

Copenhagen | Tuesday 12 November 2019 |

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## SESSION 2

# National impacts and deliverables of the ENI SEIS II East project

*Armenia*



European Environment Agency



# 1. Progress towards the expected results

– Improved implementation regional/international commitments related to environmental reporting in line with EU/EEA best practices.

## 1. Water- Development the Information systems and Infrastructure (Water component)

- The development of Ecoportal (water component) has been started since June 2019 based on SEIS principles (will be functionated in February 2020),
- Agreed points on the share of roles and responsibilities of Institutions producing and owning water related information were identified for developing water component of the EcoPortal – Armenia
- Improved inter-institutional data exchange and sharing, expert communication and network,
- Trainings and workshops (13-14 June 2019 , Kick-off meeting on the development of the eco portal for Armenia)

## 2. Biodiversity

- Developed National Indicators on protected areas
- Capacity building in national experts on reporting under Resolution N. 8(2012) of the Bern Convention

## 3. Corine Land Cover

- National team was set up by the Letter of Minister of Environment to implement pilot study



# 1. Progress towards the expected results

Water Ecoportal of Armenia

Indicators

ECO PORTAL Home Policy Topics Indicators Data Map

ECO PORTAL Home Policy Topics Indicators Data Map

- C1 – Renewable Freshwater Resources
- C2 – Freshwater Abstraction in the Republic of Armenia
- C3 – Total Water Use in the Republic of Armenia
- C4 – Household Water Use Per Capita in the Republic of Armenia
- C5 – Water Supply Industry and Population Connected to Water Supply Industry in the Republic of Armenia
- C10 – Water Quality
- C11 – Nutrients in Freshwater
- D1 – Nationally Designated Protected Areas of the Republic of Armenia

ECO PORTAL Home Policy Topics Indicators Data Map

**Key message**

- The main source of organic matter emissions to rivers in Armenia is polluted wastewater (non-treated or not sufficiently treated), which, due to the lack of treatment plants, is emitted to the rivers
- The BOD and total ammonium concentration have increased at river sites below settlements in the period 2010-11 to 2017, due to emissions of untreated domestic wastewater from settlements and diffuse runoff from agriculture. For sites above settlements the levels have been more or less stable.
- Compared to 2008, the average ammonium concentration at Armenian river sites below settlements was 74% higher in 2017.
- The average BOD at Armenian river sites below settlements increased by 25% from 2008 to 2017.
- The current ammonium concentrations levels are high at many of the sites, giving cause for concern. Especially ammonium concentrations for sites above settlements are high in many cases. The largest proportion of sites with high ammonium concentrations are found in the Akhuryan, Hrazdan and Northern Water Basin Management Areas (WBMs). BOD levels are mainly too high in the Hrazdan and Akhuryan WBMs.

**Key figure(s)**

Rivers-BOD

Rivers-BOD (without 55)

Legend: Above settlements (blue), Below settlements (red), All sites (green)

ECO PORTAL Home Policy Topics Indicators Data Map

Water resources management in Armenia is executed by the Ministry of Environment, through the Water Resources Management Agency (WRMA) and six basin management organizations (BMOs).

**Basin Management Organizations (BMOs) and River Basins in Armenia**

BMO	River basin	Area (km <sup>2</sup> )	River flow (MCM/yr)
Northern BMO	Debed	3,895	1,203
	Aghstev	2,480	445
	Kura tributaries	810	199
Hrazdan BMO	Kasakh	1,480	329
	Hrazdan	2,565	733
Sevan BMO	Lake Sevan	4,750	265
	Azat	952	232
Ararat BMO	Vedi	998	110
	Arpa	2,301	764
Akhuryan BMO	Akhuryan	2,784	391
Southern BMO	Metsamor (Sevji)	2,240	711
	Vorotan	2,476	725
	Voghji	1,341	502
	Meghritset	664	166
<b>Total</b>			<b>6,775</b>

Source: USAID 2008. Note: MCM = million cubic meters.

**Basin Management Areas of Armenia**

Legend: State border, Cities, Main rivers, Main lakes and reservoirs

Basin Management Areas: Akhuryan, Ararat, Hrazdan, Northern, Sevan, Southern

ECO PORTAL Home Policy Topics Indicators Data Map

Reports and Publications

Water Resources Atlas of Armenia

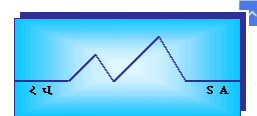
Water Resources Management in Armenia

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Araks

Ten Years of Experience in Reformatting Water Management Sector in



# 2. SEIS to support a regular assessment process

## Regularly updated environmental indicators

- Armenia has achieved progress in making UNECE environmental indicators available and accessible.
- 42 out of 49 UNECE environmental indicators are available as per 2019.
- Producing and publishing new indicators
- A dedicated section on SDGs indicators is established on the website of the Statistical Committee.
- Developing and publishing first **Satellite Water Account System**

	Armenia
<b>A. Air pollution and ozone depletion</b>	<b>3</b>
A1. Emissions of pollutants into the atmospheric air	x
A2. Ambient air quality in urban areas	x
A3. Consumption of ozone-depleting substances	x
<b>B. Climate change</b>	<b>3</b>
B1. Air temperature	x
B2. Atmospheric precipitation	x
B3. Greenhouse gas emissions	x
<b>C. Water</b>	<b>13</b>
C1. Renewable freshwater resources	x
C2. Freshwater abstraction	x
C3. Total water use	x
C4. Household water use per capita	x
C5. Water supply industry and population connected to water supply industry	x
C6. Connection of population to public water supply	x
C7. Water losses	x
C8. Reuse and recycling of freshwater	x
C9. Drinking water quality	x
C10. BOD and concentration of ammonium in rivers	x
C11. Nutrients in freshwater	x
C12. Nutrients in coastal seawaters	
C13. Concentrations of pollutants in coastal seawater and sediments (except nutrients)	
C14. Population connected to wastewater treatment	x
C15. Wastewater treatment facilities	x
C16. Polluted (non-treated) wastewaters	x
<b>D. Biodiversity</b>	<b>6</b>
D1. Protected areas	x
D2. Biosphere reserves and wetlands of international importance/place holder	x
D3. Forests and other wooded land	x
D4. Threatened and protected species	x
D5. Trends in the number and distribution of selected species	x
D6. Invasive alien species/place holder	x
<b>E. Land and soil</b>	<b>2</b>
E1. Land uptake	x
E2. Area affected by soil erosion	x
<b>F. Agriculture</b>	<b>4</b>
F1. Irrigation/place holder	x
F2. Fertilizer consumption	x
F3. Gross nitrogen balance	x
F4. Pesticide consumption	x
<b>G. Energy</b>	<b>6</b>
G1. Final energy consumption	x
G2. Total primary energy supply	x
G3. Energy intensity	x
G4. Renewable energy consumption	x
G5. Final electricity consumption/place holder	x
G6. Gross electricity production/place holder	x
<b>H. Transport</b>	<b>2</b>
H1. Passenger transport demand	x
H2. Freight transport demand	x
H3. Composition of road motor vehicle fleet by fuel type	
H4. Age of road motor vehicle fleet	
<b>I. Waste</b>	<b>3</b>
I1. Waste generation	x
I2. Management of hazardous waste	x
I3. Waste reuse and recycle	x
I4. Final waste disposal	x
<b>J. Environmental financing</b>	<b>1</b>
J1. Environment protection expenditure	x
<b>Total</b>	<b>43</b>



# 2. SEIS to support a regular assessment process

Publication new indicators the website of the Statistical Committee

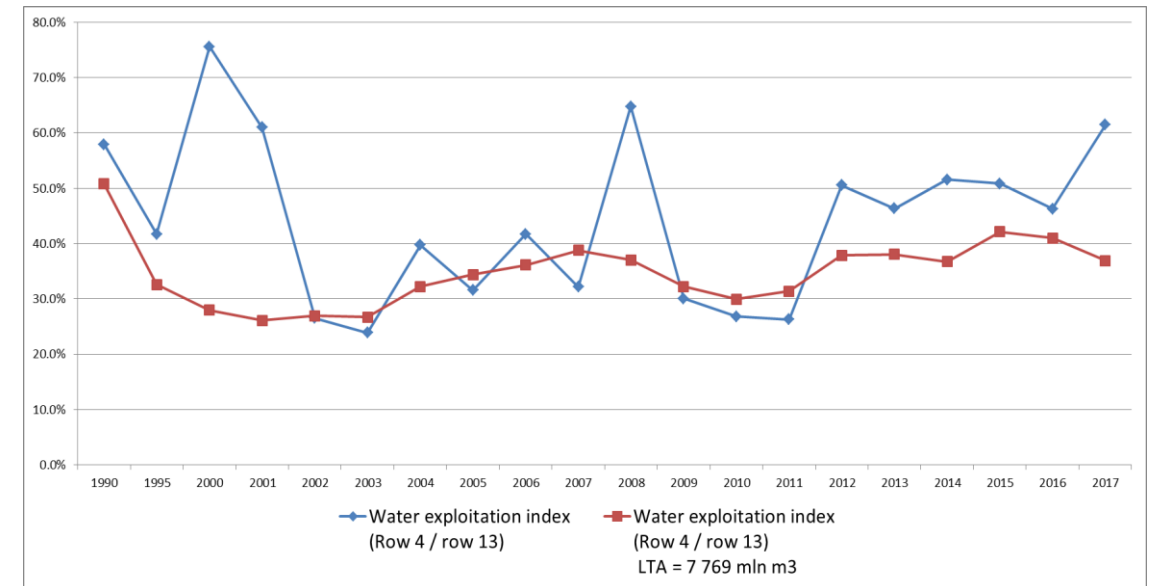
## FRESHWATER ABSTRACTION

Water removed from any water source (surface water sources, such as rivers, lakes, reservoirs or rainwater; and groundwater sources) either permanently or temporarily. Includes abstraction by the water supply industry for distribution and direct abstraction by other activities for own use. The volume of water abstracted is broken down by main groups of economic activity of the abstractors (according to ISIC Rev.4) and households.

The screenshot shows the website interface for selecting data. The breadcrumb trail is: ArmStatBank >> 8. Environment >> 8.1 Environment >> (C) Water resources >> (C2) Freshwater abstraction (surface and groundwater) by indicators and years. The 'Choose variable' step is active. The 'select variable' dropdown is open, showing a list of indicators. The 'years' dropdown is also open, showing a list of years from 1990 to 2017. The selected indicator is 'Water exploitation index (WEI) from surface water resources (LTAA), %' and the selected year is 2017.

## C-2.3 WATER EXPLOITATION INDEX (WEI)

The indicator presents the annual total fresh water abstraction in a country as a percentage of its long-term annual average (LTAA) available water from renewable fresh water resources.

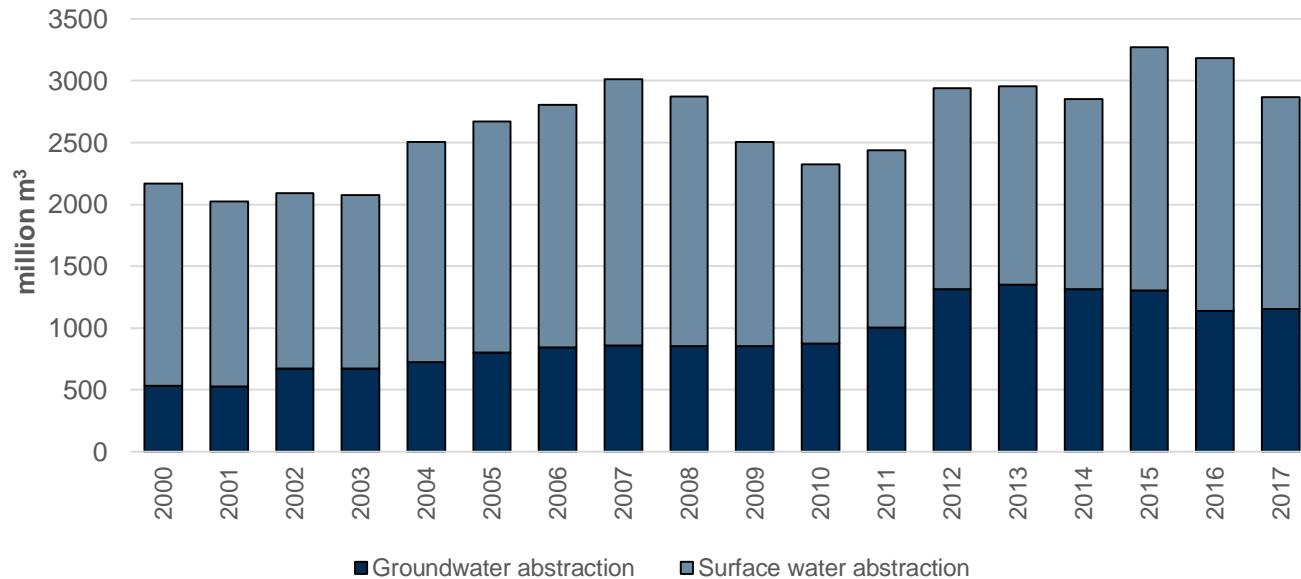




# 2. SEIS to support a regular assessment process

## Specification and Assessment of Water Indicators C1, C2, C3, C4, C5, C10, C11

### C-2.1. Freshwater abstraction (surface and groundwater)



### Key message

Armenia is not a water scarce country, however, is facing with severe water stress conditions with higher than 40% of annual water exploitation index (WEI 61.4% in 2017) due to high water demands for public water supply (61%) and agriculture (34%). Total water abstraction for both sectors accounted for 95% of annual total freshwater abstraction of the country in 2017.

Despite total population of the country has decreased around 7.5% between 2000-2017, annual freshwater abstraction has increased 65.3% for the same period.

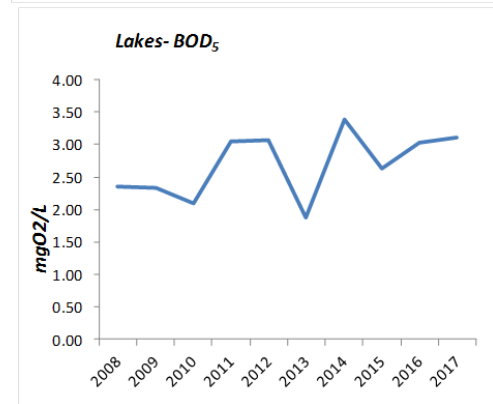
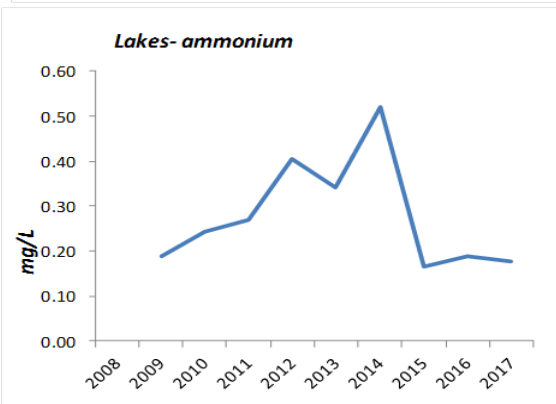
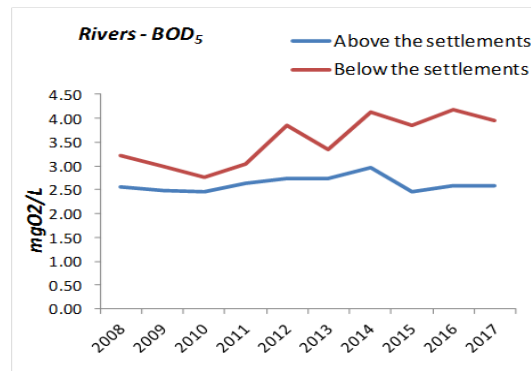
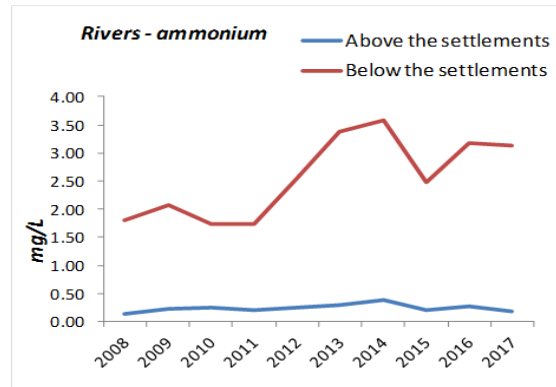
Pressure of water abstraction is relatively much higher on surface water, meeting 59.7% of annual freshwater abstraction of the country (2017). However, pressure on groundwater resources have more than doubled since 2000 (from 533 mln. m<sup>3</sup> in 2000 to 1,154.5 mln. m<sup>3</sup> in 2017).



# 2. SEIS to support a regular assessment process

## Specification and Assessment of Water Indicators C1, C2, C3, C4, C5, C10, C11

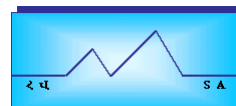
### C10. BOD and concentration of ammonium in rivers and lakes



### Key message

Biochemical oxygen demand (BOD) and ammonium are key indicators of organic pollution in water. BOD shows how much dissolved oxygen is needed for the decomposition of organic matter present in water. Concentrations of these parameters normally increase as a result of organic pollution caused by discharges from waste water treatment plants, industrial effluents and agricultural run-off. Severe organic pollution may lead to rapid de-oxygenation of river water, high concentration of ammonia and disappearance of fish and aquatic invertebrates.

- Concentration of BOD and total ammonium have increased in rivers in the period 2012 to 2017 due to the influence of not treated domestic wastewater of settlements and diffuse runoff from agriculture.
- Average concentrations of BOD<sub>5</sub> below and above settlements belong to the second class (good quality) assessed by Armenian water quality norms. Average concentrations of ammonium below settlements mainly belong to the fourth class (poor quality) or fifth class (bad quality), and before settlement - second class (good quality).



# 3. Sustainability and connectivity

## Cooperation

- Improved cooperation, expert communication and network at international level
- Improved Inter-institutional cooperation at country level (data exchange practices and the implementation of SEIS principles based on the inter-institutional protocols with the Hydro-meteorological service (the Ministry of Emergency Situations), the Tax Inspectorate, Water Committee, Inspectorate for Nature Protection and Mineral Resources, Cadastre Committee,
- Regular official and working meetings with National Focal Points and National Assistance with the relevant services, their involvement in discussions on ensuring the requirements of users of eco-information and their promotion in various reports.

## National support for project implementation

- Government programs, Developments strategy and National Action programs (particularly in regard to Environmental Information) are developing taking into account international commitment
- Increased Environmental policy-making and governance based on information and knowledge readily available in line with the SEIS principles,
- Improving Environmental Monitoring System (union three monitoring Centers), expansion the list of monitored groundwater quality parameters of and starting hydrobiological monitoring in line with EU WFD.
- ☐ Strengthened capacities of national environmental authorities and statistical agencies to collect and produce required data and application of environmental indicators in line with SEIS principles and practices.





# 3. Sustainability and connectivity

## Legislation

- Develop a road map for implementation of the new obligations of Armenia under 5 EU Directives related to water within the EU-Armenia Comprehensive and Enhanced Partnership Agreement (CEPA)
- Revision of the Water, Atmospheric Air Protection Code of, Forestry Code, Land code Armenia and other key legislation, particularly in the light of the CEPA implementation
- Law on Environmental Information is developing.

## Creation synergies and regular contact with ongoing projects at national and international levels

- ❑ **EU Water Initiative plus project (2016-2020)- Strengthening water monitoring systems and improvements with policy development in line with the EU Water Framework Directive to support data flow**
  - Renovation of Laboratory of Environmental Monitoring and Information Center of ME and purchasing new equipment (RA Government and EUWI+),
  - Starting development sectoral Databases.
  - Initiating transboundary cooperation with Georgia in the Khrami-Debed basin (joint monitoring, indicators, assessment, shared information).



# 3. Sustainability and connectivity

## ❑ GIZ

➤ Developed the Concept and road map on the “Development of Biodiversity Information System in Armenia” (In the frames of the concept of integrated environmental communication strategy of “Integrated Biodiversity Management, South Caucasus” project, the German Agency for International Cooperation (GIZ) in collaboration with the Ministry of Environment)

## ❑ REC Caucasus,

➤ Strategic Environmental Assessment (SEA) Report on "Strategic Development Plan, Road Map and Long Term Investment Plan for the Solid Waste Management Sector in Armenia" was elaborated within EU funded Greening Economies in the Eastern Neighbourhood (EaP GREEN) project, in collaboration with UNECE Espoo Convention Secretariat, RA Ministry of Environment and Regional environmental center for Caucasus, Armenia National Office.

## ❑ Aarus centers, Academic institutions, the Council for Sustainable Development / SDG /, etc.

❑ SEVAMOD project financing by German Government (Helmholtz Center for Environment research, Scientific Center of Zoology and Hydroecology) to ensure data for SEIS-SEVAN portal



# 3. Sustainability and connectivity

## Main issues to be addressed and supported

- Compile air and other environmental-economic accounts
- Complete and improve biodiversity register
- Support to maintain forest register
- Support to develop administrative land register
- Population health and quality of life according to environmental impacts
- Improvement of management of complete shared environmental information system
- Regularly study the needs of information users, prepare new publications, etc.
- Expanding the application of official environmental indicators in various reports: a report on climate change, a report on desertification, reporting on the Sustainable Development Goals (SDGs) and Green Growth In Armenia,
- To build network and support EU4Env and EU4Clim,
- National dialogue and communication with other EU/regional/international partner organisations (USAID, EU and ets)



# 3. Priorities in 2020

- Completing water information portal and publish water indicators- *Improved production and use of the set of regionally agreed environmental indicators for efficient policy-making.*
- Extending list of publishing Environmental Indicators,
- Producing State of Environment report and formalize regular assessment - *Improved production and use of the set of regionally agreed environmental indicators for efficient policy-making,*
- Piloting CORINE Land Cover (CLC) in Armenia,*
- To raise awareness and understanding of the ENI-SEIS II project goals and objectives, translate project document into national language.



# 4. Visibility and communication

## Communication and visibility action plan for Armenia

### ➤ Communication Goal

To improve communication to support environmental policy and share the EEA and the Eionet experience.

### ➤ Why does the project need a Communication Plan?

It defines all the project's stakeholders; and describes communication between these stakeholders and the project team throughout the project implementation in line with SEIS principles and local language needs.

### ➤ What results to expect after the Communication Plan's implementation?

- 1. Established regular dialogue with relevant stakeholders and engaged them in the implementation of the project.
- 2. Increased awareness and understanding of the ENI-SEIS II project goals and objectives at national level.
- 3. Effective communication between groups are in place.
- To ensure better communication and understanding almost all document were translated and shared with authorities



# 4. Visibility and communication

The screenshot shows the website of the Ministry of Environment of the Republic of Armenia. The page is titled "ENI SEIS EAST Project" and features a navigation menu on the left, a main content area, and an "ANNOUNCEMENTS" sidebar on the right. The main content area includes a description of the project, a "LETTER OF INTENT" link, and a "The project is managed" link. Below the text are six icons representing different aspects of the project: SEIS, Projects, Working meetings, Reports Presentations, Information Methodology Databases, and National Centre of Legislative.

REPUBLIC OF ARMENIA  
MINISTRY OF ENVIRONMENT

HOME MINISTRY LEGISLATION ENVIRONMENT E.MANAGEMENT

Search

ENVIRONMENTAL PROTECTION AND MINING INSPECTION BODY

EXPERTISE

LICENSES AND PERMITS

INTERNATIONAL COOPERATION

NATIONAL REPORTS

AGREEMENTS

PROGRAMMS

PROGRAMMS/General information

ENI SEIS East

UNCCD

SUPPORT PROGRAMME FOR PROTECTED AREAS – ARMENIA (SPPA-A)

COOPERATION WITH NGOS

PROCUREMENT

FORMS OF STATISTICAL, QUARTER REPORTS AND INSTRUCTIONS TO FILL OUT

SPECIALLY PROTECTED AREAS OF NATURE

LINKS

LIBRARY

## ENI SEIS EAST Project

Implementation of the Shared Environmental Information System principles and practices in the Eastern Partnership countries (ENI SEIS II East project)

[LETTER OF INTENT](#) between The Ministry of Environment of the Republic of Armenia and The Statistical Committee of the Republic of Armenia, on the one part and The European Environment Agency, on the other part.

[The project is managed](#) and implemented by the EEA because of its extensive experience in facilitating cooperation and developing expertise through the Eionet. The project furthers the EEA's lead role in environmental knowledge-sharing and capacity building. The European Neighbourhood Instrument (ENI) SEIS II East Project runs from 2016 to 2020 and is financed by the European Commission's Directorate-General for Neighbourhood and Enlargement Negotiations (DG NEAR).

[Principles and activity of SEIS](#)  
[Project coordinators](#)

[Projects](#)

[Working meetings](#)

[Reports Presentations](#)

[Information Methodology Databases](#)

### ANNOUNCEMENTS

2019-11-08  
Public reviews will be held over mineral extractions of XXVI-B and XXXIV-A blocs of the southern section in Artik tuff mine, submitted by "Firma Krunk" LLC

2019-11-07  
Public reviews will be held over mineral extractions of XXVI-B bloc of the southern section in Artik tuff mine, submitted by "Firma Krunk" LLC

2019-11-06  
Public hearings will be held over mineral prospecting in Yeghvard marbled limestone, Syunik region, submitted by "Dedal" LLC

All

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National Centre of Legislative

# 4. Visibility and communication

## ➤ *Regional*

Topic of workshops and trainings	Number of workshops and trainings	Number of participants
Water	1	3
Communication	2	4
Open data	1	5
Land accounts	2	6
Biodiversity	4	12
Waste	1	3
CLC	1	3
Summer school / SOER	3	8
Air quality	2	4
Steering Committee Meetings	3	5

## ➤ *National*

Topic of workshops and trainings	Number of workshops and trainings	Number of participants
Water	3	85
SOER	1	35
Open data / Round table	1	43

# 4. Visibility and communication

## Workshops and trainings

### ➤ *Regional*

- 8-9 October 2019 , Second regional workshop on state of environment report
- 17 September 2019 , Vocational training on environmental accounting of land
- 12-13 September 2019 , Second regional workshop on sharing environmental information effectively
- 27-29 August 2019, EEAcademy ENI Summer School on integrated environmental assessment towards integrated sustainability assessments
- 5-6 March 2019 , Regional Seminar for integrating environmental information in national E-Governance/Open Data frameworks and platforms

### ➤ *National*

- 13-14 June 2019 , Kick-off meeting on the development of the eco portal for Armenia
- 4 June 2019, In-depth training on the development of the state of environment reports in Armenia
- 10 September 2019, Armenia: Roundtable on open data and e-government for the environment





# 4. Visibility and communication

## SEIS OUTREACH CAMPAIGNS

- ✓ On 4 November the UNFCCC Secretariat, in collaboration with the Food and Agriculture Organization of the United Nations (FAO) launched a 5-day workshop titled “Quality Assurance of the National Greenhouse Gas Inventory Management System and National Greenhouse Gas Inventories of Armenia,” hosted by the Government of Armenia.
- ✓ National policy dialogue as a lever for advancing Integrated Water Resources Management in Armenia. The 18th Meeting of the Steering Committee of the National Policy Dialogue (NPD) on Integrated Water Resources Management (IWRM) was held on 15 October 2019 in Yerevan to take stock of achievements made through the National Policy Dialogue during the 10 years of EU Eastern Partnership. Over this time, major progress has been made in reforming the country’s water resources management policy.
- ✓ Public discussion addressed to increasing the effectiveness of public access to environmental information. Advisor to the Minister of Environment Narine Solomonyan had a meeting with representatives of non-governmental organizations dealing with environmental issues. Discussed the issues regarding the implementation of instructions directed to making the use of electronic means contributing to public access to environmental information.



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