State of SEIS implementation in 2018
Country Factsheet
BELARUS

Belarus has been making significant progress in establishing SEIS through the implementation of the SEIS principles and the three pillars: Content, Infrastructure and Cooperation. Belarus participates actively in work of the United Nations Economic Commission for Europe (UNECE) Working Group on Environmental Monitoring and Assessment (WGEMA) and the UNECE Joint Task Force (JTF) on Environmental Statistics and Indicators, which support countries in Europe and Central Asia towards establishing SEIS by 2021. The present document provides an overview of the state of implementation of SEIS in Belarus and offers recommendations on how to fully achieve the SEIS 2021 target.

KEY MESSAGES

Content

- Belarus has achieved progress in making UNECE environmental indicators publicly available and accessible
- 40 out of 49 (including 7 placeholders) UNECE environmental indicators are available in 2018
- Environmental indicators are used as forecasts for environmental policy targets

Infrastructure

- One common national platform was established for easier accessibility to environmental information
- A national SDGs indicators list is elaborated and a dedicated section on SDGs indicators is established on the website of the National Statistical Committee (NSC)

Cooperation

- There is an agreement on information interaction between the NSC and the Ministry of Natural Resources and Environmental Protection (MNREP)
- Belarus participates actively in the UNECE indicator-related processes and the SEIS projects supported by the European Union (EU) and the European Environment Agency (EEA)
- A letter of Intent on political commitments to environmental information between the EEA, NSC and MNREP is ready for signature within the framework of the ENI-SEIS EAST II project[1]

THE SEVEN SEIS PRINCIPLES[2] AND STATE OF THEIR APPLICATION IN BELARUS[3]

According to the SEIS priciples, information should be:

[1] The ENI-SEIS - Project "Implementation of the principles and practices of the shared environmental information system (SEIS) in the Eastern Partnership countries"

[2] More information on SEIS principles is available at: https://www.eionet.europa.eu/seis/principles

[3] Evaluation is based on expert's opinion, there are possible changes or clarifications after discussions with Belarus' counterparts.

MANAGEMENT OF ENVIRONMENTAL INFORMATION – OVERVIEW

Organizations responsible for collecting, producing, managing and sharing environmental data and information	The Ministry of Natural Resources and Environmental Protection via the National Environmental Monitoring System The National Statistical Committee The Ministry of Housing and Communal Services The Ministry of Health The Ministry of Agriculture and Food The State Committee of Property Academia, NGOs
Accessibility and availability of environmental information, data and indicators	WHERE?: On the National Statistical Committee and Ministry of Natural Resources and Environmental Protection websites, websites of Conventions In SoER , the Statistical Yearbook (environmental protection) and monthly bulletins, thematic reports In reports to MEAs (UNFCCC, UNCCD, UNCBD, BRS, Minamata etc.) IN WHAT FORMATS?: Reports (e.g. SoER), SEIS production template (for some indicators), metadata provided, visuals (tables, graphs, maps, diagrams) IN WHICH LANGUAGES?: Russian, English
Environmental indicators in use	UNECE environmental indicators (40 indicators) SDGs (there is a potential to use) OECD Green Growth indicators (there is a potential to use) Reports to MEAs Environmental policy targets

air water climate change waste biodiversity land cover soil env. statistics public relations information dissemination

CONTENT AND INFRASTRUCTURE FROM INDICATOR PRODUCTION TO USE

STATE OF PRODUCTION AND SHARING OF ENVIRONMENTAL INDICATORS

Out of the 49 UNECE environmental indicators, 23 were selected for detailed assessment as part of a 2017-2018 UNECE study on the state of production, sharing and use of UNECE environmental indicators in the EU Eastern Partnership countries[4]. Other 26 indicators were covered in less detail and less rigorous criteria were applied.

23 assessed UNECE environmental indicators of Belarus (2018):

- 23 indicators indicated the responsible authority for indicator production;
- 11 indicators included the time of update;
- 14 indicators contained references to their conformity with 7 international and 7 domestic standards;
- 15 indicators included visual representations.

[4] The EU-funded project supports production and regular update of the regional set of indicators and strengthening environmental statistics and accounting in the six Eastern Partnership countries under the ENI SEIS East II project.

Indicators (number of data sets underpinning them)	A	R	T	M	V
A. Air pollution and ozone depletion					
A1: Emissions of pollutants into the atmospheric air (14)	9	1	0	1	1
A2: Ambient air quality in urban areas (4)	4	1	0	0	1
A3: Consumption of ozone-depleting substances (7)	7	1	0	0	1
B. Climate change					
B1: Air temperature (1)	1	1	2	2	1
B2: Atmospheric precipitation (1)	1	1	2	0	1
B3: Greenhouse gas emissions (2)	2	1	1	2	0
C. Water					
C1: Renewable freshwater resources (1)	1	1	2	0	1
C2: Freshwater abstraction (3)	3	1	2	2	1
C3: Total water use (4)	4	1	2	2	1
C5: Water supply industry and population connected (1)	0	0	0	0	0
C10: BOD and concentration of ammonium in rivers (2)	2	1	0	0	0
C11: Nutrients in freshwater (5)	5	1	0	0	1
C14: Population connected to wastewater treatment (1)	0	0	0	0	0
C15: Wastewater treatment facilities (1)	1	1	0	1	0
C16: Polluted (non-treated) wastewater (2)	2	1	2	1	1
D. Biodiversity					
D1: Protected areas (1)	1	1	0	1	1
D3: Forests and other wooded land (1)	1	1	2	1	1
D4: Threatened and protected species (2)	2	1	0	1	1
E. Land and soil					
E1: Land uptake (2)*	1	1	2	0	0
G. Energy					
G1: Final energy consumption (2)**	2	0	0	2	0
G2: Total primary energy supply (2) **	2	0	0	2	0
I. Waste					
I1: Waste generation (2)	2	1	2	2	1
I2: Management of hazardous waste (6)	4	1	2	1	1

less than 33% 33 to 67% over 67% of the maximum possible number

* Data sets are found in digests and reports published on the respective national websites.

** The data sets obtained from external sources (such as, e.g. national reports for international organizations).

Rating criteria:

A - *Accessibility of data sets*[5]: the number of accessible data sets. The indicator "Emissions of pollutants into the atmospheric air" is an exception. This indicator includes the appraisal of emissions of sulphur dioxide (SO_2), nitrogen oxides (NO_x), non-methane volatile organic compounds (NMVOCs), ammonia (NH_3), carbon monoxide (CO), particulate matter PM_{10} and $PM_{2.5}$ from both stationary and mobile sources. If this requirement is met, the rating is 1, if the emissions from only one source type are demonstrated – 0.5. Emissions of any other substances are subdivided into emissions from neither stationary nor mobile sources (according to the indicator description), so that the score for each accessible data set is 1.

R - *Indication of the responsible authority for the production of an indicator*[6]: 2 – the responsible organization and the responsible official are indicated; 1 – only the responsible organisation is indicated; 0 – none is indicated.

T - *Time of update*[7]*:* 2 – in or after 2016 and within 1 year from the date of the latest data point in the series; 1 – the same but before 2016; 0 – the time of the update is not indicated.

M - *Conformity with methodological standards*[8]*:* 2 – conform with international standards; 1 – conform with national standards; 0 – conformity with standards not specified.

V - *Availability of graphs, diagrams, maps*[9]*:* 1 – available, 0 – not available.

QUALITY OF SEVEN DATA FLOWS BASED ON BELARUS' SELF-ASSESSMENT (2018)

Belarus has conducted a self-assessment of 7 data flows underpinning 3 UNECE indicators that were selected for the SEIS mid-term review. The mid-term review was based on the SEIS Assessment Framework and a questionnaire with 25 questions on quality, in accordance with the quality criteria used by the UNECE Statistical Division and EEA, and the three SEIS pillars:

[5] It relates to the Accessibility criterion of the revised SEIS Assessment Framework

[6] It relates to the Clarity criterion of the revised SEIS Assessment Framework

[7] It relates to the Timeliness and the Punctuality criteria of the revised SEIS Assessment Framework

[8] It relates to the Clarity and the Comparability criteria of the revised SEIS Assessment Framework

[9] It relates to the Clarity criterion of the revised SEIS Assessment Framework

Relevance | Accuracy | Timeliness and punctuality | Accessibility | Clarity | Comparability | Institutional and organizational arrangements

Extract: Data Flow - SO_2 [a]

User feedback is collected actively (the feedback form is available at Belstat's website, quarterly analysed and annually published), and used for many purposes.

Use the data produced by themselves and other producers. Data validation is in place. Regular mandated revision of data.

Annual dissemination. Latest release: March 2018. Deviation: less than 4 days to 8 weeks. Timeliness: less than 1 year.

SEIS establishment template, reports/SoER, metadata provided, visuals. Data is available at NSC website, also at: http://rad.org.by/monitoring/air.html , http://www.nsmos.by/content/402.html

Procedures and guidelines are applied for data quality management (requirements ISO/IEC 17025). Information on methodology, data sources, temporal and geographic coverages, data owners, contacts and data flows are made available in English and Russian.

Internationally agreed procedures are applied. Time series availability online since 2005.

Laws "On Environmental Protection", "On the Protection of Atmospheric Air"; Strategy in the field of environmental protection for the period up to 2025; Subprogram "Ensuring the functioning, development and improvement of the National Environmental Monitoring System in the Republic of Belarus" of the State Program "Environmental Protection and Sustainable Use of Natural

[a] **Theme:** A. Air pollution and ozone depletion / **Indicator:** A2. Ambient air quality in urban areas / **Data flow:** Annual average concentration of sulphur dioxide

Atmospheric air: The annual average concentration of NO_2 was regularly measured in 12 cities between 2005–2016. The annual average concentrations of SO_2, PM_{10} and ground-level ozone were measured in 8 cities in different periods of time. The information on the website is published in Russian and English. The indicator contains visuals.
Areas to improve: The website indicates the source of information – MNREP – however, there is no information about the time of update. There is no reference to methodology and its conformity with international standards.

Water: Data shows annual averages of BOD_5 and the average concentration of NH_4 in ten rivers in the period of 2005–2016. There are also annual averages of BOD_5 for each sampling location in the rivers (the number of locations varies from three on the Zapadnyi Bug to twelve on the Dnieper). There is no similar data for NH_4 concentration on the website, although such data can be found in the Annual environmental bulletin published by the MNREP. The maximum and minimum values of BOD_5 and NH_4 concentrations are unavailable. All information on the website is published in both Russian and English. The website includes reference to the information source – MNREP.
Areas to improve: There is no date of the last update of the content, information about the number of samples that were analysed to calculate the annual averages, nor about the periods of the sample collection. No visual representation is available. No reference is made to measurement methods and their conformity with international standards.

Biodiversity: The data sets include data about the total territory of protected areas, their share in the total country area, as well as information on the areas of different national categories in 2000–2016. All information on the website is available in Russian and English. Graphs show the change of the total territory of protected areas per year.
Areas to improve: The website refers to the source of information – MNREP, however there is no date to indicate the last content update. National categories of protected areas do not comply with IUCN recommendations.

Summary of self-assessment

Concerning 7 self-ranked data flows underpinning 3 environmental indicators, Belarus has reported on a long-time series of continuous monitoring: 12 years, except for data flows on protected areas (16 years). Data on protected areas is classified by national rather than IUCN categories. Belarus uses other producers' data. It indicated ministries and agencies involved in responding to the questionnaire as well as the responsible contact persons. Belarus has declared ISO 17025 as procedures used for quality assurance. The country releases its data annually. Belarus reported the use of SEIS templates and the use of the indicators for more than one purpose, i.e. reporting on SDGs. Belarus actively interacts with users, and regularly analyses user feedback collected through an online questionnaire.

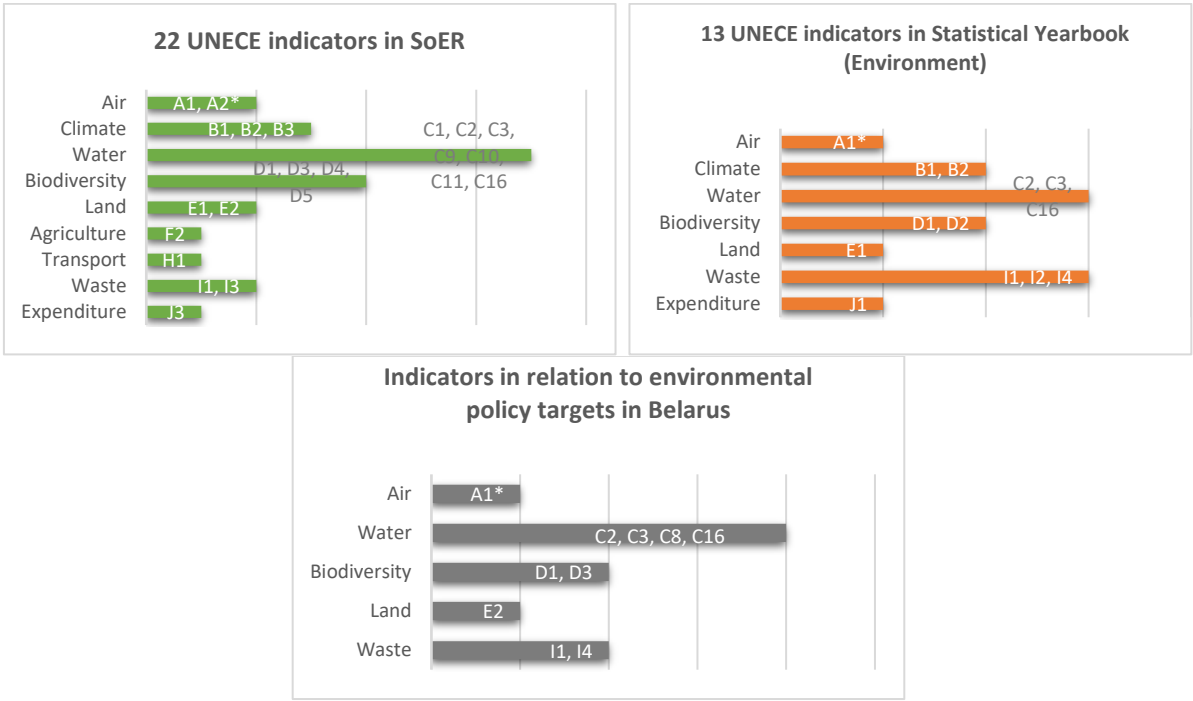
Except for protected areas, the Ministry receives primary data for the underpinning data sets from the organizations responsible for their production. The country reported the availability of metadata for the collected data sets, including information about data sources, temporal and spatial coverage. Except for protected areas, data is released on a monthly basis. Users' feedback is used for data quality and dissemination.

Belarus ranked its performances as **84.29%** - good performance. This score could be higher if the IUCN categories were used to present data on protected areas.

USE OF ENVIRONMENTAL INDICATORS

Use of environmental indicators in environmental assessments, state of the environment reports and other thematic environmental reports or statistical bulletins

Belarus produces no indicator-based environmental reports. At the same time, the UNECE environmental indicators are progressively used in visual materials (time-series graphics, tables, maps) in some national documents such as the 2010 SoER[10], the 2017 National Statistical Yearbook[11], the 2016 Environmental Protection statistical publication, and other thematic reports. In Belarus, environmental indicators are linked to environmental policy targets (defined as forecasts in the Environment Protection Strategy until 2025[12]), and could potentially become a policy-monitoring tool.



*Abbreviations as used in the Guidelines for the Application of Environmental Indicators are accessible at https://www.unece.org/env/indicators.htm

Use of environmental indicators for reporting on international obligations under MEAs

One of the SEIS principles stipulates that environmental information and indicators should be readily available to easily fulfill reporting obligations, including under MEAs. UNECE environmental indicators are used for country reports under UNFCCC[13], UNCBD[14], UNCCD[15] and the Protocol on Water and Health under the Water Convention[16], in different formats and to different extents. The indicators are also to a smaller extent used for reporting on three BRS Conventions[17] and the Minamata Convention.[18]

[10] State-of-the- environment report (2010, in English). Draft 2015 SoER by Scientific-Research Institute "Ecology" (Состояние окружающей среды Республики Беларусь. Национальный доклад [проект].) For an overview of overall user perspectives on SoER, its role and impact on the country's environmental policy , see the 2017 report "Effectiveness and relevance of recent environmental assessments for policy-making and public information in the Republic of Belarus" (in English and in Russian). Thematic reports produced in Belarus (http://www.nsmos.by/content/402.html) (reports on air, ozone layer, water, biodiversity, as well as on SDGs) cover a number of UNECE environmental indicators.

[11] 2017 National Statistical Yearbook provides data that correspond to UNECE environmental indicators. Another important statistical report is the – 2016 Environmental Protection.

[12] Environment Protection Strategy until 2025 (Стратегия в области охраны окружающей среды Республики Беларусь на период до 2025 года.), Forecasts Indicators of the Environment (Прогнозные показатели охраны окружающей среды на период до 2025 года.)

[13] Sixth National Communication of the Republic of Belarus to the United Nations Framework Convention on Climate Change (2015, in Russian).

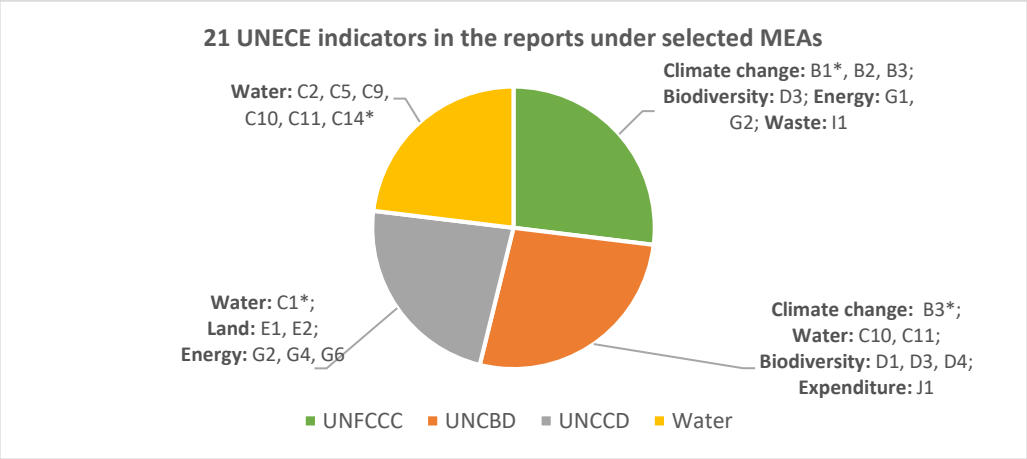
[14] Fifth National Report of the Republic of Belarus to the Convention on Biological Diversity (2014, in Russian).

[15] Third National Report on implementation of the United Nations Convention to Combat Desertification in Belarus (2006, in Russian). Indicators are mainly linked to Aichi biodiversity targets.

[16] The Convention on the Protection and Use of Transboundary Watercourses and International Lakes (Water Convention).

[17] Belarus submitted an Electronic Reporting System of the Basel convention (2011) and online reporting in 2018 under the Stockholm conventions.

[18] International projects under the Minamata convention in Belarus.



*Abbreviations as used in the Guidelines for the Application of Environmental Indicators are accessible at https://www.unece.org/env/indicators.htm

Use of environmental indicators for reporting on the Sustainable Development Goals (SDGs) and Green Growth

Belarus has developed a national list of 255 indicators to measure the progress towards SDGs (131 global indicators and 124 proxy-type indicators). Data for SDG purposes is generated by 26 national agencies and organizations, with the NSC at the forefront (101 indicators). Several indicators correspond to OECD Green Growth indicators.

The potential use of UNECE indicators for SDGs monitoring in Belarus

Water: C2*, C3, C10, C11, C16 (fully); C5, C7 (partially); C4, C9 (limited)
Air: A1 (partially)

Energy: G2 (fully); G3, G4 (partially)

Air: A1 (partially); A2 (fully); **Land:** E1 (partially); E2 (limited); **Waste:** I3, I4 (limited)

Air: A3 (fully); **Water:** C2, C3 (fully); **Biodiversity:** D3 (fully);
Agriculture: F2, F4 (fully); **Waste:** I1 (fully); I2 (partially); I3, I4 (limited)

Climate change: B1, B2, B3 (fully)

Water: C16 (fully)

Biodiversity: D1, D3, D4 (fully); D5 (partially); **Land:** E2 (partially)

Linking of 15 UNECE indicators to the OECD Green Growth indicators in Belarus

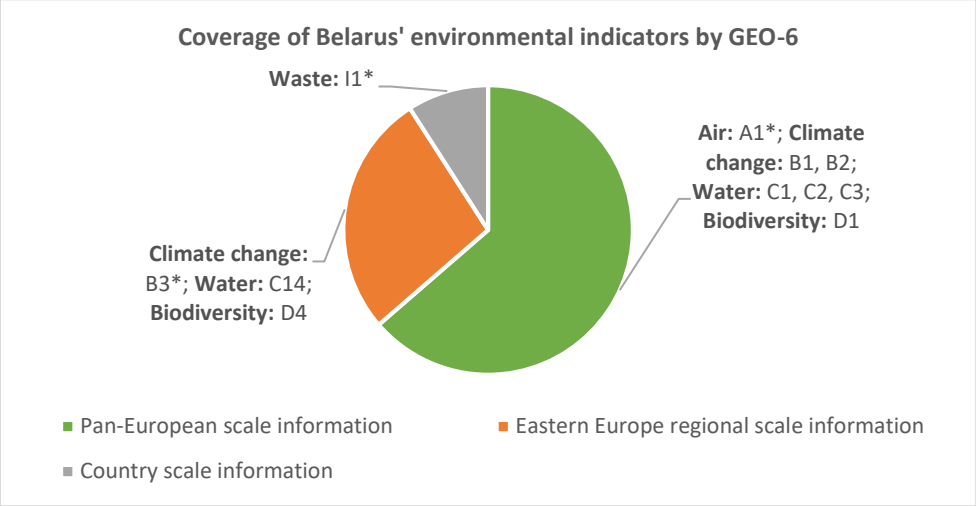
1. CO_2 productivity (1.1)**	**Climate change:** B3*
2. Energy productivity (2.1, 2.2, 2.3)	**Energy:** G1, G2, G4
3. Material productivity (non-energy) (3.3, 3.4)	**Agriculture:** F2
	Waste: I1
4. Water productivity	**Water:** C3, C7
7. Freshwater resources	**Water:** C1, C2
8. Forest resources	**Biodiversity:** D3
	Land: E1
11. Land resources:	**Agriculture:** F2
13. Wildlife resources	**Biodiversity:** D4
14. Environmentally induced health problems	**Air:** A2

*Abbreviations as used in the Guidelines for the Application of Environmental Indicators are accessible at https://www.unece.org/env/indicators.htm

** Abbreviation as used in the list of OECD Green Growth indicators.

Use of indicators in the pan-European volume of GEO-6[19]

The 6th Global Environmental Outlook (GEO-6) produced in 2016 by UNEP and UNECE covers the use of environmental indicators by Belarus in the regional context.



*Abbreviations as used in the Guidelines for the Application of Environmental Indicators are accessible at https://www.unece.org/env/indicators.htm

COOPERATION NATIONAL AND INTERNATIONAL SUPPORT FOR THE DEVELOPMENT OF SEIS

Belarus has good internal cooperation and interaction among environmental information holders: an agreement on information interaction between the NSC and the MNREP is in place.

The ENPI-SEIS project (2010-2015)[20], implemented by the EEA and funded by the EU, was aimed at enhancing the engagement of the countries of the European neighborhood (including Belarus) in regional cooperation. It was supposed to improve national capacity for the management and sharing of environmental data and information. The ENPI-SEIS project addressed three **SEIS pillars** through enhanced networking with the national capacities on environmental information.

Building on the achievements of the above-mentioned project, a four-year EU-funded ENI SEIS II EAST project (2016-2020), now aims to support the promotion of environmental protection by strengthening environmental governance. As of 2018, the project implementation in Belarus is in progress: the National Focal Points are confirmed, and a Letter of intent on political commitments to environmental information is ready for signature between the EEA, NSC and MNREP. The National Implementation Team is not yet in place, however the Inter-Institutional Group, which is already in place, will act in its place.

[19] United Nations Environment Programme. Global Environment Outlook GEO-6. Assessment for the pan-European region. 2016.

[20] The main achievements and outcomes can be found in the East Region Synthesis report 'Building SEIS with the Eastern Neighbourhood'.

CONTENT, INFRASTRUCTURE, COOPERATION	CONCLUSIONS AND RECOMMENDATIONS
Belarus has been making significant progress in enhancing the accessibility of UNECE environmental indicators, which are increasingly being published on the websites of national environmental authorities, statistical agencies and open data portals in compliance with the UNECE requirements. However, Belarus does not fully comply with the international recommendations (i.e. IUCN categories of protected areas). Belarus has the potential to achieve the 2021 target on the UNECE indicators availability, as well as on SEIS implementation.	✓Continue advancing the production and sharing of environmental indicators in compliance with recommendations of the UNECE WGEMA and the JTF on Environmental Statistics and Indicators; ✓Continue methodological work on existing and new environmental indicators, in order for all UNECE environmental indicators to be produced, available and accessible by 2021; ✓ Use the IUCN categories to present data on protected areas; ✓Maintain cooperation and interaction between environmental information producers in Belarus to achieve full SEIS implementation.
Belarus has elaborated a national list of SDGs, and it has the potential to use UNECE environment indicators to monitor the progress under SDGs. Some UNECE environmental indicators have linkages to the OECD Green Growth indicators.	✓Assess in detail and/or promote the use of UNECE environmental indicators to monitor the SDGs progress; ✓Increase the use of indicators for different purposes and monitoring capacities of the progress on achievement of SDGs and Green
There are no indicator-based reports, however, SoER, Statistical Yearbook (environment), thematic reports provide sufficient environmental information and data. 2010 SoER and some data in the reports (i.e. UNFCCC) are considered as outdated. The reports should contain up-to-date information, should be complemented with analysis, assessments and concrete recommendations, and should include relevant material, case studies and visuals.	✓Finalize, adopt and circulate the 2015 SoER to be actively used in policy development and decision-making. Consider increasing the frequency of the report's release; ✓Improve the analytical and recommendation sections of the SoER/thematic reports by using indicators (shift from providing environmental information to environmental assessment, visual explanations); ✓Prepare indicator-based reports.
The produced reports are not always available on the website of the Ministry. Some reports to the MEAs can be found on the specific Convention website. Awareness of the assessment is not high.	✓Make sure that all produced reports are available on the nationally managed websites and in the national language, well presented to a broader public.
Reporting under the MEAs remains one of the main tasks of Belarus. The use of environmental indicators for different purposes, including reporting under the MEAs, should be promoted and strengthened.	✓Increase usage of the environmental indicators for preparation of the reports under the MEAs.

Abbreviations and Acronyms:

BRS – Basel, Rotterdam and Stockholm Conventions (on waste, chemicals and POPs): Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal; Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade; Stockholm Convention on Persistent Organic Pollutants
EEA – European Environment Agency
ENI - European Neighborhood Instrument
ENI-SEIS II EAST project – Project "Implementation of the principles and practices of the shared environmental information system (SEIS) in the Eastern Partnership countries"
ENPI-SEIS project – Projects "Towards a Shared Environmental Information System in the European Neighborhood"
EU – European Union
IUCN – International Union for Conservation of Nature
MEA – Multilateral Environmental Agreement
Minamata – Minamata Convention on Mercury
MNREP – Ministry of Natural Resources and Environmental Protection
NFP – National Focal Point
NSC – National Statistical Committee
OECD – Organization for Economic Cooperation and Development
SEIS – Shared Environmental Information System
SoER – State-of-environment report
UNFCCC – United Nations Framework Convention on Climate Change
UNCCD – United Nations Convention to Combat Desertification
UNCBD - United Nations Convention on Biological Diversity

About the activity:

Countries of Eastern Europe, the Caucasus and Central Asia have long traditions in the fields of environmental information, assessment and reporting. At the Seventh Environment for Europe Ministerial Conference (Astana, 2011) the participating ministers decided to establish a regular process of environmental assessment and to develop SEIS across the region to keep the pan-European environment under review. The UNECE Working Group on Environmental Monitoring and Assessment and the Joint Task Force on Environmental Statistics and Indicators created a platform for the countries to gradually consolidate the shared vision on how to select, calculate, present and use environmental indicators to communicate factors and trends on the overall state of the environment. The European Environment Agency is supporting SEIS development in the EU Neighbourhood region.

This activity, funded by the Russian Federation, aims to support the activity under the Environmental Monitoring and Assessment (EMA) Programme in strengthening national capacities in Central Asia, the Caucasus and Eastern Europe in environmental monitoring and assessment and in enhancing the understanding by ECE member States of environmental data sharing and the establishment of SEIS.

Acknowledgments:

The country profile on the status of SEIS implementation in Belarus was prepared by Ms Lesya Nikolayeva, an international expert. Editorial work was carried out by Ksenia Nechunaeva, a UNECE consultant, and Lavinia Giulia Pomarico, UNECE intern. The UNECE Secretariat provided coordination and overall guidance during the preparation of the country profile. The document was shared with the national counterparts, presented and discussed during the Twentieth session of the Working Group on Environmental Monitoring and Assessment, 3-4 September 2018 in Geneva, Switzerland.

Sources:

Reporting on Progress in Establishing SEIS in the Pan-European Region for the mid-term review and for piloting the SEIS Assessment Framework (Belarus' self-assessment), February 2018; The current status of production, sharing and use of UNECE environmental indicators in the EU Eastern Partnership countries, June 2018; Effectiveness and relevance of recent environmental assessments for policy making and public information in the Republic of Belarus, October 2017; Ministry of Natural Resources and Environmental Protection of the Republic of Belarus and National Statistical Committee of the Republic of Belarus.