



# GREEN GROWTH

Knowledge Platform

## Analysis of Existing Environmental Policy Databases

GGKP Research Committee on Trade and Competitiveness

Working Paper 01 | 2017



# Analysis of Existing Environmental Policy Databases

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GGKP Research Committee on Trade and Competitiveness

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May 2017

The Green Growth Knowledge Platform (GGKP) is a global partnership of leading organisations that identifies and addresses major knowledge gaps in green growth theory and practice. Established by the Global Green Growth Institute (GGGI), the Organisation for Economic Co-operation and Development (OECD), the United Nations Environment Programme (UN Environment) and the World Bank, the GGKP includes over 35 partner organisations. For more information visit [www.greengrowthknowledge.org](http://www.greengrowthknowledge.org).



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The GGKP convenes research committees on key green-growth themes to identify knowledge gaps and address them through collaborative research. Each committee is made up of experts from across the GGKP partner organisations and Advisory Committee as well as outside experts. The Research Committees are tasked with assessing the state of knowledge, identifying and prioritizing knowledge gaps and catalyzing a broader research agenda.

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## **Abstract**

This report assesses 24 databases that provide information on environmental policies implemented by national governments. The review of each database summarizes the type of information provided, the breadth of coverage, the accessibility of data, and the strengths and weaknesses of each database with respect to the overall objective of improving access to environmental policy data for assessing the impact of environmental policies on competitiveness and trade. Overall, the electricity and agriculture, forestry and fishing sectors are well covered for OECD countries; other ISIC sectors are covered much less comprehensively and there is a lack of data on non-OECD countries in most databases. While many databases provide bulk download options, very few provide data services which increase data accessibility. It is recommended to work with current databases, either individually or in combination, in order to improve existing data coverage and accessibility for researchers of trade and economic competitiveness.

**Key words:** environmental policy databases; stringency measures and indicators; competitiveness, productivity and growth; developed and developing countries

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## List of Acronyms

API	application program interface
BRIICS	Brazil, Russia, India, Indonesia, China, South Africa
COP	Conference of Parties
EPS	Environmental Policy Stringency Index
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
GHG	greenhouse gas
IEA	International Energy Agency
IRENA	International Renewable Energy Agency
ISIC	International Standard Industrial Classification
ITC	International Trade Centre
IUCN	International Union for Conservation of Nature
LULUCF	Land Use, Land Use Change and Forestry
OECD	Organisation for Economic Co-operation and Development
PAMS	Policies and Measures
POCs	points of contact
REDD+	Reducing Emissions from Deforestation and Forest Degradation
UN	United Nations
WTO	World Trade Organization

## 1. Introduction

Environmental policy databases were identified to assess the availability of data on environmental policies across economic sectors as categorized by the United Nation's International Standard Industrial Classification (ISIC) Revision 4. This report provides a review of these databases, assessing the type of information provided, the breadth of coverage, the accessibility of data, and the strengths and weaknesses of each database with respect to the overall objective of improving access to environmental policy data for assessing impact on trade. The policies are not limited to those specifically targeting green growth, but include environmental policies more broadly as many of these broader policies may encourage green growth and/or impact trade opportunities. There are countless resources on environmental policy available online. This report, however, targets resources that provide large sets of data on environmental policies that can be searched through an online interface.

The process to identify existing databases included interviewing experts across sectors to determine the databases and sources they use for identifying environmental policies, reviewing association and other sector-specific websites for resources and additional expert contacts, and conducting targeted web searches for each sector.

## 2. Summary of existing databases

This report analyzes 24 environmental policy databases (listed below, in alphabetical order). The summary of each database includes information on the operating organization, URL, content summary, strengths and weaknesses with regard to the potential project's objectives, frequency of updates, data accessibility, and a point of contact when available.

**Table 1. List of databases**

<i>Database Name</i>	
1	Building Energy Efficiency Policies Database
2	Climate Change Laws of the World
3	Database on Instruments used for Environmental Policy
4	ECOLEX
5	Emissions Trading Systems Map
6	Environmental Database
7	Environmental Policy Stringency Index
8	Environmental Treaties and Resource Indicators
9	FAOLEX
10	Forest Policy and Innovation Database
11	Forestry Policy and Institutions
12	The Global Climate Legislation Database
13	Global Fisheries Economics - Fisheries Subsidies Database
14	Global Renewable Energy IEA/IRENA Joint Policies and Measures Database
15	International Environmental Agreements Database
16	Inventory of Support Measures for Fossil Fuels
17	Market Access Map
18	New Climate Policy Database
19	Policies and Measures Database: Addressing Climate Change
20	Policies and Measures Database: Energy Efficiency
21	Producer and Consumer Support Estimates Database
22	Renewable Energy Target Data Dashboard
23	RES LEGAL
24	Standards Map

## 2.1 Building Energy Efficiency Policy Database

**Operated by:** International Energy Agency (IEA)

**URL:** <http://www.iea.org/beep/>

**Summary of Content:** The database provides information on three types of policies targeting energy efficiency in buildings: building codes, labels, and incentives. The database can be searched by country, policy type, building type, and requirement type (mandatory, model code, and voluntary). There are currently 340 policies in the database. The policy summary pages provide information on applicable building type(s), governance, compliance path, resources, links to source documents, and incentive program funding levels. Beginning in 2015, the IEA has intensified its data collection for this database.

**Data Sources:** There are three sources for the data: data is provided and reviewed voluntarily by country representatives at the request of the IEA, desk-based research is conducted daily by IEA staff, and through collaborations with governments and other institutions.

**Sectors Targeted:** Electricity, gas, steam and air conditioning supply (ISIC D); Construction (ISIC F)

**Countries Covered:** OECD excluding Estonia, Iceland, Israel, Latvia, and Slovenia; 11 non-OECD countries (Brazil, China, India, Indonesia, Pakistan, Russia, Singapore, South Africa, Thailand, Tunisia, and Ukraine). Limited data on developing countries.

**Strengths:** The database provides in depth information on codes, labels and incentive programs for energy efficiency in buildings, more so than are provided in the other IEA databases for the same policies. North America and Western and Northern Europe are well covered. Subnational policies are included for Australia, Belgium, Canada, Indonesia, the United Kingdom, and the United States.

**Weaknesses:** The database has limited coverage for non-OECD countries.

**Database Updates:** Updated constantly with the most recent updates completed in August 2016.

**Data Accessibility:** The data cannot be downloaded in bulk and no data services are available.

**Main POC:** General contact [stats@iea.org](mailto:stats@iea.org)

## 2.2 Climate Change Laws of the World

**Operated by:** Columbia Law School

**URL:** <http://web.law.columbia.edu/climate-change/resources/climate-change-laws-world>

**Summary of Content:** The database provides information on policies related to climate change for 169 countries. The data is presented on individual country pages which list national level laws, plans, and initiatives. The policies are divided by sector, including climate, energy, air pollution, forest and land use, environmental impact assessments, and adaptation and resiliency. Brief summaries of 1-2 sentences are provided for a limited number of policies; however most are simply listed by the policy title. Links are provided to original source documents for each policy. In addition to the national level policies, there are a limited number of subnational policies included. The country pages also list the status under International Climate Change Law (e.g. UN Framework Convention on Climate Change, Montreal Protocol).

**Data Sources:** The primary source for the data is the 2015 Global Climate Legislation Study published by The London School of Economics and Political Science.<sup>1</sup> Additional sources are listed on each country page as relevant.

**Sectors Targeted:** Cross-cutting; climate change

**Countries Covered:** Policies for 169 countries are included. Though not all developing countries are covered, a large number are included.

**Strengths:** The country pages for OECD countries in particular provide an extensive list of policies related to climate change with links to the original documents. The summary information on the status under International Climate Change Law is unique.

**Weaknesses:** While substantial information is provided on the policies implemented in OECD, in general, there is far less information provided for non-OECD countries. Unlike other climate change policy databases, this one does not provide summary information on each policy, so the user has to go to the original policy documents to glean information about what each policy covers. The policies can only be searched by country; users cannot search the data by policy type or the sector to which it is applicable (e.g. energy, agriculture).

While not a weakness of the database, note that the Global Climate Legislation Database shares the same primary source and that the New Climate Policy Database includes data from this database.

**Database Updates:** Country pages are updated individually. The most recent update was completed in May 2016.

**Data Accessibility:** The data cannot be downloaded in bulk and no data services are available.

**Main POC:** General contact [ColumbiaClimate@gmail.com](mailto:ColumbiaClimate@gmail.com)

### **2.3 Database on Instruments used for Environmental Policy**

**Operated by:** Organisation for Economic Co-operation and Development

**URL:** <http://www2.oecd.org/ecoinst/queries/Default.aspx>

**Summary of Content:** The database provides information on taxes, fees and charges, tradable permit systems, deposit refund systems, subsidies and voluntary approaches used to address environmental concerns. It was developed by the OECD and European Environment Agency and is maintained by the OECD. The data can be searched in many ways, primarily by country, policy type, ISIC (revision 3.1) classification, household expenditure category (UN COICOP classification), or environmental domain. For policy type, a user can select the type of policy instrument (e.g. tax, fees and charges) and then either select countries or select the specific type of policy data most interested in (e.g. tax rates or exemptions). The most in-depth information is provided on the tax, fees and charges category.

**Data Sources:** The data is collected by the OECD by partnering with various experts in ministries in each country (e.g. Ministry of Finance, Ministry of Environment) to identify the appropriate information to include in the database.

**Sectors Targeted:** Cross-cutting

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<sup>1</sup> Available at <http://www.lse.ac.uk/GranthamInstitute/publication/2015-global-climate-legislation-study/>.

**Countries Covered:** OECD and BRIICS countries are covered in depth. There is limited data on non-OECD countries, and those are primarily located in Europe. The coverage for developing countries is minimal.

**Strengths:** This data is provided primarily by ministry representatives from the countries themselves into a password-protected portal, while the public can access the data for free and without log-in. The country representatives are reminded annually to review and update their information. The database staff annually review the database to standardize data as feasible. OECD and BRIICS countries are well-covered. The policies can be searched by ISIC classification, allowing for users to quickly identify all policies that apply to a specific sector. The data can also be searched by environmental domain which allows users to find all policies that apply broadly to environmental sectors (e.g. air pollution) that cut across ISIC sectors.

**Weaknesses:** The data for non-OECD countries is limited and not regularly updated. The data that is provided on the website is difficult to read and compare easily because of how it is displayed.

**Database Updates:** OECD and BRIICS countries are asked to update their data annually. It has been a couple of years since the non-OECD data were updated.

**Data Accessibility:** The data can be downloaded in Excel. There are no data services available.

**Main POC:** Miguel Cardenas-Rodriguez [miguel.cardenasrodriguez@oecd.org](mailto:miguel.cardenasrodriguez@oecd.org)

## 2.4 ECOLEX

**Operated by:** International Union for Conservation of Nature (IUCN), UN Environment, and Food and Agriculture Organization of the United Nations (FAO)

**URL:** <http://www.ecolex.org/>

**Summary of Content:** The database provides information on environmental treaties, Conference of Parties (COP) decisions, legislation, court decisions, and literature. The database builds on the previous work on environmental policies by IUCN, UN Environment and FAO. There are approximately 150,000 individual entries.

The data can be searched by document type, subject (FAO sectors), country, keyword, language, and year. Additional filters can be applied based on the type of policy. The summary pages provide the following information based on the type of policy:

- Treaties – date, place of adoption, subject, basin, summary, participating countries, and link to source document (provided by IUCN)
- COP Decisions – decision date, status, subject, applicable treaty, and link to source document (provided by the UN Environment InforMEA portal)
- Legislation - enactment date, sector, policy summary, and a link to the full text (provided by FAOLEX)
- Court Decisions – type of court, date of decision, court name, seat of court, judge, subject, summary, link to source document (provided by the UN Environment InforMEA portal)

**Data Sources:** The policy summaries are from FAOLEX, legal information is collected by IUCN and includes information collected since the 1960s, and the policy documents and legal materials related to the COP and court decisions are collected by UN Environment. See the summary above for more detailed information.

**Sectors Targeted:** Cross-cutting; climate change

**Countries Covered:** The database appears to cover all countries.

**Strengths:** The breadth of policies covered is extensive, covering policies in place as early as 1814. The number of entries by type of document is listed below.

- Treaties – 2,167
- COP Decisions – 10,481
- Legislation - 134,972
- Court Decisions – 2,031

The faceted search, which was revamped in the summer of 2016, allows users to narrow down the data in many ways. For example, selecting “legislation” and searching for the keyword “sustainable development” returns 986 results. The results can further be refined by selecting a country (e.g. 5 results are returned when Albania is selected), time period (e.g. 145 results are returned when selecting 2015-2016), type of legislation (e.g. 350 results are returned when selecting regulation), and/or a number of other filters.

The food and agricultural legislation is covered extensively, as this data is collected by the FAO. The FAO, via FAOLEX, provides substantial data on environmental policies across many other sectors, however these sectors may not be covered completely. It is, however, the database that provides the most policy information across sectors.

In addition to the document types listed above, the database also includes literature that can be searched through the same faceted search as the policies. This could be a very useful function for researchers trying to identify existing literature analyzing specific policy types, specific sectors, specific countries, or even individual policies.

The database also includes some subnational policies.

**Weaknesses:** This database is not well known within the economics community. None of the experts I interviewed were aware that this database existed, though there were 60,000 users in August 2016. After reviewing the database, a number of the experts interviewed said that it was very extensive and that they would likely use it in the future. However, an expert in agriculture said that it did not appear to include the primary policies for the agricultural sector in the EU or France and was therefore concerned about its coverage.

The information provided on each policy is very high level, including the title, date, a short summary, and a link to the original source. Users interested in understanding the specifics of the policy (e.g. amount of financial incentives) would need to do further research, likely starting with reading the source document.

**Database Updates:** The database is updated regularly.

**Data Accessibility:** The data cannot be downloaded in bulk and no data services are available. The operating partners (IUCN, FAO, and UN Environment) do entertain requests for broad access to the data. Requests for access can be submitted to Ms. Li Ning ([Ning.LI@iucn.org](mailto:Ning.LI@iucn.org)).

**Main POC:** Alexandra Fante [Alexandra.Fante@iucn.org](mailto:Alexandra.Fante@iucn.org)

## **2.5 Emissions Trading Systems Map**

**Operated by:** International Carbon Action Partnership

**URL:** <https://icapcarbonaction.com/en/ets-map>

**Summary of Content:** The database provides information on emissions trading systems that are in force, scheduled or being considered. The data can only be searched by country. The summary page for each emissions trading system provides an overview of the system, including greenhouse

gas (GHG) reduction targets, type of trading system, type of cap and phases, carbon price, emissions and sectors covered by the system, and additional information related to implementation and compliance.

**Data Sources:** The International Carbon Action Partnership and Ecofys compiled the original data in 2012 and the International Carbon Action Partnership updates the database as appropriate. The data is primarily collected from official and public information.

**Sectors Targeted:** Cross-cutting; climate change

**Countries Covered:** The European Union (EU) and 17 countries are included. While there are few developing countries included, the database attempts to cover all countries that have implemented or are considering implementing an emissions trading scheme.

**Strengths:** The database provides substantial details on each of the emissions trading systems.

**Weaknesses:** The data cannot be searched by sector or keyword, only by country.

**Database Updates:** The database was last updated in August 2016.

**Data Accessibility:** The data cannot be downloaded in bulk and data services are not available.

**Main POC:** General contact [info@icapcarbonaction.com](mailto:info@icapcarbonaction.com)

## 2.6 Environmental Database

**Operated by:** World Trade Organization

**URL:** [https://www.wto.org/english/tratop\\_e/envir\\_e/envdb\\_e.htm](https://www.wto.org/english/tratop_e/envir_e/envdb_e.htm)

**Summary of Content:** The database provides information on all environment-related notifications submitted by WTO members and on environmental policies mentioned in WTO Trade Policy Reviews. There are 1,197 notifications and 798 Trade Policy Reviews included in the database. The data is not searchable online but can be downloaded in Excel for each year from 2009 to 2013. The spreadsheet includes information on agreement, measure description, type of measure, category of the product or service impacted, and includes a link to the source document.

**Data Sources:** The data is provided to the WTO by member countries through submission of WTO-related notifications as well as policies mentioned in WTO Trade Policy Reviews.

**Sectors Targeted:** Cross-cutting

**Countries Covered:** There is data on both developed and developing countries. However, in the 2013 dataset, there is no data for approximately 90 developing countries.

**Strengths:** The database provides substantial information on the sectors and products or services to which the notification or policy applies. Though the data is only available from 2009-2013, having access to the time series data allows for comparison across years as policies evolve. The database is focused on trade, so the information included about each policy is pertinent to this project's objectives.

**Weaknesses:** The data cannot be searched through an online interface and must be downloaded in Excel.

**Database Updates:** The most recent data is available for 2013.

**Data Accessibility:** The data cannot be searched through an online interface but can be downloaded in Excel. There are no data services available.

**Main POC:** General contact [enquiries@wto.org](mailto:enquiries@wto.org)

## 2.7 Environmental Policy Stringency Index

**Operated by:** Organisation for Economic Co-operation and Development

**URL:** <http://stats.oecd.org/Index.aspx?DataSetCode=EPS>

**Summary of Content:** The Environmental Policy Stringency Index (EPS) provides data on the measure of stringency of environmental policy for 28 OECD and 6 BRIICS country. The stringency level ranges from 0 to 6 and measures the degree to which a price is placed on environmentally harmful behavior through environmental policies. The level is determined by analyzing 14 climate and air pollution policy instruments. The measurement of stringency is provided for each year from 1990-2012.

**Data Sources:** The data is based on the analysis published in “Measuring Environmental Policy Stringency in OECD Countries: A Composite Index Approach”.<sup>2</sup>

**Sectors Targeted:** Cross-cutting

**Countries Covered:** Data is available for 28 OECD and 6 BRIICS country. Data coverage is limited, particularly for developing countries.

**Strengths:** A number of the experts interviewed expressed a need for data on policy stringency, so there is particular demand for this type of data. As a stringency level is provided for each year from 1990 to 2012, this data allows for comparison of the impact of environmental policies across time and between the countries included in the database. The methodology for the measure of stringency is well documented.

**Weaknesses:** The data is only available for a limited number of countries and only includes OECD and BRIICS countries.

**Database Updates:** The database was last updated March 2016.

**Data Accessibility:** The data can be exported in Excel and also downloaded in XML format. A prototype web service is available using the SDMX REST API. Preauthorization is required for accessing some datasets within the OECD.stat database.

**Main POC:** General contact [env.stat@oecd.org](mailto:env.stat@oecd.org); Tomasz Kozluk [Tomasz.KOZLUK@oecd.org](mailto:Tomasz.KOZLUK@oecd.org)

## 2.8 Environmental Treaties and Resource Indicators

**Operated by:** Socioeconomic Data and Applications Center, Columbia University

**URL:** <http://sedac.ciesin.columbia.edu/entri/index.jsp>

**Summary of Content:** The database provides information on 666 multilateral environmental treaties. The type of data available varies by treaty, including year of agreement, year of entry

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<sup>2</sup> Botta, E. and T. Kozluk (2014), “Measuring Environmental Policy Stringency in OECD Countries: A Composite Index Approach”, OECD Economics Department Working Papers, No. 1177, OECD Publishing, Paris.  
<http://dx.doi.org/10.1787/5jxrjnc45gvg-en>.

into force, length of time to enter into force, place of adoption, signatories and parties, and full text. However, it appears that very few of the entries include a link to the full text.

**Data Sources:** The data is sourced from ECOLEX.

**Sectors Targeted:** Cross-cutting

**Countries Covered:** Information is provided on 200 countries, so coverage of developed and developing countries is extensive.

**Strengths:** The database covers nearly all countries, both developed and developing, and provides information on environmental treaties related to a wide range of sectors. The database makes it easy for a user to see the number of signatories or parties, names the countries that are signatories or party to the treaty, and when it entered into force.

**Weaknesses:** The data has not been updated since 2012 so is out of date. Also, there is incomplete information for many of the treaties, including a lack of a link to the original treaty documents themselves.

Though not a weakness of this database, note that the data is sourced from ECOLEX so it exists in both databases.

**Database Updates:** The database was last updated August 2012.

**Data Accessibility:** The data can be downloaded in Excel for the treaties that the user selects. No data services are available.

**Main POC:** General contact form on site

## 2.9 FAOLEX

**Operated by:** Food and Agriculture Organization of the United Nations

**URL:** <http://faolex.fao.org/>

**Summary of Content:** The database provides information on national laws, regulations and policies relating to food, agriculture, and renewable natural resources. The data can be searched by the topics listed below.

- Agricultural and rural development
- Air and atmosphere
- Cultivated plants
- Energy
- Environment – general
- Fisheries
- Food and nutrition
- Forestry
- Land and soil
- Livestock
- Mineral resources
- Sea
- Waste and hazardous substances
- Water
- Wild species and ecosystems

After selecting the sector, the user can search by country, basin, year, type of policy text (constitution, agreement, legislation, regulation, policy, or miscellaneous), or keyword. The policy pages provide the policy title, date of entry into force, type of text, brief policy summary, applicable comments, and a link to the source documents. The records are provided in English, French or Spanish and the source documents are provided in the language in which they were submitted to the FAO.

**Data Sources:** The majority of the information in the database is collected from the official gazettes submitted to the FAO by member countries.

**Sectors Targeted:** Cross-cutting; comprehensive coverage of sector agriculture, forestry and fishing (ISIC A).

**Countries Covered:** All FAO member nations are included, so developing countries are included.

**Strengths:** The coverage of policies is extensive with more than 20,000 policies included covering nearly every country. The majority of the data is submitted by countries directly to the FAO. The database also includes repealed and superseded policies which allow users to compare the policy environment over time.

**Weaknesses:** The summary pages for each policy do not provide many details on the specifics of the policy so the user must read the original document to determine how the policy might impact a specific sector.

While not a weakness of the database, note that ECOLEX includes data from this source.

**Database Updates:** The database was last updated August 2016.

**Data Accessibility:** The data can be downloaded in Excel and other formats, though the entire dataset cannot be downloaded at once from the website. There are no data services available.

**Main POC:** General contact [faolex@fao.org](mailto:faolex@fao.org)

## **2.10 Forest Policy and Innovation Database**

**Operated by:** European Forest Institute Central-East European Regional Office

**URL:** <http://policydatabase.boku.ac.at/>

**Summary of Content:** The database builds on previous efforts related to European forest policy, namely EFORWOOD and ARANGE. EFORWOOD (<http://www.innovawood.com/eforwood/>) focused on assessing the sustainability of the forest-wood supply chain in Europe and was concluded in 2009. ARANGE (<http://www.arange-project.eu/>) was a consortium of European institutions and countries which analyzed various models for multifunctional management of mountain forests throughout Europe. This project also concluded in 2015.

There are 741 different entries included in the database enacted between 1964 and 2014. The majority of the entries are EU-level communications, directives, decisions, regulations, resolutions, opinions and recommendations. It also includes international treaties, staff and joint staff working documents, and studies conducted by various institutes related to forest policy. The database can be searched by policy type, year enacted, and geographical scope. The policy summary pages provide information on year enacted, policy type, implementing organization, geographical scope and provide a link to the original policy document.

**Data Sources:** The Forest Policy and Innovation Database catalogues the policy data collected under the EFORWOOD and ARANGE.

**Sectors Targeted:** Forestry (ISIC A)

**Countries Covered:** The database only includes information for countries in the EU. There is limited data on developing countries.

**Strengths:** The database extensively covers forestry policy enacted at the EU level, including EU policies that apply to specific countries. It provides links to the original documents allowing for easy review of the specific details of the policy. The database is available for free; users must simply register for an account. Approved users are able to edit existing policy summaries and add new policies as appropriate.

**Weaknesses:** The database has not been updated since 2014 and it appears that it is not actively being managed or updated. There are only 92 registered users and none of the experts I interviewed mentioned using this database. The database does not include national-level forest policies for EU countries.

**Database Updates:** It does not appear to be actively managed or updated.

**Data Accessibility:** The data cannot be downloaded in bulk and there are no data services available.

**Main POC:** “Contact Us” form on homepage

## 2.11 Forestry Policy and Institutions

**Operated by:** Food and Agriculture Organization of the United Nations

**URL:** <http://www.fao.org/forestry/country/18315/en/>

**Summary of Content:** The database provides information on the forestry policies and legal instruments. The data must first be searched by country. For the policy section, the results are split into two sections, one providing a summary of policy formulation and implementation and the second providing information on the country’s National Forest Programme. The policy formulation and implementation page provides details on the country’s primary financial instruments and economic policies related to forestry. It lists the main instruments and objectives by forestry policy area listed below.

- land use and forest area
- carbon balance
- health and vitality
- production and use of wood
- production and use of non-wood goods and services
- biodiversity
- protective services
- economic viability
- employment
- public awareness
- education and research
- cultural and spiritual values

The legal instruments page provides summaries of national and international legal frameworks. This section identifies if forest issues are regulated at the national or subnational level. If the later, the number of subnational entities with forestry policies are listed. A brief summary of the national legal framework is provided. The primary legal documents are listed for each of the

categories in the bullet list above. This section also lists the main international commitments to which the country has obligated itself.

**Data Sources:** The data included in the database was collected from three primary resources: the 2010 FAO Forest Resources Assessment, FAO Forestry contact database – Foris networking, and FAO Legal Repository (FAOLEX).

**Sectors Targeted:** Forestry (ISIC A)

**Countries Covered:** 226 countries and areas are ostensibly included, though there are a number of countries (primarily developing countries) for which no data is available.

**Strengths:** For many of the countries, the database provides substantial information on the policies and legal instruments related to forestry. Additionally, the data is subcategorized by forest policy area, allowing the user to easily find the policies that relate to more specific sectors. Much of the data is summarized from policy documents submitted by the agencies responsible for forestry governance in each country.

Source documents originally published in English, French or Spanish are provided in their original language and documents provided in Arabic, Chinese or Russian are translated into English, allowing for a wider variety of these documents to be accessible for a larger audience.

**Weaknesses:** It is difficult to analyze the data across countries, policy types or forestry areas because you can only find the information on each country page. There are a number of countries for which no data is available or only limited data is included, primarily non-OECD countries. The data has not been updated since 2012.

Though not a weakness of this database, note that FAOLEX is a primary source for this data so some of the data is redundant with FAOLEX and ECOLEX.

**Database Updates:** The database was last updated May 2012.

**Data Accessibility:** The data cannot be downloaded in bulk and no data services are available.

**Main POC:** General contact [FAO-HQ@fao.org](mailto:FAO-HQ@fao.org)

## **2.12 The Global Climate Legislation Database**

**Operated by:** Grantham Research Institute on Climate Change and the Environment (London School of Economics and Political Science)

**URL:** <http://www.lse.ac.uk/GranthamInstitute/legislation/the-global-climate-legislation-database/>

**Summary of Content:** The database provides summaries of climate change related legislation (both mitigation and adaptation) and includes information on framework legislation, and executive and legislative instruments. The policies are separated into eight categories: adaptation, carbon pricing, energy demand, energy supply, institutions and administrative arrangements, REDD+ and LULUCF, research and development, and transportation. The data can also be searched by country to see a list of all policy information, climate change indicators, and an overview of the legislative process for each country. The database covers policies implemented between 1963 and January 2015. There are 828 policy summaries currently included in the database.

**Data Sources:** The primary source for the data is the 2015 Global Climate Legislation Study published by The London School of Economics and Political Science.<sup>3</sup>

**Sectors Targeted:** Cross-cutting; climate change

**Countries Covered:** There is data on 99 countries, including both developed and developing countries, though there is not data on a number of developing countries.

**Strengths:** The database provides extensive information on policies related to climate change across multiple sectors for 99 countries. The database includes policies implemented as early as 1963, allowing for comparison of policy evolution and impact across many years and multiple countries. Each policy page provides a succinct summary of the policy information, including quantitative information when relevant (e.g. feed-in tariff levels for renewable energy). The website explicitly says that the authors encourage use and distribution of the dataset by others.

**Weaknesses:** The data sources are provided for each country's summary page, but the summary page for each individual policy does not include a link to the original policy document. The downloaded dataset does not include a summary of the policy or links to sources.

While not a weakness of the database, note that the New Climate Policy Database and the Climate Change Laws of the World database includes data from this source.

**Database Updates:** Data in the database was last updated with data from January 1, 2015. However, information on significant legislation enacted after that date can be found in the country summaries.

**Data Accessibility:** High-level data can be downloaded in Excel which includes the policy name, country, year passed, whether it is a legislative or executive action, if it is part of framework legislation, and the sector categories it covers. There are no data services available.

**Main POC:** Michal Nachmany ([M.Nachmany@lse.ac.uk](mailto:M.Nachmany@lse.ac.uk)) or General contact [Gri@lse.ac.uk](mailto:Gri@lse.ac.uk)

### 2.13 Global Fisheries Economics – Fisheries Subsidies Database

**Operated by:** Sea Around Us (Research Initiative at The University of British Columbia)

**URL:** <http://www.searoundus.org/data/#/feru>

**Summary of Content:** The database provides information on government subsidies provided to the marine capture fishing sector in 2003 and 2009. There are 13 subcategories of subsidies included. The subsidies are classified as beneficial, harmful or ambiguous based on their impact on the sustainability of the fishery resource. The database lists the value of the subsidy in USD and provides the subsidy intensity for each classification (beneficial, harmful, and ambiguous).

**Data Sources:** The data is sourced from statistical publications published by governments, the OECD, academic articles, and information available online.

**Sectors Targeted:** Fisheries (ISIC A)

**Countries Covered:** The database includes information on subsidies provided by 153 “geo-political entities” which are defined as countries, sub-countries or administrative entities that provide subsidies to the sector. The database is expanded to include other geo-political entities as data becomes available on subsidies provided by additional entities. Developed countries are covered well; there is less information on developing countries.

<sup>3</sup> Available at <http://www.lse.ac.uk/GranthamInstitute/publication/2015-global-climate-legislation-study/>.

**Strengths:** The database is narrowly focused on subsidies provided to the marine capture fishing sector and thoroughly covers the topic. The methodology is well documented and based on analysis published in multiple academic articles (listed on the site). The sources for the data for each subsidy are listed in the subsidy tables with links to the original documents. The search process is simple, allowing the user to search by country to find all subsidies provided by each geo-political entity.

**Weaknesses:** The database only provides data on subsidies provided in 2003 and 2009. This may impede researchers' ability to analyze the impacts of these subsidies on trade as it does not provide data on interim years and the data is seven years out of date.

**Database Updates:** unknown

**Data Accessibility:** The data cannot be downloaded in bulk and there are no data services available.

**Main POC:** Dirk Zeller ([d.zeller@oceans.ubc.ca](mailto:d.zeller@oceans.ubc.ca))

## **2.14 Global Renewable Energy IEA/IRENA Joint Policies and Measures Database**

**Operated by:** International Energy Agency and International Renewable Energy Agency (IRENA)

**URL:** <http://www.iea.org/policiesandmeasures/renewableenergy/>

**Summary of Content:** The database provides information on policies designed to increase the generation and use of renewable energy. Policies can be searched by region or country, policy type, renewable energy policy target, sector, policy status, jurisdiction (international, national, sub-national), effective date, whether or not it is currently in force, and the size of power plant. The renewable energy policy target is further categorized by type of renewable energy generation.

There are 1860 policies currently included. Policy summary pages provide information on status, effective date, policy type, policy target category, sector, plant size (where applicable), links to source documents, and a brief summary of the policy. The summary of a country's renewable energy target(s) are provided when the country is selected from the map on the homepage.

**Data Sources:** There are three sources for the data: data is provided and reviewed voluntarily by country representatives at the request of the IEA, desk-based research is conducted daily by IEA staff, and through collaborations with governments and other institutions.

**Sectors Targeted:** Electricity, gas, steam and air conditioning supply (ISIC D)

**Countries Covered:** The database includes information on OECD countries plus 91 non-OECD countries. While a number of developing countries are included, there are a number for which data is not provided.

**Strengths:** The database broadly covers renewable energy policies in countries around the world with a total of 126 countries included, including all IEA and IRENA member countries and signatories. This database is managed by the IEA and IRENA, organizations with substantial renewable energy expertise. Experts interviewed for this project identified this database as a comprehensive resource for renewable energy policies. The level of information provided on the policy summary pages is easy to read and compare and well documented with links to original policy documents. In addition to policies currently in force, the database includes policies that have ended, are planned or are under review, allowing for comparison of policy impacts for policies that are no longer in force. More than 120 subnational policies are also included.

**Weaknesses:** Though there is broad coverage of countries, the database does not cover all countries that have renewable energy policies or targets.

Though not a weakness of this database, note that there is overlap in policies with the Policies and Measures: Addressing Climate Change database and that the New Climate Policy Database includes data from this source.

**Database Updates:** The data is updated constantly with the most recent update occurring in August 2016.

**Data Accessibility:** The data cannot be downloaded in bulk and data services are not available.

**Main POC:** General contact [stats@iea.org](mailto:stats@iea.org)

### **2.15 International Environmental Agreement Database**

**Operated by:** University of Oregon

**URL:** <https://iea.uoregon.edu/>

**Summary of Content:** The database provides information on all multi-lateral environmental agreements (MEA) and many bi-lateral environmental agreements (BEA) which are focused on environmental protection. The database can be searched by country, agreement, signature date, subject, or by using a keyword search. There are currently 1279 MEAs, 1598 BEAs, and 248 other binding agreements included. Additionally, there are 547 non-binding agreements included in the database. The database was started in 2002. The database provides summary information on each agreement including title, signature date, location of signature, entry into force date, members, responsible secretariat, searchable texts of the original agreement, and links to literature or performance data when available.

**Data Sources:** The data is compiled from multiple published documents, online sources, and treaty secretariat websites. The complete list of sources is listed at <https://iea.uoregon.edu/sources-agreements-database>.

**Sectors Targeted:** Cross-cutting

**Countries Covered:** The database ostensibly covers all countries.

**Strengths:** The database provides a comprehensive list of MEAs and BEAs across sectors and countries. The database allows for multiple options for searching the data to narrow the results and the data is available for bulk download.

**Weaknesses:** The database cannot be filtered by sector, however a keyword search can be used to identify agreements that relate to specific topics.

**Database Updates:** The database is updated twice a year with the most recent updates completed in January 2017.

**Data Accessibility:** The data can be downloaded in bulk; no data services are available.

**Main POC:** Ronald Mitchell at [rmitchel@uoregon.edu](mailto:rmitchel@uoregon.edu)

### **2.16 Inventory of Support Measures for Fossil Fuels**

**Operated by:** Organisation for Economic Co-operation and Development

**URL:** <http://www.oecd.org/site/tadffss/data/>

**Summary of Content:** The OECD produces and maintains an online *Inventory of Support Measures for Fossil Fuels*, which systematically identifies, documents, and estimates the value of support arising from about 800 individual policies that encourage the production or consumption of fossil fuels. Though this database does not target green growth policies, it is included in this review because it provides information on policies implemented to encourage the use of cleaner fuels and to reduce emissions in some instances. However, most of the policies covered do support the use of fossil fuels. In line with OECD work looking at support for the agriculture and fisheries sectors (e.g. see the Producer and Consumer Support Estimates Database below), the scope of the policies inventoried here is broad and differs from some conceptions of “subsidy”. The OECD Inventory includes both direct budgetary transfers and tax concessions that in some way provide a benefit or preference for fossil-fuel production or consumption, relative to alternatives. Such measures are classified as support without reference to the purpose for which they were first put in place or their economic or environmental effects.

**Data Sources:** Individual searches of government budgets and tax-expenditure documents, or direct provision of data by governmental agencies. Methods are described in Chapter 2 of the “OECD Companion to the Inventory of Support Measures for Fossil Fuels 2015.”<sup>4</sup>

**Sectors Targeted:** Cross-cutting since the use of fossil fuels is pervasive. Producer measures will tend to be in the energy mining sector (ISIC B) and the refining sector (part of manufacturing (ISIC C)). Consumer measures can benefit the power sector (ISIC E), farmers and fishermen (ISIC A), households, and energy-intensive industries, etc.

**Countries Covered:** Data is provided for OECD countries plus Brazil, China, India, Indonesia, Russia, and South Africa. There are many developing countries for which data is not provided.

**Strengths:** The database provides information on a variety of fossil fuel support mechanisms implemented in OECD countries. Annual data is provided from 2006 through 2014, allowing for analysis of impact over multiple years. The original source for the data is provided for each policy included. Where possible, the database provides a quantitative measure of the policy, allowing users to easily understand the financial impact.

**Weaknesses:** The database can only be searched by country and the database does not use ISIC sectors. The data is not comparable across countries because of many of the calculations used to determine the value of some subsidies (e.g. tax concessions) are dependent on the initial tax rate for each country. Additionally, the database does not comprehensively cover all types of support measures for fossil fuels (e.g. does not include loan guarantees).

**Database Updates:** The database was last updated in 2015 (the most recent data available is for 2014). Data are updated every one to two years.

**Data Accessibility:** The data can be downloaded in Excel through the OECD.Stat database. No data services are available.

**Main POC:** General contact [ffs.contact@oecd.org](mailto:ffs.contact@oecd.org)

## 2.17 Market Access Map

**Operated by:** International Trade Centre

**URL:** <http://www.macmap.org/>

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<sup>4</sup> Available at [http://www.oecd-ilibrary.org/energy/oecd-companion-to-the-inventory-of-support-measures-for-fossil-fuels-2015\\_9789264239616-en](http://www.oecd-ilibrary.org/energy/oecd-companion-to-the-inventory-of-support-measures-for-fossil-fuels-2015_9789264239616-en).

**Summary of Content:** The database provides information on customs tariffs, tariff rate quotas, trade remedies, rules and certificates of origin, bound tariffs by World Trade Organization (WTO) members, non-tariff measures, and trade flows.

The non-tariff measures can be searched by either legislation, which returns legal documents, or by non-tariff measure category, which provides information on all policies by the UN Conference on Trade and Development non-tariff measure classification. The user must choose applicable entity (importer or exporter), year, trading partner, and a single specific product type.

**Data Sources:** The data is primarily provided by country ministries and regional trade organizations. In addition, the database collects data from the UN Statistical Division Commodity Trade database, the WTO Integrated database and the WTO Consolidated Tariff Schedule database.

**Sectors Targeted:** Cross-cutting

**Countries Covered:** Data is provided on 90 countries, with little to no data for many developing countries.

**Strengths:** The database includes nearly all countries and has a particular focus on providing information to developing countries. One of the primary target audiences for the database is policy makers addressing trade issues. Historical data is also provided, allowing for comparison across time.

**Weaknesses:** It is unlikely that the data available for a fee could be incorporated into a public database as it would impact the business model of the database. Though the data can be searched by non-tariff measures, a user cannot search for non-tariff measures that are specific to environmental regulations nor by specific non-tariff measure category. To find the non-tariff measures that apply to environmental issues, the user would have to search manually through all policies. This data may be more easily searched for environmental policies to those with a subscription. The data cannot be searched by broad sector but is instead searchable by individual product.

**Database Updates:** The database is regularly updated.

**Data Accessibility:** The data is free to users in developing countries. Other users can access some of the data for free or pay a subscription fee to access the data in its entirety. The data can be downloaded in bulk for those with a subscription, including the data on non-tariff measures. There are no data services available.

**Main POC:** Mathieu Loridan [loridan@intracen.org](mailto:loridan@intracen.org)

## 2.18 New Climate Policy Database

**Operated by:** NewClimate Institute

**URL:** <http://climatepolicydatabase.org/index.php?title=Special:BrowsePolicy>

**Summary of Content:** The database compiles information on GHG mitigation policies and currently includes approximately 3,000 policies. The database categorizes the policies by sector: electricity and heat, industry, buildings, transport, and agriculture and forestry. The policy types include economic instruments, regulatory instruments, information and education, policy support, research and development, voluntary approaches, barrier removal, climate strategy, and targets. Policies can be searched by policy type, sector, implementation state (e.g. implemented, superseded), region, country, implementation date, and policy stringency.

**Data Sources:** The data on policies is compiled from multiple public resources:

- Database of State Incentives on Renewables and Efficiency
- IEA Policy and Measures Databases (climate change, renewable energy, energy efficiency, building energy)
- Transport Policy Database
- Climate Action Tracker
- UNFCCC National Communications
- Global Climate Legislation Database
- OECD Fossil Fuel Support
- Columbia Law School Database
- Emissions Trading Systems Map

**Sectors Targeted:** Cross-cutting; climate change

**Countries Covered:** The database includes policies for 113 countries, covering both developed and developing countries. There are a number of developing countries for which there is no data.

**Strengths:** The database provides an extensive list of approximately 3,000 GHG mitigation policies implemented by countries and regional bodies around the world. It includes policies enacted through November 2015 and also includes energy and GHG emissions targets announced as Intended Nationally Determined Contributions (post-2020 period). The site compiles data from a broad set of other databases and resources into a single site, making it easier to compare. A link to the original source or document is included in the policy summary.

There is a search option for policy stringency. However, it appears that the data for the policy stringency field has not been entered for any country. As many experts interviewed were most interested in having a policy stringency indicator, it is likely worthwhile to consider implementing something similar in a potential database for including information on stringency when available.

**Weaknesses:** This database provides an extensive list of GHG mitigation policies for 113 countries. For the remaining countries, the data may not be included because either there are no policies enacted or that the policy information was not covered in the databases and resources used as sources for this database. Though it may not be exhaustive, its coverage is quite extensive.

**Database Updates:** The database was last updated with policies enacted by November 2015. Users can edit or add new policies as appropriate.

**Data Accessibility:** The entire dataset can be downloaded in Excel. There are no data services available.

**Main POC:** Dr. Niklas Höhne ([n.hoehne@newclimate.org](mailto:n.hoehne@newclimate.org)) and Carsten Warnecke ([c.warnecke@newclimate.org](mailto:c.warnecke@newclimate.org))

## **2.19 Policies and Measures Database: Addressing Climate Change**

**Operated by:** International Energy Agency

**URL:** <http://www.iea.org/policiesandmeasures/climatechange/>

**Summary of Content:** The database provides information on policies that are designed to reduce GHG emissions, with a focus on energy-related sectors. The database can be searched by country or region, policy type, climate change policy target sector, effective date, jurisdiction (international, national, sub-national), and whether or not it is currently in force. The sectors are primarily focused on the energy, industry, transportation and built environment sectors.

There are currently 2853 policies currently included. Each policy page provides information on policy status, effective date, policy type, target sector, implementing agency, link to the source document, program funding amount (when appropriate), and a short description of the policy. Summary information for GHG emissions reductions targets is available by clicking on the country on the map on the homepage.

**Data Sources:** There are three sources for the data: data is provided and reviewed voluntarily by country representatives at the request of the IEA, desk-based research is conducted daily by IEA staff, and through collaborations with governments and other institutions.

**Sectors Targeted:** Cross-cutting; climate change

**Countries Covered:** Data is provided for OECD countries, excluding Chile, plus 43 non-OECD countries. There are many developing countries which are not included in the database.

**Strengths:** The database extensively covers energy-related policies that relate to GHG emissions reductions in OECD countries. Experts interviewed for this project identified this database as a good resource for GHG emissions reductions policies. The level of information provided on the policy summary pages is easy to read and compare and well documented with links to original policy documents and notes on legal references as applicable. In addition to policies currently in force, the database includes policies that have ended, are planned or are under review, allowing for comparison of policy impacts for policies that are no longer in force. In addition to the multilateral and national level policies, more than 200 subnational policies are also included.

**Weaknesses:** The database is mostly focused on countries in Europe, North America, Asia and Oceania. Policies from all OECD countries with the exception of Chile are included. There are policies from 43 non-OECD countries, however there is very limited coverage of countries in South America and Africa.

Though not a weakness of this database, note that there is overlap in policies with the other IEA Policy and Measures Databases and that the New Climate Policy Database includes data from this source.

**Database Updates:** Updated constantly with the most recent update occurring in August 2016.

**Data Accessibility:** The data cannot be downloaded in bulk and there are no data services available.

**Main POC:** General contact [stats@iea.org](mailto:stats@iea.org)

## **2.20 Policies and Management Database: Energy Efficiency**

**Operated by:** International Energy Agency

**URL:** <http://www.iea.org/policiesandmeasures/energyefficiency/>

**Summary of Content:** The database provides information on policies designed to improve energy efficiency. The database can be searched by country, policy type, energy efficiency target, energy efficiency recommendations, effective date, (international, national, sub-national), and whether or not it is currently in force. The energy efficiency targets are further categorized into sector-specific targets and include buildings, commercial/industrial equipment, energy utilities, industry, lighting, residential appliances, and transport.

There are currently 2099 policies listed in the database. The policy summary pages provide information on policy status, effective date, type, target sector, implementing agency, link to

source documents, and a brief description of the policy. The summary of a country's energy efficiency target(s) are provided when the country is selected from the map on the homepage.

**Data Sources:** There are three sources for the data: data is provided and reviewed voluntarily by country representatives at the request of the IEA, desk-based research is conducted daily by IEA staff, and through collaborations with governments and other institutions.

**Sectors Targeted:** Electricity, gas, steam and air conditioning supply (ISIC D); Construction (ISIC F)

**Countries Covered:** Data is provided for OECD countries, except Iceland and Israel, plus 41 non-OECD countries. There are many developing countries for which data is not provided.

**Strengths:** The database extensively covers energy efficiency policies in OECD countries. Experts interviewed for this project identified this database as a good resource. The level of information provided on the policy summary pages is easy to read and compare and well documented with links to original policy documents and notes on legal references as applicable. In addition to policies currently in force, the database includes policies that have ended, are planned or are under review, allowing for comparison of policy impacts for policies that are no longer in force. In addition to the multilateral and national level policies, more than 300 subnational policies are also included.

**Weaknesses:** The database is mostly focused on countries in Europe, North America, Asia and Oceania. Policies from all OECD countries with the exception of Iceland and Israel are included. There are policies from 41 non-OECD countries, however only a few countries in South America and Africa are included.

Though not a weakness of this database, note that there is overlap in policies with the other IEA Policy and Measures Databases and that the New Climate Policy Database includes data from this source.

**Database Updates:** Updated constantly with the most recent update completed in August 2016.

**Data Accessibility:** The data cannot be downloaded in bulk and no data services are available.

**Main POC:** General contact [stats@iea.org](mailto:stats@iea.org)

## **2.21 Producer and Consumer Support Estimates Database**

**Operated by:** Organisation for Economic Co-operation and Development

**URL:** <http://www.oecd.org/tad/agricultural-policies/producerandconsumersupportestimatesdatabase.htm>

**Summary of Content:** The database provides information on policies designed to support domestic farm sectors and trade in agricultural products. The statistics for each country's total support estimate, producer support estimate, agriculture as a percentage of GDP, agricultural employment, and nominal protection coefficient is provided by clicking on the country on the map on the homepage. The total support estimate sums the policy transfers to the agricultural sector as a percentage of GDP. The producer support estimate represents the total policy support provided to agricultural producers measured as a percentage of gross farm receipts. The nominal protection coefficient represents the premium that domestic producers receive compared to the price for the product on the international market.

**Data Sources:** The indicators are developed by the OECD based on the methods outlined in the “Producer Support Estimate and Related Indicators of Agricultural Support” manual.<sup>5</sup>

**Sectors Targeted:** Agriculture (ISIC A)

**Countries Covered:** Data is provided for OECD countries plus Brazil, China, Colombia, Indonesia, Russia, South Africa, Ukraine and Viet Nam. There are many developing countries for which data is not provided.

**Strengths:** The database provides extensive information on OECD countries as well as a limited number of non-OECD countries (including Brazil, China, Colombia, Indonesia, Russia, South Africa, Ukraine and Viet Nam). The data is presented in quantitative indicators that allow for easy comparison across countries and policy types. The data presented through the OECD.stat portal is available annually for multiple decades, allowing for comparison of policy impact over time. The data can be accessed and downloaded in multiple formats allowing for users to choose how to view and manipulate the data. The methodology and calculations are well-documented in the database manual. The data is available via the OECD API provided through the OECD.stat portal.

**Weaknesses:** The data is primarily limited to OECD and a few other countries.

**Database Updates:** The most recent data available is for 2015.

**Data Accessibility:** The data can be downloaded in Excel through the OECD.stat database. An API is available through the OECD.stat portal.

**Main POC:** Contact form on site

## 2.22 Renewable Energy Target Data Dashboard

**Operated by:** International Renewable Energy Agency

**URL:** <http://resourceirena.irena.org/gateway/dashboard/?topic=12&subTopic=35>

**Summary of Content:** The dashboard provides information on renewable energy targets that have been set at the national level for five sectors: total primary energy supply, total final energy consumption, electricity, heating and cooling, and transport. It lists the number of countries with each type of target every other year since 2005.

**Data Sources:** The data is collected from multiple sources including international organizations, sector specific associations and information provided directly from country representatives. The PAMS database is a primary source. IRENA also includes estimates based on internal analysis.

**Sectors Targeted:** Electricity, gas, steam and air conditioning supply (ISIC D)

**Countries Covered:** 164 countries are listed as having at least one established target in 2015. There are a number of developing countries for which no data is provided, though this may mean that they have not established a renewable energy target.

**Strengths:** The dashboard allows a user to quickly see the sectors for which each country has established renewable energy targets. In addition to the dashboard, the website provides country profiles which provide a list of policy documents. The majority of these documents are catalogued in the PAMS database, however, so the policy information listed on the country profiles is nearly redundant with the PAMS.

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<sup>5</sup> Available at <http://www.oecd.org/tad/agricultural-policies/psemanual.htm>.

**Weaknesses:** Data is provided at an aggregate level and cannot be downloaded in its entirety because, for the data collected from external sources, IRENA has not been granted the rights to provide some of the data publicly. The dashboard does not provide information on the target that is set, just simply identifies which countries have established a target.

**Database Updates:** The database is updated bi-annually with the last update completed in 2015.

**Data Accessibility:** The data cannot be downloaded in bulk and there are no data services available.

**Main POC:** Stephanie Weckend ([SWeckend@irena.org](mailto:SWeckend@irena.org))

## 2.23 RES LEGAL

**Operated by:** European Commission

**URL:** <http://www.res-legal.eu/>

**Summary of Content:** The database provides information on support schemes, grid issues, and policies related to renewable energy, including electricity, heating and cooling, and transportation. The data can be searched by country, policy type (e.g. training, certification, research and development), scheme (e.g. subsidy, loan, feed-in tariff, quota), and grid access. For the support schemes, the database provides detailed information on the financial support provided. Links are also provided to source documents.

**Data Sources:** Data is collected and summarized by the RES Legal staff.

**Sectors Targeted:** Electricity, gas, steam and air conditioning supply (ISIC D)

**Countries Covered:** Data is provided on EU member states, European Free Trade Association countries, and some EU Accession countries. The coverage of developing countries is, therefore, minimal.

**Strengths:** The database focuses specifically on renewable energy in the EU and a few other countries and is a comprehensive database of policies for these sectors and countries. Archives of the data are available back to 2007, allowing for comparison across time.

**Weaknesses:** The policy summary pages do not provide all of the information for a single policy on one page; the user must go to multiple pages to see all of the information. For example, there are four different pages that need to be viewed to see the four categories of information for a single country's feed-in tariff. The database is limited to EU member states and only a few other countries.

**Database Updates:** The database is updated regularly with the most recent update in 2016.

**Data Accessibility:** The data cannot be downloaded in bulk and there are no data services available.

**Main POC:** Anna Pobłocka-Dirakis ([ap@res-legal.eu](mailto:ap@res-legal.eu))

## 2.24 Standards Map

**Operated by:** International Trade Centre

**URL:** <http://www.standardstmap.org/>

**Summary of Content:** The database provides information on voluntary standards, codes of conduct, and audit protocols (collectively referred to as standards below) relating to sustainability in supply chains. There are currently 219 different entries in the database. The standards can be searched by product or service, producing country, destination market, or standard name. They can also be searched by environmental sector, social aspects, management, quality, and ethics. For each standard the database provides a summary, contact information, geographic scope, products/services covered, certification process, audit process, compliance assessment, cost estimates, and a variety of other information. The codes can be compared easily on the site.

**Data Sources:** The data is provided by individual standards organizations.

**Sectors Targeted:** Cross-cutting

**Countries Covered:** The database ostensibly covers all countries, however standards often only apply to specific countries.

**Strengths:** The database provides in-depth information about each standard in addition to links to for the implementing organization. There is an established review and update process where the ITC contacts the identified points of contact (POCs) within standards organizations and request information on any standard updates. Additionally, standards organization POCs can supply updates to the ITC ad hoc and they will be added to the database within 72 hours.

**Weaknesses:** For quick review, the data can be difficult to parse because there is so much information provided on each standard's page.

**Database Updates:** The database is updated quarterly and annually.

**Data Accessibility:** The data cannot be downloaded and bulk and no data services are available.

**Main POC:** Contact form on site

### 3. Gaps in existing data

#### 3.1 Country coverage

The majority of databases reviewed herein provide comprehensive coverage of OECD countries (see Table 2). While 10 of the databases provide information on a number of non-OECD countries, they still lack data for many developing countries. Only five databases (ECOLEX, FAOLEX, Environmental Treaties and Resource Indicators, International Environmental Agreements Database, and Standards Map) provide information on all or most countries. There is a gap in data on developing countries with the exception of these four databases. ECOLEX sources all legislation data from FAOLEX and there is no data in FAOLEX that is not included in ECOLEX. Additionally, the Environmental Treaties and Resource Indicators database sources its data from ECOLEX.

**Table 2. Database coverage by country type**

<i>Database Coverage by Country Type</i>	
Databases targeting OECD Countries primarily, with a limited number of non-OECD countries included.	Building Energy Efficiency Policy Database Database on Instruments used for Environmental Policy Emissions Trading Systems Map Environmental Policy Stringency Index Forest Policy and Innovation Database Inventory of Support Measures for Fossil Fuels Producer and Consumer Support Estimates Database Renewable Energy Target Data Dashboard RES LEGAL
Databases targeting OECD countries but also including data on many non-OECD countries.	Climate Change Laws of the World Environmental Database Forest Policy and Institutions The Global Climate Legislation Database Global Fisheries Economics – Fisheries Subsidies Database Global Renewable Energy IEA/IRENA Joint Policies and Measures Database Market Access Map New Climate Policy Database Policies and Measures Database: Addressing Climate Change Policies and Measures Database: Energy Efficiency
Databases targeting all or most countries.	ECOLEX FAOLEX Environmental Treaties and Resource Indicators International Environmental Agreements Database Standards Map

### 3.2 Sectoral coverage

In general, the energy, agricultural, forestry and fishing sectors are explicitly covered by existing databases (see Table 3). Additionally, climate change broadly is also well covered. With the exception of the two databases focused on forestry and the one focused on fisheries, all databases provide information on policies that apply to multiple ISIC sectors. The energy and climate change sectors are well-covered and experts regularly use the databases listed above, primarily the four IEA Policies and Measures Databases. Transportation policies are also incorporated into many of the energy databases. FAOLEX and ECOLEX broadly cover multiple sectors, including agriculture, forestry, fishing, mineral resources, waste and hazardous substances, and water.

The ISIC sectors that are explicitly covered in the existing databases are:

- Agriculture, forestry and fishing
- Electricity, gas, steam and air conditioning supply

The ISIC sectors that are not explicitly or comprehensively covered in any of the databases above are:

- Mining and quarrying
- Manufacturing
- Water supply; sewerage, waste management and remediation activities
- Construction
- Wholesale and retail trade
- Transportation and storage
- Accommodation and food service activities
- Information and communication
- Financial and insurance activities
- Real estate activities
- Professional, scientific and technical activities
- Administrative and support services activities
- Public administration and defense
- Education
- Human health and social work activities
- Arts, entertainment and recreation
- Other service activities
- Activities of household employers
- Activities of extraterritorial organizations and bodies

Many of the ISIC sectors that are not explicitly covered by a database are at least partially covered by other databases because they contain policies that apply to the operational activities (e.g. energy use, water use) related to each sector. For example, energy policies related to energy use in educational facilities are included in the Building Energy Efficiency Policy Database. The lack of database specifically targeting the ISIC sectors makes it difficult to ascertain if all environmental policies relating to those sectors are covered.

The OECD's Database on Instruments used for Environmental Policy is the only database for which the policies can be searched by ISIC sector. For all other databases, a user would have to do a keyword search to find policies that apply to a specific sector. This could prove very difficult because the words used to describe specific sectors vary.

**Table 3. Sectoral and policy coverage**

ISIC Sector		Policy Type Coverage			
		Financial Incentives	Regulations	Overarching Policies & Frameworks	Voluntary Approaches
Agriculture, forestry and fishing	A				
Mining and quarrying	B				
Manufacturing	C				
Electricity, gas, steam and air conditioning supply	D				
Water supply; sewerage, waste management and remediation activities	E				
Construction	F				
Wholesale and retail trade; repair of motor vehicles and motorcycles	G				
Transportation and storage	H				
Accommodation and food service activities	I				
Information and communication	J				
Financial and insurance activities	K				
Real estate activities	L				
Professional, scientific and technical activities	M				
Administrative and support service activities	N				
Public administration and defence; compulsory social security	O				
Education	P				
Human health and social work activities	Q				
Arts, entertainment and recreation	R				
Other service activities	S				
Activities of households as employers; undifferentiated goods- and services-producing activities of households for own use	T				
Activities of extraterritorial organizations and bodies	U				
Climate Change (Broadly)	N/A				

KEY: Sector covered extensively Sector covered partially Sector covered minimally

### 3.3 Policy coverage

The four policy categories assessed in this analysis are financial incentives, regulations, overarching policies and frameworks, and voluntary approaches. The policy types are generally well covered for the sectors that are well covered (see Table 3): 1) agriculture, forestry and fishing, 2) electricity, gas, steam and air conditioning supply, and 3) climate change broadly. For all other sectors, financial incentives and regulations are moderately covered in the databases that address the other sectors. The least amount of information is available on voluntary approaches. The primary data gap in policy coverage is for the sectors that are not well-covered and for non-OECD countries.

### 3.4 Data accessibility

All of the databases are primarily designed for a human to search the database and to read the results. Additionally, some databases allow users to download the data in bulk (e.g. in Excel) and two allow users to access the data via a data service (see Table 4). Only one database, Market Access Map, charges a fee for access to all data. Every other database reviewed herein provides access to data for free. Open data principles call for publically available data to be made available in a machine readable format so that others can leverage the existing data to develop new applications and uses of the data. The lack of machine readable data available via web services hinders the incorporation of this data into other applications and greatly increases the cost for incorporating data into a potential database.

**Table 4. Data accessibility**

<i>Data Accessibility</i>	
Data can be downloaded in bulk (e.g. Excel)	Database on Instruments used for Environmental Policy Environmental Database Environmental Treaties and Resource Indicators FAOLEX <sup>6</sup> The Global Climate Legislation Database International Environmental Agreements Database Inventory of Support Measures for Fossil Fuels Market Access Map <sup>7</sup> New Climate Policy Database
Data can be downloaded in bulk and data services are available	Environmental Policy Stringency Index <sup>8</sup> Producer and Consumer Support Estimates Database

<sup>6</sup> The entire dataset cannot be downloaded in a single file.

<sup>7</sup> The data is free to users in developing countries. Other users can access some of the data for free or pay a subscription fee to access the data in its entirety. The data can be downloaded in bulk for those with a subscription, including the data on non-tariff measures. As such, it is unlikely that this data would be available to be published publicly in a new database.

<sup>8</sup> The data can be exported in Excel and also downloaded in XML format. A prototype web service is available using the SDMX REST API.

### 3.5 Frequency of updates

As policies evolve and new policies are regularly implemented, it is critical for any database to regularly update data. The majority of the databases are updated and reviewed regularly. However, a few have not been updated in the last two years (see Table 5). As such, these databases would not likely be the best sources for data in their current status.

**Table 5. Frequency of database updates**

<i>Database</i>	<i>Last Updated</i>
Database on Instruments used for Environmental Policy	OECD data updated annually; non-OECD data has not been updated in the last two years
Environmental Database	2013
Environmental Treaties and Resource Indicators	2012
Forest Policy and Innovation Database	Does not appear to be actively managed or updated
Forest Policy and Institutions	2012
Global Fisheries Economics – Fisheries Subsidies Database	Update frequency unknown

### 3.6 Summary of existing database coverage

Table 6 below provides an overview of the policy, sector and country coverage across the 24 databases reviewed in this report and discussed in more detail above. It also identifies that sector-policy areas for which at least one database makes data available via web services: financial policies for the agriculture sector, and financial and regulatory policies for the electricity sector. Information on the frequency of updates is not included in the table as each policy sector is covered by at least one database that has been updated in the last two years. Please see Table 5 for information on databases that have not been updated in the last two years. The table is meant to provide a high-level overview of coverage; the specifics of coverage for each database is discussed in the “*Summary of Existing Databases*” section above.

**Table 6. Overview of sector, policy, and country coverage and data accessibility**

ISIC Sector		Policy Type Coverage			
		Financial Incentives	Regulations	Overarching Policies & Frameworks	Voluntary Approaches
Agriculture, forestry and fishing	A	★★★	★★★	★★★	★★
Mining and quarrying	B	★★★	★★★	★★★	★
Manufacturing	C	★★★	★★★	★★★	★★
Electricity, gas, steam and air conditioning supply	D	★★★	★★★	★★★	★★
Water supply; sewerage, waste management and remediation activities	E	★★★	★★★	★★★	★
Construction	F	★★★	★★★	★★★	★★
Wholesale and retail trade; repair of motor vehicles and motorcycles	G	★★★	★★★	★★★	★
Transportation and storage	H	★★★	★★★	★★★	★★
Accommodation and food service activities	I	★★★	★★★	★★★	★
Information and communication	J	★★	★★	★★	★
Financial and insurance activities	K	★★	★★	★★	★
Real estate activities	L	★★★	★★★	★★★	★
Professional, scientific and technical activities	M	★★	★★	★★	★
Administrative and support service activities	N	★★	★★	★★	★
Public administration and defence; compulsory social security	O	★★	★★	★★	★
Education	P	★★	★★	★★	★
Human health and social work activities	Q	★★	★★	★★	★
Arts, entertainment and recreation	R	★★	★★	★★	★
Other service activities	S	★★	★★	★★	★
Activities of households as employers; undifferentiated goods- and services-producing activities of households for own use	T	★★	★★	★★	★
Activities of extraterritorial organizations and bodies	U	★★	★★	★★	★
Climate Change (Broadly)	N/A	★★	★★	★★	★★

KEY:	Sector covered extensively	Sector covered partially	Sector covered minimally
	★	★★	★★★
	Primarily OECD countries	OECD and many non-OECD countries	Most or all countries
	At least one database makes data available via web services		

## 4. Summary of expert interviews

A total of 48 experts representing sectors across the economy were contacted to get their input on comprehensive policy resources and the type of policy data they wished were accessible online. To date, responses have been received from 22 experts, either via a phone interview or via email. The following provides a summary of the expert comments.

- The majority of experts contact country ministries, sector-specific associations and non-profits and conduct literature reviews to identify the types of environmental policies that are in place in non-OECD countries. Most analyses require the experts to read the policy documents in detail.
- Multiple experts expressed a need for a stringency indicator to better understand how the policies are actually implemented and enforced. In many cases, there is a disconnect between the policy as it is written on paper and how it is implemented.<sup>9</sup>
- For non-OECD countries, many policy documents are not available online and hard copies must be requested from ministries.
- The majority of international data collection and database development has focused on air pollutants and the energy and climate change sectors. There is much less comprehensive data available on other sectors, particularly waste, water, noise, and natural resource management.
- It is imperative that data is collected and presented in a way that allows for comparison across countries and sectors without simplifying the data so much that the qualitative information about the policies are lost. The data must be consistent across time and countries. The data must be presented such that users can easily and quickly extract that pertinent information for all policies.
- Comprehensive information on waste policies outside OECD countries is difficult to find.
- For the agricultural sector there is no database that provides information on all policies. It is particularly difficult to determine which policies apply as there are so many different environmental aspects related to the sector.
- The types of analyses conducted depend on the data that is currently available. Therefore, providing more data on environmental policies would allow for broader research on policy impact on trade.
- It is difficult to find policy documents in English for many countries, particularly non-OECD countries, and many important details are often lost in the translations or policy summaries due to the complexity of the policy documents.

There was one expert, Dr. Arik Levinson from Georgetown University, who said that the problem is not a lack of data. He explained that environmental problems are complicated and there are multiple factors beyond simply policy that are impacting a sector's competitiveness. To understand all of the factors impacting a specific sector, it is necessary to understand the policies from every level of government that would apply (e.g. national, subnational, local), to assess how each policy is enforced, and how other economic factors impact the sector. To complete this assessment accurately requires a researcher to analyze an extremely specific portion of a sector (e.g. the amount of money manufacturers spend on emissions abatement technology in a single city) and that it is impossible to have all of this information available in a single site. More

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<sup>9</sup> Though many experts identified a gap in data on policy stringency, this is something that will not be addressed in this specific project as it is beyond the scope of this potential policy database. The Green Growth Knowledge Platform's Green Growth and the Law Research Committee is currently working on this topic.

information on his argument is available in the OECD Trade and Environment Working Paper titled “Measuring Environmental Regulatory Stringency” by Claire Brunel and Arik Levinson.<sup>10</sup>

## 5. Conclusion

The primary gaps identified in the existing databases are:

- There is comprehensive coverage for OECD countries for the sectors that are well covered, but mixed coverage, at best, for non-OECD countries.
- There is comprehensive coverage of electricity and agriculture, fishery and forestry sectors but no comprehensive coverage for the remaining ISIC sectors.
- Very little of the data in existing databases is accessible via data services which allow for easy incorporation into other applications.
- Very few of the databases provide data that researchers can easily analyze to assess their impact on trade. Many of the databases provide little more than a summary of the policy, requiring users analyzing the impact on trade to read the policy documents in detail. This is burdensome and limits most researchers to narrower studies.

There are multiple options to build on the existing databases to provide trade-related data on policies. There are trade-offs with each option, of course. Determining the best option depends on weighing the value of providing substantial data specific to trade and economic competitiveness on existing databases, expanding coverage of existing databases, and the cost to implement. It is recommended to work with current databases, either individually or in combination, in order to improve existing data coverage and accessibility for researchers of trade and economic competitiveness.

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<sup>10</sup> Available at [http://www.oecd-ilibrary.org/trade/measuring-environmental-regulatory-stringency\\_5k41t69f6f6d-en](http://www.oecd-ilibrary.org/trade/measuring-environmental-regulatory-stringency_5k41t69f6f6d-en).



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