

Advancing the production and sharing of an extended set of 14 environmental indicators in the countries of the Eastern European Neighbourhood

March 2015



The European Neighbourhood Partnership Instrument-
Shared Environmental Information System (ENPI-SEIS) project



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Legal notice

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This analysis was written on the basis of information and links provided by the countries of the Eastern European Neighbourhood participating in the ENPI-SEIS project.

I. Introduction

The countries of the ENPI-SEIS¹ Eastern Partnership, Armenia, Azerbaijan, Belarus, Georgia, Republic of Moldova and Ukraine, have been working together with other countries of South-Eastern and Eastern Europe, Caucasus and Central Asia since 2009 in the United Nations Economic Commission for Europe (UNECE) Joint Task Force on Environmental Indicators (Joint Task Force) to enhance the comparability of environmental statistics between each other and within the entire pan-European region. The ongoing work for the establishment of the national Shared Environmental Information System (SEIS) in those countries is implemented in close cooperation with the ENPI-SEIS project led by the European Environment Agency (EEA).

The Joint Task Force serves as a forum for joint work on improving environmental data collection, reporting and assessment. In their efforts to achieve the above-mentioned goals, the countries participating in the Joint Task Force activities have reviewed and agreed to apply a set of 41 environmental indicators contained in the Online Guidelines for the Application of Environmental Indicators (Indicator Guidelines)². These countries have the common ambition to produce and share all the indicators and their underpinning datasets in the near future, which is an important step towards establishing SEIS. With this, the countries aim at having a solid set of indicators ready for use for a possible pan-European assessment cycle.

The availability of data flows and the calculation of meaningful environmental indicators are important to help policy makers at national and international levels to better understand the undergoing changes to the environment, to compare the results with neighbouring countries, and to take informed policy actions for safeguarding the environment. They also enable citizens to access comprehensive information about the ambient environment in an effective manner.

The process focused on the production and sharing of the environmental indicators has accelerated since 2013 under the Joint Task Force. The countries, in this process, have started working with eight indicators and fourteen of their underpinning data flows referred to as ‘core indicators’. Those cover five thematic areas: air, climate change, water, biodiversity and waste. At its Ninth Session in November 2014 the Joint Task Force decided to expand their focus by taking up additional six indicators

¹ The European Neighbourhood and Partnership Instrument (ENPI) Shared Environmental Information System (SEIS) project

² <http://www.unece.org/env/indicators.html>

into the agreed core set. The new core set of 14 indicators and 44 data flows (the core set) contains further indicators on water and biodiversity and opens up to the thematic areas of agriculture and transport (see Table 1).

Since 2014 the review of all the Joint Task Force countries' production and sharing of the environmental indicators is supported by regular analyses prepared by the secretariat and presenting the status of production and sharing for each core indicator in every country. This paper contains the third review of this kind for countries of the ENPI-SEIS Eastern Partnership. It is an extract of an analysis of the performance of twelve countries of South-Eastern and Eastern Europe, Caucasus and Central Asia, which will be presented at the Tenth Session of the Joint Task Force (Geneva, 11 - 13 May 2015).

The first analysis, prepared for all the Joint Task Force countries, was presented and discussed at the Eighth Session of the Joint Task Force in May 2014 (CEP-CES/GE.1/2014/3). It helped to formulate a set of 14 tailor-made recommendations for the countries to guide them in strengthening the production and sharing of indicators (CEP-CES/GE.1/2014/4). An update of the initial analysis was presented and discussed at the Ninth Session of the Joint Task Force in November 2014 (CEP-CES/GE.1/2014/8).

The present analysis, that focuses on the countries of the ENPI-SEIS Eastern Partnership, shows the performance of these countries as of March 2015, was prepared to take into account progress in implementing the recommendations on the production and sharing of indicators and to review the availability of the extended core set of 14 indicators. It is based on indicators, underpinning data flows and background information shared through national websites.

Links to those websites were provided by the following five ENPI-SEIS Eastern Partnership countries: Armenia, Azerbaijan, Belarus, Georgia and Republic of Moldova.

Ukraine confirmed that links to national websites will be shared with the secretariat of the Joint Task Force before end of April 2015. Those websites will be taken into account for an updated version of this paper.

The paper consists of a summary of the progress achieved by the ENPI-SEIS Eastern Partnership countries in terms of making available the core indicators in a clear and informative manner (chapter II). This is followed by the in-depth analysis of the production of the 14 indicators (chapter III). This section presents the analysis of

countries' performance in producing the indicators according to the methodologies stipulated in the Indicator Guidelines. The analysis closes with concluding remarks (chapter IV).

II. Summary – Availability of online data flows for the core set of 14 indicators and progress between May 2014 and March 2015

A. Overview on the production and sharing of indicators

The analysis as of March 2015 shows that the majority of the 14 core indicators and underpinning data flows are produced and shared by the five ENPI-SEIS Eastern Partnership countries that submitted links (see Table 1). All of these countries produce and share data for each of the eight indicators that have been in the focus since 2013, with only one exception (Georgia for the indicator on waste). With regard to the additional six core indicators that were selected only in November 2014, the paper also finds a good performance: all countries already share data flows under the indicators *Freshwater abstraction (C2)*, *Total water use (C3)* and *Passenger transport demand (H1)*. For the other new indicators, data are already produced and shared for four (*Fertilizer Consumption (F2)*) or three (*Renewable freshwater resources (C1)*; *Threatened and protected species (D4)*) of the ENPI-SEIS Eastern Partnership countries respectively.

Besides these encouraging results, however, the paper also points out a number of cases in which further improvements are necessary by the countries. On the one hand, those gaps include cases in which not all data flows under certain indicators are shared or are not produced according to the agreed methodology of the Indicator Guidelines (see chapter III). On the other hand, the paper suggests tailored improvements in terms of providing background information and a brief interpretation with the shared data as well as making it available to the national public and international community.

Table 1: Production and Sharing of 14 core indicators by ENPI-SEIS Eastern Partnership countries

Indicator	Data flow	ARM	AZE	BLR	GEO	MDA
<i>Emissions of pollutants into the atmospheric air (A1)</i>	SO ₂	✓	✓	✓	✓	✓
	NO _x	✓	✓	✓	✓	✓
	NMVOCS	✓	✓	✓	✓	✗
	NH ₃	✓	✓	✓	✗	✓

Indicator	Data flow	ARM	AZE	BLR	GEO	MDA
	CO	✓	✓	✓	✓	✓
	CH	✓	✓	✓	✗	✓
	POPs	✗	✗	✗	✓	✓
	Heavy metals	✓	✗	✓	✗	✓
	PM	✓	✓	✓	✓	✓
<i>Ambient air quality (A2)</i>	NO ₂	✓	✓	✓	✓	✓
	SO ₂	✓	✓	✓	✓	✓
	O ₃	✓	✗	✗	✗	✗
	PM ₁₀	✗	✗	✓	✗	✓
<i>Consumption of ozone-depleting substances (A3)</i>	Total consumption of ODS	✓	✓	✓	✓	✓
	ODS broken down by different substances	✓	✗	✗	✓	✓
<i>Greenhouse gas emissions (B3)</i>	Total GHG emissions	✓	✓	✓	✓	✓
	LULUCF	✗	✓	✓	✗	✓
	GHGs broken down by different gases	✓	✗	✓	✓	✓
<i>Renewable freshwater resources (C1)</i>	Total renewable freshwater resources	✗	✓	✗	✓	✓
<i>Freshwater abstraction (C2)</i>	Fresh surface water abstracted	✗	✓	✓	✓	✓
	Fresh groundwater abstracted	✗	✓	✓	✓	✓
	Total freshwater abstraction	✓	✓	✓	✓	✓
	Water Exploitation Index	✗	✗	✓	✓	✗
<i>Total water use (C3)</i>	Total freshwater available	✗	✓	✓	✓	✓
	Losses of water during transport	✓	✓	✓	✓	✓
	Total freshwater use (by economic activity)	✓	✓	✓	✓	✓
<i>BOD₅ and concentration of ammonium in rivers (C10)</i>	BOD ₅ in rivers	✓	✓	✓	✓	✓
	Ammonium in rivers	✓	✓	✓	✓	✓
<i>Nutrients in freshwater (C11)</i>	Nitrates in lakes	✓	✓	✗	✓	✓
	Total phosphorus in lakes	✓	✓	✓	✓	✓
	Phosphates in rivers	✗	✗	✓	✓	✓
	Nitrates in rivers	✓	✓	✓	✓	✓
	Nitrates in groundwater	✓	✗	✗	✗	✓
<i>Protected areas (D1)</i>	Total protected areas by IUCN categories	✓	✓	✓	✓	✓
<i>Threatened and protected species (D4)</i>	Number of species protected	✗	✗	✓	✓	✓
	Number of species threatened	✗	✗	✓	✓	✓
<i>Fertilizer consumption (F2)</i>	Agricultural area	✗	✓	✓	✓	✓
	Total consumption of mineral fertilizers	✗	✓	✓	✓	✓
	Area treated with mineral fertilizers	✗	✓	✓	✓	✓
	Total consumption of organic fertilizers	✗	✓	✗	✓	✓
	Area treated with organic fertilizers	✗	✓	✓	✓	✓
<i>Passenger transport demand (H1)</i>	Total passenger transport demand	✓	✓	✓	✓	✓
	Passenger transport demand by different modes of transport	✓	✓	✓	✓	✓
<i>Waste generation (I1)</i>	Annual municipal waste generation	✓	✓	✓	✗	✓

Legend	
✓	Data flow produced and shared
✓	Data flow shared with issues in data structure
✗	Data flow not shared

B. Background information on the applied methodology

The website with an indicator or a set of indicators should be presented in a clear and comprehensive way. It should provide clear and brief information on the methodology applied for the production of the indicator. This important background information

should be either embedded in the webpage presenting an indicator, or should be directly accessible from this webpage via a link. It should at least include definitions of the most important terms, so that it is clear how the data flow is calculated and what it measures, introduce data sources as well as methods of data collection and define the units of measurement. In addition, information on the legal framework for reporting on this indicator, as well as data validation procedures and limits of the applied methodology should be included into the background information.

The performance of the countries in this regard is summarized in Table 2. Countries that meet or come close to meeting the optimal level described above for most indicators include Armenia, which makes the indicator description and the glossary of terms from the Indicator Guidelines available with 10 core indicators it publishes. Azerbaijan shares very brief “methodological guidelines” as well as their statistical yearbook on their webpage on environmental indicators for references to methodology.

Belarus presents for each of their published indicators a brief summary of the applied methodology on their webpages and for most indicators more detailed information on methodology can be accessed via a link on “additional information”.

Countries that do not fully meet the requirements in terms of the background information on methodology include the Republic of Moldova. The information published on the indicators in the country’s “Open Data Portal” currently cannot be considered sufficient in many cases. For Georgia no background information can be found yet on the respective webpage on environmental indicators.

C. Information on the responsible institutions

On a webpage presenting indicators the institution responsible for the production of the respective data flows should be clearly specified, in particular when data are shown on an overview page or portal.

The performance of the ENPI-SEIS Eastern Partnership countries in this regard is summarized in Table 2. Belarus and the Republic of Moldova specify the responsible institutions for the majority of their published indicators.

On the webpages of Armenia, Azerbaijan and Georgia such information is not clearly specified.

D. Brief interpretation of data flows and trends

To facilitate the understanding of the presented data for policy makers and the public, the webpages on environmental indicators should contain a brief analysis of the data and trends or make such information easily accessible via a link. This analysis could include graphs or charts showing trends, references to policy targets, if available, and an evaluation in how far those targets are met.

The performance of countries in this regard is summarized in Table 2. Interpretations are presented for most indicators by Belarus and the Republic of Moldova.

For Armenia, Azerbaijan and Georgia no interpretation of the data are found on the websites.

Table 2: Background information published with indicators

	<i>Armenia</i>	<i>Azerbaijan</i>	<i>Belarus</i>	<i>Georgia</i>	<i>Rep. of Moldova</i>
<i>A1</i>					
<i>A2</i>					
<i>A3</i>					
<i>B3</i>					
<i>C1</i>					
<i>C2</i>					
<i>C3</i>					
<i>C10</i>					
<i>C11</i>					
<i>D1</i>					
<i>D4</i>					
<i>F2</i>					
<i>H1</i>					
<i>I1</i>					

Legend

	Indicator published with background information on the applied methodology
	Indicator published with information on the responsible institutions
	Indicator published with a brief interpretation of data flows and trends
	No background information available
	Indicator not published

E. Languages






The webpage(s) presenting the indicators should be available in local languages to be accessible for the local public and policy makers and in a second language (English or Russian) so that it can be used by the international community and public of neighbouring countries. The websites which contain information on the indicators, not the main pages of the relevant agencies are taken into account for the analysis of the available languages.





The performance of countries in this regard is summarized in Table 3. The analysis confirms findings of the previous analyses: While Armenia, Azerbaijan and Georgia publish all of their indicators in their national languages and in English, Belarus publishes its indicators in Russian, being a national language.

In the case of the Republic of Moldova not all indicators are made available to both local and international users. The indicators that are shared via the “Open Data Portal” are not yet available in Russian or English.

Table 3: Languages in which indicators are published

	<i>Armenia</i>	<i>Azerbaijan</i>	<i>Belarus</i>	<i>Georgia</i>	<i>Rep. of Moldova</i>
<i>A1</i>					
<i>A2</i>					
<i>A3</i>					
<i>B3</i>					
<i>C1</i>	✘		✘	✘	
<i>C2</i>					
<i>C3</i>					
<i>C10</i>					
<i>C11</i>					
<i>D1</i>					
<i>D4</i>	✘	✘			
<i>F2</i>	✘				
<i>H1</i>					

	<i>Armenia</i>	<i>Azerbaijan</i>	<i>Belarus</i>	<i>Georgia</i>	<i>Rep. of Moldova</i>
<i>II</i>					

<i>Legend</i>	
	Indicator published in the national language
	Indicator published in Russian
	Indicator published in English
	Indicator not published

F. Evaluation of progress between May 2014 and March 2015

The countries have gone a long way in production and sharing of the environmental indicators and their underpinning data since May 2014 when the first analysis on the production and sharing of the eight core environmental indicators was done. With all the success achieved in this work, they established a good part of the Shared Environmental Information System (SEIS).

The remarkable performance of the countries can be shown by applying a concept³ for measuring the progress in establishing and operating SEIS. This measurement can be done based on information on the production and sharing of the indicators and their underpinning data flows available at the points of the reviews in May 2014, November 2014 and March 2015.

Following the concept, each data flow is measured on its online accessibility and online availability of additional information explaining what the accessed data flow is showing and how it is produced. It focusses on the following blocks, each of them assigned a magnitude specifying its significance in assessing the effective production and sharing of the data flows:

- a. On-line accessibility of data flow – the flow can be easily accessed by anybody at any time on-line (magnitude 3);
- b. Data flow up-to-date – the data flow is updated with figures of the latest agreed production period (magnitude 2);
- c. Data flow production methodology known and meeting the agreed standard – anybody can access detailed information on the applied

³ See *Reporting the performance in establishing and operating the Shared Environmental Information System*; Note by the Secretariat of the UNECE Working Group on Environmental Monitoring and Assessment, April 2015.

methodology and calculation methods for the production of the data flow; the detailed information confirms that the applied methodology is the agreed methodology for the production of the particular data flow (magnitude 2);

- d. Data flow assessed – the data flow is supported by information about what it presents and how to understand the changes in figures over time; this information should be provided in the national language for the national public and in an international language – Eng and/or Rus – to be accessible to the international community (magnitude 2);
- e. Data flow source provided – the institution responsible for the production of the data flow and its contact details are available (magnitude 1).

This paper shows the results of applying the SEIS measurement concept on the production and sharing for the five ENPI-SEIS Eastern Partnership countries that submitted links for the present review. As the number of data flows reviewed increased at each of the three review points when the analytical papers were prepared, the concept was applied for:

- a. 14 data flows for the review of May 2014, Nov 2014 and March 2015;
- b. 26 data flows for the review of Nov 2014 and March 2015.

The results of the measurement are displayed in Figures 1–5. In terms of the performance over the three review points, similar patterns are noticeable for all five countries. Remarkable progress is found between May and November 2014 in producing and sharing the 14 data flows, while in the period between November 2014 and March 2015 the performance is still increasing but to a smaller degree.

This finding can be explained with several developments. At the Eighth Session of the Joint Task Force it was decided to focus on the online sharing of indicators for the next reviews, so that countries invested increased efforts to upload data that was already produced but not shared online. Georgia, for example, had submitted all its core indicators in Excel files for the assessment in May 2014 and already shared seven indicators online in November of the same year. Also the numbers show that progress was made when countries took into account the recommendations for the production and sharing of indicators that were presented and discussed at the Eighth Session of the Joint Task Force in May 2014.

⁴ Additionally to the 14 dataflows assessed since May 2014, in the second analytical paper (November 2014) additional parameters under the indicators A1, A2 and C11 were reviewed.

With regard to the comparison of the performance in terms of production and sharing of 26 data flows between November 2014 and March 2015 the graphs for all countries show slight but important progress, mostly already starting from a high level in November 2014. This proves that the countries, having the production of the 26 data flows that are part of the original set of eight core indicators under control to a large degree, have conducted gradual improvements in optimizing the production and sharing of those indicators while focusing on the publication of the 18 new data flows.

Figure 1: Evaluation of the performance in producing and sharing 14 data flows between May 2014 and March 2015 (left) and in producing and sharing 26 data flows between November 2014 and March 2015 (right) - Armenia

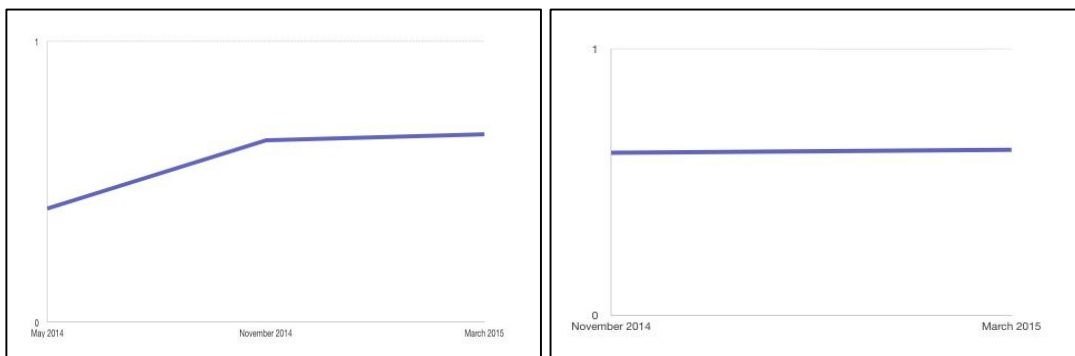


Figure 2: Evaluation of the performance in producing and sharing 14 data flows between May 2014 and March 2015 (left) and in producing and sharing 26 data flows between November 2014 and March 2015 (right) - Azerbaijan

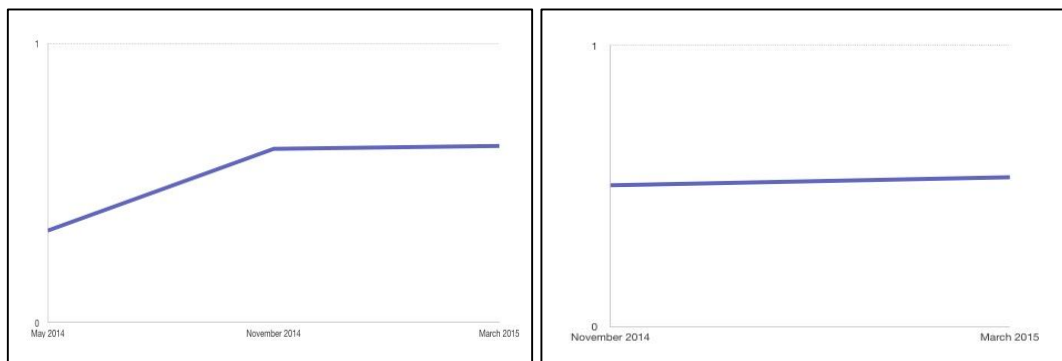


Figure 3: Evaluation of the performance in producing and sharing 14 data flows between May 2014 and March 2015 (left) and producing and sharing 26 data flows between November 2014 and March 2015 (right) – Belarus

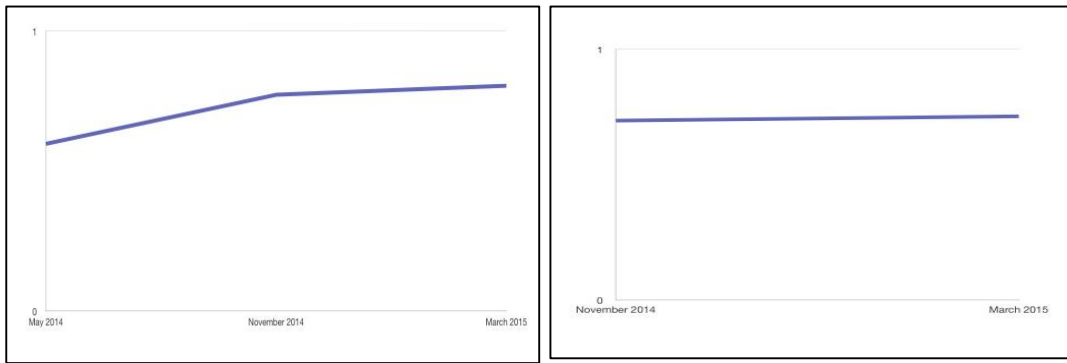


Figure 4: Evaluation of the performance in producing and sharing 14 data flows between May 2014 and March 2015 (left) and in producing and sharing 26 data flows between November 2014 and March 2015 (right) – Georgia

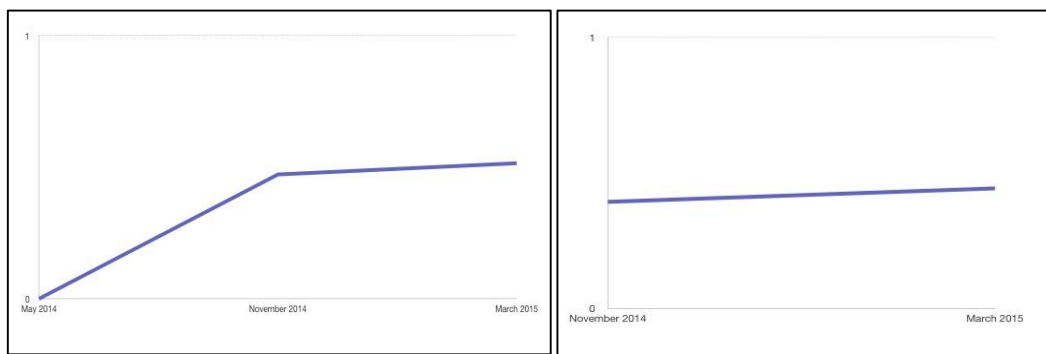
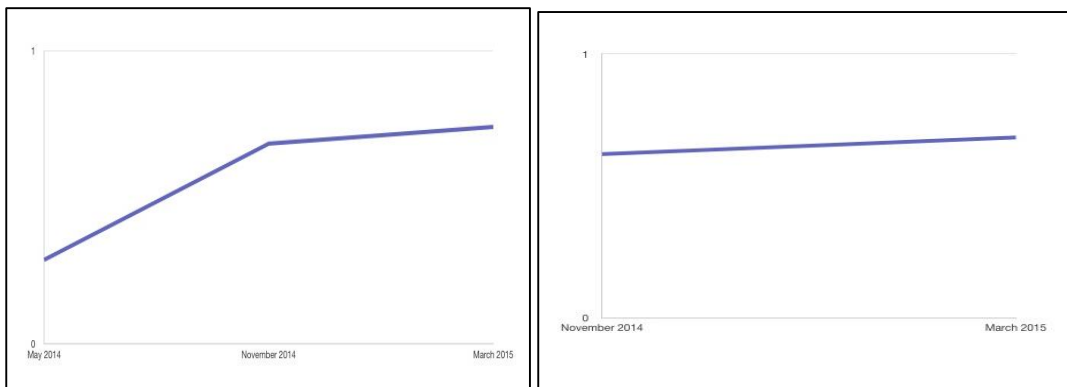


Figure 5: Evaluation of the performance in producing and sharing 14 data flows between May 2014 and March 2015 (left) and in producing and sharing 26 data flows between November 2014 and March 2015 (right) – Republic of Moldova



III. Analysis – Production of the core indicators and underpinning data flows

For this review of the production of the core indicators the websites of the relevant agencies with published indicators are examined to assess whether an optimal level of production for each of the 14 core indicators is reached with regard to data structure and format as well as the availability of time series. The links that are taken into

account for the review are listed in Tables 4-17. The data structure, format and time series are applied as specified by the UNECE Indicator Guidelines.

The optimal level of structure is reached when all parameters are correctly used to produce the required data flows (see Table 1). The optimal level of format is reached if all data flows for the respective indicator are provided in a clear and sound way and in the required unit of measurement. In the following sections for each indicator the parameters and units of measurements required by the Indicator Guidelines are specified, before the performance of the countries in meeting those requirements is discussed.

A. Emissions of pollutants into the atmospheric air (A1)

This core indicator provides a measure of the pressure on environment in terms of total emissions of pollutants into the atmospheric air from stationary and mobile sources, which are regulated in the Protocols of the UNECE Convention on Long-range Transboundary Air Pollution (CLRTAP).

1. Structure

To reach the optimal level of indicator A1 in terms of structure, the calculation of total emissions of pollutants should include data from stationary and mobile sources for the following air pollutants:

- (a) Sulphur dioxide (SO₂)
- (b) Nitrogen oxides (NO_x), shown as nitrogen dioxide (NO₂)
- (c) Non-methane volatile organic compounds (NMVOCs)
- (d) Ammonia (NH₃)
- (e) Carbon monoxide (CO)
- (f) Hydrocarbons (CH)
- (g) Persistent organic pollutants (POPs)
- (h) Heavy metals (mainly lead (Pb), cadmium (Cd), mercury (Hg), nickel (Ni) and arsenic (As))
- (i) Particulate matter (PM₁₀ and/or PM_{2.5} and/or total suspended particulates (TSP))

For the calculation of sub-indicators 1.1, 1.2, 1.3 and 1.4, the emissions of SO₂ and NO_x are to be provided per capita and per Gross Domestic Product (GDP).

Countries' achievements in this regard are summarized in Table 4. None of the countries produce and share all of the parameters above.

The following countries partially meet the requirements: Armenia shows data on the emissions of NH₃, Pb, As and TSP from mobile sources, but does not share data on CO₃, PM₁₀ and PM_{2.5}. Azerbaijan produces data on the emissions of SO₂, NO_x, NMVOCs, CO and CH separately for stationary and mobile sources; it does not share data on the emissions of NH₃ and TSP from mobile sources as well as on CO₃, heavy metals, PM₁₀ and PM_{2.5}.

Belarus presents data on the emissions of SO₂, NO_x, NMVOCs, CO, CH, Pb, Hg, Cd and TSP from mobile sources, but does not share data on CO₃, PM₁₀ and PM_{2.5}. Georgia shares data on the emissions of CO₃ only from mobile sources. It does not publish data on NH₃, CH, heavy metals, PM₁₀ and PM_{2.5}.

The Republic of Moldova does not share data on the emissions of SO₂ and NO_x per capita and per GDP; it publishes data on the emissions of NO_x, CO, CH separately from stationary and mobile sources while not showing data on the emissions of SO₂, Pb and TSP from mobile sources. Moreover, it does not share data on NMVOCs and heavy metals.

2. Format

The pollutants are to be provided in tons, thousands of tons or kilograms of the respective pollutant. The area of a country should be expressed in km². And population is measured in millions of people.

All countries that present data fully meet those requirements.

3. Time series

All countries share data for this indicator for 2013 and for at least four additional years.

Table 4: Production of indicator AI in ENPI-SEIS Eastern Partnership countries

Country		SO ₂	NO _x	NMVOCs	NH ₃	CO	CH	POPs	Heavy Metals	PM
Armenia	Structure	✓	✓	✓	✓ (only stationary)	✓	✓	x	✓ Pb and As (only stationary)	✓ (only particulates stationary)
	Format	✓	✓	✓	✓	✓	✓	-	✓	✓
	Time series	1990, 1995, 2000-2013	1990, 1995, 2000-2013	1990, 1995, 2000-2013	1990, 1995, 2000-2013	1990, 1995, 2000-2013	1990, 1995, 2000-2013	1990, 1995, 2000-2013	-	1990, 1995, 2000-2013

Country		SO ₂	NO _x	NMVOCS	NH ₃	CO	CH	POPs	Heavy Metals	PM	
Azerbaijan	Link	www.armstatbank.am/									
	Structure	✓	✓	✓	✓ (only stationary)	✓	✓	✗	✗	✓ (only particulates stationary)	
	Format	✓	✓	✓	✓	✓	✓	-	-	✓	
	Time series	1990, 1995, 2000-2014	1990, 1995, 2000-2014	1990, 1995, 2000-2014	1990, 1995, 2000-2014	1990, 1995, 2000-2014	1990, 1995, 2000-2014	1990, 1995, 2000-2014	-	-	1990-2013
	Link	www.stat.gov.az/source/environment									
Belarus	Structure	✓	✓	✓ (only stationary)	✓ (only stationary)	✓ (only stationary)	✓ (only stationary - methane)	✗	✓ Pb, Hg, Cd (only stationary)	✓ (only particulates stationary)	
	Format	✓	✓	✓	✓	✓	✓	-	✓	✓	
	Time series	2005-2013	2005-2013	2005-2013	2005-2013	2005-2013	2005-2013	2005-2013	-	2005-2009	2005-2009
	Link	http://belstat.gov.by/ofitsialnaya-statistika/otrasli-statistiki/okruzhayuschaya-sreda/sovmevnaya-sistema-ekologicheskoi-informatsii2									
Georgia	Structure	✓	✓	✓	✗	✓	✗	✓ (only PAN stationary)	✗	✓ (only particulates)	
	Format	✓	✓	✓	-	✓	-	✓	-	✓	
	Time series	2000-2013	2000-2013	2000-2013	-	2000-2013	-	2000-2013	-	2000-2013	
	Link	http://moe.gov.ge/index.php?lang_id=ENG&sec_id=242&info_id=2864									
Republic of Moldova	Structure	✓ (only total stationary)	✓ (only total)	✗	✓	✓	✓	✓ (only stationary)	✓ Pb (only stationary)	✓ (only particulates stationary)	
	Format	✓	✓	-	✓	✓	✓	✓	✓	✓	
	Time series	2001-2013	2001-2013	-	2001-2013	2001-2013	2001-2013	2001-2013	2002-2013	2001-2013	
	Link	http://statbank.statistica.md/pxweb/Dialog/varval.asp?ma=GEO0301_en&ti=Emission+of+detrimental+substances+in+atmospheric+air+by+stationary+sources+by++ingredients%2C+2001%2D2013&path=../Database/EN/01%20GEO/GEO03/&lang=3									

B. Ambient air quality in urban areas (A2)

This core indicator provides a measure of the state of the environment and in terms of air quality and the impact of air pollution on the population in urban areas.

1. Structure

For the optimal production of indicator A2, concentrations of NO₂, SO₂, O₃ and PM₁₀ in urban areas are to be provided. As a minimal requirement, the average annual concentration for those parameters and/or number of days with exceeded daily limit value for them in the capital city should be provided.

Countries' achievements in this regard are summarized in Table 5.

The following countries partially meet the requirements: Armenia does not share the concentration of PM₁₀. Azerbaijan and Georgia do not publish the concentration of O₃ and PM₁₀. Belarus and the Republic of Moldova do not show the concentration of O₃.

2. Format

For this indicator the following units of measurement are to be used: concentration of pollutants in micrograms (μg) per m^3 of ambient air and/or number of days with exceeded daily limit value for the pollutant.

All countries fully meet those requirements.

3. Time series

The following countries present the data for this indicator for 2013 and for at least four additional years: Armenia, Azerbaijan, Belarus and Republic of Moldova (concentrations of NO_2 , SO_2).

Table 5: Production of indicator A2 in ENPI-SEIS Eastern Partnership countries

Country		NO_2	SO_2	O_3	PM_{10}
Armenia	Structure	✓ (3 cities)	✓ (3 cities)	✓ (1 city)	✗
	Format	✓	✓	✓	-
	Time series	1990, 1995, 2000-2013	1990, 1995, 2000-2013	2004-2013	-
	Link	www.armstatbank.am/			
Azerbaijan	Structure	✓ (3 cities)	✓ (3 cities)	✗	✗
	Format	✓	✓	-	-
	Time series	2003-2013	2003-2013	-	-
	Link	www.stat.gov.az/source/environment			
Belarus	Structure	✓ (12 cities)	✓ (12 cities)	✗	✓ (8 cities)
	Format	✓	✓	-	✓ (only the number of days exceeding the daily average / maximum single concentrations)
	Time series	2005-2013	2005-2013	-	2010-2013
	Link	http://belstat.gov.by/ofitsialnaya-statistika/otrasli-statistiki/okruzhayuschaya-sreda/sovместnaya-sistema-ekologicheskoi-informatsii2			
Georgia	Structure	✓ (3 cities)	✓ (3 cities)	✗	✗
	Format	✓	✓	-	-
	Time series	1990, 1995, 2000-2012	1990, 1995, 2000-2012	-	-
	Link	http://moe.gov.ge/index.php?lang_id=ENG&sec_id=242&info_id=2864			
Republic of Moldova	Structure	✓ (1 city)	✓ (1 city)	✗	✓ (1 city)
	Format	✓	✓	-	✓
	Time series	1995, 2000-2014	1995, 2002-2008, 2010-2014	-	2014
	Link	http://date.gov.md/ckan/ro/dataset/11688-calitatea-aerului-atmosferic-in-localitatile-urbane/resource/80277b9e-5183-46d1-93c6-581f9bca07			

C. Consumption of ozone-depleting substances (ODS) (A3)

This core indicator is a measure of environmental pressure through substances that deplete the ozone layer. In particular it shows the amount of ozone-depleting substances (ODS), consumed in a country. ODS are regulated by the Vienna Convention for the Protection of the Ozone Layer, its Montreal Protocol on Substances that Deplete the Ozone Layer as well as by Montreal Protocol Amendments enacted in London, Copenhagen, Beijing and Montreal. The total consumption of ODS is defined as the production of ODS plus imports minus exports of ODS.

1. Structure

For the optimal production of indicator A3, the total amount of ODS consumed in a country should be calculated, which comprises the total consumption of chlorofluorocarbons (CFCs), halons, carbon tetrachloride, 1,1,1-trichloroethane (methyl chloroform), hydrochlorofluorocarbons (HCFCs) and methyl bromide.

Countries' achievements in this regard are summarized in Table 6. The following countries fully meet the requirements: Armenia, Georgia and the Republic of Moldova show the total amount of ODS consumed as well as the total amount of ODS broken down by different substances.

The following countries partially meet the requirements: Azerbaijan and Belarus show the total amount of ODS consumed, but do not specify the amount of ODS broken down by different substances.

2. Format

For this indicator the following units of measurement are to be used: tons of ODS weighted by their ozone depleting potential (ODP).

All countries fully meet those requirements.

3. Time series

All countries present the data for this indicator for 2013 and for at least four additional years.

Table 6: *Production of indicator A3 in ENPI-SEIS Eastern Partnership countries*

Country		Total consumption of ODS	ODS broken down by different substances
Armenia	Structure	✓	✓
	Format	✓	✓
	Time series	1995, 2000-2013	1995, 2000-2013
	Link	www.armstatbank.am/	
Azerbaijan	Structure	✓	✗
	Format	✓	-
	Time series	2006-2013	-
	Link	http://www.stat.gov.az/source/environment/index.php	
Belarus	Structure	✓	✗
	Format	✓	-
	Time series	2009-2013	-
	Link	http://belstat.gov.by/ofitsialnaya-statistika/otrasli-statistiki/okruzhayuschaya-sreda/sovmeznaya-sistema-ekologicheskoi-informatsii2	
Georgia	Structure	✓	✓
	Format	✓	✓
	Time series	1995, 2000-2013	1995, 2000-2013
	Link	http://moe.gov.ge/index.php?lang_id=ENG&sec_id=242&info_id=2864	
Republic of Moldova	Structure	✓	✓
	Format	✓	✓
	Time series	1990, 1995, 2000-2013	1990, 1995, 2000-2013
	Link	http://date.gov.md/ckan/ro/dataset/11693-consumul-de-substante-care-distrug-stratul-de-ozon	

D. Greenhouse gas (GHG) emissions (B3)

This core indicator is a measure of anthropogenic emissions of greenhouse gases (GHGs) included in Annex A to the Kyoto Protocol to the United Nations Framework Convention on Climate Change (UNFCCC).

1. Structure

To reach the optimal level of the production of indicator B3, the following parameters should be included in the calculation of the total GHG emissions: carbon dioxide (CO₂), nitrous oxide (N₂O), methane (CH₄), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulphur hexafluoride (SF₆), as well as emissions/removals by sources and sinks through land use, land use change and forestry (LULUCF).

For the production of the sub-indicators 4.1 and 4.2 the total GHG emissions should be expressed per capita and per GDP.

Countries' achievements in this regard are summarized in Table 7. The following countries fully meet the requirements: Belarus and the Republic of Moldova.

The following countries partially meet the requirements: Armenia and Georgia present GHG emissions without specifying LULUCF. Azerbaijan shows the total GHG emissions, but does not share data on emissions broken down by different gases.

2. Format

The GHGs should be presented in tones of CO₂ equivalent or in millions of tons of CO₂ equivalent. Population is measured in millions of people. GDP should be presented in international dollars in purchasing power parity (PPP). Additionally, emissions per GDP should be expressed in tones of CO₂ equivalent per 1000 dollars.

The following countries fully meet those requirements: Armenia, Azerbaijan, Georgia and Republic of Moldova.

The following countries partially meet the requirements: Belarus, showing emissions by types of GHG summarized in percentages.

3. Time series

The following countries present the data for this indicator for 2013 and for at least four additional years: Azerbaijan and Georgia.

Table 7: Production of indicator B3 in ENPI-SEIS Eastern Partnership countries

Country		Total GHG emissions	LULUCF	GHGs broken down by different gases
Armenia	Structure	✓	✗	✓
	Format	✓	-	✓
	Time series	1990, 1995, 2000-2010	-	1990, 1995, 2000-2010
	Link	http://www.armstatbank.am/		
Azerbaijan	Structure	✓	✓	✗
	Format	✓	✓	-
	Time series	2000-2013	2000-2013	-
	Link	http://www.stat.gov.az/source/environment/index.php n003en.xls		
Belarus	Structure	✓	✓	✓
	Format	✓	✓	(only %)
	Time series	2005-2012	2005-2012	2008
	Link	http://belstat.gov.by/ofitsialnaya-statistika/otrasli-statistiki/okruzhayuschaya-sreda/sovmealnaya-sistema-ekologicheskoi-informatsii2		
Georgia	Structure	✓	✗	✓
	Format	✓	-	✓
	Time series	1990, 1995, 2000-2013	-	1990, 1995, 2000-2013
	Link	http://moe.gov.ge/index.php?lang_id=ENG&sec_id=242&info_id=2864		
Republic of Moldova	Structure	✓	✓	✓
	Format	✓	✓	✓
	Time series	1990-2010	1990-2010	1990-2010
	Link	http://date.gov.md/ckan/ru/dataset/9952-date-cu-privire-la-emisiile-de-gaze-cu-efect-de-sera		

E. Renewable freshwater resources (C1)

This core indicator provides a measure of the state of renewable freshwater resources in a country, which are of major environmental and economic importance

1. Structure

To reach the optimal level of the production of this indicator, total renewable freshwater resources are to be provided, which are calculated as internal flow plus inflow of surface and groundwaters.

Countries' achievements in this regard are summarized in Table 8. The following countries fully meet those requirements: Azerbaijan, Georgia and the Republic of Moldova.

The following countries did not provide data on this indicator: Armenia and Belarus.

2. Format

Total renewable freshwater resources should be expressed as million cubic metres per year.

The following countries fully meet those requirements: Azerbaijan, Georgia and the Republic of Moldova.

3. Time series

The following countries present the data for this indicator for 2013 and for at least four additional years: Azerbaijan and Republic of Moldova.

Table 8: Production of indicator CI in ENPI-SEIS Eastern Partnership countries

Country		Total renewable freshwater resources
Armenia	Structure	×
	Format	-
	Time series	-
	Link	-
Azerbaijan	Structure	✓
	Format	✓
	Time series	2000-2014
	Link	www.stat.gov.az/source/environment
Belarus	Structure	×
	Format	-
	Time series	-
	Link	-
Georgia	Structure	✓
	Format	✓
	Time series	2001-2012
	Link	http://moe.gov.ge/index.php?lang_id=ENG&sec_id=242&info_id=2864
Republic of Moldova	Structure	✓
	Format	✓
	Time series	1990, 1995, 2000-2013
	Link	http://date.gov.md/ckan/ru/dataset/13313-surse-regenerabile-de-ape-dulci

F. Freshwater abstraction (C2)

This core indicator provides, in relation to total resources available for abstraction, a measure of the pressure on the environment in terms of the abstraction of freshwater resources. It can reflect the extent of water resource scarcity and the distribution of abstracted water among different economic activities (according to the International Standard Industrial Classification of All Economic Activities (ISIC)).

1. Structure

To reach the optimal level of the production of this indicator, the following data flows should be produced:

- (a) Fresh surface water abstracted
- (b) Fresh groundwater abstracted
- (c) Total freshwater abstraction (by water supply industry, households, agriculture forestry and fishing, manufacturing, electric industry, other economic activities)
- (d) Water Exploitation Index (WEI)

Countries' achievements in this regard are summarized in Table 9.

Georgia fully meets the requirements.

The following countries partially meet the requirements: Belarus shows data on all four data flows, but does not outline the distribution of abstracted water among different economic activities in total resources available for abstraction. The WEI is calculated separately for fresh surface water and for fresh groundwater.

Azerbaijan and Republic of Moldova do not calculate the WEI. Armenia presents data only on the total abstraction of freshwater resources.

2. Format

The total volume of freshwater abstraction (surface and groundwater) and the volume by economic activity should be measured in million cubic metres per year. The WEI should be expressed as a percentage.

All countries fully meet those requirements in terms of the volume of freshwater abstraction.

In terms of the value for the WEI, Belarus fully meets the requirements, while Georgia expresses the volume of WEI in absolute values rather than as a percentage.

3. Time series

All countries present the data for this indicator for 2013 and for at least four additional years.

Table 9: Production of indicator C2 in ENPI-SEIS Eastern Partnership countries

Country		Fresh surface water abstracted	Fresh groundwater abstracted	Total freshwater abstraction	Water Exploitation Index (WEI)
Armenia	Structure	×	×	✓	×
	Format	-	-	✓	-
	Time series	-	-	2011-2013	-
	Link	www.armstatbank.am/			
Azerbaijan	Structure	✓	✓	✓	×
	Format	✓	✓	✓	-
	Time series	2000-2013	2000-2013	2000-2013	-
	Link	www.stat.gov.az/source/environment			
Belarus	Structure	✓	✓	(not by ISIC)	✓
	Format	✓	✓	✓	✓
	Time series	2005-2013	2005-2013	2005-2013	2005-2013
	Link	http://belstat.gov.by/ofitsialnaya-statistika/otrasli-statistiki/okruzhayuschaya-sreda/sovместnaya-sistema-ekologicheskoi-informatsii2			
Georgia	Structure	✓	✓	✓	✓
	Format	✓	✓	✓	(without %)
	Time series	2001-2013	2001-2013	2001-2013	2001-2012
	Link	http://moe.gov.ge/index.php?lang_id=ENG&sec_id=242&info_id=2864			
Republic of Moldova	Structure	✓	✓	✓	×
	Format	✓	✓	✓	-
	Time series	2001-2013	2001-2013	2001-2013	-
	Link	http://statbank.statistica.md/pxweb/Dialog/varval.asp?ma=GEO0201_en&ti=The+main+indicator+s+of+water+use%2C+2001-2013&path=../Database/EN/01%20GEO/GEO02/&lang=3			

G. Total water use (C3)

This core indicator is important for defining the pressure on the environment in terms of water abstraction from different sources (including freshwater abstracted, desalinated water, reused water and with regard to water losses).

1. Structure

To reach the optimal level of the production of this indicator, the following data flows should be produced:

- (a) Total freshwater available
- (b) Losses of water during transport
- (c) Total freshwater use (by households, agriculture forestry and fishing, manufacturing, electric industry, other economic activities)

For the production of the sub-indicators 7.1 total freshwater use should be expressed by GDP.

Countries' achievements in this regard are summarized in Table 10. The following countries fully meet the requirements: Azerbaijan and Georgia.

The following countries partially meet the requirements: Belarus and the Republic of Moldova share data on all three data flows, but do not show freshwater use per GDP.

Armenia, Belarus and the Republic of Moldova do not publish freshwater use per GDP. At the same time, Armenia does not share the total volume of freshwater available.

2. Format

The total volume of water use and the volume by economic activity should be expressed in million cubic metres per year; total water use per unit of GDP should be expressed as cubic meters per in international dollars (PPP).

With regard to the volume of freshwater use and water losses all countries that share such information fully meet those requirements.

3. Time series

All countries present the data for this indicator for 2013 and for at least four additional years.

Table 10: Production of indicator C3 in ENPI-SEIS Eastern Partnership countries

Country		Total freshwater available	Losses of water during transport	Total freshwater use (by economic activities)
Armenia	Structure	×	✓	✓ (not per GDP)
	Format	-	✓	✓
	Time series	-	2011-2013	2011-2013
	Link	www.armstatbank.am/		
Azerbaijan	Structure	✓	✓	✓
	Format	✓	✓	✓
	Time series	2000-2013	2000-2013	2000-2013
	Link	www.stat.gov.az/source/environment		
Belarus	Structure	✓	✓	✓ (not per GDP)
	Format	✓	✓	✓
	Time series	2005-2013	2005-2013	2010-2013
	Link	http://belstat.gov.by/ofitsialnaya-statistika/otrasli-statistiki/okruzhayuschaya-sreda/sovместnaya-sistema-ekologicheskoi-informatsii2		
Georgia	Structure	✓	✓	✓
	Format	✓	✓	✓
	Time series	2001-2013	2001-2013	2001-2013
	Link	http://moe.gov.ge/index.php?lang_id=ENG&sec_id=242&info_id=2864		
Republic of Moldova	Structure	✓	✓	✓ (not per GDP)
	Format	✓	✓	✓
	Time series	2001-2013	2001-2013	2001-2013
	Link	http://statbank.statistica.md/pxweb/Dialog/varval.asp?ma=GEO0201_en&ti=The+main+indicators+of+water+use%2C+2001-2013&path=../Database/EN/01%20GEO/GEO02/&lang=3		

H. BOD₅ and concentration of ammonium in rivers (C10)

This core indicator provides a measure of the state of rivers in terms of biochemical oxygen demand (BOD) and ammonium (NH₄).

1. Structure

To reach the optimal level of production of indicator C10, river water samples from at least one river with a minimum of three sampling points (upstream and downstream) need to be taken and analysed for the concentrations of BOD and ammonium.

Countries' achievements in this regard are summarized in Table 11. The following countries fully meet the requirements: Armenia and Republic of Moldova.

The following countries partially meet the requirements: Azerbaijan, Belarus and Georgia publish only the average concentration of BOD₅ and NH₄ in rivers, without showing concentration of these samples with a minimum of three sampling points.

2. Format

The annual average BOD after five days of incubation (BOD₅) should be expressed in mg of O₂/litre. The average annual ammonium concentration should be measured in mg/litre.

All countries which share data fully meet those requirements.

3. Time series

All countries present the data for this indicator for 2013 and for at least four additional years.

Table 11: Production of indicator C10 in ENPI-SEIS Eastern Partnership countries

Country		BOD ₅ concentration in rivers	Ammonium concentration in rivers
Armenia	Structure	✓ (8 rivers)	✓ (8 rivers)
	Format	✓	✓
	Time series	1990, 1995, 2000-2013	1990, 1995, 2000-2013
	Link	http://www.armstatbank.am/	
Azerbaijan	Structure	✓ (2 rivers; only average concentration)	✓ (2 rivers; only average concentration)
	Format	✓	✓
	Time series	2000-2013	2000-2013
	Link	www.stat.gov.az/source/environment	
Belarus	Structure	✓ (10 rivers; only average concentration)	✓ (10 rivers; only average concentration)
	Format	✓	✓
	Time series	2005-2013	2005-2013
	Link	http://belstat.gov.by/ofitsialnaya-statistika/otrasli-statistiki/okruzhayuschaya-sreda/sovmejnaya-sistema-ekologicheskoi-informatsii2	

Country		<i>BOD₅ concentration in rivers</i>	<i>Ammonium concentration in rivers</i>
<i>Georgia</i>	<i>Structure</i>	✓ (1 river; only average concentration)	✓ (1 river; only average concentration)
	<i>Format</i>	✓	✓
	<i>Time series</i>	1990, 1995, 2001-2012	1990, 1995, 2001-2012
	<i>Link</i>	http://moe.gov.ge/index.php?lang_id=ENG&sec_id=242&info_id=2864	
<i>Republic of Moldova</i>	<i>Structure</i>	✓ (1 river)	✓ (1 river)
	<i>Format</i>	✓	✓
	<i>Time series</i>	1990, 1995, 2000-2013	1990, 1995, 2000-2003, 2005-1013
	<i>Link</i>	http://date.gov.md/ru/node/13230	

I. Nutrients in freshwater (C11)

This indicator helps to assess the condition of water bodies by measuring nutrient concentrations in rivers, lakes, reservoirs, as well as in groundwater.

1. Structure

To reach the optimal level of the production of this indicator, the following data flows should be produced:

- (a) Nitrates concentration in lakes, reservoirs
- (b) Total phosphorus concentration in lakes, reservoirs
- (c) Phosphates concentration in rivers
- (d) Nitrates concentration in rivers
- (e) Nitrates concentration in groundwater

Countries' achievements in this regard are summarized in Table 12. The Republic of Moldova fully meets the requirements.

The following countries partially meet the requirements: Armenia shares only the total phosphorus concentration instead of phosphates concentration in rivers. Azerbaijan defines the total phosphorus concentration instead of phosphates concentration in the rivers. Belarus does not show data on nitrates concentration in rivers and in groundwater. Georgia does not publish data on nitrates in groundwater.

2. Format

The concentrations of nitrates in fresh water samples (lakes, rivers, groundwater) should be measured in mg of NO₃/litre. Concentrations of total phosphorus in samples taken in lakes and concentrations of phosphates in samples taken in rivers should be measured in mg of P/litre.

All countries, that publish data on one of the data flows of this indicator, fully meet these requirements.

3. Time series

The following countries present the data for this indicator for 2013 and for at least four additional years: Armenia (except data flow “Nitrates concentration in groundwater”), Azerbaijan, Belarus and the Republic of Moldova.

Table 12: Production of indicator C11 in ENPI-SEIS Eastern Partnership countries

Country		Nitrates in lakes	Total phosphorus in lakes	Phosphates in rivers	Nitrates in rivers	Nitrates in groundwater
Armenia	Structure	✓ (1 lake)	✓ (1 lake)	✗	✓ (8 rivers)	✓
	Format	✓	✓	-	✓	✓
	Time series	2000, 2002, 2004-2013	2000, 2002, 2004-2013	-	1990, 1995, 2000-2013	2009-2012
	Link	http://www.armstatbank.am/				
Azerbaijan	Structure	✓ (6 lakes)	✓ (6 lakes)	✗	✓ (2 rivers)	✗
	Format	✓	✓	-	✓	-
	Time series	2005-2013	2005-2013	-	2005-2013	-
	Link	www.stat.gov.az/source/environment				
Belarus	Structure	✗	✓ (18 lakes)	✓ (10 rivers)	✓ (10 rivers)	✗
	Format	-	✓	✓	✓	-
	Time series	-	2005-2013	2005-2013	2005-2013	-
	Link	http://belstat.gov.by/ofitsialnaya-statistika/otrasli-statistiki/okruzhayuschaya-sreda/sovmeznaya-sistema-ekologicheskoi-informatsii2				
Georgia	Structure	✓ (1 lake)	✓ (1 lake)	✓ (3 rivers)	✓ (3 rivers)	✗
	Format	✓	✓	✓	✓	-
	Time series	2005-2012	2005-2012	2000-2012	2000-2012	-
	Link	http://moe.gov.ge/index.php?lang_id=ENG&sec_id=242&info_id=2864				
Republic of Moldova	Structure	✓ (1 reservoir)	✓ (1 reservoir)	✓ (1 river)	✓ (1 river)	✓
	Format	✓	✓	✓	✓	✓
	Time series	1990, 1995, 2000-2003, 2005-2013	1990, 1995, 2000-2003, 2005-2013	1990, 1995, 2000-2003, 2005-2013	1990, 1995, 2000-2003, 2005-2013	2000, 2002-2005, 2007, 2009-2014
	Link	http://date.gov.md/ro/dataset/resource/13232		http://date.gov.md/ru/node/13231		http://date.gov.md/ckan/ru/dataset/11684-date-privind-nutrientii-in-ape-dulci

J. Protected areas (D1)

This core indicator is a response indicator, which shows the areas of land, water surfaces and adjacent air layer protected in compliance with the national legislation.

1. Structure

In order to reach the optimal level of production for indicator D1, data on the total protected areas in km² and as a percentage of the total country area are necessary. Additionally, the indicator can be further broken down by the categories of natural areas as classified by the International Union for Conservation of Nature (IUCN) and for the national categories of protected areas to demonstrate their respective extent and share in the total area of a country.

Countries' achievements in this regard are summarized in Table 13. The following countries fully meet the requirements: Armenia and Georgia publish the indicator on protected areas for IUCN categories.

The following countries partially meet the requirements: Azerbaijan, Belarus and Republic of Moldova share the indicator on protected areas in national categories.

2. Format

The indicator is calculated as the total area of a country's protected areas in hectares (ha) or km². Total country areas should be provided in ha or km² and protected areas relative to the country's total area should be expressed as a percentage.

The following countries fully meet those requirements: Armenia, Azerbaijan, Belarus and Georgia.

The following countries partially meet the requirements: The Republic of Moldova publishes data only on the total area of protected areas without the percentage of the protected areas in the total country's area.

3. Time series

The following countries present the data for this indicator for 2013 and for at least four additional years: Armenia, Azerbaijan, Belarus and Republic of Moldova.

Table 13: Production of indicator D1 in ENPI-SEIS Eastern Partnership countries

Country		Total protected areas by IUCN categories
Armenia	Structure	✓ (categories IUCN)
	Format	✓
	Time series	1990, 1995/ 2000-2013
	Link	http://www.armstatbank.am
Azerbaijan	Structure	✓ (national categories)
	Format	✓
	Time series	1990, 1995, 2000-2013
	Link	http://www.stat.gov.az/source/environment/indexen.php
Belarus	Structure	✓ (national categories)
	Format	✓
	Time series	2005-2013

Country		Total protected areas by IUCN categories
	Link	http://belstat.gov.by/ofitsialnaya-statistika/otrasli-statistiki/okruzhayuschaya-sreda/sovmeznaya-sistema-ekologicheskoi-informatsii2
Georgia	Structure	✓ (categories IUCN)
	Format	✓
	Time series	1995, 2000-2012
	Link	http://moe.gov.ge/index.php?lang_id=ENG&sec_id=242&info_id=2864
Republic of Moldova	Structure	✓ (national categories)
	Format	✓ (Only number and area of protected areas without %)
	Time series	2013
	Link	http://www.statistica.md/public/files/publicatii_electronice/Mediu/Resurse_naturale_2014.pdf

K. Threatened and protected species (D4)

This core indicator provides a measure of the state of biodiversity in terms of the number of threatened species and the effectiveness of national responses, i.e. actions taken to conserve national and global biodiversity.

1. Structure

To reach the optimal level of the production of this indicator, the following data flows should be produced:

- (a) Number of species protected (mammals, birds, fishes, reptiles, amphibians, invertebrates, vascular plants, mosses, lichens, fungi, algae)
- (b) Number of species threatened (mammals, birds, fishes, reptiles, amphibians, invertebrates, vascular plants, mosses, lichens, fungi, algae)

Countries' achievements in this regard are summarized in Table 14. Georgia and the Republic of Moldova fully meet the requirements.

The following countries partially meet the requirements: Belarus considers the same species as protected as well as threatened.

Armenia and Azerbaijan did not provide data on this indicator.

2. Format

The protected and threatened species should be expressed as numbers of species. The share of protected and threatened species in the total number of species should be expressed as a percentage.

The following countries fully meet those requirements: Georgia and Republic of Moldova.

The following countries partially meet the requirements: Belarus does not show the percentage of number of species protected and threatened in the total number of species.

3. Time series

The following countries present the data for this indicator for 2013 and for at least four additional years: Belarus, Georgia and Republic of Moldova.

Table 14: Production of indicator D4 in ENPI-SEIS Eastern Partnership countries

Country		Number of species protected	Number of species threatened
Armenia	Structure	×	×
	Format	-	-
	Time series	-	-
	Link	-	-
Azerbaijan	Structure	×	×
	Format	-	-
	Time series	-	-
	Link	-	-
Belarus	Structure	✓ (together the number of species protected and threatened)	✓ (together the number of species protected and threatened)
	Format	✓ (only numbers of species without %)	✓ (only numbers of species without %)
	Time series	2005-2013	2005-2013
	Link	http://belstat.gov.by/ofitsialnaya-statistika/otrasli-statistiki/okruzhayuschaya-sreda/sovmeznaya-sistema-ekologicheskoi-informatsii2	
Georgia	Structure	✓	✓
	Format	✓	✓
	Time series	1990, 1995, 2000-2013	1990, 1995, 2000-2013
	Link	http://moe.gov.ge/index.php?lang_id=ENG&sec_id=242&info_id=2864	
Republic of Moldova	Structure	✓	✓
	Format	✓	✓
	Time series	1990, 1995, 2000-2013	1990, 1995, 2000-2013
	Link	http://date.gov.md/ckan/ru/dataset/13331-speciile-aflate-pe-cale-de-disparitie-si-specii-protejate	

L. Fertilizer consumption (F2)

The indicator makes it possible to assess the pressure on the environment arising through the use of fertilizers: the accumulation of nutrients in the soil, the resulting pollution of surface and groundwater and the movement of nutrients through trophic chains and other parts of the environment.

1. Structure

To reach the optimal level of the production of this indicator, the following data flows should be produced:

- (a) Agricultural area
- (b) Total consumption of mineral fertilizers

- (c) Area treated with mineral fertilizers
- (d) Total consumption of organic fertilizers
- (e) Area treated with organic fertilizers

Countries' achievements in this regard are summarized in Table 15. The following countries fully meet the requirements: Azerbaijan, Georgia and Republic of Moldova (agricultural area of 50 ha and more treated with fertilizer).

The following countries partially meet the requirements: Belarus does not show the total consumption of organic fertilizers.

Armenia did not provide data on this indicator.

2. Format

The total consumption of fertilizers should be expressed as thousands of tons. The consumption of fertilizers per unit of agricultural area should be expressed as kilogram per hectare or square kilometre. And the share of areas treated with fertilizers in the total agricultural area should be expressed as a percentage.

The following countries fully meet those requirements: Azerbaijan and Georgia.

The following countries partially meet the requirements: Belarus and Republic of Moldova do not publish the percentage of areas treated with fertilizers in the total agricultural areas.

3. Time series

The following countries present the data for this indicator for 2013 and for at least four additional years: Azerbaijan, Belarus, Georgia and Republic of Moldova.

Table 15: Production of indicator F2 in ENPI-SEIS Eastern Partnership countries

Country		Agricultural area	Total consumption of mineral fertilizers	Area treated with mineral fertilizers	Total consumption of organic fertilizers	Area treated with organic fertilizers
Armenia	Structure	x	x	x	x	x
	Format	-	-	-	-	-
	Time series	-	-	-	-	-
	Link	-				
Azerbaijan	Structure	✓	✓	✓	✓	✓
	Format	✓	✓	✓	✓	✓
	Time series	2007-2013	2007, 2009-2013	2009-2013	2007, 2009-2013	2009-2013
	Link	http://www.stat.gov.az/source/environment/indexen.php				
Belarus	Structure	✓	✓	✓	x	✓
	Format	✓	✓	✓	-	✓
	Time series	2005-2013	2005-2013	2005-2013	-	2005-2013
	Link	http://belstat.gov.by/ofitsialnaya-statistika/otrasli-statistiki/okruzhayuschaya-sreda/sovmeznaya-sistema-ekologicheskoi-informatsii2				
	Structure	✓	✓	✓	✓	✓

Country		Agricultural area	Total consumption of mineral fertilizers	Area treated with mineral fertilizers	Total consumption of organic fertilizers	Area treated with organic fertilizers
Georgia	Format	✓	✓	✓	✓	✓
	Time series	1990, 1995, 2000-2013	2006-2013	2006-2013	2006-2013	2006-2013
	Link	http://moe.gov.ge/index.php?lang_id=ENG&sec_id=242&info_id=2864				
Republic of Moldova	Structure	✓	✓ (with area agricultural lands 50 ha and over)	✓ (with area agricultural lands 50 ha and over)	✓ (with area agricultural lands 50 ha and over)	✓ (with area agricultural lands 50 ha and over)
	Format	✓	✓	✓ (without %)	✓	✓ (without %)
	Time series	2007-2014	2006-2013	2006-2013	2006-2013	2006-2013
	Link	http://www.statistica.md/pageview.php?l=ru&idc=315&id=2279				

M. Passenger transport demand (H1)

Passenger transport demand is a driving force indicator. It can be of major importance in regulating passenger transport demand and fostering specific modes of transport. Breaking down passenger transport demand by mode helps to assess the effectiveness of response measures.

1. Structure

To reach the optimal level of the production of this indicator, the following data flows should be produced:

- (a) Total passenger transport demand
- (b) Passenger transport demand broken down by different modes of transport
(road, railway, inland waterways, maritime, domestic aviation, underground)

Countries' achievements in this regard are summarized in Table 16.

All countries fully meet those requirements.

2. Format

The total passenger transport demand should be expressed as thousands of passenger-kilometres (pkm). The share of each mode in total transport demand should be expressed as a percentage.

All countries, which publish data on the indicator, fully meet those requirements.

3. Time series

All countries present the data for this indicator for 2013 and for at least four additional years.

Table 16: Production of indicator H1 in ENPI-SEIS Eastern Partnership countries

Country		Total passenger transport demand	Passenger transport demand broken down by different modes of transport
Armenia	Structure	✓	✓
	Format	✓	✓ (without %)
	Time series	1990, 1995, 2000-2013	1990, 1995, 2000-2013
	Link	http://www.armstatbank.am/	
Azerbaijan	Structure	✓	✓
	Format	✓	✓
	Time series	2000-2013	2000-2013
	Link	http://www.stat.gov.az/source/environment/indexen.php n011en.xls	
Belarus	Structure	✓	✓
	Format	✓	✓
	Time series	2005-2013	2005-2013
	Link	http://belstat.gov.by/ofitsialnaya-statistika/otrasli-statistiki/okruzhayuschaya-sreda/sovmeestnaya-sistema-ekologicheskoi-informatsii2	
Georgia	Structure	✓	✓
	Format	✓	✓
	Time series	1990, 1995, 2000-2013	1990, 1995, 2000-2013
	Link	http://moe.gov.ge/index.php?lang_id=ENG&sec_id=242&info_id=2864	
Republic of Moldova	Structure	✓	✓
	Format	✓	✓
	Time series	1995-2013	1995-2013
	Link	http://statbank.statistica.md/pxweb/Dialog/varval.asp?ma=TRA0300_en&ti=Monthly+transport+goods+and+passengers%2C+means+of+transport%2C+2006-2015&path=../Database/EN/19%20TRA/TRA03/&lang=3	

N. Waste generation (I1)

The main purpose of this core indicator is to provide a measure of the pressure on the environment through the amount of generated waste. The waste intensity represents a driving force indicator and shows response to anthropogenic activities. Waste generated per unit of GDP will show whether there has been any decoupling of waste generation from economic growth of the country.

1. Structure

In order to reach the optimal production of indicator I1, the calculation should include the amount of waste generated per capita. This can be expressed as waste collected by municipalities and/or as total waste generated by source.

This analysis considers only one parameter of the indicator I1, in accordance with the requirements of the project on establishing a joint system of environmental indicators, in order to set up a regular process of reporting on those indicators.

For the calculation of sub-indicator 14.1 the annual generation of municipal waste are to be provided per capita.

Countries' achievements in this regard are summarized in Table 17. The following countries fully meet the requirements: Armenia, Azerbaijan and Belarus.

The following countries partially meet the requirements: The Republic of Moldova publishes data on the amount of solid waste, disposed from urban areas to landfill instead of showing waste collected by municipalities.

Georgia did not provide data on this indicator.

2. Format

The parameter is to be provided in thousands of metric tons of generated wastes. Population is measured in millions of people.

The following countries fully meet those requirements: Armenia, Azerbaijan and Belarus.

The Republic of Moldova, showing the amount of wastes disposed in millions of cubic meters instead of thousands (millions) tons, does not meet the requirements.

3. Time series

The following countries present the data for this indicator for 2013 and for at least four additional years: Armenia, Azerbaijan, Belarus and Republic of Moldova.

Table 17: Production of indicator 11 in ENPI-SEIS Eastern Partnership countries

Country		Annual municipal waste generation
Armenia	Structure	✓ (municipal waste)
	Format	✓
	Time series	2000-2013
	Link	http://www.armstatbank.am
Azerbaijan	Structure	✓ (wastes from households)
	Format	✓
	Time series	2010-2013
	Link	http://www.stat.gov.az/source/environment/indexen.php
Belarus	Structure	✓ (municipal solid waste)
	Format	✓
	Time series	2005-2013
	Link	http://belstat.gov.by/ofitsialnaya-statistika/otrasli-statistiki/okruzhayuschaya-sreda/sovместnaya-sistema-ekologicheskoi-informatsii2
Georgia	Structure	×
	Format	-
	Time series	-
	Link	-
Republic of Moldova	Structure	✓ (only solid waste removal)
	Format	×
	Time series	2001-2013
	Link	http://statbank.statistica.md/pxweb/Dialog/varval.asp?ma=GEO0403&ti=Deseuri+menajere+in+localitate+urbane%2C+2001-2013&path=../Database/RO/01%20GEO/GEO04/&lang=1

IV. Conclusions

This analysis reveals that the countries of the ENPI-SEIS Eastern Partnership are striving to share all indicators they produce while improving the content and user-friendliness of the websites where information on the indicators is shared. Almost all of the indicators produced by the five countries that provided links for this analysis are available to the local public as well as to the international community. While the majority of the countries already publish background information on the applied methodology with their indicators, further efforts have to be invested into the publication of brief interpretations of the shared data flows and trends.

Moreover, the countries produce indicators that are in most cases compliant with the international standards and formats that were agreed upon in the UNECE Joint Task Force on Environmental indicators. This assessment as of March 2015 finds progress in meeting the recommendations of the Joint Task Force in comparison with previous analyses in May 2014 and November 2014.

At the same time, in a number of cases it is noted that additional data flows have to be produced and shared and production methodology has to be further adjusted to fully implement all requirements of the Indicator Guidelines. This is in particular true with regard to the ambitious goal of the countries to produce and share a total of 13 data flows on different parameters under the air indicators.

The present paper, for the first time, reviews the production and sharing of six additional core indicators, *Renewable freshwater resources (C1)*, *Freshwater abstraction (C2)*, *Total water use (C3)*, *Threatened and protected species (D4)*, *Fertilizer consumption (F2)* and *Passenger transport demand (H1)*. The indicators were selected with the aim to have at least a total of 14 core indicators to be considered for regional assessment work in 2015 and 2016, including the preparation of the Sixth Global Environmental Outlook (GEO-6) publication of UNEP and the next Environment for Europe (EfE) Ministerial Conference in Batumi, Georgia in 2016. The analysis shows that the preparations in terms of producing and sharing this full set are well underway with all six indicators being produced by the majority of the countries.

It seems evident that given the progress of the countries in production and sharing highlighted in this report, including setting up of dedicated websites, there is optimism that the countries of the ENPI-SEIS Eastern Partnership can ensure the

establishment of national SEIS with a solid set of environmental indicators and data flows.