Ms. Silvia Nicolaescu | Environmental Agency | NFP Ms. Elena Orlov | National Bureau of Statistic | NFP Ms. Maria Tarigradean | ENI SEIS II East National assistant

Concluding event "Implementation of the Shared Environmental Information System principles and practices in the EaP countries (ENI SEIS II East) Project

Republic of Moldova: national impact and key achievements of the ENI SEIS II East project





ENI SEIS II East project areas and the key achievements in the Republic of Moldova

Improve capacities in the national administrations to manage and use environmental information to support decision-making;

Implementation of regional/international commitments related to environmental reporting;

Streamline a regular environmental assessment process (indicator-based assessments) Key achievement 1: delivery of the pan-European set of environmental indicators based on national environmental statistics using EEA methodology Available online

Key achievement 2: finalized the pilot project CORINE Land Cover (CLC) 2018

Deployed the RAVEN open-source software for AQ data management and e-reporting

Key achievement 3: drafting the indicator-based assessment (SoER) 2015-2018, country briefing based on EEA/SEA methodology



European Environment Agency

Inter-institutional setting at national level – cooperation through the NIT

- Established by inter-institutional
 Order to effectively share and use the environmental information;
- Members: 17 authorities, civil society organizations = more than 33 representatives involved
- Goal: streamline a regular assessment and reporting process at the national level
- Objective: to apply the UNECE regional environmental indicators and SoER elaboration;
- Coordination and secretariat: Environmental Agency

- On October 30, 2019: NIT discussed and approved the list of UNECE indicator to be applied at national level
- Approved the indicator evaluation national templates designed on SEA's example following UNECE guidelines and elaborated within ENI SEIS II East project;
- Agreed on cooperation set up and deadlines for data collection, validation, indicator assessment, public consultations, make it available online for the public;







Key achievement 1: National Environmental Indicators (UNECE core-set) developed and available online (1/3)

The National Implementation Team with the suport of European Environment Agency in collaboration with Slovak Environment Agency extended the indicators list from 8 to 36 indicators (UNECE core-set) majority <u>based on the</u> <u>national statistics on environment.</u>

Available online on Environment Agency website – including data time series tables for download (xls format)

http://www.mediu.gov.md/ro/content/indicato ri-de-mediu

Indicator Management System (IMS)

Indicator = methodology + story (assessment) + visualisation

Each indicator is presented online, user-friendly and covers:

- \checkmark Key questions and messages,
- State and trend analysis with illustration (graphics, maps);
 Detailed assessment text
- Indicator specification and metadata (indicator definition, units, methodology of calculation);
- Rationale (justification for indicator selection, scientific references);



Key achievement 1: National Environmental Indicators (UNECE core-set) developed and available online (2/3)

Ministerul Agriculturii, Dezvoltării Regionale și Mediului Agenția de Mediu

(satelitul Proba-V care este operat de Agenția Spațială Europeană).

LEAC Moldova anexa

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Ministerul Agriculturii, Dezvoltării Regionale și Mediului Agenția de Mediu

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Agenția Comunicare Domenii de activitate Indicatori de mediu Transparența Acte permisive Informație de interes public Contacte



03:07

CALENDARUL **EVENIMENTELOR**

Noutați		e-PESCUIT AGENTIA DE MEDIU
Reprezentan Evaluarea p	ții Agenției de Mediu au participat la webinarul eriodică de mediu" în cadrul ENI SEIS II	WWW.E-PESCUIT.MEDIU.GOV.MD
"Livinanca p		





Conturile economice și de mediu pe "Acoperirea Terenurilor" pentru Republica Moldova au fost dezvoltate prin aplicarea Sistemului de Analize Geo-științifice automate (SAGA) și Sistemului de Informații Geografice (GIS) cu participarea experților din cadrul Agenției de Mediu, Biroului Național de Statistică și Agenției Relații Funciare și Cadastru instruiți de experții Agenției Europene de Mediu (EEA) și a Centrului Francez de Cercetare Agricolă pentru Dezvoltare Internațională (CIRAD). Conturile economice de mediu referitoare la acopirerea terenurilor reprezintă rezultatul unui exercițiu practic pe durata instruirii profesionale privind contabilitatea de mediu și utilizarea datelor existente și necesare pentru producerea indicatorilor, în cadrul proiectului Agenției Europene de Mediu - punerea în aplicare a principiilor și practicilor Sistemului Partajat de Informații de Mediu (ENI SEIS II Est), care s-a desfăsurat la Montpellier. Franta, în septembrie 2019. În procesul de elaborare a conturilor economice de mediu pe acoperirea terenurilor au fost utilizare datele satelitare

Conturile economice si de mediu "Acoperirea Terenurilor", Republica Moldova (2000-2015)

Agenția Comunicare Domenii de activitate Indicatori de mediu Transparența Acte permisive Informație de interes public Contacte

Conturi economice și de mediu, acoperirea terenurilor (UN-SEEA)

		LEAC_MD - Land enver accounts of the Republic of Muldova, ha (based on Earth observation data)*) (In baza datebr satelliare de						a, ha								
>	8	c	-	2	3	4	5	6	7	8	9	10	11	12	13	14
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		land/Gestionarea si modificarea terenurilor			1							1	1			
	N-64	inerial unite						610	261		4122					4993
-		Restoration and development of														
	bert5	habitats/dezvoltarea și restaurarea		10088	200	5884	5658									21830
		Change due to natural and multiple														
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		Formation of land cover														
	N-0	Urban spraw/Artificial development/Zone un	27538	0	0	0	0	0	0	0	0	0	0	0	87	27625
,	102	Agriculture extention/extinderes terenurilor a	0	15721	0	1713	0	0	0	0	0	0	0	0	0	17434
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		land/Gestionarea și modificarea terenurilor														
	N 64	Consultation in the second s						4383			610					4993
-		Restoration and development of														
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															_	
		Losses of ecosystem extent (SEEA)/Pienleri	28	29446	1627	0028	6981	18691	850	24	4234	0	0	5	785	
		Gains of ecosystem extent (SEEA)Cliptique	27538	15721	0	1713	288	26641	0	0	610	0	0	10	87	
		Urban land take (UNECE, EEA)	27625													
		Net loss of land cover	27510	-13725	-1627	-8215	-6693	7950	-859	-24	-3624	0	0		-698	
		Net change of land cover % 2000	12.7156	-0.65%	-3.06%	-3.26%	-1.70%	3.20%	-2.5156	-1.5856	-18.69%	0.00%	0.00%	0.14%	-1.3756	
		Land cover turn over	12.73%	2.13%	3.06%	4.61%	1.85%	18.23%	2.5156	1.58%	24.98%	0.00%	0.00%	0.43%	1.71%	
		¹⁴ The answers are do check by applications of System for Australiant Gravehoulli, Analyse, BACAS, Grazenghie Information System (GE) computer precisions with the participations of copering of The Computer System (Analyse), and the Computer System (Analyse) and the Computer System (GE) computer precisions with the participations of copering of The Computer System (Analyse), and the Computer System (GE) computer System (GE) computer System (GE) and the Computer System (GE) computer S														
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Key achievement 1: National Environmental Indicators (UNECE core-set) developed and available online (3/3)

NATIONAL BUREAU OF STATISTICS: AVAILABLE ENVIRONMNETAL INFORMATION

Biroul National de Statistică al Republici Moldove

ANUARUL STATISTIC

AL REPUBLICII MOLDOVA

СТАТИСТИЧЕСКИЙ ЕЖЕГОДНИК

OF THE REPUBLIC OF MOLDOVA

РЕСПУБЛИКИ МОЛДОВА

STATISTICAL YEARBOOK

2019



Природные ресурсы и окружающая среда в Республике Молдова

BIROUL NATIONAL DE STATISTICĂ AL REPUBLICII MOLDOVA



STATISTICA MOLDOVEI Statistical databank

> Environment

1	2	3
Choose table	Choose variable	Show table

Environment

Atmospheric air protection

- 🗋 Emission of pollutants in atmosferic air by stationary sources of economic agents by ingredients, 2001-2018 📾
- 🗋 Emission of specific polluting substances in atmosferic air by stationary sources of economic agents, 2001-2018 📾
- Capture (neutralization) by the purification plants of polluting substances at the emissions by stationary sources of atmosferic air pollution of economic agents, 2001-2018 📾
- Polluting substances emitted in atmosferic air by road transport by substances, 2001-2018
- 🗋 Emission of pollutants in atmosferic air by stationary sources of economic agents, in territorial aspect, 2008-2018 🖩
- 🗋 Emission of pollutants in atmosferic air by stationary sources of economic agents by ingredients, in territorial aspect, 2017-2018 📾

Çity infrastructure

- Development of urban streets in territorial aspect, 2008-2018 🗃
- 🗋 Green spaces in territorial aspect, 2008-2018 🛍

Land and forest fund

- Land fund, as of January 1, by Categories of land and Years, 2001-2019
- Main indicators of the forest fund, 2005-2018 📾
- Conduction of foresting works, 2005-2018 📾
- 🗋 Forest cutting, 2005-2018 📾

Meteorology

- Average monthly air temperature, 2002-2019
- Monthly quantity of precipitations, 2002-2019 #
- Average monthly wind speed, 2002-2019 8





English

Search

Search in Environment:

2***

CLC pilot project area:

Chisinau urban area and its surroundings - **3158 km²** (10% out of the total country area);

Databases used:

- 1. CLC2000_MD dataset;
- 2. Satellite imagery: four high resolution (HR) satellite image coverage IMAGE2018 taken by the ESA Sentinel-2 satellite in 2017 and 2018, selected and prepared by ETC-ULS partner BFKH were available for the project to cover the pilot area;
- **3.** In-situ data: Topographic maps (2000-2012) and ortho-photos 2007/2016.







✓ CLC_2000
(revised/corrected);
✓ CLC-Change layer
✓ CLC_2018



Revised CLC2000



code	No of polygons	Area ha	Percent of total
112	185	33115,77	10,49%
121	36	3126,82	0,99%
131	8	536,99	0,17%
141	10	2380,73	0,75%
142	1	62,64	0,02%
211	226	95087,49	30,11%
221	224	29993,98	9,50%
222	298	23644,19	7,49%
231	207	17039,33	5,40%
242	157	19681,66	6,23%
243	111	11027,67	3,49%
311	101	57730,27	18,28%
313	1	58,91	0,02%
321	9	856,31	0,27%
324	221	18560,72	5,88%
333	6	246,68	0,08%
411	8	474,71	0,15%
512	36	2154,42	0,68%
Sum	1845	315779,26	100,00%

Plans for continuation of CLC mapping:

CLC mapping for the whole territory:

- National dialogue with the main stakeholders (potential users and the National Implementation Team) to finalise a project proposal for CLC extension for the entire country area with the support of the European Topic Centre of Urban, Land and Soil Systems (ETC-ULS);



CLC-Change (2000-2018

CLC2018 statistics

European Environment Agency

V Evaluated the status of AQ monitoring and use of data (Country Fact Sheet); v National experts trained on AQ monitoring&reporting **√** RAVEN+ application successfully installed and deployed on the server of the Environment Agency of Moldova; **V** Created the meta-data for Chisinau stations and uploaded to RAVEN (2018)

RAVEN+ activities in progress:

- EEA+NILU+4sfera continues to provide support for the national expert on:
- creating the meta-data for the rest of the stations (cities) and Upload Raven with historical data ;
- making the link between DOS database (existing database) and Raven (script)
- e-report ensure data visualisation on EU AQ Index





Currently, the Environmental Agency with the NIT support is drafting the:

- National Report on the State of Environment 2015-2018 (SoER) (Romanian version), indicatorbased report; using the methodology developed by Slovak Environmental Agency;
- 2. Executive summary in Romanian;
- Country brief covering:
 main themes and sectors addressed in the report
 - key findings and messages of the state of the environment

- main policy responses to key environmental challenges and concerns.

SoER 2015-2018 approved structure:

Introduction

General information about Republic of Moldova Executive summary State of Environment (Air, Water, Biodiversity, Soil and Land) Economic impact on Environment (Transport, Energy)) Waste Management Climate Change Environmental Expenditure Environmental Care

Environmental policy, institutional cooperation

The report is planned to be available in the following formats:

- Digital version (online)/chapters;
- On paper





National impact, future steps and support needed for the SEIS implementation



- Implement the legal obligations, methods, tools, procedures and standards for environmental information /data management responsibilities amongst institutions;
- Develop the Integrated Environmental Information Management System to connect all the existent databases; digitalise databases stored on paper; share information between databases of different institutions; and to collect data electronically/digitally (interoperability standards);
- Further improve the institutional collaboration and share of information through clearly stated legal, organizational and technological measures





Thank you for attention and cooperation!









