# State of SEIS implementation in 2018 Country Factsheet AZERBAIJAN

Azerbaijan has been making significant progress in establishing SEIS through the implementation of the SEIS principles and the three pillars: Content, Infrastructure and Cooperation. Azerbaijan participates actively in the 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 Azerbaijan and offers recommendations on how to fully achieve the SEIS 2021 target.

## **KEY MESSAGES**

#### Content

- Azerbaijan has been making significant progress in making UNECE environmental indicators publicly available and accessible
- 42 out of 49 (including 7 placeholders) UNECE environmental indicators are available in 2018
- Lack of reference to methodological standards used for producing the data sets for the indicators
- Azerbaijan submitted a voluntary national review on the state of implementation of the SDGs in 2017

#### Infrastructure

- A common national platform was established to facilitate accessibility to environmental information
- Information is illustrated only for three indicators (out of the 23 selected and analyzed by UNECE)

#### Cooperation

- Interagency cooperation on information exchange is in place
- Azerbaijan participates actively in the UNECE indicator-related processes and the SEIS projects supported by the European Union (EU) and the European Environment Agency (EEA)
- The ENI-SEIS EAST II project<sup>1</sup>, a National Implementation Team and a SEIS assistant are in place. A letter of Intent on political commitments to environmental information was signed

## THE SEVEN SEIS PRINCIPLES<sup>2</sup> AND STATE OF THEIR APPLICATION IN AZERBAIJAN<sup>3</sup>

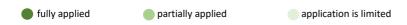
# According to the SEIS principles, information should be: Managed as close as possible to its source

Collected once, and shared with others for many purposes

Readily available to easily fulfill reporting obligations

Easily accessible to all users

Accessible to enable comparisons at the appropriate geographical scale and citizen participation Fully available to the general public at the national level in the relevant national language(s) Supported through common free open software standards

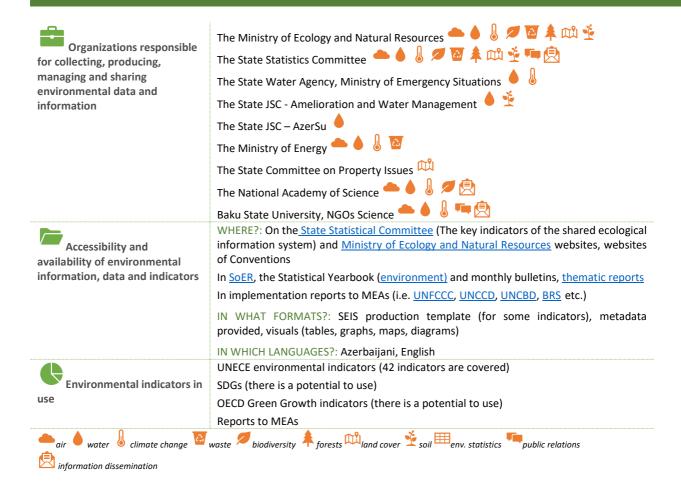


<sup>&</sup>lt;sup>1</sup> ENI-SEIS - Project "Implementation of the principles and practices of the shared environmental information system (SEIS) in the Eastern Partnership countries".

<sup>&</sup>lt;sup>2</sup> More information on SEIS principles is available at: https://www.eionet.europa.eu/seis/principles.

<sup>&</sup>lt;sup>3</sup> Evaluation is based on expert's opinion, there are possible changes or clarifications after discussions with Azerbaijan's counterparts.

## **MANAGEMENT OF ENVIRONMENTAL INFORMATION – OVERVIEW**



## **CONTENT AND INFRASTRUCTURE**

## FROM INDICATOR PRODUCTION TO USE

## STATE OF PRODUCTION AND SHARING OF ENVIRONMENTAL INDICATORS

Out of the 49 UNECE environmental indicators, 23 selected indicators 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.<sup>4</sup> Other 26 indicators were covered in less detail and with less rigorous criteria.

23 assessed UNECE environmental indicators and data sets of Azerbaijan (2018):

- 15 indicators indicated the responsible authority for indicator production;
- 17 indicators included the time of update;
- 4 indicators contained references to their conformity with international standards;
- 3 indicators included visual representations.

<sup>&</sup>lt;sup>4</sup> 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)	Α	R	Т	М	V
A. Air pollution and ozone depletion					
A1: Emissions of pollutants into the atmospheric air (15)	4	1	2	0	1
A2: Ambient air quality in urban areas (4)	2	1	2	0	0
A3: Consumption of ozone-depleting substances (7)	1	1	2	0	0
B. Climate change					
B1: Air temperature (1)	1	1	2	0	0
B2: Atmospheric precipitation (1)	1	1	2	0	0
B3: Greenhouse gas emissions (2)	2	1	2	2	0
C. Water			_		
C1: Renewable freshwater resources (1)	1	1	2	0	0
C2: Freshwater abstraction (3)	3	1	2	0	1
C3: Total water use (4)	4	1	2	0	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	2	0	0
C11: Nutrients in freshwater (5)	4	1	2	0	0
C14: Population connected to wastewater treatment (1)	0	0	0	0	0
C15: Wastewater treatment facilities (1)	0	0	0	0	0
C16: Polluted (non-treated) wastewater (2)	2	1	2	0	0
D. Biodiversity			-		
D1: Protected areas (1)	1	1	2	2	0
D3: Forests and other wooded land (1)	1	0	0	0	0
D4: Threatened and protected species (2)	0	0	0	0	0
E. Land and soil			-		
E1: Land uptake (2)	2	1	0	0	0
G. Energy					
G1: Final energy consumption (2)	2	0	2	2	0
G2: Total primary energy supply (2)	2	0	2	2	0
I. Waste					
I1: Waste generation (2)	2	0	2	0	0
I2: Management of hazardous waste (6)	5	1	2	0	0

## 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<sub>2</sub>), nitrogen oxides (NO<sub>x</sub>), nonmethane volatile organic compounds (NMVOCs), ammonia (NH<sub>3</sub>), carbon monoxide (CO), TSP, particulate matter PM<sub>10</sub> and PM<sub>2.5</sub> 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<sup>6</sup>: 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<sup>7</sup>: 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<sup>8</sup>: 2 conform with international standards; 1 conform with national standards; 0 conformity with standards not specified.
- ${f V}$  Availability of graphs, diagrams, maps  $^9$ : 1 available, 0 not available.

## QUALITY OF SEVEN DATA FLOWS BASED ON AZERBAIJAN'S SELF-ASSESSMENT (2018)

Azerbaijan 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 the EEA, and the three SEIS pillars.

<sup>&</sup>lt;sup>5</sup> It relates to the Accessibility criterion of the revised SEIS Assessment Framework

<sup>&</sup>lt;sup>6</sup> It relates to the Clarity criterion of the revised SEIS Assessment Framework

 $<sup>^{7}</sup>$  It relates to the Timeliness and the Punctuality criteria of the revised SEIS Assessment Framework

<sup>&</sup>lt;sup>8</sup> It relates to the Clarity and the Comparability criteria of the revised SEIS Assessment Framework

<sup>&</sup>lt;sup>9</sup> It relates to the Clarity criterion of the revised SEIS Assessment Framework



#### Extract: Data Flow - SO<sub>2</sub> a

Passively collects user feedback to assess whether the data flow meets the needs of users. Used for many purposes in the determination of the national policy, production of the national indicator. The regular quality control and validations measures are applied to improve data quality.

Use the data produced by themselves. Data validation in place. Regular revision of data (due to methodological change, errors, mandatory). No data from other sources to compare with

X Appl

Annual dissemination (at the beginning of the year). Deviation: less than 4 days. Timeliness: less than 1 year

SEIS production template. Reports/SoER, visuals, link to the policy context and targets. Data is available at http://eco.gov.az/en/post/1050 , https://www.stat.gov.az/source/environment/?lang=en

The National Environmental Monitoring Department is responsible for checking the data and ensuring its quality. Information on data quality, methodology, data sources, geographic coverage, contacts of owners, data flows are available in English



Internationally agreed procedures are applied. Time series for the last 15 years with no breaks.

National legislation is in place (Resolution of the Cabinet of Ministers). The data is placed on the official web page of the Ministry of Ecology and Natural Resources

Atmospheric air: Only the concentrations of  $SO_2$  and  $NO_2$  were regularly measured in 7 cities in 2003–2018. Two automated stations also measure PM2.5, PM10, and ground-level ozone. The data, including graphics from one automated station, is published online on the web page of the Ministry (<a href="http://eco.gov.az/en/post/1050">http://eco.gov.az/en/post/1050</a>). The information on the <a href="https://eco.gov.az/en/post/1050">website</a> is published in Azerbaijani and English. The website contains information on the responsible organization for the generation of data – the Ministry of Ecology and Nature Resources (MENR) – as well as reference to the last update of content, 11.05.2017.

<u>Areas to improve:</u> Visuals (graphs, diagrams) are not included. No reference is made to measuring methods and their conformity with international standards.

Water: Data only characterizes the annual averages of  $BOD_5$  and  $NH_4$  in two rivers – the Kura and the Araks – in the period 2000–2016. All information on the <u>website</u> is published in Azerbaijani and English. The website contains information about the responsible organization for the data production – the MENR – as well as reference to the last update of the content, 11.05.2017.

<u>Areas to improve:</u> The minimum and the maximum BOD<sub>5</sub> and NH<sub>4</sub> values are not available. There is no data on the type and number of monitoring locations, the sampling periods and the number of samples taken. There is no visual representation of data. There is no reference to measurement methods and to their conformity with international standards.

**Biodiversity**: The data sets for 1990, 1995 and 2000–2016 include data on the total territory of protected areas, their share in the total country area as well as information on the areas of different IUCN categories (national parks, national and other reserves). All information on the <u>website</u> is published in Azerbaijani and English. The website refers to the responsible authority for data production – the MENR – and indicates the date of the last update of content, 26.04.2017. The methodology for indicator production is stated and complies with IUCN recommendations. <u>Areas to improve</u>: There is no visual representation of data.

#### Summary of self-assessment

Concerning the 7 self-ranked underpinning data flows, Azerbaijan has reported on a long-time series of continuous monitoring: 15 to 28 years (exceptions are PM<sub>10</sub> and O<sub>3</sub>, both of which are two-years long). With the exception of protected areas, Azerbaijan receives primary data for the indicators from other organizations. The country declared its procedures for quality assurance, provides information regarding the availability of metadata for the collected data sets (including information about data sources and spatial coverage), and the mechanism for data production and exchange. Data is released annually. Online information covers 2017, and the reported delay in publishing data is less than one year. Apparently, it referred to a continuous release of automated measurements of PM<sub>10</sub> and O<sub>3</sub> rather than to the production of corresponding indicators, requiring data processing to calculate annual averages. Azerbaijan uses the SEIS templates. Indicators of Azerbaijan lack reference to methodological standards used for the production of the data sets.

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

Azerbaijan ranked its performances as **90.48%** - a good performance. Azerbaijan has potential to achieve 2021 target on UNECE indicators' availability, considering the progress made over the reviewed period.

#### **USE OF ENVIRONMENTAL INDICATORS**

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

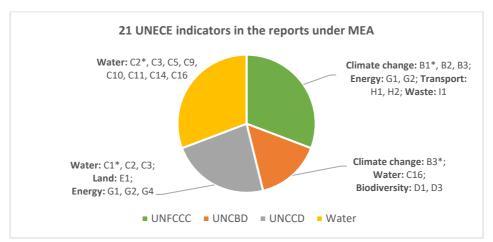
Azerbaijan does not produce indicator-based reports. At the same time, the UNECE environmental indicators are progressively used in visual materials (time-series graphics, tables, maps) in national documents, such as the 2013 National Report on Environmental Conditions for 2008-2012<sup>10</sup>, the 2017 Statistical Yearbook of Azerbaijan (Environment)<sup>11</sup>, and other thematic reports.



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

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<sup>12</sup>, UNCBD<sup>13</sup>, UNCCD<sup>14</sup>, and the Protocol on Water and Health under the Water Convention<sup>15</sup>. Some indicators are used for the reports under the Basel Convention.<sup>16</sup>



<sup>\*</sup> Abbreviations as used in the Guidelines for the Application of Environmental Indicators are accessible at <a href="https://www.unece.org/env/indicators.html">https://www.unece.org/env/indicators.html</a>.

Use of environmental indicators for reporting on the Sustainable Development Goals (SDGs) and Green Growth The UNDP country office in Azerbaijan assisted the country in assessing capacities and needs in developing SDGs indicators<sup>17</sup>. In 2017, Azerbaijan conducted a <u>voluntary national review on the first steps in the implementation of the 2030 Agenda for Sustainable Development.</u> Several indicators correspond to OECD Green Growth indicators.

<sup>&</sup>lt;sup>10</sup> National Report on Environmental Conditions for 2008-2012 (2013, <u>in Azeri</u>). 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 Azerbaijan" (<u>in English</u> and <u>in Azeri</u>). Thematic reports produced in Azerbaijan (<a href="http://eco.gov.az/en">http://eco.gov.az/en</a> )(reports on climate change, <a href="https://eco.gov.az/en">water</a>, <a href="https://eco.gov.az/en">sustainable development</a>) cover a number of UNECE environmental indicators.

<sup>&</sup>lt;sup>11</sup> 2017 Statistical Yearbook of Azerbaijan (Environment) provides data that correspond to UNECE environmental indicators.

<sup>12</sup> Third National Communication of Azerbaijan to the United Nations Framework Convention on Climate Change (2015, in Azeri).

<sup>&</sup>lt;sup>13</sup> Fifth National Report of the Republic of Azerbaijan to the Convention on Biological Diversity (2014, in English).

<sup>&</sup>lt;sup>14</sup> National Report to the United Nations Convention on Combat Desertification (2006, in Russian). Indicators are mainly linked to Aichi biodiversity targets.

<sup>&</sup>lt;sup>15</sup> The Convention on the Protection and Use of Transboundary Watercourses and International Lakes (Water Convention).

<sup>&</sup>lt;sup>16</sup> Azerbaijan submitted Electronic Reporting System of the Basel convention (2016).

<sup>&</sup>lt;sup>17</sup> Building statistical capacity to monitor SDGs in Azerbaijan.

## The potential use of UNECE indicators for SDGs monitoring in Azerbaijan













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

Air: A1 (partially)

Energy: G2, G3, G4 (fully)

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

Air: A3 (limited); Water: C2, C3 (fully); Biodiversity: D3 (fully);

Agriculture: F2 (fully), F4 (limited); Waste: I1 (fully); I2 (partially); I3, I4 (limited)

Climate change: B1, B2, B3 (fully)

Water: C16 (fully); C12, C13 (partially)

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

### Linking of 14 UNECE indicators to OECD Green Growth indicators in Azerbaijan

1. CO<sub>2</sub> productivity (1.1)\*\*

2. Energy productivity (2.1, 2.2, 2.3)

3. Material productivity (non-energy) (3.3, 3.4)

4. Water productivity

7. Freshwater resources

8. Forest resources

11. Land resources:

14. Environmentally induced health problems

Climate change: B3\*

Energy: G1, G2, G4 Agriculture: F2

Waste: I1

Water: C3, C7

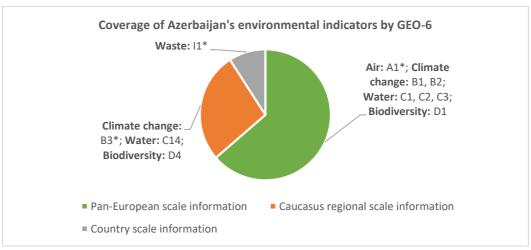
Water: C1, C2 **Biodiversity: D3** 

Land: E1 Agriculture: F2

Air: A2

Use of indicators in the pan-European volume of GEO-6<sup>18</sup>

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



<sup>\*</sup>Abbreviations as used in the Guidelines for the Application of Environmental Indicators accessible at https://www.unece.org/env/indicators.html.

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

<sup>\*\*</sup>Abbreviation as used in the list of OECD Green Growth indicators.

<sup>&</sup>lt;sup>18</sup> United Nations Environment Programme. <u>Global Environment Outlook GEO-6. Assessment for the pan-European region.</u> 2016.

# **COOPERATION**

# REGIONAL AND INTERNATIONAL SUPPORT FOR THE DEVELOPMENT OF SEIS

There is good cooperation between the Ministry of Ecology and Natural Resources and State Statistics Committee, as well as between other owners of environmental data. Information collection and exchange are mainly based on the national procedures under the Law on Official Statistics.

The ENPI-SEIS project (2010-2015)<sup>19</sup>, implemented by the EEA and funded by the EU, was aimed at enhancing the engagement of the countries of the European Neighborhood (including Azerbaijan) in regional cooperation. It was supposed to improve national capacities for managing and sharing environmental data and information. The ENPI-SEIS project addressed the three **SEIS pillars** — cooperation, content and infrastructure — through enhanced networking with the national capacities on environmental information.

Building on achievements of the above-mentioned project, a four-year EU-funded ENI SEIS II EAST project (2016-2020), aims to support the promotion of environmental protection by strengthening environmental governance. As of 2018, the project implementation in Azerbaijan is in progress: The National Focal Points are confirmed, a letter of intent on political commitments on environmental information between the EEA, MENR and State Statistic Committee was signed and the National Implementation Team and a national SEIS assistant are in place.

<sup>&</sup>lt;sup>19</sup> The main achievements and outcomes can be found in the East Region Synthesis report 'Building SEIS with the Eastern Neighborhood'.

Azerbaijan has been making significant progress in enhancing the accessibility of UNECE environmental indicators. These are increasingly being published on the websites of national environmental authorities, statistical agencies and open data portals in compliance with the UNECE requirements.

Azerbaijan has the potential to achieve the 2021 target on UNECE indicators' availability, as well as on SEIS implementation.

Azerbaijan has potential to use the UNECE environment indicators to monitor the progress under the SDGs. Some UNECE environmental indicators have linkages to the OECD Green Growth indicators.

There are no indicator-based reports, however, SoER, Statistical Yearbook (environment), thematic reports provide sufficient environmental information and data. The reports should be complemented with analysis, assessments. Documents should include relevant material and case studies; they should be well visualized. Reports should cover sectoral issues and offer concrete recommendations.

The produced reports are not always available on the website of the MENR (or are difficult to find). Some reports to the MEAs are available on the conventions' website. Some reports/information are available only in the national language that limits the usage by international users.

Reporting under the MEAs remains one of the main tasks of the country. The use of environmental indicators for different purposes, including reporting under the MEAs should be promoted and strengthened. The quality of the reports should be improved (i.e. new tools and guidelines for UNFCCC National Communication report should be applied).

- Continue advancing the production and sharing of environmental indicators in compliance with recommendations of the UNECE WGEMA and JTF on Environmental Statistics and Indicators;
- Continue methodological work on existing and new environmental indicators to ensure that the number of accessible indicators is increased by 2021;
- Maintain one common platform of environmental information;
- Maintain cooperation and interaction between environmental information producers in Azerbaijan to achieve full SEIS implementation.
- ✓ Assess the linkages and capacities of using UNECE environmental indicators to monitor the SDGs progress;
- Increase the use of indicators for different purposes and monitoring capacitity of the progress on achievement of SDGs and Green Growth.
- Strengthen communication and the role of the environmental assessments (especially SoER) in policy development and decision-making;
- Improve the analytical, recommendation and sectoral parts of the SoER/thematic reports with using indicators (shift from providing environmental information to environmental assessment, visual explanations);
- ✓Prenare indicator-hased renorts
- Make sure all produced reports are available on nationally managed websites; reports are well presented to a broader public;
- Ensure the availability of information and data in the national and English languages.
- Improve the quality of reports under the MEAs by involving more experts and adding visuals;
- Increase usage of the environmental indicators for the preparation of the reports under the MEAs;
- ✓ Apply new tools and guidelines for the reports;

.....

#### 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 Neighbourhood 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

MEAs - Multilateral Environmental Agreements

Minamata – Minamata Convention on Mercury

MENR - Ministry of Ecology and Natural Resources

NFP - National Focal Point

SEIS – Shared Environmental Information System

SoER - State-of-Environment Report

OECD - Organization for Economic Cooperation and Development

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, 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 of how to select, calculate, present and use environmental indicators to communicate the state of the environment, factors and trends. The European Environment Agency is supporting the development of the SEIS in the EU Neighbourhood region.

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

## Acknowledgments:

The Country profile on the status of SEIS implementation in Azerbaijan 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 (Azerbaijan's 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 Azerbaijan, October 2017; Ministry of Ecology and National Resources of Azerbaijan and State Statistical Committee of Azerbaijan.

## Disclaimer:

The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations concerning the legal status of any country, territory, city or area, or of its authorities, or concerning the delimitation of its frontiers and boundaries.