
Experience of Belarus in using the UNECE Guidelines for the Application of Environmental Indicators



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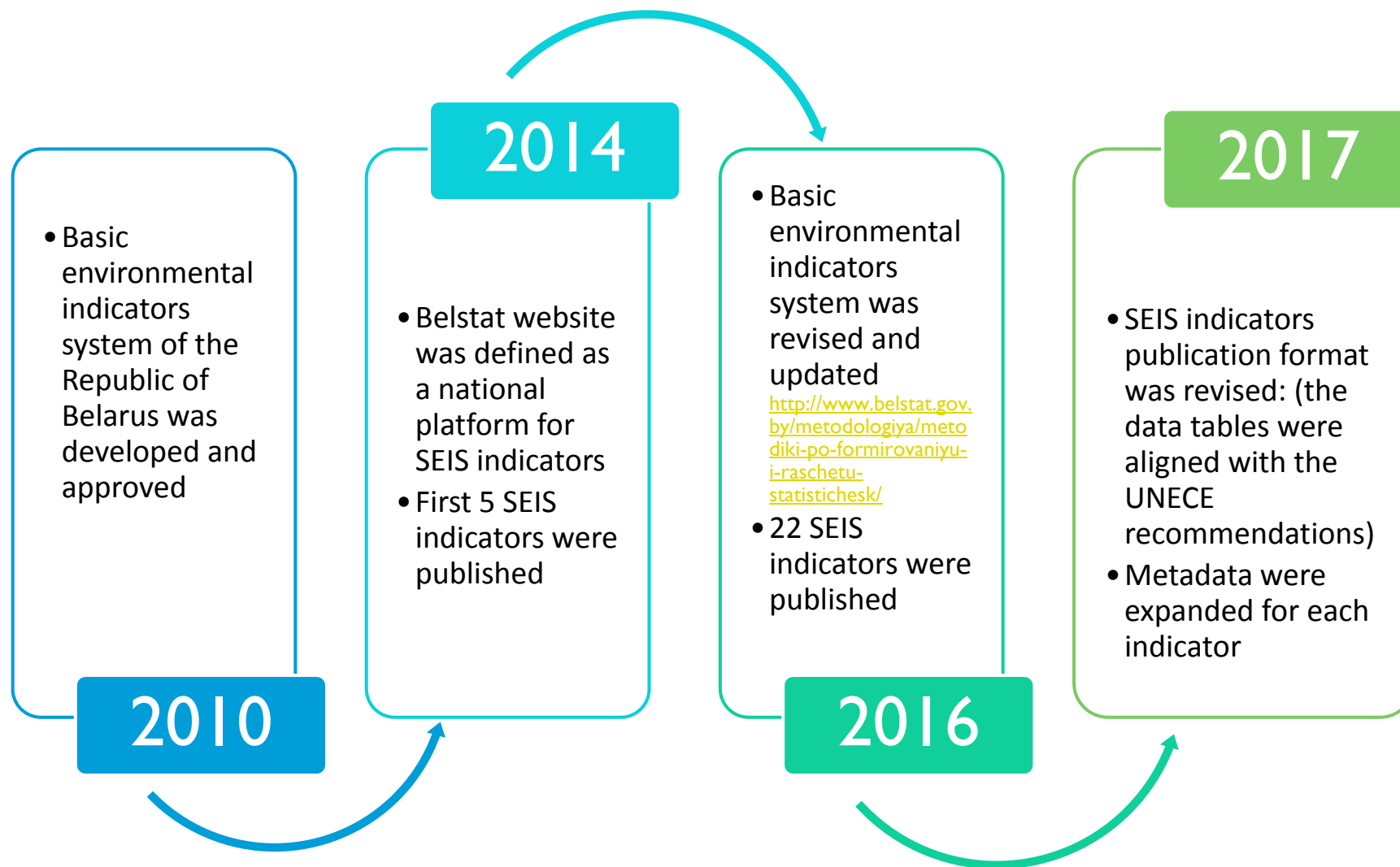
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Environmental Indicators (SEIS indicators): general information



SEIS indicators: 2010-2017



SEIS indicators: 2018

- Of the 49 SEIS indicators recommended by the UNECE, the Belstat website presents the following:
 - 24 - within the framework of the Shared Environmental Information System in the UNECE format
 - Additional 16 as part of various statistical publications
 - 2 indicators are not relevant for the country
- Plans for Quarter 4 of 2018
 - To expand the list of SEIS indicators in the UNECE format on the Belstat website to 35
 - To prepare and publish Specification and Assessment files on the indicators related to water (C1-C5) and biodiversity (D1) (within the ENI SEIS II East project for the Eastern Partnership countries)

2018



Legal and Methodological Framework

- ▶ Legal framework:
 - ▶ Strategy for the Development of State Statistics until 2022
http://www.belstat.gov.by/upload-belstat/upload-belstat-pdf/o-belstate/Stategija_2022_2018-02-16.pdf
 - ▶ User Work Plan of the National Statistical Committee of the Republic of Belarus for 2018
 - ▶ Quarterly work plans of the Belstat Department of Agriculture and Environment Statistics
 - ▶ Agreements on information exchange between Belstat and other state bodies
 - ▶ Currently, there are **34** bilateral agreements, **10** of them involve environmental data
- ▶ Methodological framework:
 - ▶ Guidelines for the Application of Environmental Indicators in Eastern Europe, Caucasus, Central Asia and South-Eastern Europe
<https://www.unece.org/ru/environmental-policy/environmental-monitoring-and-assessment/napravlenija-raboty/enveuropemonitoringiandr-ru/peresmotrennoe-rukovodstvo-po-primeneniju-ehkologicheskikh-pokazatelei.html>
 - ▶ Methodological Provisions on Components of Statistical Activities of the Republic of Belarus (Environment, Energy, Transport, Agriculture, Forestry)
<http://www.belstat.gov.by/metodologiya/metodologicheskie-polozheniya-po-statistike/>



Platform for SEIS indicators on Belstat website

<http://www.belstat.gov.by/en/ofitsialnaya-statistika/macro-economy-and-environment/okruzhayuschaya-sreda/the-shared-environmental-information-system/>

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Main / Official statistics / Macro-economy and environment / Environment / The Shared Environmental Information System

OFFICIAL STATISTICS

- ▾ **Macroeconomy and environment**
 - National accounts
 - Business finance
 - Prices
 - Foreign trade
- ▾ **Environment**
 - Annual data
 - The Shared Environmental Information System**
 - Publications
 - Main socio-economic indicators of the Republic of Belarus

The Shared Environmental Information System

Preamble
The Shared Environmental Information System (SEIS) was done in accordance with the Guidelines for the Application of Environmental Indicators in the Eastern Europe, Caucasus, Central Asia and South-Eastern Europe, developed by the United Nations Economic Commission for Europe, and aimed to modernize and simplify the collection, exchange and use of environmental data and information.

A. Air pollution and ozone depletion >

- A.1. Emissions of pollutants into the atmospheric air
- A.2. Ambient air quality in urban areas
- A.3. Consumption of ozone depleting substances

B. Climate change >

- B.1. Air temperature
- B.2. Atmospheric precipitation
- B.3. Greenhouse gas emissions

C. Water >

D. Biodiversity >

▶ Indicators have been adjusted taking into account the national specifics (metadata provide explanations)

▶ For the convenience of users, tables have been supplemented by data disaggregated by administrative-territorial unit and economic activity

D.1. Protected areas

Indicator:
D1 – Protected areas

[download the file in Excel format for 1990–2017](#)

Brief description:
A part of the territory of Belarus with the unique, etalon or other valuable natural complexes and features of a special ecological, scientific and/or aesthetic value in respect to which special protection and use regulations are established; The area of nature reserves, national parks, refuges, natural landmarks, and share of protected areas in total country area are presented for Belarus as a whole and by regions

Land area of protected areas of the Republic of Belarus for 2001–2017
(square kilometers)

Year	Land area (square kilometers)
2001	15 930
2002	17 288
2003	15 951
2004	15 919
2005	15 700
2006	16 155
2007	17 227
2008	18 256
2009	17 987
2010	18 116

Excel spreadsheet showing data for "защитимые природные территории" (protected natural territories) for the period 2011-2017. The table includes columns for years and values for different categories of territories.

	2011	2012	2013	2014	2015	2016	2017
защитимые природные территории	207600	207600	207600	207600	207600	207600	207600
водных территорий	51	15919	15700	16155	17227	18256	17987
	9	809	852	852	852	852	852
	10	4000	3907	3907	3902	3903	3897
	88	10944	10768	11242	12320	13362	13226
	4	166	173	154	153	140	141
	7	7,7	7,8	7,8	8,3	8,8	8,7

SEIS indicators: one by one



Indicators A. Air pollution and ozone depletion

Indicator	Compliance with UNECE methodology	Comments
A1. Emissions of pollutants into the atmospheric air (1990-2017)	Agreed	Rows for air polluting emissions – total, as well as separately from mobile and stationary sources were added. Extra tables with data on emissions of pollutants into the atmospheric air from stationary sources by economic activity were added.
A2. Ambient air quality in urban areas (2005-2017)	Agreed partly	Data are published for 12 cities. Two more rows for each pollutant were added (Maximum allowable annual limit value; Number of days with exceeded maximum allowable annual limit value), but data on the highest daily concentration are not published. General note: a table template for A2 is too massive.
A3. Consumption of ozone-depleting substances (2005-2017)	Agreed	The table was a bit changed, because it had many “0” rows, but the concept was fully kept.

Data sources:

- Ministry of Natural Resources and Environmental Protection
- National Statistical Committee



Indicators B. Climate change

Indicator	Compliance with UNECE methodology	Comments
B1. Air temperature (1990-2017)	Agreed	Extra table with data on average annual temperature by region was added.
B2. Atmospheric precipitation (1990-2017)	Agreed	Extra table with data on annual precipitation by region was added.
B3. Greenhouse gas emissions (1990-2016)	Agreed	No comments.

Data source:

- Ministry of Natural Resources and Environmental Protection



Indicators C. Water

Indicator	Compliance with UNECE methodology	Comments
C1. Renewable freshwater resources (2000-2016)	Not agreed	The agreed table for 1995-2017 has already been compiled and will be published in November 2018.
C2. Freshwater abstraction (1990-2017)	Agreed	<p>In Belarus we do not have the official statistics on freshwater abstracted by households. Because of this the data on freshwater abstracted by households do not include the information on self supply households.</p> <p>Extra tables with data on freshwater abstraction by economic activity were added.</p> <p>Questions on WEI: mineral water is included in fresh water abstraction; different methodology in comparison with SDG (indicator 6.4.2 Water stress).</p>
C3. Total water use (1990-2017)	Agreed partly	<p>Data on reused water are not available.</p> <p>Data on freshwater use by self supply households are not included.</p> <p>Because in Belarus “Total freshwater use” is “Total freshwater available” minus “Losses of water during transportation” minus “Other losses and water not for use”, the extra row (6-a) “Other losses and water not for use” was added.</p> <p>Extra tables with data on water use by economic activity were added.</p>



Indicators C. Water (cont.)

Indicator	Compliance with UNECE methodology	Comments
C4. Household water use per capita (2001-2017)	Agreed	The data on population connected / not connected to water supply industry as well as on water use by households supplied by self supply were estimated by Belstat.
C5. Water supply industry and population connected to water supply industry (2000-2017)	Agreed	Note: Indicator C5 reflects the water supply industry (ISIC 36), but ISIC 35 is very important sector, which reflects water supply as well (hot water). Should we analyze both ISIC 36 and ISIC 35, when we talk about Water supply industry?
C6. Connection of population to public water supply (2005-2017)	Not agreed	Because indicators C4 and C5 already include data on connection of population to public water supply, we decided to use C6 to reflect the share of households living in apartments/ houses connected to piped water supply systems (based on the data of the sample household living standards survey; expressed as a percentage of the total households).



Indicators C. Water (cont.)

Indicator	Compliance with UNECE methodology	Comments
C10. BOD and concentration of ammonium in rivers (2005-2017)	Agreed partly	Data are published for 10 largest rivers of the country. The concept of C10 was kept, but not all of the recommended rows of C10 table template were used for publication: just “Average annual biochemical oxygen demand (BOD5) in rivers” (biochemical oxygen demand (BOD5) by monitoring station as well), “Concentrations of ammonium ions (in terms of nitrogen) in rivers”. General note: a table template for C10 is too massive.
C11. Nutrients in freshwater: rivers, lakes (2005-2017); groundwater (2005-2016)	Agreed partly	The concept of C11 was kept. Data are published for 10 largest rivers and 18 lakes (on average concentrations of phosphates and nitrates). Data on groundwater are published by monitoring stations within five main river basins. General note: a table template for C10 is too massive.



Indicators C. Water (cont.)

Indicator	Compliance with UNECE methodology	Comments
C14. Population connected to wastewater treatment (2005-2017)	Not agreed	The data on the share of households living in apartments/ houses connected to piped water supply systems and wastewater collecting system (based on the data of the sample household living standards survey; expressed as a percentage of the total households) are published.
C16. Polluted (non-treated) wastewaters (2005-2017)	Agreed partly	The data on wastewater discharge into surface water bodies by degree of treatment are published. The data on total water discharge are published in the statistical book "Environmental protection in the Republic of Belarus".

Indicators **C12**. Nutrients in coastal seawaters and **C13**. Concentrations of pollutants in coastal seawater and sediments (except nutrients) are not relevant for Belarus.

Data sources:

- Ministry of Natural Resources and Environmental Protection
- Ministry of Housing and Utilities
- National Statistical Committee



Indicators D. Biodiversity

Indicator	Compliance with UNECE methodology	Comments
D1. Protected areas (1990-2017)	Agreed	The data on protected areas by national categories are published. Extra table with data on protected areas by national categories by region was added.
D3. Forests (2005-2017)	Agreed	No comments.
D4. Threatened and protected species (1990-2017)	Agreed	Protected species contain species of all categories (I, II, III and IV) of the national nature conservation significance listed in the Red Data Book of Belarus; of which species of I, II and III categories represent threatened species. Critically endangered species include taxons of I category; endangered species - taxons of II category; vulnerable species - taxons of III category. General note: a more detailed explanation of protected categories in the Guidelines for the Application of Environmental Indicators is needed.

Indicator **D5**. Trends in the number and distribution of selected species is going to be published until the end of 2018.

Data sources: National Academy of Sciences of Belarus, Ministry of Forestry, Ministry of Natural Resources and Environmental Protection



Indicators E. Land and soil

- ▶ No E indicators in the UNECE format are published on Belstat website
- ▶ Indicator “E1. Land uptake” is planned to be published by the end of 2018
 - ▶ Data source: State Committee for Property



Indicators F. Agriculture

Indicator	Compliance with UNECE methodology	Comments
F2. Fertilizer consumption (1990-2017)	Agreed	Data are published in total and for particular types of crops (grains and legumes, potatoes, vegetables, forage crops, rape, flax, sugar beets).

Indicators **F1**. Irrigation and **F4**. Pesticide consumption are going to be published on Belstat website in the UNECE format until the end of 2018.

Data sources:

- National Statistical Committee
- State Committee for Property



Indicators G. Energy

- ▶ Before 2018, no G indicators in the UNECE format were published on Belstat website; direct links to the website of IEA where Belarusian data are published were used
- ▶ Plans to publish all G indicators in the UNECE format on Belstat website by the end of 2018
 - ▶ **Data source:** National Statistical Committee



Indicators H. Transport

Indicator	Compliance with UNECE methodology	Comments
H1. Passenger transport demand (1990-2017)	Agreed	No comments.
H2. Freight transport demand (2000-2017)	Agreed	Include pipeline transport as well.

Data sources:

- National Statistical Committee
- Ministry of Transport and Communications



Indicators I. Waste

Indicator	Compliance with UNECE methodology	Comments
I1. Waste generation (2005-2017)	Agreed partly	Waste generation is split into industrial waste generation as well as generation of municipal waste. Extra table with data on industrial waste generation by economic activity was added.
I2. Management of hazardous waste (2005-2017)	Agreed	No comments.

Data sources:

- Ministry of Natural Resources and Environmental Protection
- Ministry of Housing and Utilities
- National Statistical Committee



Indicators J. Environmental financing

- ▶ No J indicators are published as part of SEIS indicators on Belstat website
- ▶ Plans to develop a template and publish indicator “J1. Environment protection expenditure” by the end of 2018
 - ▶ **Data source:** National Statistical Committee



Conclusions

- ▶ The UNECE Guidelines for the Application of Environmental Indicators is a very useful base for production and publishing of the core environmental indicators. Regular production of UNECE environmental indicators:
 - ▶ facilitates access to environmental data for users
 - ▶ facilitates filling out the international questionnaires
- ▶ Possible recommendations on improvements of the UNECE Environmental Indicators :
 - ▶ Some of recommended templates are too massive (A2, C10, C11; it is not quite a common practice to publish data by monitoring station on the websites of statistical offices)
 - ▶ Some indicators have to be harmonized with the “same” indicators, recommended by other international organizations (for example: WEI)
 - ▶ Extra tables for some indicators could be recommended (especially by ISIC/NACE sections)
 - ▶ Some indicators need improvement of their glossaries (for example: D4)
 - ▶ It could be useful to develop Metadata list for each published indicator




ENI SEIS II East project (Belarus)

<https://eni-seis.eionet.europa.eu/east/countries/belarus>

ENI SEIS II East
Implementation of the Shared Environmental Information System (SEIS) principles and practices in the ENP East region

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UNECE ENVIRONMENTAL INDICATORS ENVIRONMENTAL ASSESSMENT REPORTS

National Focal Points:
Elena Kaminskaya, Ministry of Natural Resources and Environmental Protection of the Republic of Belarus
Ekaterina Poleshchuk, National Statistical Committee of the Republic of Belarus

Links:
ENI SEIS II Project in Belarus
Belarus and the EU



UNECE Environmental Indicator Belarus

A B **C** D E F G H I J

Air pollution and ozone depletion Climate change **Water** Biodiversity Land and soil Agriculture Energy Transport Waste Environmental financing

C. Water	Belarus	
C1. Renewable freshwater resources	■	Read more »
C2. Freshwater abstraction	■	Read more »
C3. Total water use	■	Read more »
C4. Household water use per capita	■	Read more »
C5. Water supply industry and population connected to water supply industry	■	Read more »
C6. Connection of population to public water supply	■	Read more »
C7. Water losses	■	Read more »
C8. Reuse and recycling of freshwater	■	Read more »

Thank you for your attention!

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