

Sharing and disseminating environmental information

National roundtable in Georgia

June 2019



This project is funded by the European Union and is implemented by the European Environment Agency



Project background information and organisation

Sharing environmental information through national e-governance and open data frameworks based on SEIS principles should be further underpinned with clearly developed visions and comprehensive road maps for this specific area.

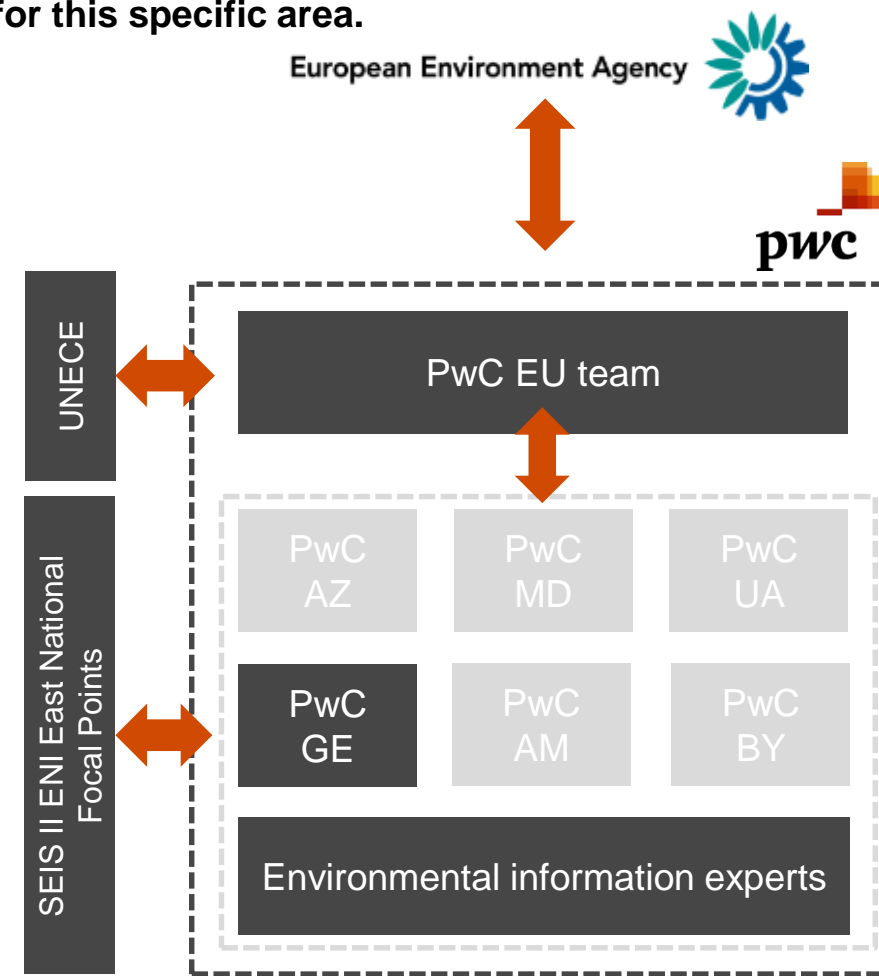
EaP countries have undertaken several international obligations and commitments to collect, update, share and disseminate environmental information as set out in:

- Article 5 of the Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters (Aarhus Convention) and decision VI/1 of the Meeting of the Parties to the Aarhus Convention on promoting effective access to information.
- The Protocol on Pollutant Release and Transfer Registers (Protocol on PRTRs).
- The Batumi Declaration “Greener, cleaner, smarter!” adopted by Ministers of the UNECE region calling to have SEIS in place in support to regular assessment in countries of UNECE region by 2021.
- The Declaration on cooperation on Environment and Climate Change in Eastern Partnership (Luxemburg 2016).
- The 2030 Agenda for Sustainable Development.

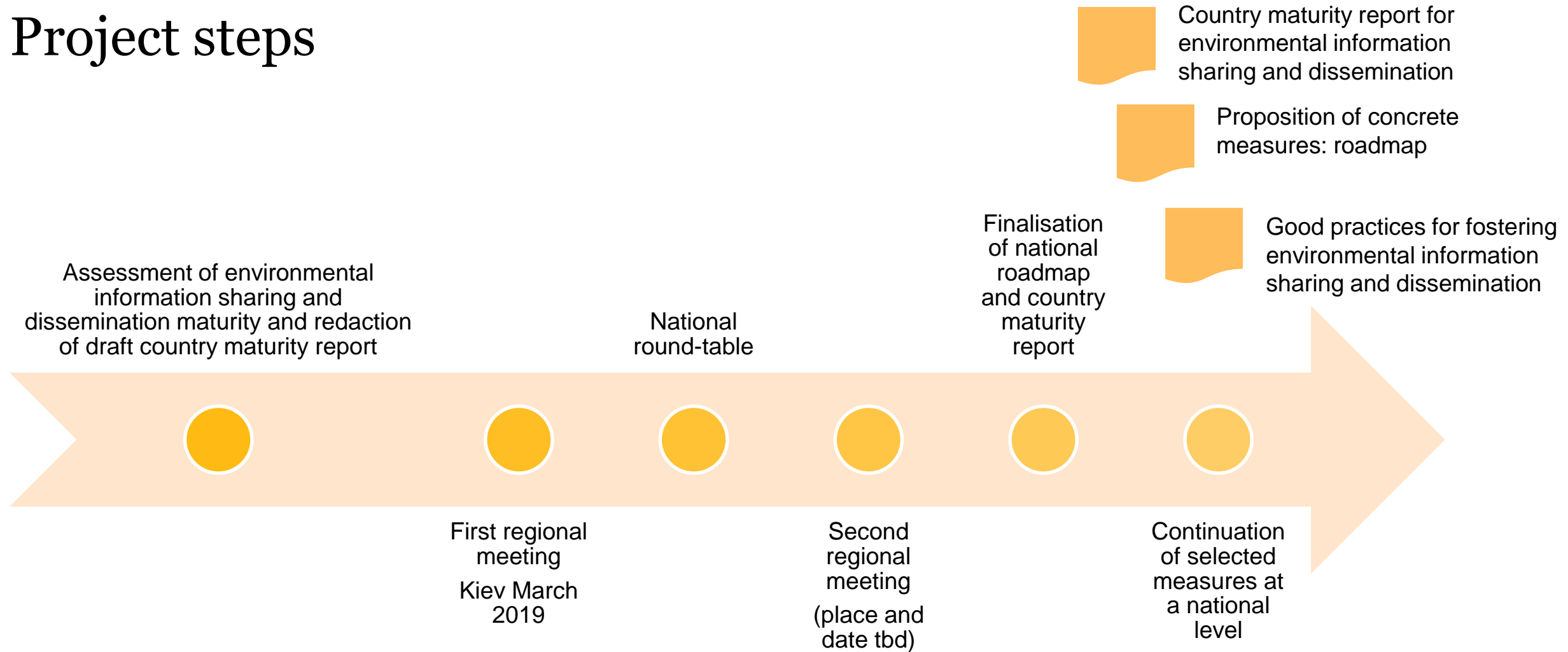
Key objectives of project:

- Support governmental policies and actions in environment and related areas, the transition towards green economy, innovations, compliance with various reporting obligations as well as the implementation of various sustainable development goals (SDGs).
- Streamline efforts and reduce the reporting burden for the national bodies.
- Exchanging ideas, experiences and good practices between countries and institutions, seek advice and receive targeted assistance to make progress smoother and steadier.

Out of scope: environmental system architecture, detailed legal analysis, provision of framework/methodologies/APIs, detailed analysis of environmental monitoring systems and related organisations, financing mechanisms.



Project steps

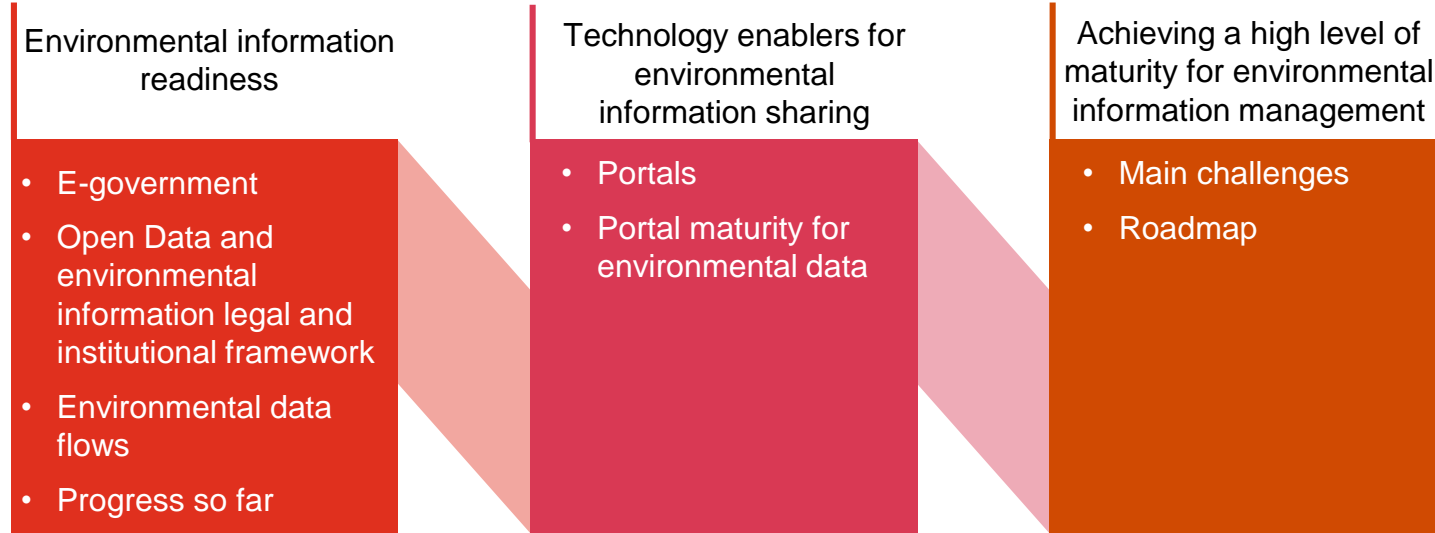


Approach and methodology for the draft maturity report



Dissemination and sharing of environmental information in EaP countries

Draft country maturity reports



Analysis based on publicly available material

Objective of the roundtable

The roundtable aim to identify concrete steps to advance in terms of legal, organisational, technical conditions to ensure that environmental information is integrated/aligned with national e-government and open data initiatives at country level and in line with SEIS principles.

A key objective in this process is to raise awareness on the benefits of sharing environmental information and knowledge at all levels. For the implementation of this component, close links need to be established, among others, with key international partners, such as UNECE WGEMA, Aarhus Convention/PRTR Protocol Secretariat, OSCE/Aarhus Centres, RECs, NGOs, etc. In this regard, the national roundtable audience consists of a mix of environment, e-government, open data, and international experts.

A finalised road-map/set of actions for improving the dissemination and sharing of environmental data through e-governance and open data initiatives.

Input to relevant processes impacting the further development of SEIS in the European Neighbourhood East region, the pan-European assessment processes based on SEIS or/and the Aarhus-related meetings such as the Aarhus Convention Task Force on Access to Information.

Final remarks on the country maturity report, to be gathered during the discussions.

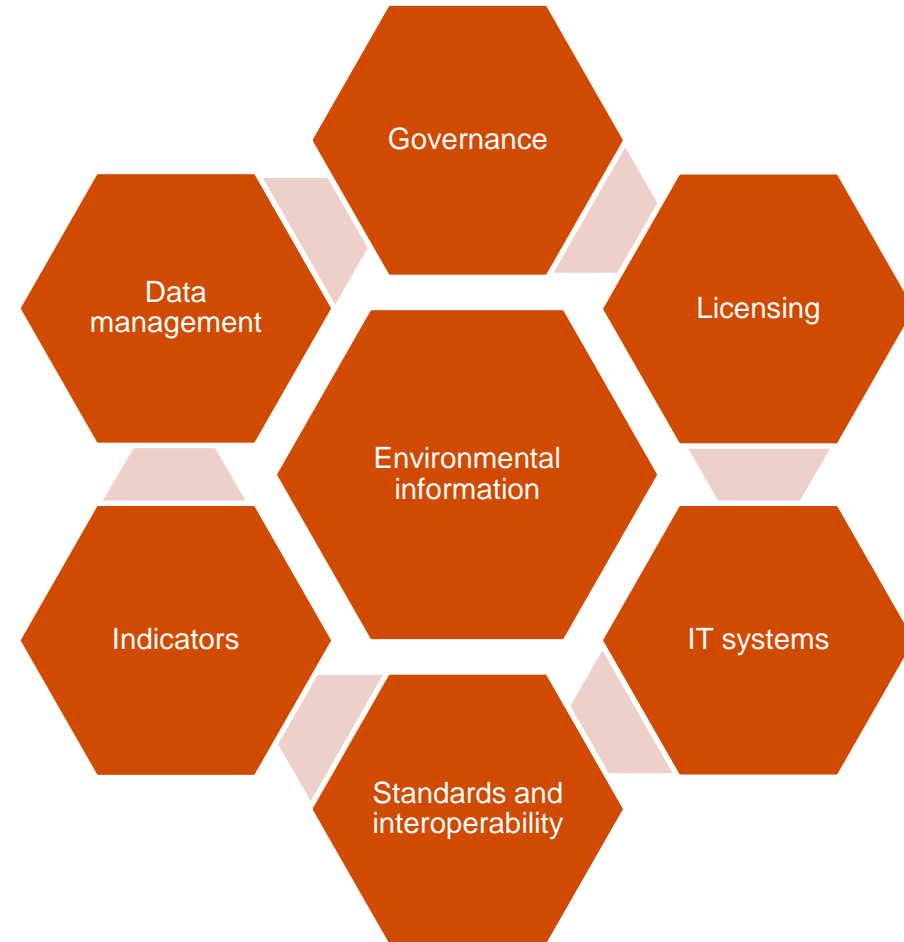
A set of measures for continuing the implementation of the Aarhus Convention, Protocol on PRTRs (as applicable), SEIS principles and other international commitments



Main outcome from the regional meeting in Kiev

The regional meeting in Kiev provided a lot of insights regarding the achieved and ongoing initiatives in the EaP countries. For the Republic of Moldova, it was made clear that real progress is being made in the area of e-government, and that organisational changes are ongoing regarding the environment. In general, the following points were identified:

- Governance: set up the right governance model and embed stakeholders from Open Data, e-government, health, statistics and the environment.
- Necessity to provide a single web-access point for environmental information.
- Necessity to develop/adopt metadata standards for environmental information.
- Necessity for licensing norms for Open Data and dissemination of environmental information.
- Importance of interoperability between information systems for exchanging environmental information.
- Data governance: necessity to define environmental data quality from a monitoring and publication perspective, necessity to manage confidentiality and data privacy, and managing consistency of data published on various platforms.
- Necessity to defined the granularity of environmental data published according to clear rules.
- Importance of considering user feedback and ad hoc request for information.
- Lack of "story" to support environmental indicators (assessments).



Good practices for sharing and disseminating environmental information



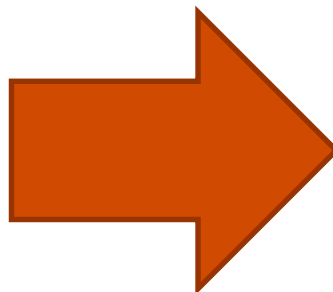
How to read the good practices document?

3.2 Environmental implementation roadmap

This section presents key areas¹³⁶ of development for the Republic of Moldova. It is to be noted that these initiatives should be undertaken taking into account regional and international collaboration. In particular, initiatives which were undertaken in other countries could be leveraged. In addition, the development of national standards would benefit if developed regionally and/or aligned to international standards. This especially is true for the design of information systems, metadata standards, portals and interoperability standards.

3.2.1 Content

Measure	Priority	Description
Revision of legal framework to promote accessibility and re-use of non-sensitive public sector information (PSI) online	High	<p>Review of the legal framework for data governance related to environmental monitoring, decision-making and control, natural resources, ecosystems and pollution inventories and environmental assessments, in accordance with the Aarhus Convention, the Protocol on PRTRs (as appropriate). This can include:</p> <ul style="list-style-type: none"> improving environmental information system(s) by defining themes, sources (lists, registers, databases, funds, etc.), formats, metadata and interoperability requirements in accordance with the Aarhus Convention, Protocol on PRTRs, ECE environmental indicators and other international commitments and the e-government/open data framework improving procedures for environmental data collection in electronic forms improving procedures for environmental data update, quality assurance, reporting, online dissemination and other means of dissemination proving public participation in the design, use and update of the environmental information system(s) of the and taking on citizens science and citizens engagement initiatives division of responsibilities of the public authorities at all levels and across the sectors to ensure their clear roles and coordination reviewing the application of the exceptions in disclosure of environmental information and establishing a clear and predictable legal framework to ensure the legitimate application of these exceptions and the disclosure of information on emissions in accordance with the Convention



Open data and e-government best practices for fostering environmental information sharing and dissemination

Date: May 2019
From: PricewaterhouseCoopers

Legal notice

The contents of this draft report were created by PricewaterhouseCoopers under ESA service contract No. 3437/RO/EN/EEA/57335 and do not necessarily reflect the official opinions of the European Commission or other institutions of the European Union. Neither the European Environment Agency nor any person or company acting on behalf of the Agency is responsible for the use that may be made of the information contained in this report.

This project is funded by the European Union and is implemented by the European Environment Agency

Implementation of the Shared Environmental Information System principles and practices in the Eastern Partnership countries (ENI SEIS II East)

Table of content

- 1 Introduction 4
- 2 Best practices for fostering environmental information sharing and dissemination 5
- 2.1 E-government 5
- 2.1.1 Content 5
 - Building a digital strategy which includes the environment 5
 - Building e-services and public information systems according to national and international standards 6
 - Publishing e-services on a dedicated e-service portal 7
- 2.1.2 Infrastructure 8
 - Establishing an interoperability framework 8
 - Building a "central" environmental monitoring system 11
 - Provide space and time analysis functionalities for environmental indicators on the statistical portal 11
- 2.1.3 Network 13
 - Increasing awareness and motivation among public institutions over e-government and digital solutions 13
 - Increasing awareness about e-government among citizens and businesses 14
- 2.2 Open data 15
- 2.2.1 Content 15
 - Develop a national strategy for Open Data and action plan to implement it for specific types of information 15
 - Designing an "Open Data" legal framework and provision of enforcement mechanisms 18
 - Definition of metadata description standard for all environmental information 19
 - Increase the findability of environmental data and information 21
 - Categorising Open Data 21
 - Transformation of data published to machine-readable format 22
 - Develop and publish quality control mechanisms for environmental data 23
 - Harmonise licensing terms and conditions of environmental data to promote its public use and re-use 24
 - Evaluate the impact of Open Data 26
 - Improve accessibility and use of available environmental data and information by improving the multi-lingual aspect of portals 27
- 2.2.2 Infrastructure 27
 - Build an Open Data portal, and foster publication of public sector information (PSI) 27
 - Establish a single and user-friendly web-access point for environmental information 30
 - Build an infrastructure to embed environmental data in geographic data 33
 - Provide technological means for sharing environmental data at regional level 36
- 2.2.3 Network 36
 - Coordinating Open Data initiative(s) 36
 - Establishing processes and procedures for managing Open Data 37
 - Increasing public administration, citizens and business awareness over Open Data and environmental data 38

ENI SEIS II East | Best practices for fostering environmental information sharing and dissemination | Draft Page | 2

This project is funded by the European Union and is implemented by the European Environment Agency

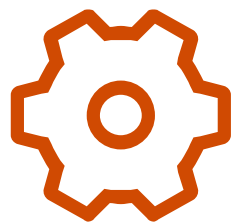
Sharing and dissemination of environmental information

Good practices



Environmental information sharing and dissemination

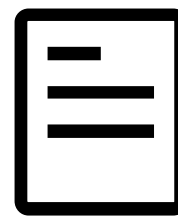
Good practices: Content



Provide mechanisms for enforcing dissemination of environmental information



Define metadata standards for dissemination of environmental information



Define licences for re-use of data published



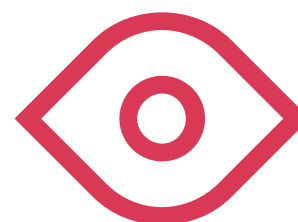
Evaluate the impact of environmental data published (economic, social, political and environmental)



Publish environmental data and reports frequently



Disseminate environmental data in machine-readable format



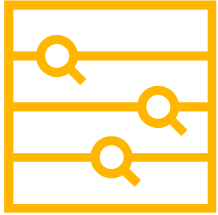
Perform regular “awareness campaign”



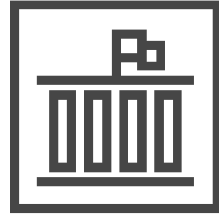
Provide multilingual support & user friendly portals

Environmental information sharing and dissemination

Good practices: infrastructure



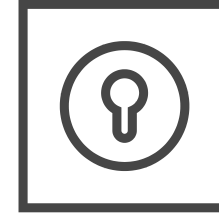
Ensure responsibilities for monitoring are clearly defined and provision of tools and methods for environmental monitoring



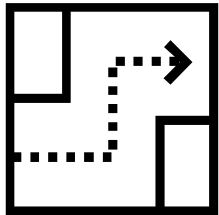
Integrate environmental sharing interoperability in e-government strategy



Align publication of information across platforms (i.e. environmental portals, Open Data portal)



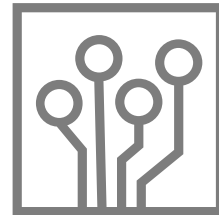
Limit the amount of portals but keep specificities (e.g. Open Data, Geoportal and Eco-portal)



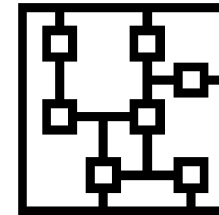
Adopt a simple governance model



Build interoperability standards (i.e. organisational and technical, provision of building blocks)



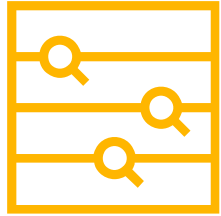
Leverage on e-government and technology



Leverage on geoportal and publish environmental data on it

Portals for environmental information dissemination

Good practices: cooperation



Build user-friendly portals



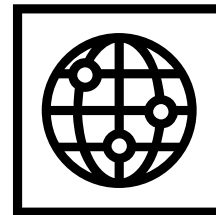
Provide automatic multilingual support (as appropriate, taking into consideration confidentiality)



Build user community and gather their feedback



Provide an advanced statistical system for data visualisation



Leverage on international and regional experience (e.g. Joinup platform in the EU)



Continuously develop skills and ensure availability of resources

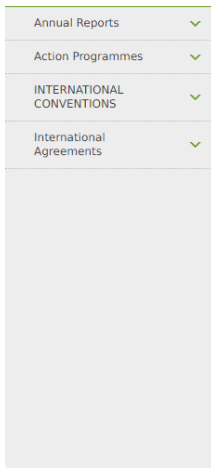
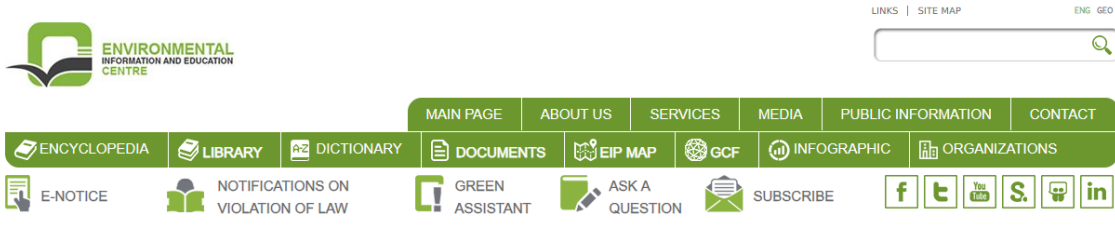
Sharing and dissemination of environmental information

Examples of implementation of
good practices

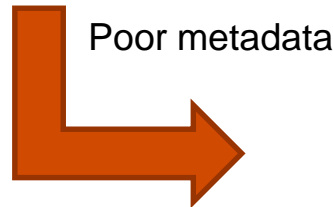


Example of good practices

Defining metadata for environmental information, as for Open Data



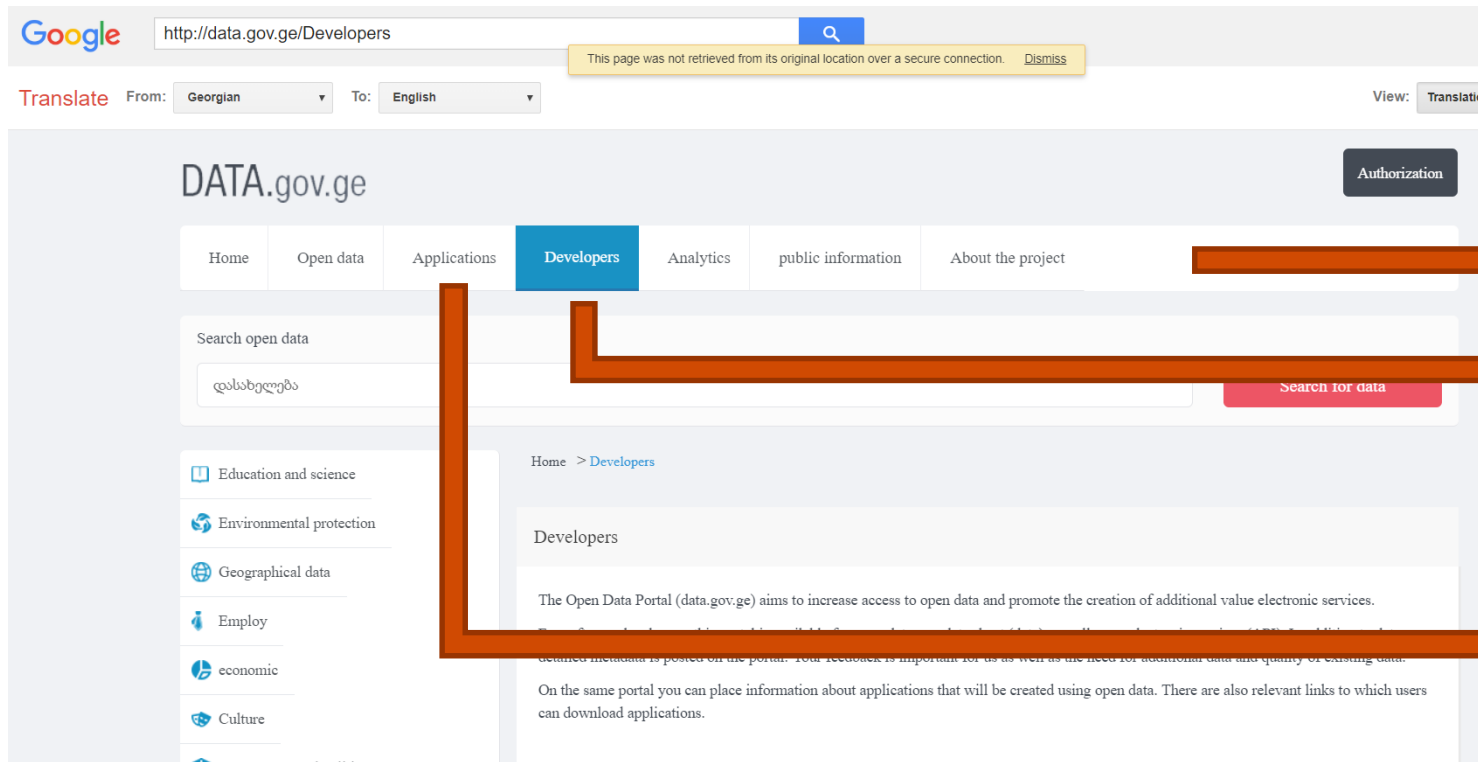
Ministry of Environment and Natural Resources Protection of Georgia
Donors Coordination Meeting MENRP



June 2019	
Sun Mon Tue Wed Thu Fri Sat	
Title	Aarhus Convention, implementation report for the year 2018
Description	This report provides insights regarding the implementation of the Aarhus Convention.
Time coverage	February 2019
Space coverage	Tbilisi, Georgia
Distribution	Report in pdf: http://reportinpdf.pdf Report in Word format: http://reportinword.docx Data in Excel: http://excelrawdata.xlsx Alternative link: http://xyz.md/aarhus2019.pdf
Publisher	Ministry of Environmental Protection and Agriculture of Georgia
Contact person	Mr. XYZ
Contact email	xyz@abc.md
Contact person phone number	+xxxxxxx
Theme	International convention, implementation report
Release date	03.03.2019
Language	Georgian, Russian, English
Keyword	Aarhus Convention, February 2019

Example of good practices

Categorisation of datasets, and highlighting environmental information



Add a section to request data
Add Open Data community

Provide documentation for API usage

Empty section: provide insights about re-used datasets

Example of good practices

Access to geospatial information

INSPIRE Data Themes
Explore all Member States' INSPIRE data sets by selecting an INSPIRE data theme.

Annex I

<p>Addresses Def.: Location of properties based on address identifiers,...</p> <p>2246 34 45</p>	<p>Administrative units Def.: Units of administration, dividing areas where Member...</p> <p>1760 70 240</p>	<p>Cadastral parcels Def.: Areas defined by cadastral registers or equivalent.</p> <p>12219 46 67</p>	<p>Geographical grid systems Def.: Harmonised multi...</p> <p>233 4 22</p>
<p>Geographical names Def.: Names of areas, regions, localities, cities, suburbs...</p> <p>1617 55 62</p>	<p>Hydrography Def.: Hydrographic elements, including marine areas and al...</p> <p>2603 156 253</p>	<p>Protected sites Def.: Area designated or managed within a framework...</p> <p>2443 290 431</p>	<p>Coordinate reference systems Def.: Systems for uniquely...</p> <p>177 8 8</p>
<p>Transport networks Def.: Road, rail, air and water transport networks and rel...</p> <p>3044 163 359</p>			

INSPIRE GEOPORTAL
Enhancing access to European spatial data

European Commission > INSPIRE > Geoportal > INSPIRE Thematic Viewer

Home | Priority Data Sets Viewer | INSPIRE Thematic Viewer | Harvesting status | Find out more about

Data Sets - Protected sites of Europe

Show: Downloadable | Viewable

INSPIRE Geoportal Data Set Statistics

2443 Metadata records	290 Downloadable Data Sets
--------------------------	-------------------------------

Leaflet | Credits: © OpenStreetMap contributors | EC-GISCO. © EuroGeographics for the administrative boundaries (disclaimer)*

Example of good practices

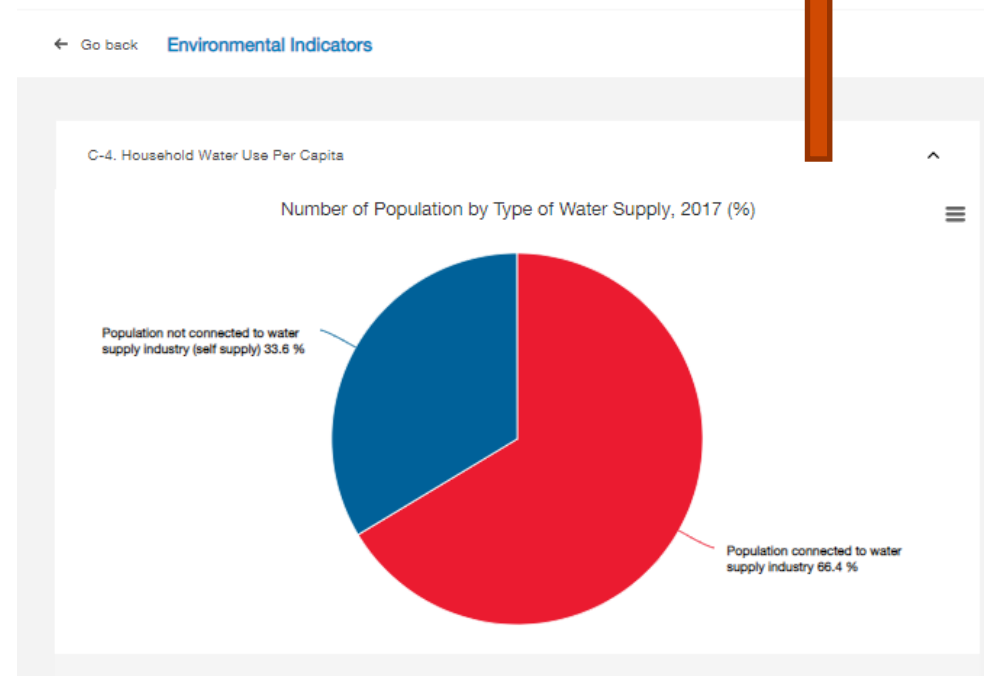
Environment indicators (1/2)

The screenshot shows the website of the National Statistics Office of Georgia. The top navigation bar includes 'STATISTICS', 'PUBLICATIONS', 'METHODOLOGY', 'METADATA', 'CALENDAR', 'MEDIA', 'SURVEYS', 'LINKS', and 'PROJECTS'. Below this is a breadcrumb trail: 'Home / Environment Statistics / Environmental Indicators'. A list of indicators is displayed on the left, including 'C-4. Household Water Use Per Capita', 'C-5. Water Supply Industry and Population Connected to Water Supply Industry', 'C-7. Water Losses', 'C-14. Population Connected to Wastewater Treatment', 'F-2. Fertilizer Consumption', 'F-4. Pesticide Consumption', 'G-1. Final Energy Consumption', 'G-2. Total Primary Energy Supply', 'G-3. Energy Intensity', 'G-4. Renewable Energy Supply', 'H-1. Passenger Transport Demand', 'H-2. Freight Transport Demand', 'H-3. Composition of Road Motor Vehicle Fleet by Fuel Type', and 'H-4. Age of Road Motor Vehicle Fleet'. A 'News' section on the right features articles like 'Foreign Direct Investments Q1 2019 (Preliminary)' and 'Activities of Enterprises (I Quarter, 2019)'. A calendar for June 2019 is also visible.

Methods for ensuring data quality

Provide more indicators

No story
Timely availability of data
Poor metadata
Detailed view? (e.g. per region)



Example of good practices

Environment indicators (2/2)

European Environment Agency

Search

Topics Countries Data and maps Indicators Publications Media About us

Chlorophyll in transitional, coastal and marine waters

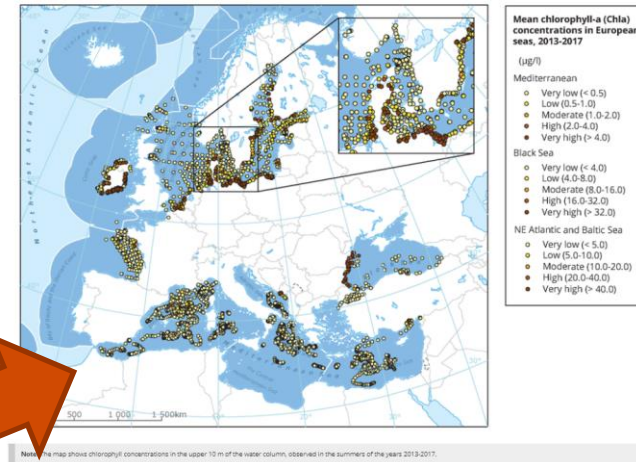
Indicator Assessment — Prod-ID: IND-18-en Also known as: CSI 023 , MAR 006 — Created 19 Oct 2018 — Published 11 Apr 2019 — Last modified 11 Apr 2019 — 15 min read

Topics: Water and marine environment

Key messages

- The trends in chlorophyll concentrations show improvements in the eutrophication status in some of Europe's seas, due to the successful implementation of nutrient management strategies.
- The highest chlorophyll concentrations are generally observed in transitional and coastal waters of the marine (sub)regions, in response to elevated nutrient concentrations in those waters.
- Decreasing chlorophyll concentrations were observed in the southwestern Baltic Sea and along the continental coast of the Greater North Sea (including Kattegat), showing the effects of measures to reduce nutrient inputs (OSPAR 2017, HELCOM 2018).
- For the other marine (sub)regions, only a few time series were available. In general, those time series did not show significant trends.

Fig. 3: Mean chlorophyll-a (Chla) concentrations in European seas, 2013-2017



Map + graphs

Analysis

Baltic Sea

Eutrophication is still a large-scale problem in the Baltic Sea, a fact acknowledged by most, if not all, of the bordering countries (EEA, 2019). The highest measured summer chlorophyll-a concentrations in the 2013-2017 period were found in coastal and transitional waters along the German coast and in the Gulf of Gdansk. Low concentrations were predominantly observed in the open waters of the Baltic Sea (Figure 3). Most of the stations (86 %) did not show a significant change in chlorophyll concentration in the period 1990-2017. Overall, statistically significant decreasing trends were evident in 9 % of the Baltic Sea stations (Figure 2), which were in the southwestern part of the Baltic Sea. Chlorophyll concentrations increased at 5 % of the stations, mainly in coastal waters of the Bothnian Bay and the Bothnian Sea, and at some stations in the Baltic Proper and the Gulf of Finland (Figure 1).

Greater North Sea

Eutrophication is a problem in parts of the Northeast Atlantic. River discharges are the main sources of elevated nutrient levels caused by human activities (EEA, 2019). In the North Sea, the highest chlorophyll concentrations were found in coastal and transitional waters along the continental coast from Belgium to Denmark. Decreasing trends were found in transitional, coastal and offshore waters of the Kattegat and at some stations along the continental North Sea coast.

Atlantic waters: Celtic Seas, Bay of Biscay and the Iberian coast

In the Celtic Seas, only data on chlorophyll concentrations were available for transitional and coastal waters of Ireland. The concentrations generally show a decreasing gradient from inshore to offshore. In 2 % of the cases, the time series showed an increasing trend, while in all other cases there was no significant trend. In the Bay of Biscay and Iberian coast, oxygen concentrations along the French coast were low in general (<10 µg/l). There were few time series available, none of which showed a significant trend.

Mediterranean Sea

Mediterranean Sea is probably the regional seas with fewest eutrophication problem areas. This is partly related to the fact that the offshore parts of the Mediterranean Sea are characterized by very low nutrient concentrations (EEA, 2019). Data for the western Mediterranean Sea mainly cover offshore waters where concentrations are low. Data for the Adriatic Sea and the Ionian Sea show very low concentrations (<1 µg/l). There were few time series available. Only 1 out of 12 available series showed a significant increasing trend.

Black Sea

More reductions in nutrient inputs are required to restore the Black Sea to being unaffected by eutrophication (EEA, 2019).

Example of good practice

Managing Open Data licences

Setting licences enables setting limits for re-using Open Data. It also enables commercial use of data – the Open Data portal can also be used to share commercial data on request.

Filtering licences according to conditions

Licences



Licensing Assistant

Data which is shared with a licence becomes Open Data. There are many licences available. The licence assistant provides a description of the available licences. It also gives an overview of how to apply licences as re-publisher/distributor of Open Data and how to combine multiple licences.

Please find a licence by selecting the preferred licence terms below:

Weighted filtering

Advanced settings

Obligation: Notice, Attribution, Sharealike, Lesser Copyleft, Copyleft, State Changes

Permission: Distribution, Reproduction, Derivative Works, Sublicensing, Use patent claims

Prohibition: Commercial use

Name	Terms
CC BY 3.0 Austria	Obligation: Notice, Permission: Distribution, Obligation: Attribution, Permission: Reproduction, Permission: Derivative Works
CC-BY 4.0	Obligation: Notice, Obligation: State Changes, Permission: Distribution, Obligation: Attribution, Permission: Reproduction, Permission: Derivative Works
CC-BY 3.0 NL	Obligation: Notice, Permission: Distribution, Obligation: Attribution, Permission: Reproduction, Permission: Derivative Works

Example of good practice

Open Data quality measurement and impact assessment



Open Data in Europe

2018 2017 2016

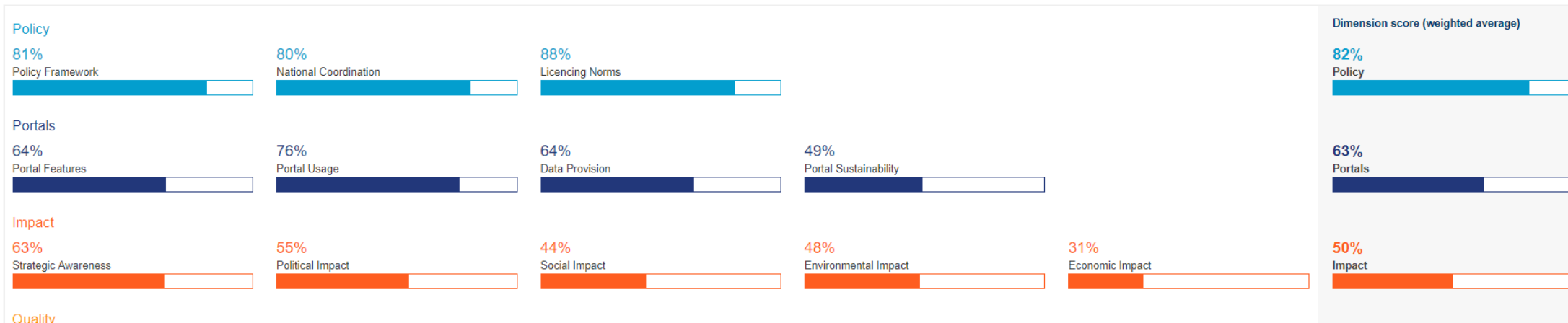
A series of indicators have been selected to measure Open Data maturity across Europe. These indicators cover the level of development of national policies promoting Open Data, an assessment of the features made available on national data portals as well as the expected impact of Open Data.



Jump to section

- Overview
- Country overview
- Detailed country view
- Country maturity map
- Download the full report 2018
- Method Paper 2018
- Download Country Scores 2018

Overview



Example of good practice

Establish a single access-point for sharing environmental information

The screenshot shows the EPA Ireland website. At the top, there is a navigation menu with links for Home, News & events, Videos, EPA maps, FAQ, Gaelige, Site map, and Contact us. Below this is a search bar and social media icons. A horizontal menu contains categories: Ireland's Environment, Licensing and Permitting, Enforcement, Monitoring and Assessment, Research and Education, and Publications and Downloads. The breadcrumb trail reads: You are here: Home > Air > Air Quality > What We Monitor. A sidebar on the left lists various air quality topics. The main content area is titled 'What we monitor' and includes a sub-section 'What we monitor' with a link to 'View up-to-date information for air monitoring locations.' This section describes the national ambient air quality monitoring network and lists pollutants of concern: Particulate Matter and Nitrogen Dioxide. It also features an ISO 17025 Accredited logo for INAB Calibration. Below this, there are sections for 'Ozone' and 'Carbon monoxide', each with a brief description of their sources and effects. A map of Ireland shows monitoring stations and an air quality index for health, ranging from Good (1-3) to Very Poor (10).

The environment portal of Ireland contains information about:

- Licensing and permitting
- Enforcement – Law
- Monitoring & Assessment
- Research & Education
- Publications and Downloads

For each environment theme (air, water, etc.), a specific portal is available and provides access to data and analysis. The portal also provides access to real-time data.

<https://www.epa.ie/air/quality/monitor/>

Sharing and dissemination of environmental information

Report highlights



E-government and Open Data

International rankings of EaP countries for e-government

E-Government Development Index

Year	EaP Avg.	EU Avg.	UA	BY	GE	AZ	AM	MD
2014	0,57	0,73	0,50	0,60	0,60	0,55	0,59	0,56
2016	0,60	0,76	0,61	0,66	0,61	0,63	0,52	0,6
2018	0,66	0,80	0,62	0,76	0,69	0,66	0,59	0,66

Key findings:

Strong development of e-services and e-government portal

Initiatives such as Open Data portal, one-stop-shop for citizens, Electronic System of Doc flow, portal my.gov.ge

Key challenges:

- Interoperability standards for exchange of information between information systems, especially between environmental, statistical, geospatial and health.
- Enhance multilingual support for public authorities websites (including metadata where applicable).
- Leverage on e-government initiatives for fostering environmental information monitoring, sharing and dissemination.
- Development of ICT skills in public institutions and raising awareness for implementing e-government solutions.



Good practice example

The European Interoperability Framework provides guidance on how to set up interoperable digital public services by offering recommendations on the improvement of governance of interoperability activities, establish cross-organisational relationships, streamline processes supporting end-to-end digital services, and ensuring that both existing and new legislation do not compromise interoperability efforts. The four layers of interoperability are: legal, organisational, semantic, and technical.

The EIF can be used to foster the Interoperability Framework Program in Georgia.

E-government and Open Data

International rankings of EaP countries for Open Data

Open Data Inventory (ODIN)

	AM	AZ	BY	GE	MD	UA	Avg.
Overall	53	51	48	55	67	42	53
Coverage	51	59	58	53	54	47	53
Openness	56	43	40	57	80	37	52

Key challenges:

- Provision of standard metadata for datasets published (and if appropriate compatibility with the EU DCAT-AP).
- Enhance metadata quality and provision of multilingual metadata.
- Continue to provision of datasets in machine-readable format.
- Provision of well documented APIs and Open Data community.



Good practice example

Open Data portal in Ireland

Data.gov.ie is intended to provide easy access to datasets that are free to use, reuse, and redistribute. The portal is operated by the Government Reform Unit of the Department of Public Expenditure and Reform. The portal provides a good functionality to “suggest” data to be opened.



Good practice example

Open Data potential in Kyiv

The research is prepared by Kyiv School of Economics jointly with Open Data Institute within USAID/ UK aid Transparency and Accountability in Public Administration and Services program /TAPAS and with the support of the State Agency for eGovernance of Ukraine.

In Ukraine, they estimated that Open Data could contribute up to USD 1.4 billion to the Ukrainian economy by 2025, representing 0.92% of Ukrainian GDP, through a combination of direct and indirect benefits.

Environmental information availability

Main reports published

Type of Report	GE
National environmental reports	Available
Specialised reports - climate (national communications to UNFCCC)	Available
Specialised reports - air	Available
Specialised reports - water	Available
Specialised reports - biodiversity	Available
Specialised reports - waste	To be improved
Indicator-based reports	To be improved
National Statistical Yearbook	Available
National Statistical Yearbook on environment	Available
Report on sustainable development	Available

To be improved
 Available

Key challenges:

- Small amount of datasets published.
- Improve the availability of reports on waste.
- Make environmental data available faster.
- Continue implementing national (or adopt international) indicators.
- Improve the tools for visualising, downloading and analysing the indicators

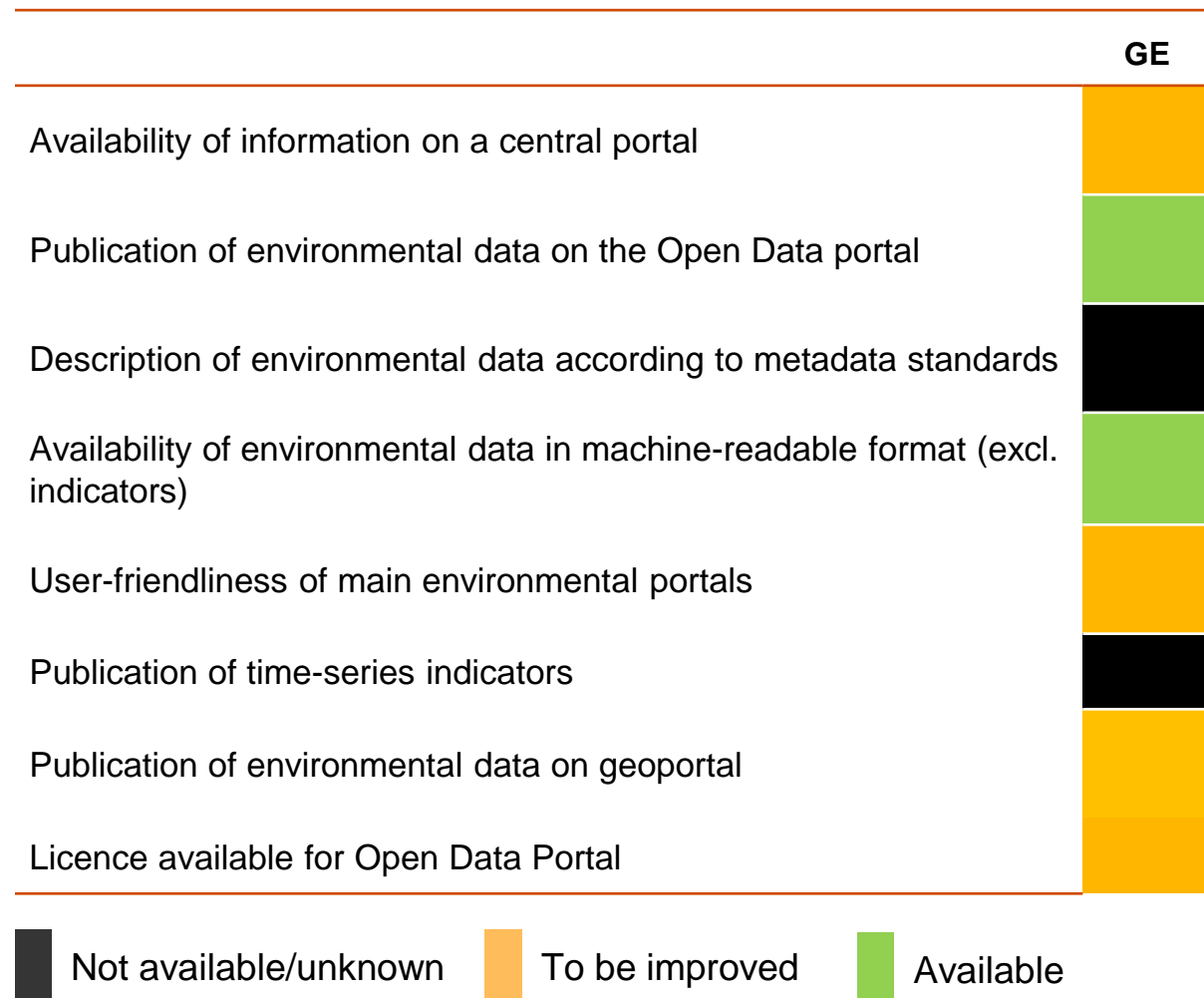


Good practice example

The EEA indicators are the basis of the reports, which are produced by the EEA. The Core Set of Indicators (CSI) cover such thematic categories as climate change, energy, biodiversity and other. The main function of the indicators is to aid in the process of policy making by providing information on which environmental issues are demanding immediate attention and solutions and evaluate the progress made, since the current policies have been enabled. These indicators contain a lot of metadata, a history and an analysis.

Portals for environmental information dissemination

Main platforms maturity level



Key challenges in:

- Lack of metadata descriptions.
- Absence of metadata standard for the reports.
- Need for mechanisms for the enforcement of the legal framework.
- Improving multilingual aspect.
- Availability of time series for environmental data.



Good practice example

Ireland has developed Environmental Protection Agency portal, which provides information on various environmental dimensions: licensing, such as IE or IPC licensing and its enforcement, as well as environmental legislation, reports on various sectors, such as drinking water, urban waste water and landfills. In addition, new research and publications on the current state of the environment are available. Maps with air quality index, sewage treatment and others are accessible to the user. Also, the portal promotes news and events on various environmental topics.

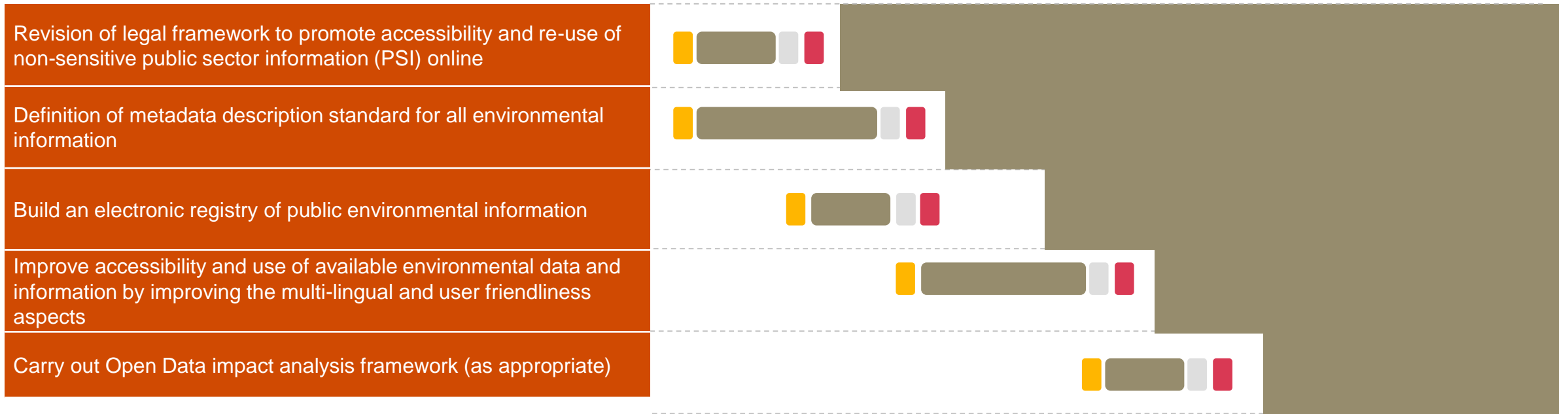
Sharing and disseminating of environmental information

Proposed actions for
discussion



Common key initiatives

Content



Common key initiatives

Infrastructure

Update/adopt interoperability standards for environmental systems and establishment of norms regarding inter-institutional data flow exchange/sharing, its format and improvement of the management of data collected.



Develop and/or continue to enhance an integrated system for environmental information management, including environmental information in accordance with international commitments



Continue to develop a single and user-friendly web-access point for environmental information

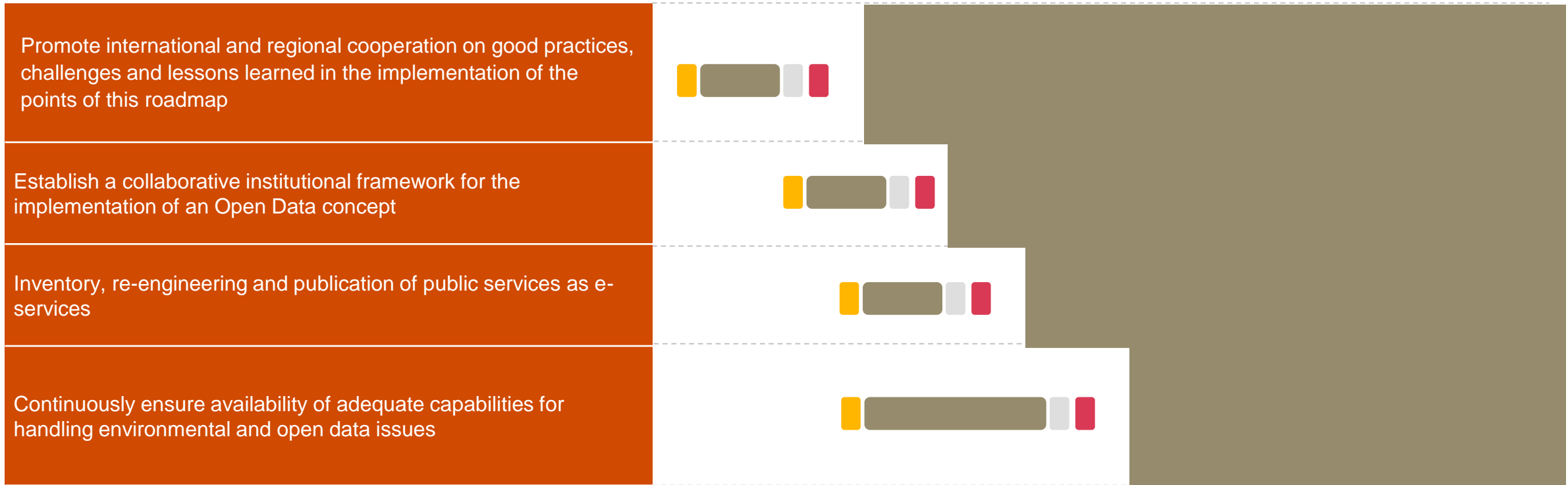


Develop applications to engage citizens in environmental protection through technology, especially extending the scope of existing widely used one regarding meteo forecasts or citizens engagement tools



Common key initiatives

Institutional Cooperation (Network)



Group discussion: content

The goal of these group discussions is to look at the initiatives proposed in the roadmap and to see how relevant they are at a national level, and how they could practically be implemented. Where possible, discuss how existing initiatives can be leveraged to address these points.

1. Reflect on the proposed national roadmap, and see how measures are relevant / applicable. Discuss potential responsibilities for the implementation of initiatives. (30 min discussion)
2. Present your initiatives to all participants (~5-10min per group)

Group discussion: infrastructure

The goal of these group discussions is to look at the initiatives proposed in the roadmap and to see how relevant they are at a national level, and how they could practically be implemented. Where possible, discuss how existing initiatives can be leveraged to address these points.

1. Reflect on the proposed national roadmap, and see how measures are relevant / applicable. Discuss potential responsibilities for the implementation of initiatives. (30 min discussion)
2. Present your initiatives to all participants (~5-10min per group)

Group discussion: cooperation

The goal of these group discussions is to look at the initiatives proposed in the roadmap and to see how relevant they are at a national level, and how they could practically be implemented. Where possible, discuss how existing initiatives can be leveraged to address these points.

1. Reflect on the proposed national roadmap, and see how measures are relevant / applicable. Discuss potential responsibilities for the implementation of initiatives. (30 min discussion)
2. Present your initiatives to all participants (~5-10min per group)

Project next steps

Our objective is to provide you with a sound as-is analysis, practical measures, and good practices for disseminating and sharing environmental information. It is up to you to decide which measure you would like to implement at a national level; the results of this project should help you to pinpoint key challenges and concrete measures.

The following steps will be:

- Review of draft reports to integrate/discuss the last comments: please provide your comments by 30/07/2019.
- Update the roadmap taking into consideration the output of the meeting: please provide your comments by 30/07/2019.
- Finalisation of best practices for key issues raised in the field of e-government, Open Data and environmental information sharing and dissemination taking into consideration the output of the event.
- Second regional meeting (October 2019?).

...

And the journey should not end here.

Thank you

[pwc.com](https://www.pwc.com)

© 2019 PwC. All rights reserved.