Sharing and dissemination of environmental information

Country maturity report: Armenia

Executive summary

June 2020

Prepared by PricewaterhouseCoopers under contract with the European Environment Agency

European Environment Agency

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This report was produced by PricewaterhouseCoopers as part of the project for developing a roadmap and identifying feasible and practical means for integrating environmental information in national e-governance/open data processes and platforms. This action is done in the context of the ENI SEIS II East project 2016-2020. The report was built in 2018 and updated throughout 2019, including a review in March 2019 after the first regional meeting in Kyiv, and the second review after the roundtable in May 2019. The report was commented by the local authorities in Armenia in January 2020.

This report contains information obtained or derived from a variety of publicly available sources described within the report in more detail and does not intend to be a comprehensive analysis of environmental information, open data and e-government in the country but a collection of the main elements shaping the national environmental information landscape.

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The report was prepared and updated between 2018 and 2020 as part of the EU funded project implemented by EEA – 'Implementation of the Shared Environmental Information System principles and practices in the Eastern Partnership countries (ENI SEIS II East)'. National input in the preparation of the report was ensured through broad dialogue and consultation with various public authorities and other stakeholders in Armenia, particularly, those related to the environment and statistics. In addition, experts across various policy domains, including IT and e-government, have been involved through participation in national and regional events. These activities allowed an exchange of views on the future of e-government and open data in the cross-cutting domain of the environment. As a result, the document presents an overview of the national e-government framework, the maturity level of open data and dissemination of environmental information in Armenia. The analysis included the following:

- the policy framework was reviewed to identify existing strategic directions and available tools for the dissemination of environmental information by using open data and e-government solutions;
- the legal framework was analysed to determine the existing requirements related to e-government, open data and dissemination of environmental data and information;
- the technological solutions were assessed to determine the existing technical capabilities and improvements and/or adjustments needed in the future.

Based on the above, the document proposes a roadmap that includes measures focusing on the development of e-government and open data frameworks, which would greatly support the environmental domain and even beyond. The road map is designed to be a living document throughout the implementation process and to serve as a benchmark in assessing the progress at various stages of development.

The methodology followed to prepare the present report is based on the 2018 and 2019 European Union reports on open data maturity in Europe. Some adjustments were made to accommodate the specific situation of Eastern Partnership countries as well as the focus on environmental information.

E-government

Armenia has been on a journey to develop a digital transformation strategy since 2018, when a draft framework document "2030 Digital Transformation Agenda"[1] was prepared. In order to have a clear strategic direction for actions in the area of e-government, the country should prioritise the adoption of the "2030 Digital Transformation Agenda". This process has to be immediately followed by the preparation of an action plan containing clear measures on how to improve digital government services and e-governance.

Government Resolution No. 1093-N adopted in 2015 sets up basic security and interoperability requirements for the information systems managed by public authorities. It is necessary to

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[1] The document was originally referred to as "2018-2030 Digital Transformation Agenda". As there is no public information available on the adoption of the document, "2030 Digital Transformation Agenda" title is used in this report.

follow up on this process and develop secondary legislation to specify in detail the interoperability standards and the procedures which would ensure further development of e-government.

Armenian E-government Portal serves as a single access point for the e-governance tools and databases of the Armenian public authorities. For example, legal acts information system and electronic auction system are accessible via the portal. Also, the portal contains links to the various specific thematic e-service portals and descriptions of public e-services, as well as online service request forms. In addition, the portal provides information on Government's decisions, budget and expenditures. Currently, the portal does not have a functionality to process e-services workflow.

Open data

Open data in Armenia is emerging. Law on Freedom of Information (adopted in 2003) confirms the public right on access to information. The current legislation could be further enhanced to include also the concept of open data and to further support it through necessary governance and enforcement mechanisms.

Currently open data is disseminated by public authorities through their web portals, usually in non-machine-readable formats. To ensure a single-access point, an open data portal should be developed. This would allow to strengthen the open data initiative by providing the necessary tools for open data management and dissemination.

Environmental information sharing and dissemination

The existing legal framework (defining the general processes for environmental information and data management and dissemination as well as the responsibilities of the public authorities) requires updating and modernisation. Consequently, a new law on environmental information was drafted and submitted to the Armenian Parliament for consideration and adoption. Among others, the draft law is improving the procedures for environmental data and information management and effective dissemination.

A few technology-driven initiatives were undertaken over the last five years. Relevant examples in this respect include the establishment of the Shared Environmental Information System (SEIS) for Lake Sevan and the development of the Ecoportal. In 2015, the pilot project for Lake Sevan aimed at developing a model to allow the integration of data from a variety of sources. It is a step towards regular data sharing among key partners and it was made possible with EEA support under the first ENI SEIS project funded by the European Union. Another example is the development of Ecoportal - in 2020, the portal was developed with the technical and financial support of the ENI SEIS II East project. This development was building further on the experience already gained during the previous ENI SEIS project. The Ecoportal provides a single-access point for data and information dissemination on water. The Ecoportal allows to be further expanded to other thematic areas of the environmental domain and become a single access point for all environmental information.

Suggested recommendations

Following the analysis of the current situation, the proposed roadmap outlines key areas for future development in the field of e-government, open data and dissemination of environmental information, and provides concrete measures for improvement. Additionally, to facilitate the implementation of the roadmap, several examples and practical recommendations are provided in the report "Open data and e-government good practices for fostering environmental information sharing and dissemination".

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The success and rapid advancement of the country in this challenging domain remain strongly dependent on the clear priority-setting, multi-disciplinary teamwork and regular monitoring of progress. Furthermore, once progress is made in one or several areas proposed for consideration, amendments of the roadmap will be needed to keep it relevant and focused on the key priorities for the country.

The measures recommended for Armenia in the context of the roadmap have been grouped into the following categories: policy-related, legal and technical measures. They cover the following issues:

- Policy measures: focusing, among others, on the development and adoption of an e-government and open data strategy, followed by the adoption of a detailed action plan for the implementation of the digital initiatives;
- Legal measures: formalising, among others, the responsibilities of the public authorities in e-government and open data areas, as well as recommending the adoption and/or the use of available international standards for interoperability and metadata description;
- Technical measures: covering, among others, the development of an open data portal and of an integrated environmental information system which could be potentially used as a single web access point for environmental information; updating the licensing terms and conditions for access to information; preparation of metadata description and enhancement of the multilingual aspect of web portals and websites in the area of the environment.

All measures are to be seen as strongly interacting with and interdependent of each other. The impact of their gradual implementation has to be closely monitored, as it may bring systemic changes across the whole data and information chain.

It is also strongly recommended that a multidisciplinary team should be set up to address and oversee the implementation of all the above measures. Armenia has a good experience and practice in setting up cross-sectoral teams. A recent example was the development of the Ecoportal were experts from Ministry of Environment and subordinated institutions, Ministry of Emergency Situations and subordinate institutions, and Statistical Committee were closely working together. This good practice should be continued and strengthen and where possible applied in the broader context of the inter-institutional cooperation.

A specific recommendation to Armenia is to further enhance the Ecoportal by extending it to other thematic areas[2]. Furthermore, there is a need to gradually equip the public authorities dealing with environment and related data and information with the necessary technical tools for management (including exchange and sharing) and dissemination. In practice, this recommendation could be achieved by implementing relevant actions, presented in the roadmap and summarised below:

- Specific policy measures - setting a clear policy for the use of Ecoportal as the integrated environmental information system;

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[2] Currently water thematic area is implemented in the portal

- Specific legal measures - formalising procedures for data and information access and dissemination via the Ecoportal, including an obligation to provide user support services;
- Specific technical measures – (1) targeting maintenance and expansion to new thematic areas of the Ecoportal; (2) developing new interfaces and standard APIs for data exchange with other information systems; (3) providing training to civil servants in order to develop their technical skills in management and dissemination of environmental data and information.

The present report depicts the current status of e-government, open data and environmental information management and dissemination in Armenia. Given the exponential development of this area and its recognition as a top policy priority for the near future, a regular update of the report and roadmap proposed is strongly recommended. All the measures proposed need to be seen in strong interaction and interdependence with each other; the impact of their gradual implementation has to be closely monitored, as it might bring systemic changes across the whole data and information chain.