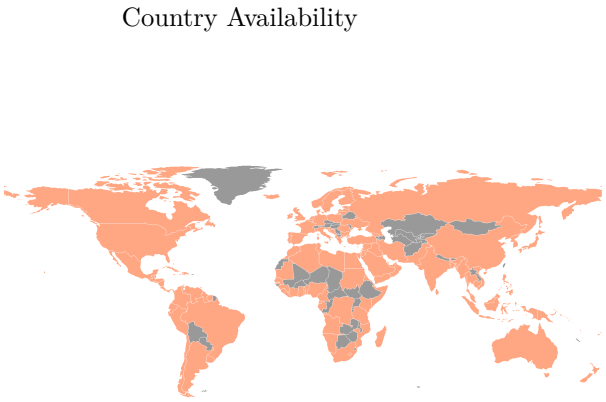
h) The national system of marine and coastal protected areas is surrounded by sustainable management practices over the wider marine and coastal environment?

For more details on the variable construction, see the original sources:

Convention on Biological Diversity, CBD (http://www.cbd.int/reports/search/default.shtml).

When using this variable, please cite both the OHI project and the original source.

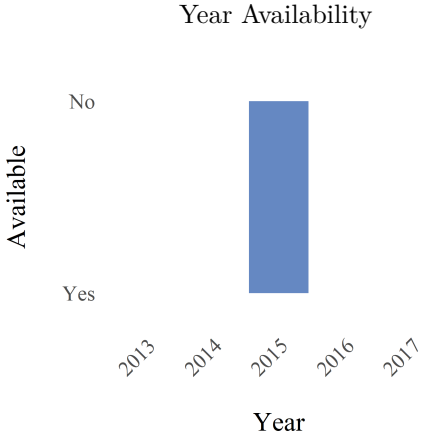


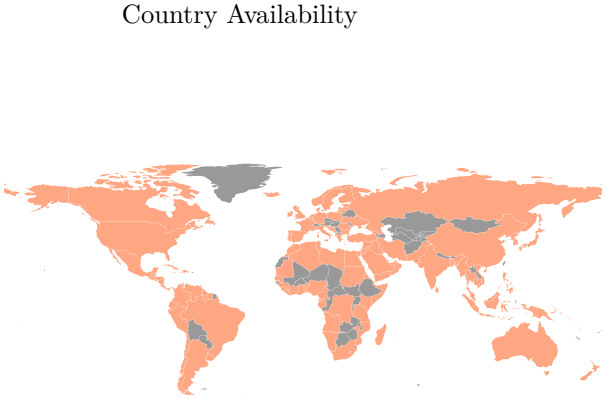


3.32.11 CBD survey: coastal habitat (ohi_habcom)

CBD survey: coastal habitat. For more details on the variable construction, see the original sources: Convention on Biological Diversity, CBD (http://www.cbd.int/reports/search/default.shtml).

When using this variable, please cite both the OHI project and the original source.

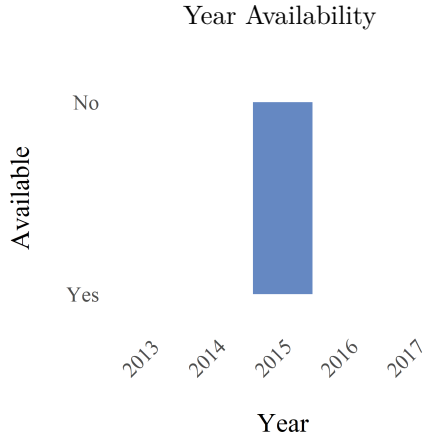


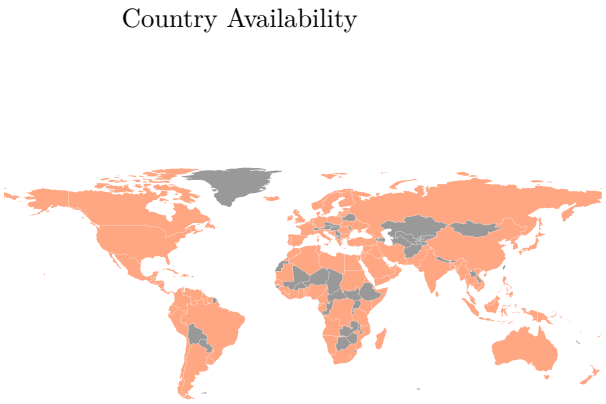


3.32.12 CBD survey: ocean habitat (ohi_habeez)

CBD survey: ocean habitat. For more details on the variable construction, see the original sources: Convention on Biological Diversity, CBD (http://www.cbd.int/reports/search/default.shtml).

When using this variable, please cite both the OHI project and the original source.





3.32.13 Coastal population density as a proxy for intertidal habitat destruction (ohi_hdinter)

Coastal population density as a proxy for intertidal habitat destruction. For more details on the variable construction, see the original sources:

CIESIN & CIAT (Center for International Earth Science Information Network /Columbia University & Centro Internacional de Agricultura Tropical) (2005). Gridded Population of the World, Version 3 (GPWv3): Population Density Grid, Future Estimates. Palisades, NY.

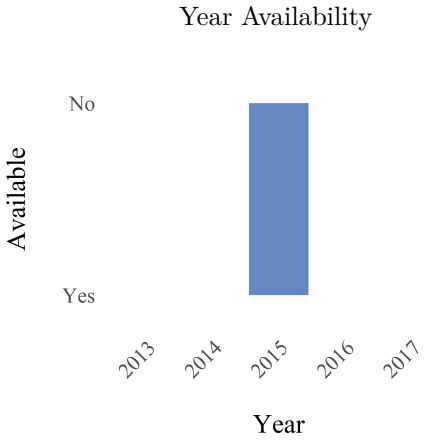
and

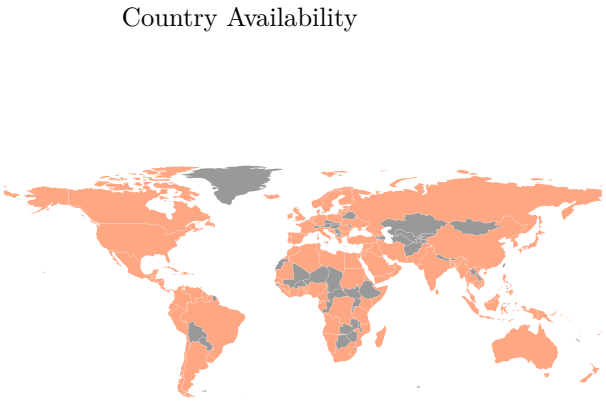
NASA Socioeconomic Data and Applications Center (SEDAC)

and

Halpern, B. S. et. al. (2008) A global map of human impact on marine ecosystems. Science, 3199(5865): 948-952.

When using this variable, please cite both the OHI project and the original sources.



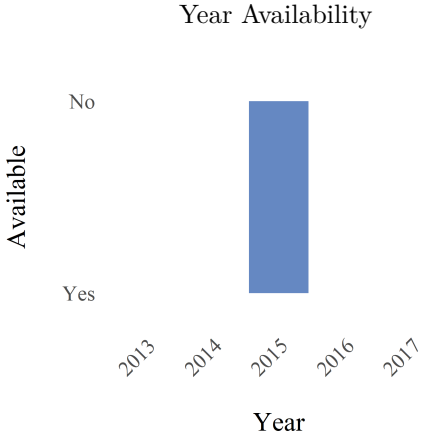


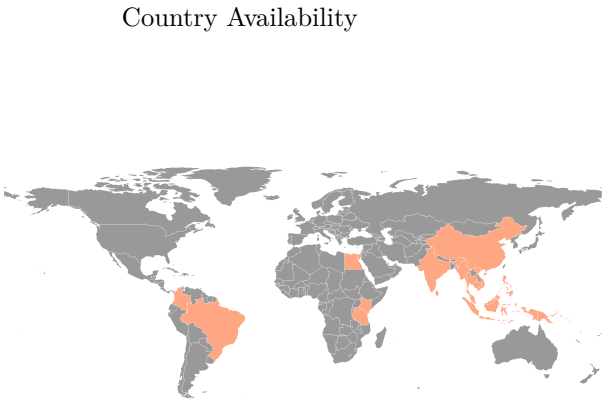
3.32.14 Bycatch by artisanal fishing - hard bottom habitat destruction (ohi_hshb)

High bycatch artisanal fishing practices as a proxy for subtidal hard bottom habitat destruction. For more details on the variable construction, see the original sources:

Reefs at Risk Revisited (http://www.wri.org/publication/reefs-at-risk-revisited).

When using this variable, please cite both the OHI project and the original source.





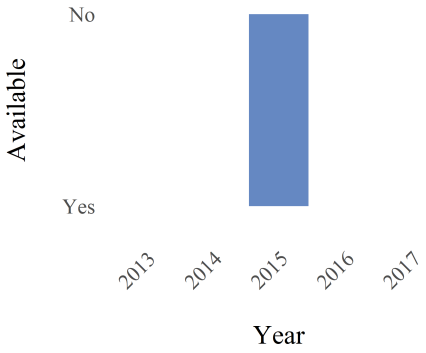
3.32.15 Demersal destructive fishing - soft bottom habitat destruction (ohi_hssb)

Demersal destructive commercial fishing practices relative to soft-bottom habitat area as a proxy for soft bottom habitat destruction. For more details on the variable construction, see the original source:

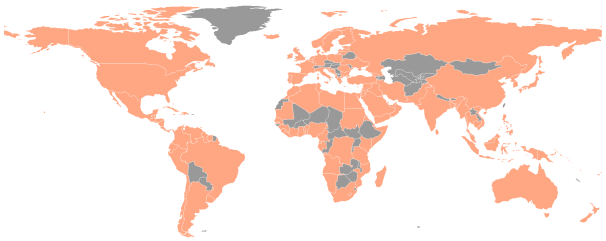
Sea Around Us Project (http://www.seaaroundus.org/)

When using this variable, please cite both the OHI project and the original source.

Year Availability



Country Availability



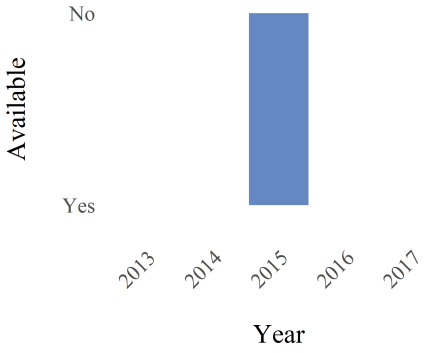
3.32.16 Coastal protected areas inland 1km (ohi_lpai)

Coastal protected areas inland 1km. For more details on the variable construction, see the original sources:

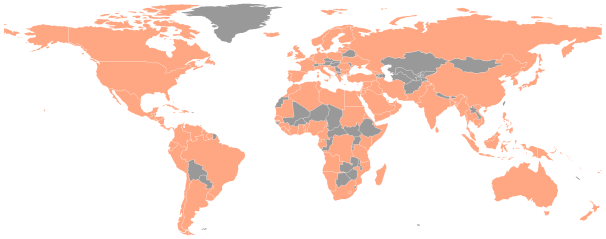
United Nations - World Conservation Monitoring Centre's World Database on Protected Areas (WDPA) through [Protected Planet (http://www.protectedplanet.net)].

When using this variable, please cite both the OHI project and the original source.

Year Availability



Country Availability

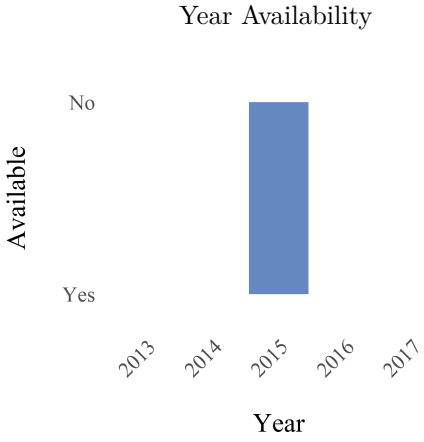


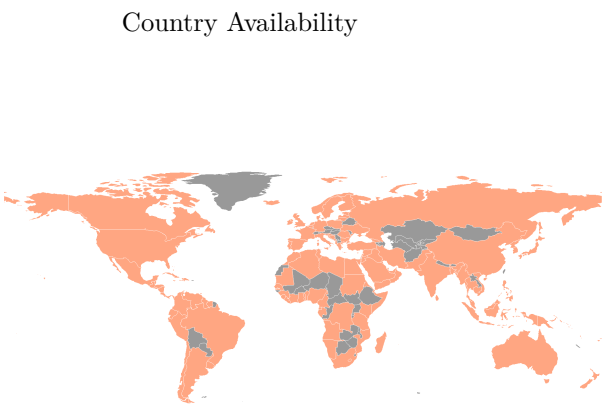
3.32.17 Coastal marine protected areas offshore 3km (ohi_lpao)

Coastal marine protected areas offshore 3km. For more details on the variable construction, see the original sources:

United Nations - World Conservation Monitoring Centre's World Database on Protected Areas (WDPA) through [Protected Planet (http://www.protectedplanet.net)].

When using this variable, please cite both the OHI project and the original source.





3.32.18 CBD Survey: Mariculture (ohi_maricul)

CBD Survey: Mariculture. A resilience measure based on questions 158(d) and 159(a-l) from The Convention on Biological Diversity country questionnaire (Third National Report to the CBD, from 2005).

Question 158: Which of the following statements can best describe the current status of marine and coastal protected areas in your country:

d) A national system or network of marine and coastal protected areas is under development?

Question 159: Is your country applying the following techniques aimed at minimizing adverse impacts of mariculture on marine and coastal biodiversity?

a) Application of environmental impact assessments for mariculture developments;

b) Development and application of effective site selection methods in the framework of integrated marine and coastal area management;

c) development of effective methods for effluent and waste control;

d) Development of appropriate genetic resource management plans at the hatchery level;

e) Development of controlled hatchery and genetically sound reproduction methods in order to avoid seed collection from nature;

f) If seed collection from nature cannot be avoided, development of environmentally sound practices for spat collecting operations, including use of selective fishing gear to avoid by-catch;

g) Use of native species and subspecies in mariculture;

h) Implementation of effective measures to prevent the inadvertent release of mariculture species and fertile polypoids;

i) Use of proper methods of breeding and proper places of releasing in order to protect genetic diversity;

j) Minimizing the use of antibiotics through better husbandry techniques;

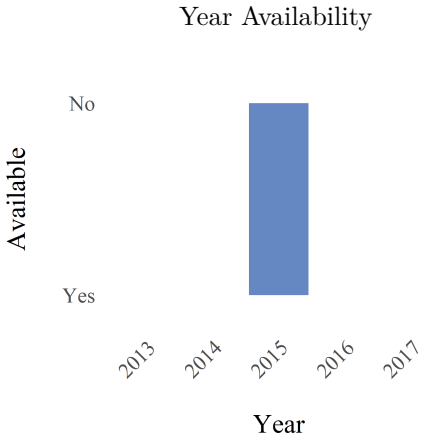
k) Use of selective methods in commercial fishing to avoid or minimize bycatch;

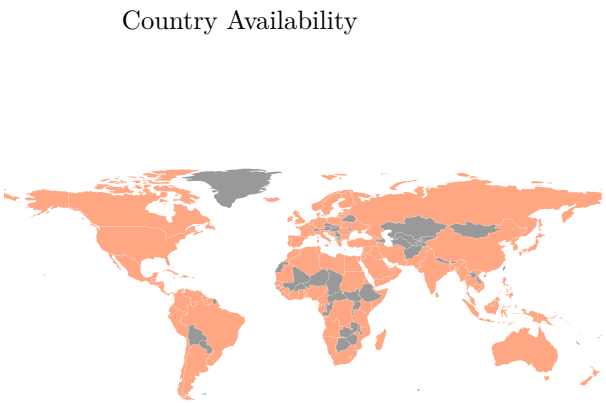
l) Considering traditional knowledge, where applicable, as a source to develop sustainable mariculture techniques.

For more details on the variable construction, see the original source:

Convention on Biological Diversity, CBD (http://www.cbd.int/reports/search/default.shtml)-

When using this variable, please cite both the OHI project and the original source.



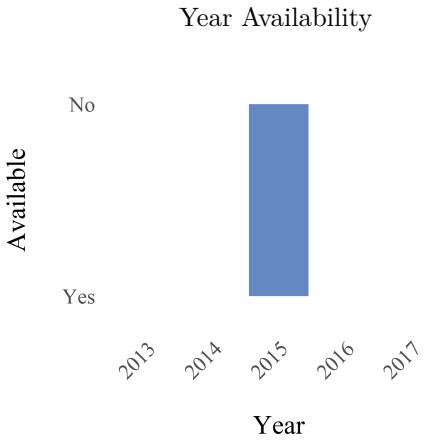


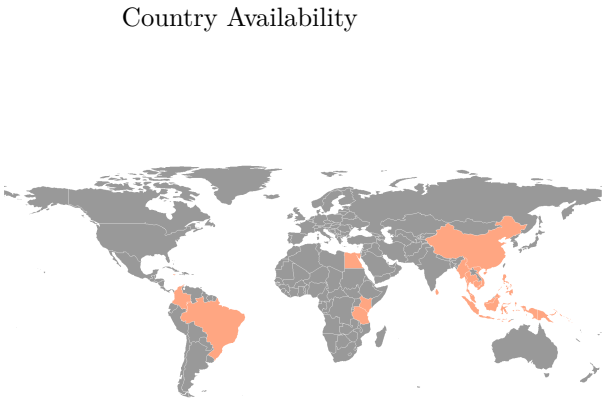
3.32.19 Areas of observed blast (dynamite) fishing (ohi_npblast)

Areas of observed blast (dynamite) fishing. For more details on the variable construction, see the original source:

Reefs at Risk Revisited (http://www.wri.org/publication/reefs-at-risk-revisited)

When using this variable, please cite both the OHI project and the original source.



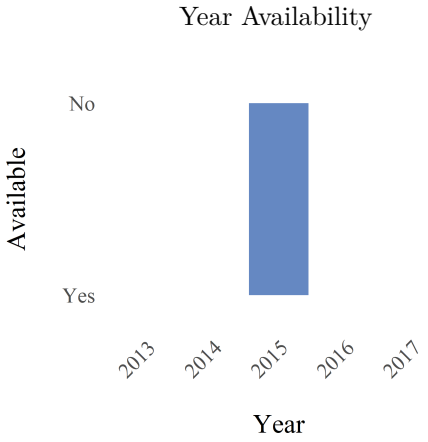


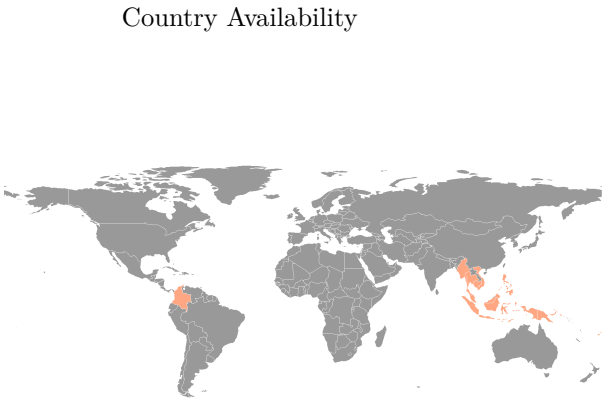
3.32.20 Areas of observed poison fishing (ohi_npcyan)

Areas of observed poison fishing. For more details on the variable construction, see the original source:

Reefs at Risk Revisited (http://www.wri.org/publication/reefs-at-risk-revisited)

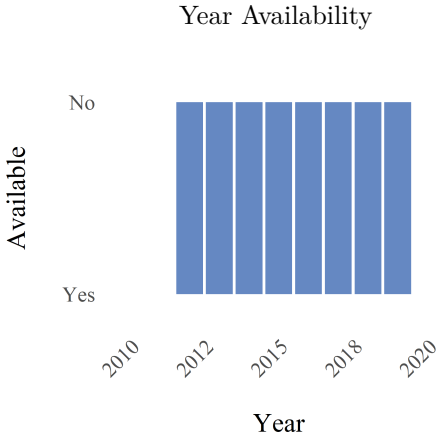
When using this variable, please cite both the OHI project and the original source.

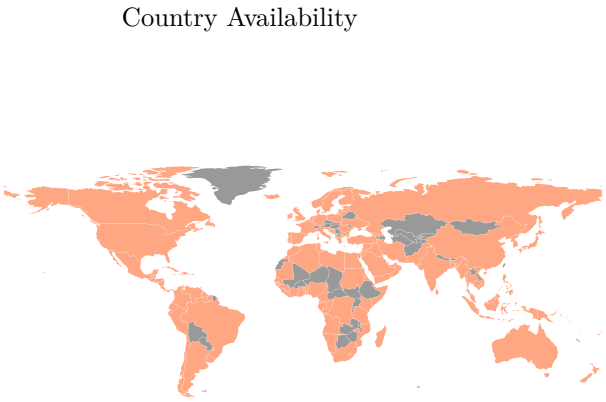




3.32.21 The Ocean Health Index (ohi_ohi)

The Ocean Health Index establishes reference points for achieving ten widely accepted socio-ecological objectives and scores the oceans adjacent to 171 countries and territories on how successfully they deliver these goals. Evaluated globally and by country, these ten public goals represent the wide range of benefits that a healthy ocean can provide; each country's overall score is the average of its respective goal scores. The ten socio-ecological objectives are: Food Provision, Artisanal Fishing Opportunities, Natural Products, Carbon Storage, Coastal Protection, Coastal Livelihoods & Economies, Tourism & Recreation, Sense of Place, Clean Waters, Biodiversity. The index varies from 0 to 100.





3.32.22 Coastal chemical pollution within 3 nm offshore (ohi_pc3)

Coastal chemical pollution within 3 nautical miles (nm) offshore. For more details on the variable construction, see the original sources:

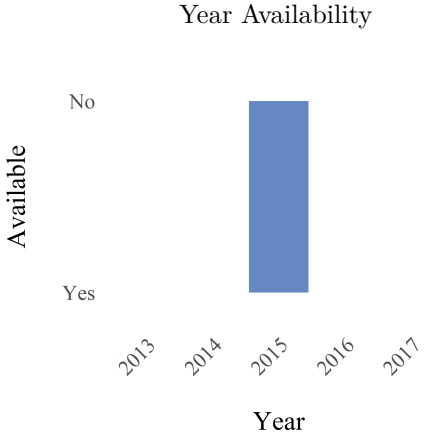
Halpern, B. S. et al. (2015). Spatial and temporal changes in cumulative human impacts on the world's ocean. Nature Communications 6(7615).

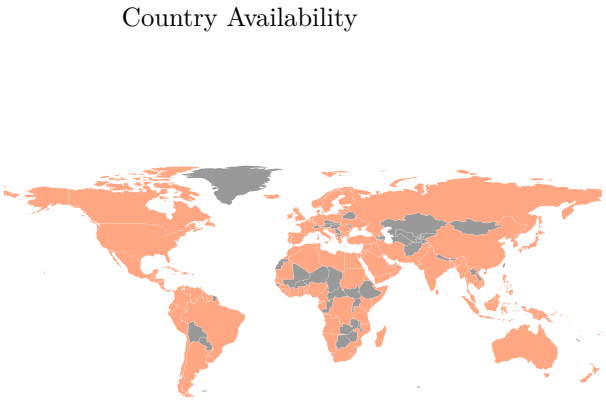
When using this variable, please cite both the OHI project and the original sources.

and

FAO's statistical database FAOSTAT (http://faostat3.fao.org/faostat-gateway/go/to/browse/R/*/E).

When using this variable, please cite both the OHI project and the original sources.





3.32.23 Chemical pollution (ohi_pchem)

Chemical pollution is measured as the average of land-based organic pollution, land-based inorganic pollution, and ocean-based pollution from commercial shipping and port as proxies.

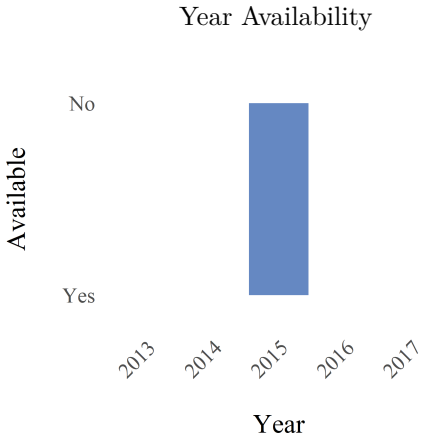
For more details on the variable construction, see the original sources:

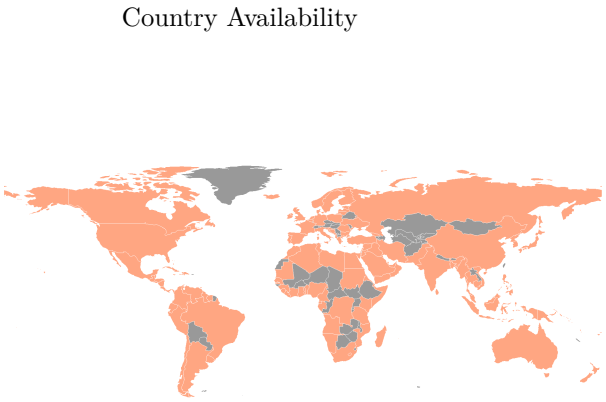
Halpern, B. S. et al. (2015). Spatial and temporal changes in cumulative human impacts on the world's ocean. Nature Communications 6(7615).

and

FAO's statistical database FAOSTAT (http://faostat3.fao.org/faostat-gateway/go/to/browse/R/*/E).

When using this variable, please cite both the OHI project and the original source.





3.32.24 Coastal fertilizer pollution (ohi_pn3)

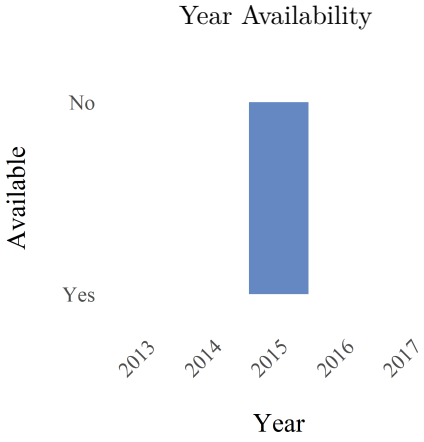
Coastal fertilizer pollution as a proxy for nutrient pollution within 3 nautical miles (nm) offshore. For more details on the variable construction, see the original sources:

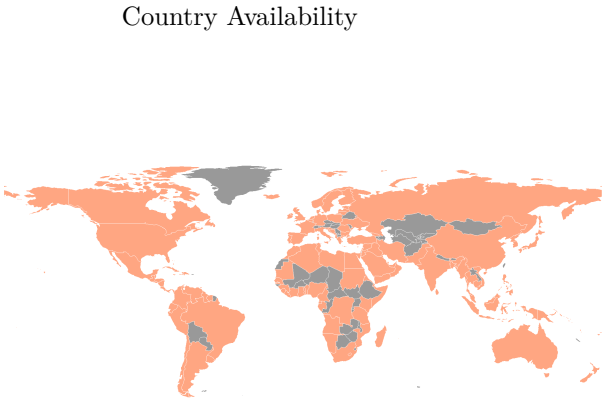
Halpern, B. S. et al. (2015). Spatial and temporal changes in cumulative human impacts on the world's ocean. Nature Communications 6(7615).

and

FAO's statistical database FAOSTAT (http://faostat3.fao.org/faostat-gateway/go/to/browse/R/*/E).

When using this variable, please cite both the OHI project and the original sources.





3.32.25 Fertilizer pollution as a proxy for nutrient pollution (ohi_pnutrient)

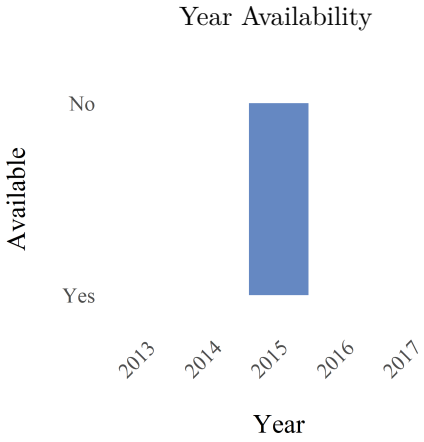
Fertilizer pollution as a proxy for nutrient pollution. For more details on the variable construction, see the original sources:

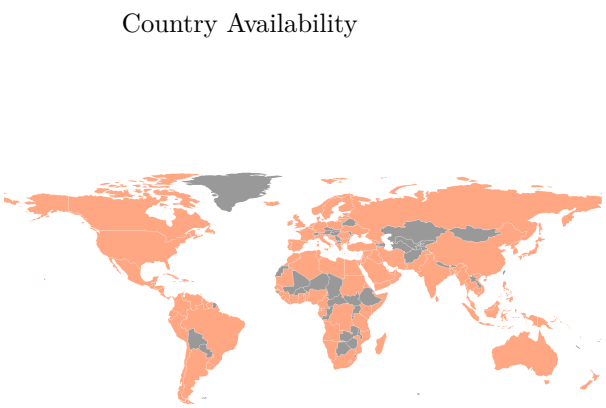
Halpern, B. S. et al. (2015). Spatial and temporal changes in cumulative human impacts on the world's ocean. Nature Communications 6(7615).

and

FAO's statistical database FAOSTAT (http://faostat3.fao.org/faostat-gateway/go/to/browse/R/*/E).

When using this variable, please cite both the OHI project and the original source.





3.32.26 Trash pollution (ohi_ptrash)

Trash pollution. Estimated by the tons of litter per km of beach collected during beach cleanups organized by the Ocean Conservancys Trash Free Seas Alliance in 96 countries and locations.

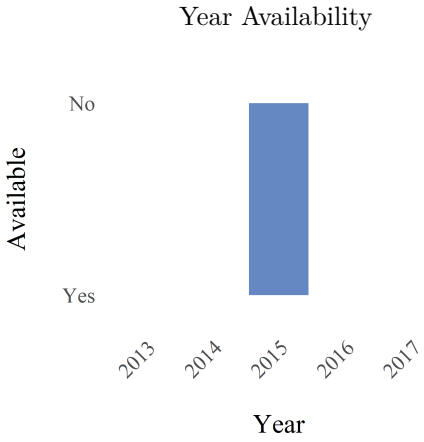
For more details on the variable construction, see the original sources:

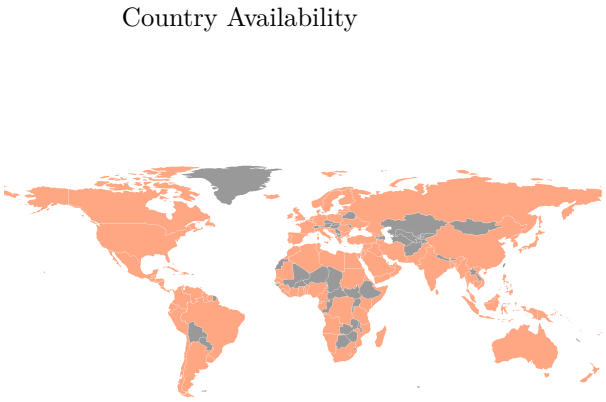
Eriksen M., Lebreton, L. C. M., Carson, H. S., Thiel, M., Moore, C. J. and Borerro, J. C. (2014). Plastic pollution in the world's oceans: more than 5 trillion plastic pieces weighing over 250,000 tons afloat at sea. PLoS ONE 9:e111913.

and

J. Afflerbach et al. (2015). [Methods](https://github.com/OHI Science/ohiprep/tree/master/globalprep/CW_-pressure_trash)

When using this variable, please cite both the OHI project and the original sources.





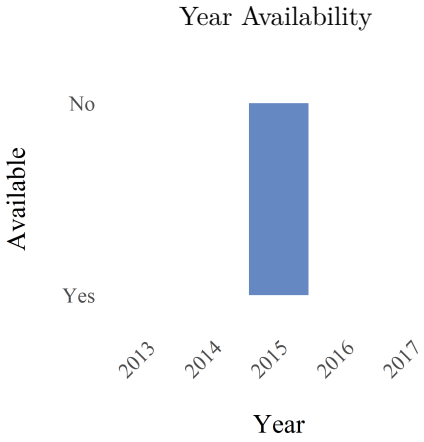
3.32.27 Alien Species (ohi_saali)

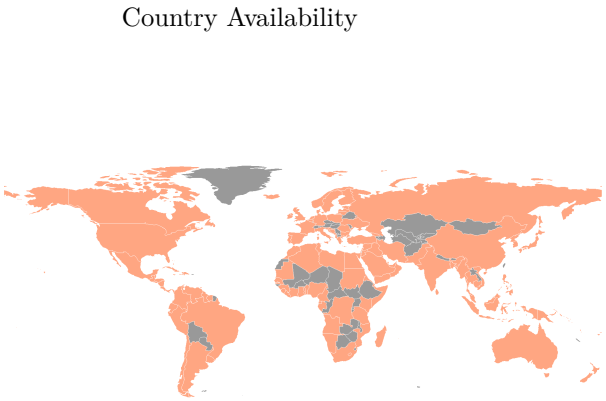
Alien species are non-indigenous organisms introduced into an ecosystem that is not their native habitat either by accident or intentionally. Measured by total counts of all invasive species according to data from the Global Invasive Species Database (GIRD).

For more details on the variable construction, see the original source:

Molnar, J. L., Gamboa, R. L., Revenga C., Spalding, M. (2008). Assessing the global threat of invasive species to marine biodiversity. Frontiers in Ecology and the Environment 6(485).

When using this variable, please cite both the OHI project and the original source.



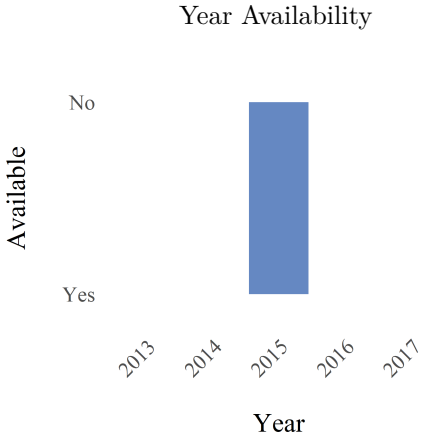


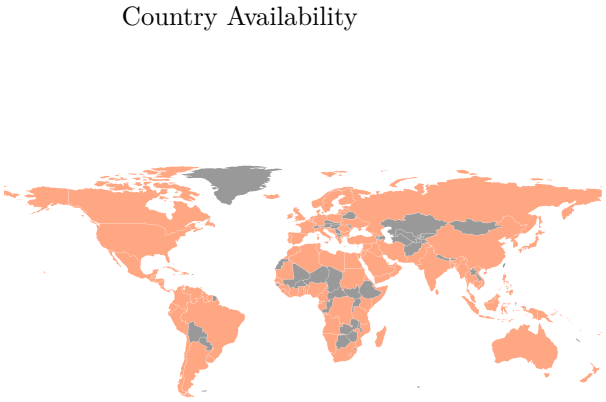
3.32.28 Percent direct employment in tourism (ohi_tjpt)

Percent direct employment in tourism. For more details on the variable construction, see the original source:

World Travel and Tourism Council, WTTC (http://www.wttc.org/research/economic-data-search-tool/)

When using this variable, please cite both the OHI project and the original source.





3.32.29 CBD Survey: Tourism (ohi_tour)

CBD Survey: Tourism. A resilience measure based on questions 79, 80, and 82 from The Convention on Biological Diversity country questionnaire (Third National Report to the CBD, from 2005).

Question 79: Has your country established mechanisms to assess, monitor and measure the impact of tourism on biodiversity?

a) No;

b) No, but mechanisms are under development;

c) Yes, mechanisms are in place (please specify below);

d) Yes, existing mechanisms are under review.

Question 80: Has your country provided educational and training programmes to the tourism operators so as to increase their awareness of the impacts of tourism on biodiversity and upgrade the technical capacity at the local level to minimize the impacts?

a) No;

b) No, but programmes are under development;

c) Yes, programmes are in place (please describe below).

Question 82: Does your country provide indigenous and local communities with capacity-building and financial resources to support their participation in tourism policy-making, development planning, product development and management?

a) No;

b) No, but relevant programmes are being considered;

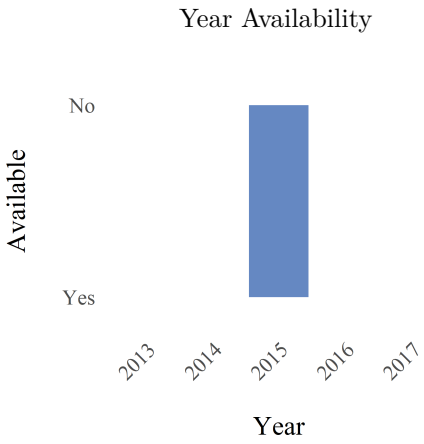
c) Yes, some programmes are in place;

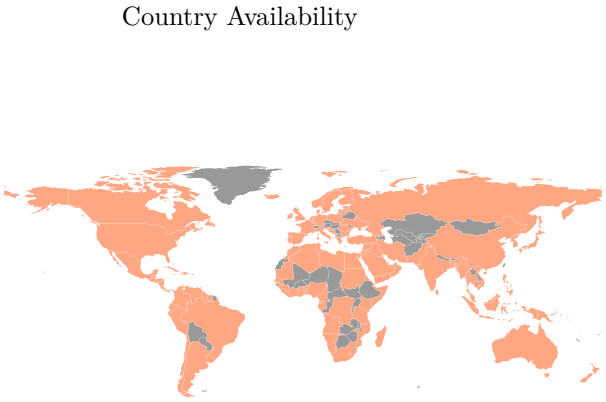
d) Yes, comprehensive programmes are in place.

For more details on the variable construction, see the original sources:

Convention on Biological Diversity, CBD (http://www.cbd.int/reports/search/default.shtml)

When using this variable, please cite both the OHI project and the original source.



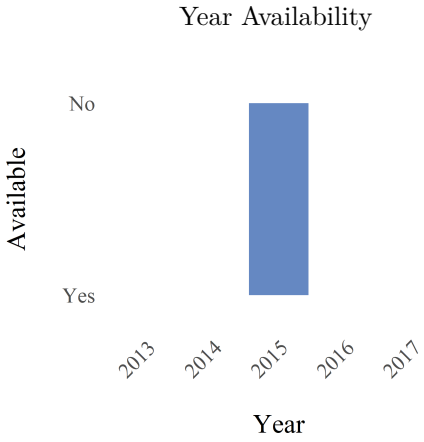


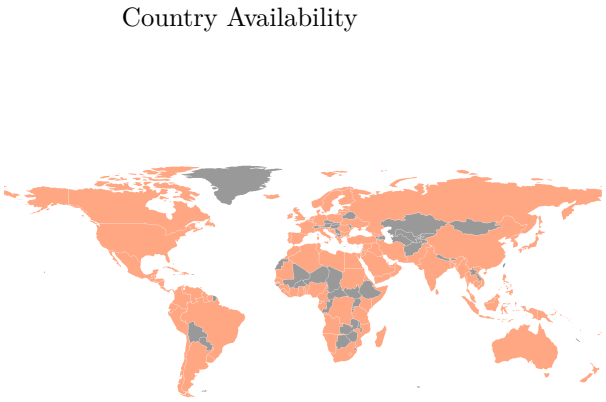
3.32.30 Sustainability index (ohi_trsust)

Sustainability index. For more details on the variable construction, see the original source:

World Economic Forum (http://www.weforum.org/issues/global-competitiveness)

When using this variable, please cite both the OHI project and the original source.





3.32.31 CBD Survey: Water (ohi_water)

CBD Survey: water. A resilience measure based on question 153(d,f) from The Convention on Biological Diversity country questionnaire (Third National Report to the CBD, from 2005).

Question 153(d,f): Do your country's strategies and action plans include the following:

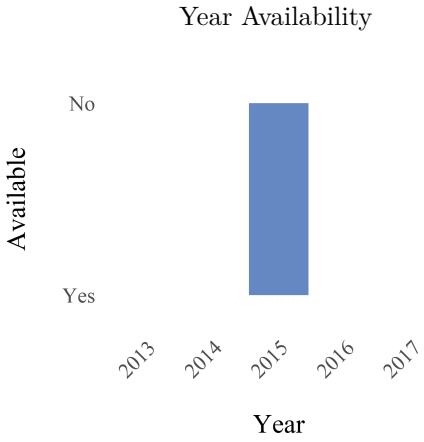
d) Instituting improved integrated marine and coastal area management (including catchments management) in order to reduce sediment and nutrient loads into the marine environment;

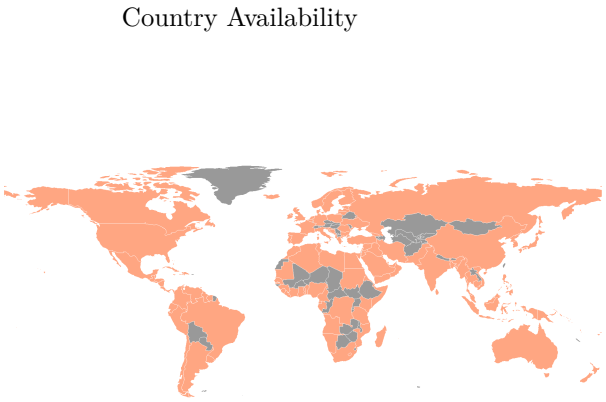
f) Improving sewage and other waste treatment?

For more details on the variable construction, see the original source:

Convention on Biological Diversity, CBD (http://www.cbd.int/reports/search/default.shtml)

When using this variable, please cite both the OHI project and the original source.


Year Availability
No
Yes
Available
2013
2014
2015
2016
2017
Year


Country Availability

3.33 V-Party Dataset

Dataset by: Varieties of Democracy (V-Dem) Project

If you use any of these variables, make sure to cite the original source and QoG Data. Our suggested citation for this dataset is:

Lührmann, Anna et al. 2020. *Varieties of Party Identity and Organization (V-Party) Dataset V1*

Pemstein, Daniel et al. 2020. *The V-Dem Measurement Model: Latent Variable Analysis for Cross-National and Cross-Temporal Expert-Coded Data*

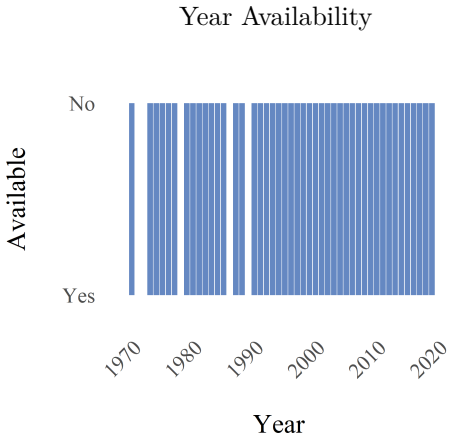
Link to the original source: `https://www.v-dem.net/en/data/data/v-party-dataset/`

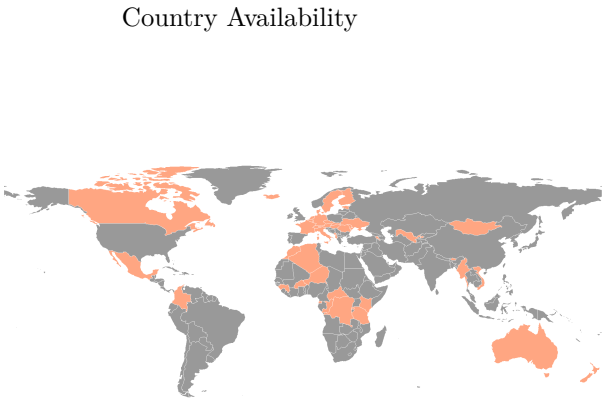
V-Party provides expert-coded assessments of party organization and identity for most parties in most countries over 1970-2019. Using V-Dem methodology (Coppedge et al., 2020), in January 2020, 665 experts rated the policy positions and organizational capacity of political parties across elections in a given country. Specifically, as a general rule, experts coded data for all parties that reached more than 5% of the vote share at a given election. The expert-coded data are aggregated using V-Dems Bayesian Item Response Theory measurement model (Pemstein et al., 2020). The result is data on 1,955 political parties across 1,560 elections in 169 countries; in total 6,330 party-election year units. Typically, at least 4 coders provided their assessment per observation.

3.33.1 Environmental parties: share of seats (vparty_envseat)

The variable measures the share of seats in the lower chamber taken by the parties, for which environmental protection is relevant to gain and keep voters, as agreed on by at least half of the coders in the V-Party dataset.

The original variable from V-Party dataset - v2pasalie - measures the share of coders who answered "12: Environmental protection" to the multiple-choice question "Which of the following issues are most relevant for the party's effort to gain and keep voters?". We only keep parties that score 0.5 or higher on variable v2pasalie_12 and then calculate their share of seats in a given country-year using v2paseatshare variable - Seat share the party gained in the election to the lower chamber.

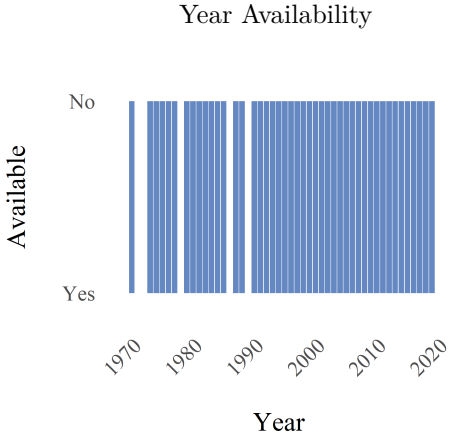


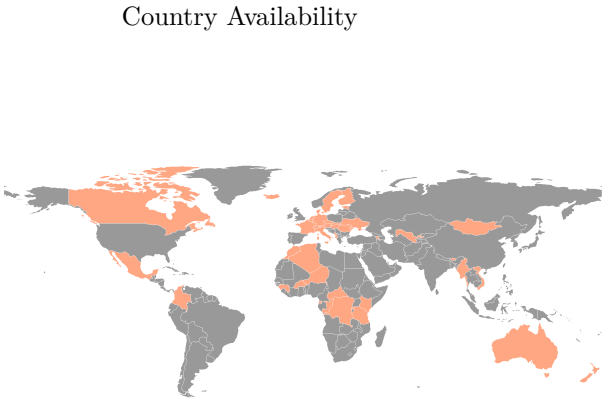


3.33.2 Environmental parties: share of votes (vparty_envvote)

The variable measures the share of votes to the lower chamber received by the parties, for which environmental protection is relevant to gain and keep voters, as agreed on by at least half of the coders in the V-Party dataset.

The original variable from V-Party dataset - v2pasalie - reports the share of coders who answered "12: Environmental protection" to the multiple-choice question "Which of the following issues are most relevant for the party's effort to gain and keep voters?". We only keep parties that score 0.5 or higher on variable v2pasalie_12 and then calculate their share of votes in a given country-year using v2pavote variable - Vote share the party gained in the election to the lower chamber.





3.34 World Development Indicators

Dataset by: The World Bank Group

If you use any of these variables, make sure to cite the original source and QoG Data. Our suggested citation for this dataset is:

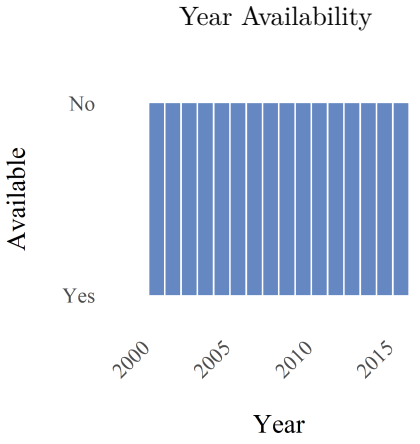
World Bank. 2020. *World Development Indicators*

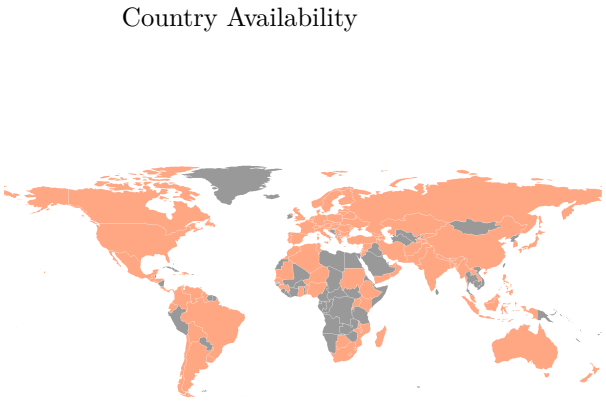
Link to the original source: `http://data.worldbank.org/data-catalog/world-development-indicators`

The primary World Bank collection of development indicators, compiled from officially-recognized international sources.

3.34.1 Agricultural irrigated land (% of total agricultural land) (wdi_agrland)

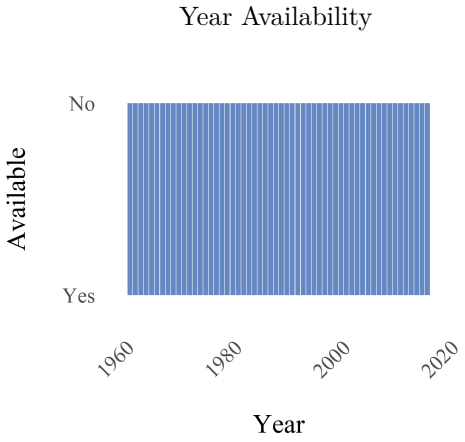
Agricultural land refers to the share of land area that is arable, under permanent crops, and under permanent pastures. Arable land includes land defined by the FAO as land under temporary crops (double-cropped areas are counted once), temporary meadows for mowing or for pasture, land under market or kitchen gardens, and land temporarily fallow. Land abandoned as a result of shifting cultivation is excluded. Land under permanent crops is land cultivated with crops that occupy the land for long periods and need not be replanted after each harvest, such as cocoa, coffee, and rubber. This category includes land under flowering shrubs, fruit trees, nut trees, and vines, but excludes land under trees grown for wood or timber. Permanent pasture is land used for five or more years for forage, including natural and cultivated crops.

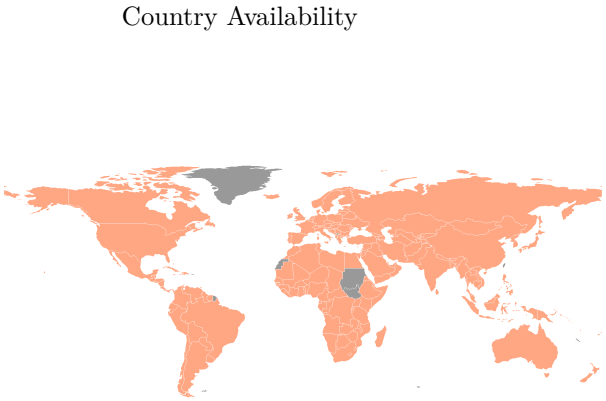




3.34.2 Arable land (% of land area) (wdi_araland)

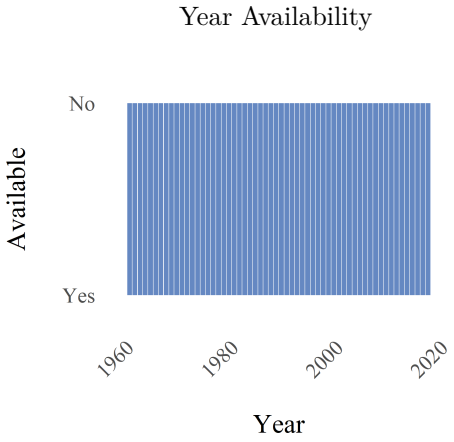
Arable land includes land defined by the FAO as land under temporary crops (double-cropped areas are counted once), temporary meadows for mowing or for pasture, land under market or kitchen gardens, and land temporarily fallow. Land abandoned as a result of shifting cultivation is excluded.

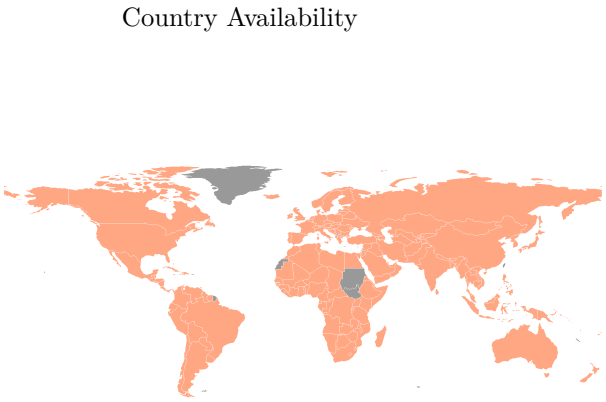




3.34.3 Land area (sq. km) (wdi_area)

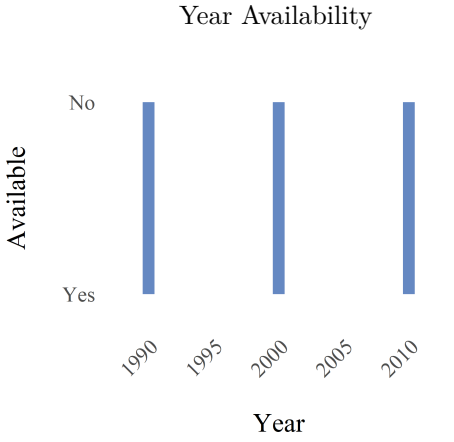
Land area is a country's total area, excluding area under inland water bodies, national claims to continental shelf, and exclusive economic zones. In most cases the definition of inland water bodies includes major rivers and lakes.

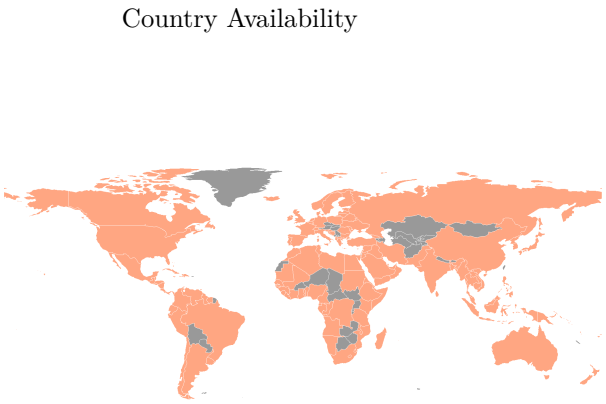




3.34.4 Land area where elevation is below 5 meters (% of total land area) (wdi_-areabelow)

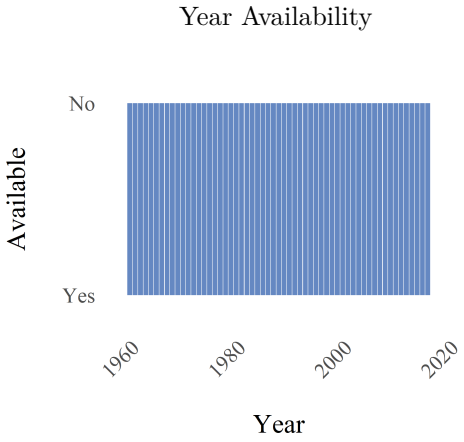
Land area below 5m is the percentage of total land where the elevation is 5 meters or less.

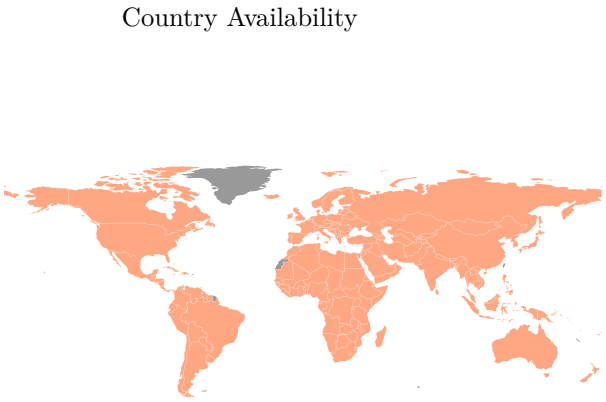




3.34.5 CO2 emissions (metric tons per capita) (wdi_co2)

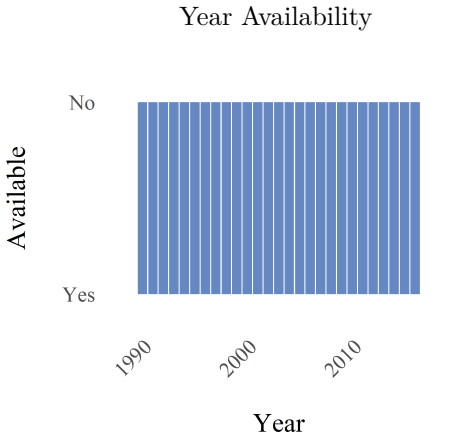
Carbon dioxide (CO2) emissions stem from the burning of fossil fuels and the manufacture of cement. They include carbon dioxide produced during consumption of solid, liquid, and gas fuels and gas flaring.

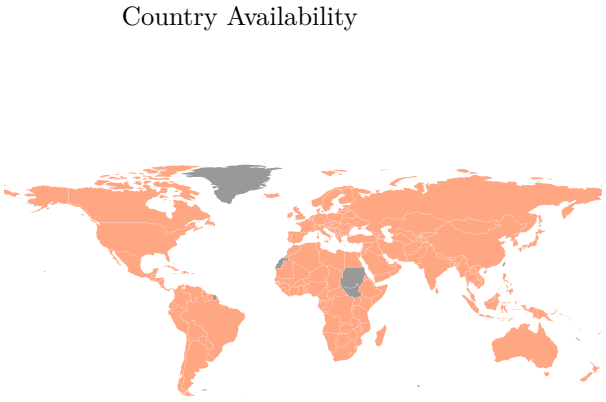




3.34.6 Forest area (% of land area) (wdi_forest)

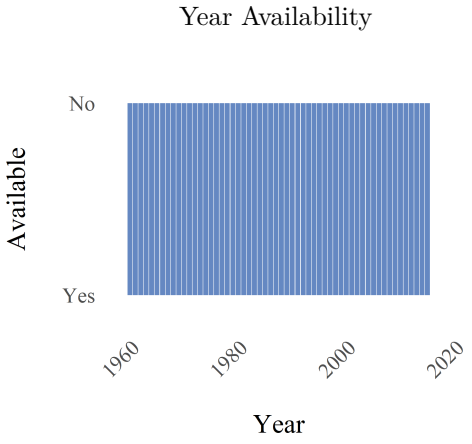
Forest area is land under natural or planted stands of trees of at least 5 meters in situ, whether productive or not, and excludes tree stands in agricultural production systems (for example, in fruit plantations and agroforestry systems) and trees in urban parks and gardens.

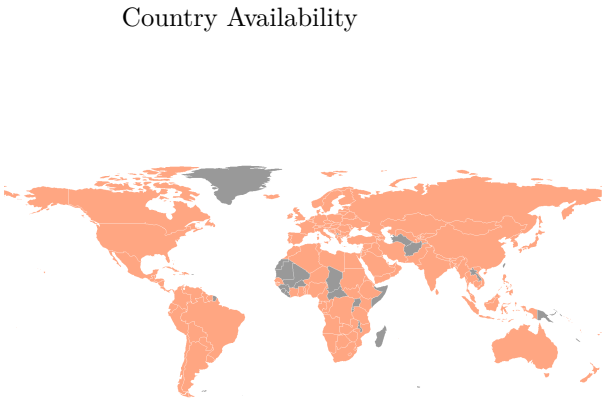




3.34.7 Fossil fuel energy consumption (% of total) (wdi_fossil)

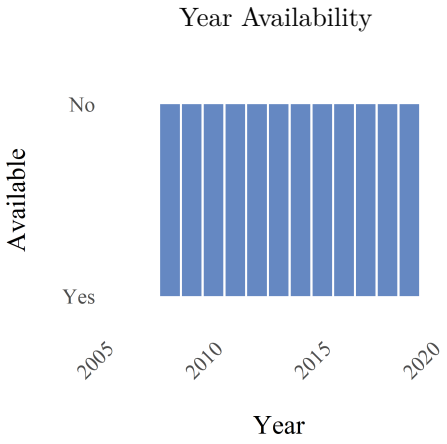
Fossil fuel energy consumption as a percentage of total energy consumption. Fossil fuel comprises coal, oil, petroleum, and natural gas products.

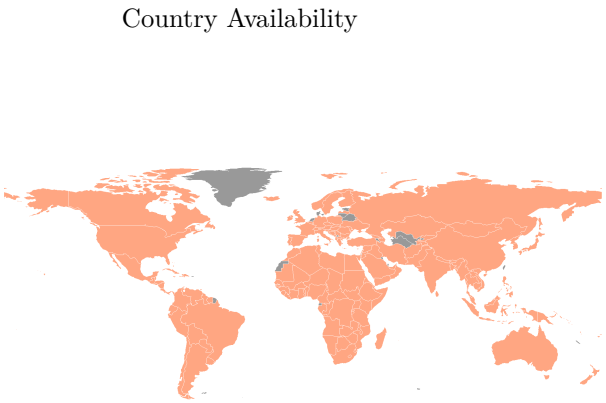




3.34.8 Internally displaced persons, new displacement-disasters (number) (wdi_-idpdis)

Internally displaced persons, new displacement associated with disasters (number of people). Internally displaced persons are defined according to the 1998 Guiding Principles (http://www.internal-displacement.org/publications/1998/ocha-guiding-principles-on-internal-displacement) as people or groups of people who have been forced or obliged to flee or to leave their homes or places of habitual residence, in particular as a result of armed conflict, or to avoid the effects of armed conflict, situations of generalized violence, violations of human rights, or natural or human-made disasters and who have not crossed an international border. "New Displacement" refers to the number of new cases or incidents of displacement recorded, rather than the number of people displaced. This is done because people may have been displaced more than once.

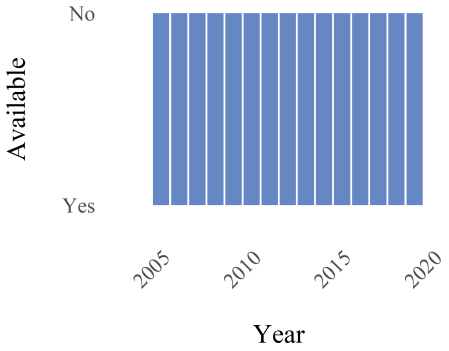




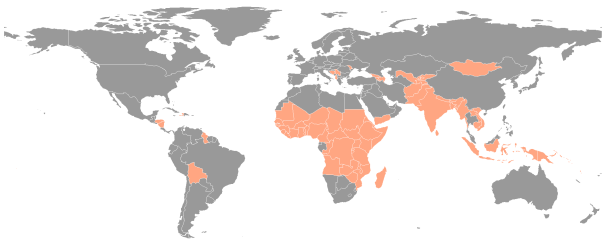
3.34.9 Policy and institutions for environmental sustainability (wdi_piesr)

Policy and institutions for environmental sustainability measures the extent to which environmental policies foster the protection and sustainable use of natural resources and the management of pollution. The indicator ranges from 1 (low) to 6 (high).

Year Availability



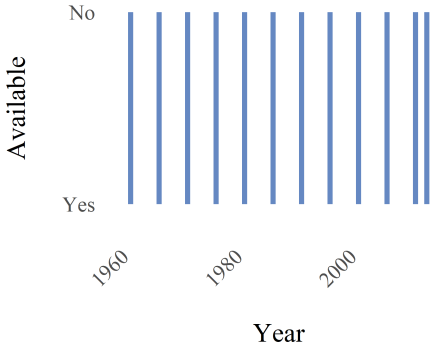
Country Availability



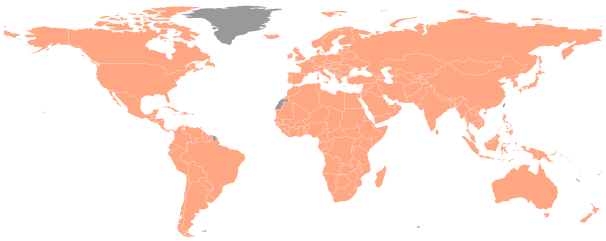
3.34.10 Average precipitation in depth (mm per year) (wdi_precip)

Average precipitation is the long-term average in depth (over space and time) of annual precipitation in the country in millimeters (mm). Precipitation is defined as any kind of water that falls from clouds as a liquid or a solid.

Year Availability

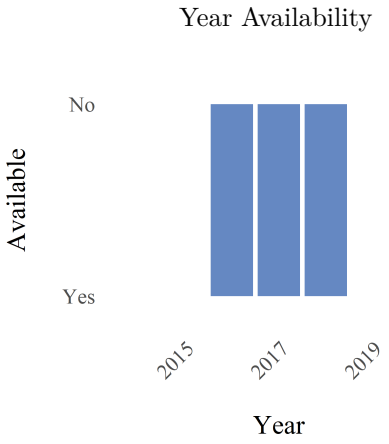


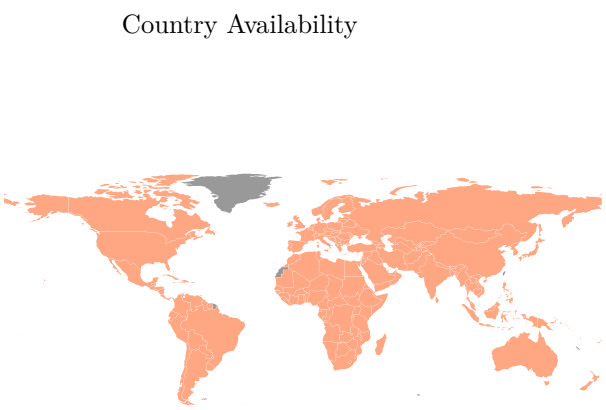
Country Availability



3.34.11 Terrestrial protected areas (% of total land area) (wdi_tpa)

Terrestrial protected areas are totally or partially protected areas of at least 1,000 hectares that are designated by national authorities as scientific reserves with limited public access, national parks, natural monuments, nature reserves or wildlife sanctuaries, protected landscapes, and areas managed mainly for sustainable use. Marine areas, unclassified areas, littoral (intertidal) areas, and sites protected under local or provincial law are excluded. World Database on Protected Areas (WDPA) where the compilation and management is carried out by United Nations Environment World Conservation Monitoring Centre (UNEP-WCMC) in collaboration with governments, non-governmental organizations, academia, and industry. The data are available online through the Protected Planet website (https://www.protectedplanet.net/).





3.35 World Values Survey

Dataset by: World Values Survey

If you use any of these variables, make sure to cite the original source and QoG Data. Our suggested citation for this dataset is:

EVS. 2020. *European Values Study 2017: Integrated Dataset (EVS 2017).* URL: `https://doi.org/10.4232/1.13560`

EVS. 2020. *European Values Study Longitudinal Data File 1981-2008 (EVS 1981-2008).* URL: `https://doi.org/10.4232/1.13486`

Inglehart, R. et al. 2014. *World Values Survey: Round Six - Country-Pooled Datafile Version.* URL: `www.worldvaluessurvey.org/WVSDocumentationWV6.jsp`

Haerpfer, C. et al. 2020. *World Values Survey: Round Seven Country-Pooled Datafile.* URL: `http://www.worldvaluessurvey.org/WVSDocumentationWV7.jsp`

Link to the original source: `http://www.worldvaluessurvey.org/`

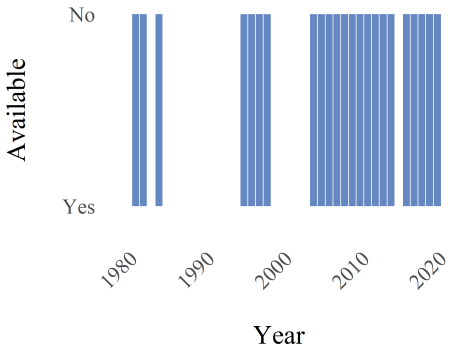
The World Values Survey is a global network of social scientists studying changing values and their impact on social and political life, led by an international team of scholars, with the WVS association and secretariat headquartered in Stockholm, Sweden. The European Values Study started in 1981 when a thousand citizens in the European Member States of that time were interviewed using standardized questionnaires. Every nine years, the survey is repeated in a variable number of countries. The fourth wave in 2008 covers no less than 47 European countries/regions, from Iceland to Georgia and from Portugal to Norway. EVS is cooperating with WVS for the data collection in Europe and both datasets can be integrated.

The variables are country averages calculated using the population weight provided by WVS/EVS.

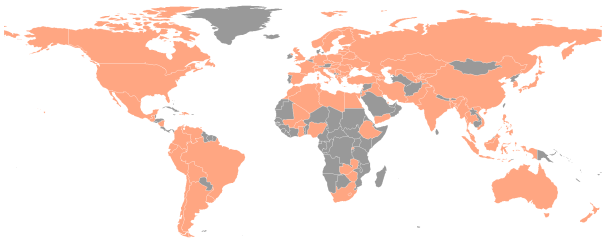
3.35.1 Active memberships in environmental organizations (%) (wvs_ameop)

Percent of respondents mentioning they are active members in an environmental organization in the question: "Now I am going to read out a list of voluntary organizations; for each one, could you tell me whether you are a member, an active member, an inactive member, or not a member of that type of organization?". A higher score means that more people are active members of environmental organizations. A lower score means that fewer people are active members of environmental organizations.

Year Availability



Country Availability



3.35.2 Confidence in environmental organizations (mean) (wvs_ceom)

Average reply to the question: "I am going to name a number of organizations. For each one, could you tell me how much confidence you have in them: is it a great deal of confidence, quite a lot of confidence, not very much confidence, or none at all? - Environmental organizations":

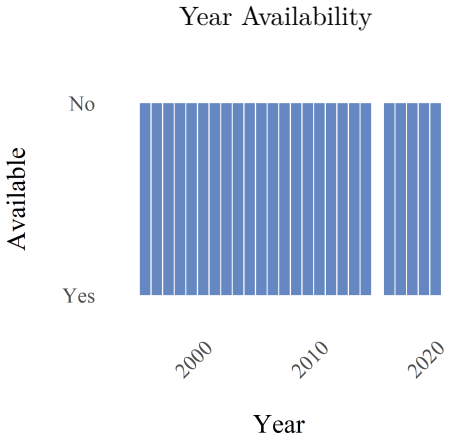
1) A great deal;

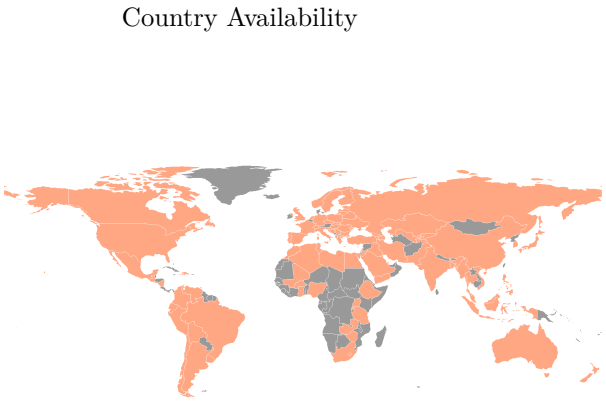
2) Quite a lot;

3) Not very much;

4) None at all.

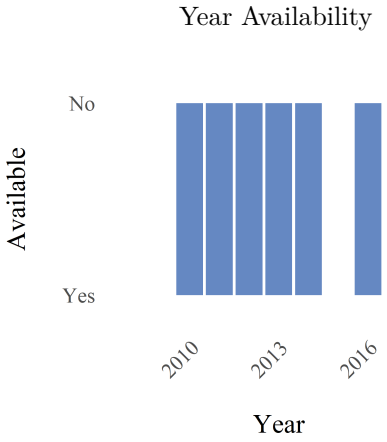
Answers "Don't know" and "No answer" are deleted. The higher the score, the lower the confidence in environmental organizations.

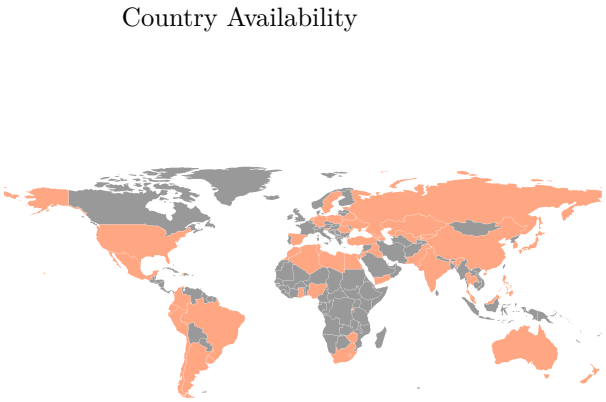




3.35.3 Donations to ecological organizations (%) (wvs_deop)

Percent of "yes"-replies to the question: "During the past two years, have you given money to an ecological organization?". A higher score means that more people have donated money to environmental organizations. A lower score means that fewer people have donated money to environmental organizations.





3.35.4 Protecting environment vs economic growth (%) (wvs_epmip)

Percent of replies mentioning "Protecting the environment should be given priority" to the question: "Here are two statements people sometimes make when discussing the environment and economic growth. Which of them comes closer to your own point of view?

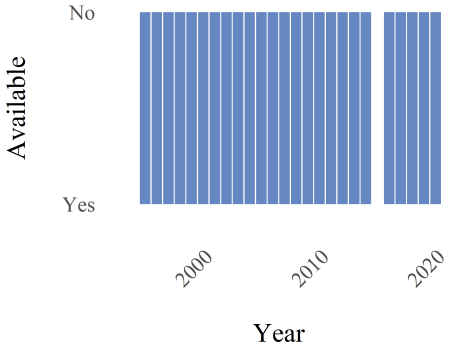
A. Protecting the environment should be given priority, even if it causes slower economic growth

and some loss of jobs

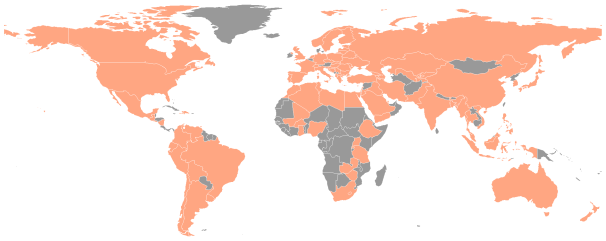
B. Economic growth and creating jobs should be the top priority, even if the environment suffers to some extent".

A higher score means that more people prioritize the environment over economic growth and jobs. A lower score means that more people prioritize economic growth and jobs over the environment.

Year Availability



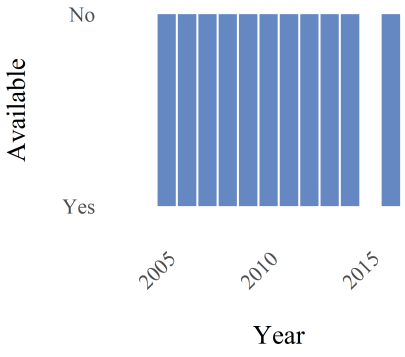
Country Availability



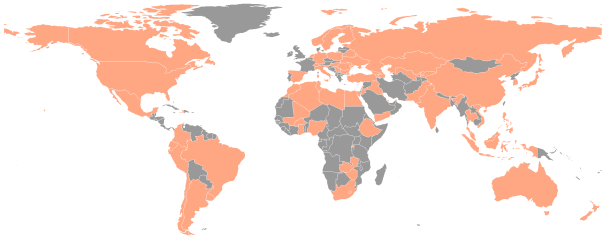
3.35.5 Environment is the most serious problem (%) (wvs_epmpp)

Percent of replies mentioning "Environmental pollution" to the question: "I'm going to read out some problems. Please indicate which of the following problems you consider the most serious one for the world as a whole?". A higher score means that more people prioritize the environment over other serious world problems. A lower score means that fewer people prioritize the environment over other serious world problems.

Year Availability



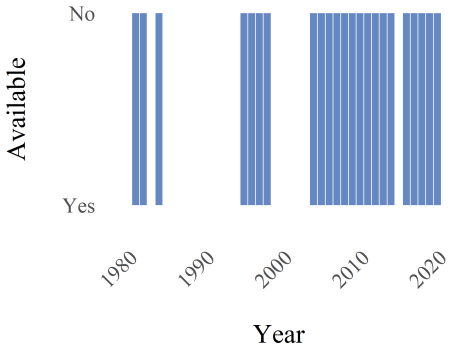
Country Availability



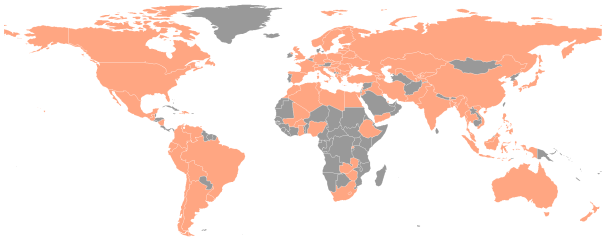
3.35.6 Inactive memberships in environmental organizations (%) (wvs_imeop)

Percent of respondents mentioning they are inactive members in an environmental organization in the question: "Now I am going to read out a list of voluntary organizations; for each one, could you tell me whether you are a member, an active member, an inactive member, or not a member of that type of organization?". A higher score means that there are more inactive members in environmental organizations among the general population. A lower score implies that there are fewer inactive members in environmental organizations among the general population.

Year Availability



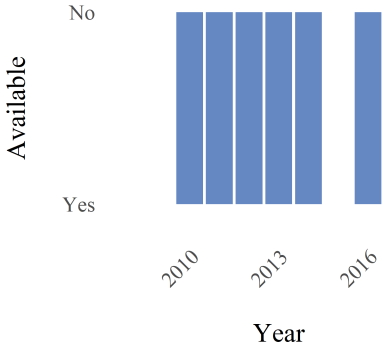
Country Availability



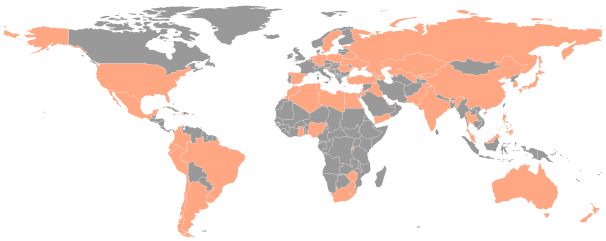
3.35.7 Participation in environmental protests (%) (wvs_pedp)

Percent of "yes"-replies to the question: "During the past two years, have you participated in a demonstration for some environmental cause?". A higher score means that there are more people who have participated in environmental protests. A lower score means that there are fewer people who have participated in environmental protests.

Year Availability



Country Availability



3.35.8 Important to look after the environment (mean) (wvs_ploem)

Average reply to the question: "Now I will briefly describe some people. Using this card, would you please indicate for each description whether that person is very much like you, like you, somewhat like you, not like you, or not at all like you? - Looking after the environment is important to this person; to care for nature and save life resources":

1) Very much like me;

2) Like me;

3) Somewhat like me;

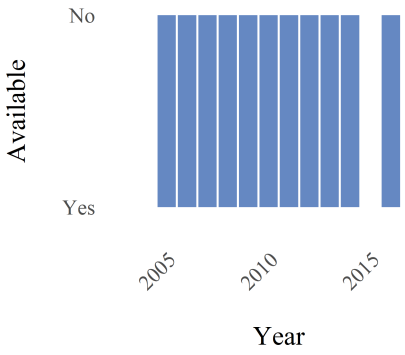
4) A little like me;

5) Not like me;

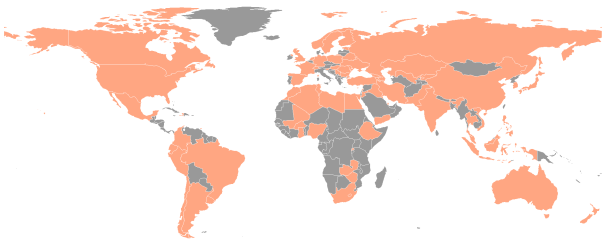
6) Not at all like me.

Answers "Don't know" and "No answer" are deleted. A higher score means that fewer people believe that it is important to look after the environment. A lower score means that more people believe that it is important to look after the environment.

Year Availability



Country Availability



4 Appendix

Country name	ccode	ccodealp	Data from	Data to	Comment
Afghanistan	4	AFG	1946	2020	Independence from the UK 1919
Albania	8	ALB	1946	2020	Independence recognized by the Great Powers 1913
Algeria	12	DZA	1963	2020	Independence from France 1962
Andorra	20	AND	1946	2020	Independence from the Crown of Aragon 1278
Angola	24	AGO	1976	2020	Independence from Portugal 1975
Antigua and Barbuda	28	ATG	1982	2020	Independence from the UK 1981
Argentina	32	ARG	1946	2020	Independence from Spain 1816
Armenia	51	ARM	1992	2020	Independence from the Soviet Union recognized 1991
Australia	36	AUS	1946	2020	Statute of Westminster Adoption Act 1942
Austria	40	AUT	1955	2020	The State Treaty signed in Vienna 1955
Azerbaijan	31	AZE	1992	2020	Independence from the Soviet Union 1991
Bahamas	44	BHS	1974	2020	Independence from the UK 1973
Bahrain	48	BHR	1972	2020	End of treaties with the UK 1971
Bangladesh	50	BGD	1971	2020	Independence from Pakistan 1971
Barbados	52	BRB	1967	2020	Independence from the UK 1966
Belarus	112	BLR	1992	2020	Independence from the Soviet Union 1991
Belgium	56	BEL	1946	2020	Independence from the Netherlands recognized 1839
Belize	84	BLZ	1982	2020	Independence from the UK 1981
Benin	204	BEN	1961	2020	Independence from France 1960
Bhutan	64	BTN	1946	2020	Monarchy established 1907
Bolivia	68	BOL	1946	2020	Independence from Spain recognized 1847
Bosnia and Herzegovina	70	BIH	1992	2020	Independence from Yugoslavia 1992
Botswana	72	BWA	1967	2020	Independence from the UK 1966
Brazil	76	BRA	1946	2020	Independence from the UK of Portugal, Brazil & the Algarve 1825
Brunei	96	BRN	1984	2020	Independence from the UK 1984
Bulgaria	100	BGR	1946	2020	Independence from Ottoman Empire 1909
Burkina Faso	854	BFA	1961	2020	Independence from France 1960
Burundi	108	BDI	1963	2020	UN Trust Territory ceased to exist 1962
Cambodia	116	KHM	1954	2020	Independence from France 1953
Cameroon	120	CMR	1960	2020	Independence from France 1960
Canada	124	CAN	1946	2020	Statute of Westminster 1931
Cape Verde	132	CPV	1976	2020	Independence from Portugal 1975

Country name	ccode	ccodealp	Data from	Data to	Comment
Central African Republic	140	CAF	1961	2020	Independence from France 1960
Chad	148	TCD	1961	2020	Independence from France 1960
Chile	152	CHL	1946	2020	Independence from Spain recognized 1844
China	156	CHN	1946	2020	Unification of China under the Qin Dynasty 221 BC
Colombia	170	COL	1946	2020	Independence from Spain recognized 1819
Comoros	174	COM	1976	2020	Independence from France 1975
Congo, Democratic Republic	180	COD	1960	2020	Independence from Belgium 1960
Congo, Republic of	178	COG	1961	2020	Independence from France 1960
Costa Rica	188	CRI	1946	2020	Independence from United Provinces of Central America 1847
Cote d'Ivoire	384	CIV	1961	2020	Independence from France 1960
Croatia	191	HRV	1992	2020	Independence 1991
Cuba	192	CUB	1946	2020	Independence from the United States 1902
Cyprus (-1974)	993	CYP	1961	1974	Independence from the UK 1960
Cyprus (1975-)	196	CYP	1975	2020	Division of the island 1974
Czech Republic	203	CZE	1993	2020	Dissolution of Czechoslovakia 1993
Czechoslovakia	200	CSK	1946	1992	Independence 1918, Liberation 1945
Denmark	208	DNK	1946	2020	Consolidaton 8th century
Djibouti	262	DJI	1977	2020	Independence from France 1977
Dominica	212	DMA	1979	2020	Independence from the UK 1978
Dominican Republic	214	DOM	1946	2020	Independence from Spain 1865
Ecuador	218	ECU	1946	2020	Independence from Gran Colombia 1830
Egypt	818	EGY	1946	2020	Indepencence from the UK 1922
El Salvador	222	SLV	1946	2020	Independence from the Greater Republic of Central America 1898
Equatorial Guinea	226	GNQ	1969	2020	Independence from Spain 1968
Eritrea	232	ERI	1993	2020	Independence from Ethiopia 1993
Estonia	233	EST	1992	2020	Independence restored 1991
Eswatini (formerly Swaziland)	748	SWZ	1969	2020	Independence from British mandate 1968
Ethiopia (-1992)	230	ETH	1946	1992	Empire of Ethiopia 1137
Ethiopia (1993-)	231	ETH	1993	2020	Eritrean Independence 1993
Fiji	242	FJI	1971	2020	Independence from the UK 1970
Finland	246	FIN	1946	2020	Independence from Soviet Russia recognized 1918
France (-1962)	991	FRA	1946	1962	French Republic 1792

Country name	ccode	ccodealp	Data from	Data to	Comment
France (1963-)	250	FRA	1963	2020	Algeria Independence from France 1962
Gabon	266	GAB	1961	2020	Independence from France 1960
Gambia	270	GMB	1965	2020	Independence from the UK 1965
Georgia	268	GEO	1992	2020	Independence from the Soviet Union 1991
Germany	276	DEU	1991	2020	Reunification 1990
Germany, East	278	DDR	1950	1990	Established 1949
Germany, West	280	DEU	1949	1990	Established 1949
Ghana	288	GHA	1957	2020	Independence from the British Empire 1957
Greece	300	GRC	1946	2020	Independence from the Ottoman Empire recognized 1830
Grenada	308	GRD	1974	2020	Independence from the UK 1974
Guatemala	320	GTM	1946	2020	Independence from the First Mexican Empire 1823
Guinea	324	GIN	1959	2020	Independence from France 1958
Guinea-Bissau	624	GNB	1975	2020	Independence from Portugal recognized 1974
Guyana	328	GUY	1966	2020	Independence from the UK 1966
Haiti	332	HTI	1946	2020	Independence recognized 1825
Honduras	340	HND	1946	2020	Independence declared as Honduras 1838
Hungary	348	HUN	1946	2020	Secession from Austria-Hungary 1918
Iceland	352	ISL	1946	2020	Kingdom of Iceland 1918
India	356	IND	1948	2020	Independence from the UK (Dominion) 1947
Indonesia	360	IDN	1950	2020	Independence from the Netherlands recognized 1949
Iran	364	IRN	1946	2020	Safavid Empire 1501
Iraq	368	IRQ	1946	2020	Independence from the UK 1932
Ireland	372	IRL	1946	2020	The Anglo-lrish Treaty 1921
Israel	376	ISR	1948	2020	Independence from Mandatory Palestine 1948
Italy	380	ITA	1946	2020	Unification 1861
Jamaica	388	JAM	1963	2020	Independence from the UK 1962
Japan	392	JPN	1946	2020	National Foundation Day 660 BC
Jordan	400	JOR	1946	2020	League of Nation mandate ended 1946
Kazakhstan	398	KAZ	1992	2020	Independence from the Soviet Union 1991
Kenya	404	KEN	1964	2020	Independence from the UK 1963
Kiribati	296	KIR	1980	2020	Independence from the UK 1979
Korea, North	408	PRK	1949	2020	Division of Korea 1948
Korea, South	410	KOR	1948	2020	Division of Korea 1948
Kuwait	414	KWT	1961	2020	Independence from the UK 1961
Kyrgyzstan	417	KGZ	1992	2020	Independence from the Soviet Union 1991
Laos	418	LAO	1954	2020	Independence from France 1953

Country name	ccode	ccodealp	Data from	Data to	Comment
Latvia	428	LVA	1992	2020	Independence from the Soviet Union 1991
Lebanon	422	LBN	1946	2020	Independence from France 1943
Lesotho	426	LSO	1967	2020	Independence from the UK 1966
Liberia	430	LBR	1946	2020	Independence from the American Colonization Society 1847
Libya	434	LBY	1952	2020	Released from British and French oversight 1951
Liechtenstein	438	LIE	1946	2020	Independence from German Confederation 1866
Lithuania	440	LTU	1992	2020	Independence from the Soviet Union 1991
Luxembourg	442	LUX	1946	2020	End of Personal Union 1890
Madagascar	450	MDG	1960	2020	Independence from France 1960
Malawi	454	MWI	1965	2020	Independence from the UK 1964
Malaysia (-1965)	992	MYS	1964	1965	Federation of Malaya, N Bomeo, Sarawak, Singapore 1963
Malaysia (1966-)	458	MYS	1966	2020	Singapore separation from Malaysia 1965
Maldives	462	MDV	1966	2020	Independence from the UK 1965
Mali	466	MLI	1961	2020	Independence from France 1960
Malta	470	MLT	1965	2020	Independence from the UK 1964
Marshall Islands	584	MHL	1987	2020	Independence from Compact of Free Associaton 1986
Mauritania	478	MRT	1961	2020	Independence from France 1960
Mauritius	480	MUS	1968	2020	Independence from the UK 1968
Mexico	484	MEX	1946	2020	Independence from Spain recognized 1821
Micronesia	583	FSM	1987	2020	Independence from Compact of Free Associaton 1986
Moldova	498	MDA	1992	2020	Independence from the Soviet Union 1991
Monaco	492	MCO	1946	2020	Franco-Monegasque Treaty 1861
Mongolia	496	MNG	1946	2020	Independence from the Qin Dynasty 1911
Montenegro	499	MNE	2006	2020	Independence from Serbia and Montenegro 2006
Morocco	504	MAR	1956	2020	Independence from France and Spain 1956
Mozambique	508	MOZ	1975	2020	Independence from the Portuguese Republic 1975
Myanmar	104	MMR	1948	2020	Independence from the UK 1948
Namibia	516	NAM	1990	2020	Independence from South Africa 1990
Nauru	520	NRU	1968	2020	Independence from UN Trusteeship 1968
Nepal	524	NPL	1946	2020	Kingdom declared 1768
Netherlands	528	NLD	1946	2020	Independence from the Spanish Empire in 1648 with the treaty of Munster
New Zealand	554	NZL	1948	2020	Statute of Westminster Adoption Act 1947
Nicaragua	558	NIC	1946	2020	Independence from the Federal Republic of Central America 1838
Niger	562	NER	1961	2020	Independence from France 1960

Country name	ccode	ccodealp	Data from	Data to	Comment
Nigeria	566	NGA	1961	2020	Independence from the UK 1960
Norway	578	NOR	1946	2020	Dissolution of union with Sweden 1905
North Macedonia	807	MKD	1993	2020	Independence from Yugolsavia recognized 1993
Oman	512	OMN	1946	2020	Imamate established 751
Pakistan (-1970)	997	PAK	1948	1970	Independence from the UK 1947
Pakistan (1971-)	586	PAK	1971	2020	Bangladesh independence from Pakistan 1971
Palau	585	PLW	1995	2020	Independence from Compact of Free Association with the US 1994
Panama	591	PAN	1946	2020	Independence from Colombia 1903
Papua New Guinea	598	PNG	1976	2020	Independence from Australia 1975
Paraguay	600	PRY	1946	2020	Independence from Spain 1811
Peru	604	PER	1946	2020	Independence from Span recognized 1824
Philippines	608	PHL	1947	2020	Independence from the United States 1946
Poland	616	POL	1946	2020	Reconstitution of Poland 1918
Portugal	620	PRT	1946	2020	Independence from Kingdom of Leon recognzed 1143
Qatar	634	QAT	1972	2020	Independence from the UK 1971
Romania	642	ROU	1946	2020	Independence from the Ottoman Empire 1878
Russia	643	RUS	1992	2020	Russian Federation 1991
Rwanda	646	RWA	1963	2020	Independence from Belgium 1962
Samoa	882	WSM	1962	2020	Independence from New Zealand 1962
San Marino	674	SMR	1946	2020	Independence from the Roman Empire 301
Sao Tome and Principe	678	STP	1976	2020	Independence from Portugal 1975
Saudi Arabia	682	SAU	1946	2020	Kingdom founded 1932
Senegal	686	SEN	1961	2020	Withdrawal from the Mali Federation 1960
Serbia	688	SRB	2006	2020	Independent republic 2006
Serbia and Montenegro	891	SCG	1992	2005	Established 1992, Dissolution 2006
Seychelles	690	SYC	1976	2020	Independence from the UK 1976
Sierra Leone	694	SLE	1961	2020	Independence from the UK 1961
Singapore	702	SGP	1966	2020	Separation from Malaysia 1965
Slovakia	703	SVK	1993	2020	Independence from Czechoslovakia 1993
Slovenia	705	SVN	1991	2020	Independence from Yugoslavia 1991
Solomon Islands	90	SLB	1979	2020	Independence from the UK 1978
Somalia	706	SOM	1961	2020	Union, Independence and Constitution 1960
South Africa	710	ZAF	1946	2020	The Union of South Africa came into being 1910
South Sudan	728	SSD	2011	2020	Separation from Sudan in 2011

Country name	ccode	ccodealp	Data from	Data to	Comment
Spain	724	ESP	1946	2020	Nation State 1812
Sri Lanka	144	LKA	1948	2020	Independence from the UK(Dominion) 1948
St Kitts and Nevis	659	KNA	1984	2020	Independence from the UK 1983
St Lucia	662	LCA	1979	2020	Independence from the UK 1979
St. Vincent & the Grenadines	670	VCT	1980	2020	Independence from the UK 1979
Sudan (-2011)	736	SDN	1956	2011	Independence from the UK and Egypt 1956
Sudan (2012-)	729	SDN	2012	2020	South Sudanese independence 2011
Suriname	740	SUR	1976	2020	Independence from the Netherlands 1975
Sweden	752	SWE	1946	2020	Consolidation Middle Ages
Switzerland	756	CHE	1946	2020	Peace of Westphalia 1648
Syria	760	SYR	1946	2020	Independence from France 1946
Taiwan	158	TWN	1950	2020	Kuomintang retreat to Taiwan 1949
Tajikistan	762	TJK	1992	2020	Independence from the Soviet Union 1991
Tanzania	834	TZA	1964	2020	Merger (Tanganyika, Zanzibar and Pemba) 1964
Thailand	764	THA	1946	2020	Rattanakosin Kingdom 1782
Tibet	994	XTI	1946	1950	Independence from Qing Dynasty 1913
Timor-Leste	626	TLS	2002	2020	Independence from Indonesia 2002
Togo	768	TGO	1960	2020	Independence from France 1960
Tonga	776	TON	1970	2020	Independence from British protection 1970
Trinidad and Tobago	780	TTO	1963	2020	Independence from the UK 1962
Tunisia	788	TUN	1956	2020	Independence from France 1956
Turkey	792	TUR	1946	2020	Secession from the Ottoman Empire 1923
Turkmenistan	795	TKM	1992	2020	Independence from the Soviet Union 1991
Tuvalu	798	TUV	1979	2020	Independence from the UK 1978
Uganda	800	UGA	1963	2020	Independence from the UK 1962
Ukraine	804	UKR	1992	2020	Independence from the Soviet Union 1991
United Arab Emirates	784	ARE	1972	2020	UK treaties ended 1971
United Kingdom	826	GBR	1946	2020	Acts of Union 1707
United States	840	USA	1946	2020	Independence from the Kingdom of Great Britain recognized 1783
Uruguay	858	URY	1946	2020	Independence from the Empire of Brazil recognized 1828
USSR	810	SUN	1946	1991	Treaty of Creation 1922, Union dissolved 1991
Uzbekistan	860	UZB	1992	2020	Independence from the Soviet Union 1991
Vanuatu	548	VUT	1981	2020	Independence from France and the UK 1980
Venezuela	862	VEN	1946	2020	Independence from Gran Colombia recognized 1845

Country name	ccode	ccodealp	Data from	Data to	Comment
Vietnam	704	VNM	1977	2020	Reunification 1976
Vietnam, North	998	VNM	1955	1976	Geneva Accords. Partition of the County, 1954
Vietnam, South	999	VDR	1955	1976	Geneva Accords. Partition of the County, 1954
Yemen	887	YEM	1990	2020	Unification 1990
Yemen, North	886	YEM	1946	1989	Independence from the Ottoman Empire 1918
Yemen, South	720	YMD	1968	1989	Independence from the UK 1967
Yugoslavia	890	YUG	1946	1991	The union of the State of Slovenes, Croats, Serbs & Serbia est 1918
Zambia	894	ZMB	1965	2020	Independence from the UK 1964
Zimbabwe	716	ZWE	1966	2020	The Unilateral Declarator of Independence (UDI) of Rhodesia 1965

References

Aklin, Michaël and Johannes Urpelainen (2014). "The global spread of environmental ministries: domestic–international interactions". In: *International Studies Quarterly* 58.4, pp. 764–780. DOI: 10.1111/isqu.12119.

Bättig, Michèle B, Simone Brander, and Dieter M Imboden (2008). "Measuring countries cooperation within the international climate change regime". In: *Environmental Science & Policy* 11.6, pp. 478–489. DOI: 10.1016/j.envsci.2008.04.003.

Bernauer, Thomas, Tobias Böhmelt, and Vally Koubi (2013). "Is there a democracy–civil society paradox in global environmental governance?" In: *Global Environmental Politics* 13.1, pp. 88–107. DOI: 10.1162/GLEP_a_00155.

Boräng, Frida et al. (2019). "Committing to the climate: a global study of accountable climate targets". In: *Sustainability* 11.7, p. 1861. DOI: 10.3390/su11071861.

Botta, Enrico and Tomasz Kozluk (2014). "Measuring environmental policy stringency in OECD countries: A composite index approach". In: *OECD Economics Department Working Papers, No. 1177, OECD Publishing*. Date accessed: 23 August 2020.

Center for International Earth Science Information Network - CIESIN - Columbia University (2019). *Natural Resource Protection and Child Health Indicators, 2019 Release*. Accessed on: 13-11-2020. URL: https://doi.org/10.7927/r6mv-sv82.

Crippa, Monica, Diego Guizzardi, Marilena Muntean, E. Schaaf, et al. (2020). *Fossil CO2 emissions of all world countries - 2020 Report*. Date accessed: 16 April 2020. DOI: 10.2760/143674, JRC121460. URL: https://edgar.jrc.ec.europa.eu/overview.php?v=booklet2020.

Crippa, Monica, Diego Guizzardi, Marilena Muntean, Edwin Schaaf, et al. (2019). *EDGAR v5.0 Global Air Pollutant Emissions*. Date accessed: 16 April 2020. URL: http://data.europa.eu/89h/377801af-b094-4943-8fdc-f79a7c0c2d19.

Crippa, Monica, Efisio Solazzo, et al. (2020). "High resolution temporal profiles in the Emissions Database for Global Atmospheric Research".

Donner, Sabine, Hauke Hartmann, and Robert Schwarz (2020). *Transformation Index of the Bertelsmann Stiftung 2020*. Bertelsmann Stiftung. URL: http://www.bti-project.org.

Eskander, S. and Fankhauser S. (2020). "Reduction in greenhouse gas emissions from national climate legislation". In: *Nature Climate Change* 10. Date accessed: pp. 750–756. DOI: 10.1038/s41558-020-0831-z. URL: https://github.com/smsu1979/Eskander-Fankhauser-NCC-2020-.

European Commission, Joint Research Centre (EC-JRC)/Netherlands Environmental Assessment Agency (PBL) (2020). *Emissions Database for Global Atmospheric Research (EDGAR), release EDGAR v5.0 (1970 - 2015) of April 2020*. Date accessed: 27 February 2021. URL: https://edgar.jrc.ec.europa.eu/overview.php?v=50_AP.

EVS (2020a). *European Values Study 2017: Integrated Dataset (EVS 2017)*. URL: https://doi.org/10.4232/1.13560.

— (2020b). *European Values Study Longitudinal Data File 1981-2008 (EVS 1981-2008)*. URL: https://doi.org/10.4232/1.13486.

FAO (2021). *AQUASTAT Database*. Date accessed: 10 June 2021. URL: http://www.fao.org/aquastat/statistics/query/index.html.

Food and Agricultural Organization of the United Nations (2020). *Global Forest Resources Assessments*. URL: http://www.fao.org/forest-resources-assessment/en/.

Global Footprint Network (2019). *National Footprint and Biocapacity Accounts (1961-2016), 2019 Edition*. Date accessed: 21 October 2020. URL: https://data.footprintnetwork.org.

Grantham Research Institute on Climate Change and the Environment and Sabin Center for Climate Change Law (2021). *Climate Change Laws of the World database*. Date accessed: 7 June 2021. URL: climate-laws.org.

Guha-Sapir, Debarati (2020). "EM-DAT, the Emergency Events Database". Date accessed 23 December 2020. URL: www.emdat.be.

Haerpfer, C. et al. (2020). *World Values Survey: Round Seven – Country-Pooled Datafile*. URL: http://www.worldvaluessurvey.org/WVSDocumentationWV7.jsp.

Halpern, Benjamine et al. (Aug. 2012). "An index to assess the health and benefits of the global ocean". In: *Nature* 488, pp. 615–620. DOI: 10.1038/nature11397.

— (2018). *Ocean Health Index*. Date accessed: 2 October 2020. URL: https://github.com/OHI-Science/ohi-global/releases.

Harris, Ian et al. (2020). "Version 4 of the CRU TS monthly high-resolution gridded multivariate climate dataset". In: *Scientific Data* 7.1, p. 109. ISSN: 2052-4463. DOI: 10.1038/s41597-020-0453-3. URL: https://doi.org/10.1038/s41597-020-0453-3.

Heichel, Stephan et al. (2008). "Research design, variables and data". In: *Environmental Policy Convergence in Europe: The Impact of International Institutions and Trade*. Ed. by Katharina Holzinger, Christoph Knill, and Helge Jörgens. Date accessed: 24 March 2020. Cambridge: Cambridge University Press, pp. 64–97. URL: https://www.polver.uni-konstanz.de/en/holzinger/research/research-projects/enviromental-policy-convergence-in-europe-envipolcon/project-deliverables/.

Holzinger, Katharina, Christoph Knill, and Thomas Sommerer (2011). "Is there convergence of national environmental policies? An analysis of policy outputs in 24 OECD countries". In: *Environmental politics* 20.1. Date accessed: 23 July 2020, pp. 20–41. URL: https://www.polver.uni-konstanz.de/holzinger/research/research-projects/policy-wandel-in-der-umweltpolitik-der-einfluss-von-nationalen-vetospielern-und-transnationalem-policy-learning/der-datensatz-environmental-policy-chance-envipolchange/.

Inglehart, R. et al. (2014). *World Values Survey: Round Six - Country-Pooled Datafile Version*. URL: www.worldvaluessurvey.org/WVSDocumentationWV6.jsp.

ISSP Research Group (1995). *International Social Survey Programme: Environment I - ISSP 1993*. GESIS Data Archive, Cologne. ZA2450 Data file Version 1.0.0, https://doi.org/10.4232/1.2450. Date accessed: 17 February 2016. DOI: 10.4232/1.2450.

— (2003). *International Social Survey Programme: Environment II - ISSP 2000*. GESIS Data Archive, Cologne. ZA3440 Data file Version 1.0.0, https://doi.org/10.4232/1.3440. Date accessed: 17 February 2016. DOI: 10.4232/1.3440.

— (2019). *International Social Survey Programme: Environment III - ISSP 2010*. GESIS Data Archive, Cologne. ZA5500 Data file Version 3.0.0, https://doi.org/10.4232/1.13271. Date accessed: 17 February 2016. DOI: 10.4232/1.13271.

Lührmann, Anna et al. (2020). *Varieties of Party Identity and Organization (V-Party) Dataset V1*. Date accessed: 22 February 2021. DOI: 10.23696/vpartydsv1.

Mitchell, Ronald B et al. (2020). "What we know (and could know) about international environmental agreements". In: *Global Environmental Politics* 20.1, pp. 103–121.

Mitchell, Ronald B. (2020). *International Environmental Agreements Database Project (Version 2020.1)*. Date accessed: 15 November 2020. URL: http://iea.uoregon.edu/.

NSD - Norwegian Centre for Research Data (2020). *European Social Survey Cumulative File, ESS 1-9*. Date accessed: 17 February 2021. DOI: 10.21338/NSD-ESS-CUMULATIVE. URL: http://www.europeansocialsurvey.org/.

Organisation for Economic Co-operation and Development (OECD) (2020a). *Environmental protection expenditure account (EPEA)*. Date accessed: 13 May 2020. DOI: 10.1787/7cf875d3-en. URL: https://ec.europa.eu/eurostat/web/products-manuals-and-guidelines/-/KS-GQ-17-004.

— (2020b). *Environmentally adjusted multifactor productivity*. Date accessed: 13 May 2020. DOI: 10.1787/55a11744-en. URL: oe.cd/eamfp.

— (2020c). *Exposure to PM2.5 in countries and regions (Edition 2018)*. Date accessed: 13 May 2020. DOI: 10.1787/bbb42e4d-en. URL: https://www.oecd-ilibrary.org/environment/data/oecd-environment-statistics_env-data-en.

— (2020d). *Green Growth Indicators Database*. Date accessed: 23 August 2020. DOI: 10.1787/data-00665-en. URL: https://stats.oecd.org/.

— (2020e). *Policy Instruments for the Environment (PINE)*. Date accessed: 13 May 2020. DOI: 10.1787/env-data-en. URL: oe.cd/pine.

Pemstein, Daniel et al. (2020). *The V-Dem Measurement Model: Latent Variable Analysis for Cross-National and Cross-Temporal Expert-Coded Data*.

Rodríguez, Miguel Cárdenas, Ivan Hai, and Martin Souchier (2018). "Environmentally adjusted multifactor productivity: methodology and empirical results for OECD and G20 countries". In: *Ecological Economics* 153, pp. 147–160.

Ross, Michael and Paasha Mahdavi (2015). *Oil and Gas Data, 1932-2014*. DOI: 10.7910/DVN/ZTPW0Y. URL: http://dx.doi.org/10.7910/DVN/ZTPW0Y.

Schiller, Christof, Thorsten Hellmann, and Pia Paulini (2020). "Sustainable Governance Indicators 2020". In: *Bertelsmann Stiftung*. Date accessed: 6 August 2020. URL: https://www.sgi-network.org/2020/Downloads.

Shaddick, Gavin et al. (2018). "Data integration for the assessment of population exposure to ambient air pollution for global burden of disease assessment". In: *Environmental Science & Technology* 52.16, pp. 9069–9078.

The World Bank Group (2021). *Climate Change Knowledge Portal*. Date accessed 2 June 2021. URL: https://climateknowledgeportal.worldbank.org.

Wendling, Z.A. et al. (2020). "2020 Environmental Performance Index". In: *New Haven, CT: Yale Center for Environmental Law and Policy*. Date accessed: 9 September 2021. URL: https://epi.envirocenter.yale.edu/.

World Bank (2020). *World Development Indicators*.

World Resource Institute and the Access Initiative (2015). *Environmental Democracy Index*. Date accessed: 8 February 2021. URL: https://environmentaldemocracyindex.org/.