

Roadmap for the establishment of national Shared Environmental Information System

North Macedonia

Objective 1: Improve inter-agency cooperation in data exchange and promote SEIS concept.

Priority: (to be determined by country)

Timeframe for fulfilment: (to be determined by country)

Actions required:

Set up the inter-sectoral Committee under the auspices of MEIC and SSO. Invitations should be sent to all participants to nominate a representative at the Committee.

The Committee should organise technical groups to carry out operational activities, particularly:

- Prepare materials on SEIS concept and principles, environmental indicators production and some related SDG goals/indicators if they are in SDG national framework;
- Provide the Committee members with all the required documentation (materials on SEIS concept, methodology for indicators and environmental indicator-based web platform, infrastructure guidance, presentations and SDG national framework);
- Provide each indicator with metadata that include the methodology of indicator, data source and frequency;
- Group the institutions in line with the role in data chain (data collection Institute, Indicator producing institute and reporting institute);
- Do the assessment (questionnaires /interviews/discussions/workshops) of technical support needed to facilitate data collection and validation, upload, indicator producing, sharing and reporting (national workshop, consultancy);
- Among EEA countries find an example of SEIS good practices on SEIS implementation and use of open free software in order to organize a study visit;
- Increase the capacities of institutions to provide the necessary trainings, national workshops in line with needs;
- Produce the calendar of publishing/producing indicators to get time-series data, which would be internationally comparable;
- Initiate the changes in environmental legislation regarding regular preparation and publication of national reports.

Objective 2: Align the design of the development of currently ongoing National Environmental Information System (NEIS) and National Environmental Monitoring Network (NEMN) with SEIS concept/activities. NEIS should encompass all existing environmental information systems and develop missing

information systems to cover all environmental data in the country in a structured way.

Priority: high

Timeframe for fulfilment: (NEMNT project cycle)

Actions required:

The country should promote such SEIS principles as data availability, and align the design of NEIS ISs/databases across institutions with SEIS principles.

Objective 3: Initiate the changes in environmental legislation regarding regular preparation and publication of national environmental reports.

Priority: high

Timeframe for fulfilment: (to be determined by country)

Actions required:

MEIC should initiate and be in favour of these changes in legislation. These changes should ensure annual updates of environmental indicators and set specific deadlines.

Objective 4: Enhance allocation of all environmental UNECE indicators on environmental indicator-based web platform.

Priority: (to be determined by country)

Timeframe for fulfilment:(to be determined by country)

Actions required:

It is necessary to produce data flows for missing indicators and cooperate with data providers if data exist. If data do not exist, initiate monitoring and data collection.

Objective 5: Bolster data presentation, user interactivity and use of visualisation tools on environmental indicator-bases web platform.

Priority: (to be determined by country)

Timeframe for fulfilment:(to be determined by country)

Actions required:

It requires the redesign of web platform, namely creation of a dynamic web portal. Data visualisation tool should be introduced. In addition, data upload should be done automatically through Application Programming Interface (APIs).

Objective 6: Improve automatic data upload on environmental indicator-based web platform.

Priority: (to be determined by country)

Timeframe for fulfilment:(to be determined by country)

Actions required:

- Introduce the Application Programming Interface (APIs), where data upload from databases of data providers could be done automatically. It requires programming skills, data readiness/availability at the data provider's database and internet connection.
- Organise monitoring and evaluation of the implementation of SEIS principles in order to get feedback for further improvements.

Objective 7: Reinforce the production of environmental information at the local level.

Priority: (to be determined by country)

Timeframe for fulfilment:(to be determined by country)

Actions required:

Improve the capacities of self-government organisations (municipalities) and NGOs. They should provide locally accurate, reliable and accessible environmental information that can be used for comparative analysis on appropriate geographical scale (for example on the scale of regions and cities). The issue must be resolved at the national level. Trainings and communication platforms for exchange of the needs could address this issue.