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PROMOTION OF THE SHARED ENVIRONMENTAL INFORMATION SYSTEM (SEIS) IN CENTRAL ASIA

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Project background:

The Project «Targeted Awareness Raising for Enhanced European Union - Central Asia Partnership» is being implemented with the financial support of the European Union in the framework of the EU Regional Environmental Program for the countries of Central Asia. Activities within the SEIS framework are co-financed by the Swiss Federal Agency for Environment (FOEN).

This is a two-year Project (2012-2014) and it is being implemented in five CA countries: Kazakhstan, Kyrgyzstan, Uzbekistan, Tajikistan and Turkmenistan. It covers three directions: raising awareness about the use of return water and reverse/recycled water supply as a way to overcome gaps in water supply and management; capacity building and raising awareness about mostly used practices such as Shared Environmental Information System (SEIS) and ensuring private sector involvement by raising awareness for sustainable consumption and production (SCP) and energy efficiency (EE) as possible components of public-private partnership (PPP).

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INTRODUCTION

It is impossible to carry out effective environmental policy allowing management of the environment and addressing existing environmental problems without good quality, reliable and pertinent environmental information. This fact has been acknowledged by the first «Environment for Europe» Ministerial Conference that took place in former Czechoslovakia in1991. In the following years, comprehensive ideas have been formed to what information is necessary for stake-holders, and who environmental information should be addressed to.

Environmental information consists of a set of environmental data, upon which it is possible to assess the status of environment, and use the results of their analysis in planning and application of practices pertaining to ecosystem conservation and environment improvement.

Currently environmental information in many countries is a disconnected system consisting of a set of both statistical data pertaining to the environment, data resulting from environmental monitoring as well as other estimated data, of which different (predominantly 'state') agencies are holders.

The exchange of environmental information between producers and holders, and interested users is frequently difficult. Furthermore, the information is not always presented in an accessible fashion to users at large, thus losing its significance and relevance.

It is necessary that in CA countries environmental information should be developed on a regular basis and that collected data should be accessible to all interested users. Environmental information exchange should be done at least between the holders of this information via created and interacting information systems – shared databases.

One example of such information system is the joint initiative of the European Environmental Agency and European Commission - as well as members states — on the creation of a Shared Environmental Information System (SEIS). The major goal of the SEIS is to simplify and harmonize the system of collection, exchange and use of data necessary for carrying our effective environmental policy.

The SEIS compels participating countries to virtually link available electronic databases related to the environment in order to make environmental information accessible and understandable to politicians and the public at large, as well as simplify information collection and analysis processes.

At present, whilst the initiative has further to develop, projects aimed at promoting SEIS have already commenced not only in the countries of Europe, but in Caucuses, Russia and Central Asia.

WHAT IS SEIS?

The Shared Environmental Information System (SEIS) is a system aimed at upgrading the process of data and information collection, exchange and use necessary for the development and implementation of environmental policies.

The over-arching goal is to maintain and improve the quality and accessibility of information required for the development and implementation of environmental policy and, simultaneously, to minimize administrative costs.

According to the SEIS concept, information and data pertaining to the environment are stored in the electronic databases of participating countries. These databases will be virtually linked with each other, thus ensuring easy access to information and data for decision-makers and the community at large alike.

WHAT ARE THE PRINCIPLES OF SEIS:

The goals set-up by SEIS may be achieved according to seven principles that could be formulated in the following way.

- Principle № 1: Information should be managed as close to its source as possible. Compliance with this principle will make it possible to store more reliable and pertinent information for the region in which the data is collected.
- Principle № 2: Once collected, information should be available for a variety of purposes. This principle is necessary to ensure that the data collected can be used by a wide range of users and can be simultaneously used in the work of a spectrum of interested sectors, organizations and individuals.
- Principle № 3: Information should be easy to locate and should be accessible online. The holders of information predominantly statutory agencies – upload information onto their own websites in such a form that can be understood by, and accessible to a wide range of users.
- Principle № 4: The information should be comparable at respective geographical levels (for example, between regions, countries, cities or watershed basins). Accordingly, countries should develop such data that can be easily comparable. This can be achieved only when data collection is based on a unified methodology and common units of measurement.
- **Principle № 5:** Information should be publicly accessible at the national level in respective national languages.

The information published should be available in the national language (s) and should be accessible to a wide range of people via the internet portals of the information holders. This is especially pertinent in regions with tense environmental situations in which community participation is likely to influence measures towards the improvement of the environment.

Principle № 6: Information should be readily accessible to state agencies and allow them timely assessment of the environmental status and effectiveness of decisions taken.

This principle aims to improve the system of mutual data exchange, as well as promote access to data through open, web-based information platforms by information holders. This should considerably reduce the time for information request and retrieval between government agencies and will, furthermore, make it possible to better respond to environmental changes within a shorter timeframe.

Principle № 7: Information management, and its accessibility, should be maintained based on generally accepted standards of free-, open- source software.

Databases containing environmental information should be developed in such a way that they may be easily integrated into existing informational systems. This will facilitate the process of information exchange not only at the national, but also at the regional and international levels.

The above principles are based on research and the long-term experience of a number of countries whose overall goal was to develop and ensure effective approaches to environmental information management. These principles are designed to drive practical approaches towards the use of existing data given the fact that, until now, collected information is often neither accessible-to nor usable-by end users, due to a range of bureaucratic, legal, technical and procedural barriers that hinder access-to and use-of environmental information.

GUIDELINES ON SEIS IMPLEMENTATION

It is assumed that the introduction of SEIS-oriented projects in the countries of Europe, Caucasus and Central Asia will be accompanied by an assessment of the status of the main aspects of SEIS, such as cooperation, infrastructure and content. At the initial stages of SEIS implementation, it is necessary to clearly understand the current status of generation and dissemination of environmental information in participating countries, by the different national stakeholders of the project.

The initiators of SEIS have devised a so-called "cookbook" to ensure successful implementation of SEIS. The "cookbook" sets major principles for the implementation of the system. The following website provides an opportunity to learn more about it: http://www.seiscookbook.net

Thus, three key components that facilitate the development of SEIS appear to be of crucial importance:



Content – information on air, water, biodiversity, forests, waste, transport, energy and other environmental topics available in countries and organizations at different levels are of potential use for both policy–making and awareness-raising.

This aspect implies a thorough review of existing environmental indicators in each country, covering a wide spectrum of data and assessment of developed reports for Multilateral Environmental Agreements (MEAs), as well as an analysis of the availability and accessibility of the information online.

2. Infrastructure and services – infrastructure and services, facilitate the sharing of, and access to, data and information (software, standards, protocols and data exchange).



This aspect covers assessment of the level of infrastructure development with regard to environmental information (databases, monitoring system, national information data systems). Following such an assessment, development of the most appropriate ways to integrate available databases pertaining to environmental information into SEIS will become feasible.

3. Network (cooperation) – data and information holders at local, national or international levels potentially involved in access to and sharing of environmental information.



This aspect stipulates assessment of the state of international links between government and other organizations that carry-out collection, processing, storage and publication of environmental information, setting up links and development of ways that allow ensuring access and environmental information sharing between information holders. Apart from that, it is necessary to identify existing barriers and challenges in the area of information exchange and identify the legislative foundation supporting the information collection, processing and storage system. Thus, careful elaboration of all three aspects, when promoting SEIS-oriented projects in participating countries, will contribute to its successful implementation and integration.



SEIS PROMOTION IN CA: CHALLENGES AND PERSPECTIVES

Within the framework of the regional environmental program of the European Union for the countries of Central Asia (EURECA), CAREC has been chosen to implement the component «Targeted Awareness Raising for Enhanced European Union - Central Asia Partnership», which implies holding an information campaign, together with the European Environmental Agency (EEA), in order to promote SEIS in Central Asia.

The «Bilateral support to Central Asian countries in SEIS oriented improvement of the environmental governance» project was launched within the framework of the aforementioned component, the principal objective of which is to improve accessibility of environmental information in CA through SEIS.

The project promotes SEIS at the national and regional levels, with the use of a wide spectrum of approaches in the area of cooperation, networking, monitoring, data management, assessment and reporting based on environmental indicators.

The project beneficiaries are decision-makers responsible for environmental policy, public officials, NGO representatives, as well as researchers, leading experts and practitioners in Eastern European, Caucasus and Central Asian countries.

Beginning in May 2012, five national workshops have been held in countries of Central Asia within the framework of the «Targeted Awareness Raising for Enhanced European Union - Central Asia Partnership» project.

Information, accumulated experience and lessons learnt pertaining to SEIS implementation in the countries of Eastern Europe and Caucasus, Green Growth indicators and an overview of statistical data concerning the environmental status in these countries was presented at the workshops. In addition, issues discussions were held concerning the preparation of National Reports for MEAs, in which each CA countries presented comparative comments pertaining to situation in their own countries.

These workshops contributed to the exchange of experience between countries with regard to the generation of environmental information, and also helped identify directions for further improvement and development of processes for environmental data collection, analysis, use and publication.

Representatives of government agencies in charge of environment management and protection, as well as other stakeholders - representatives of NGOs, international organizations, media and experts from CA countries - were participating in the workshops. The following current problems, gaps and needs relating to the environmental information systems have been discussed in light of the different situations in each of the Central Asian countries.

In general, what characterizes all countries of the CA region is decentralized data collection with different information holders and sources; shortage of resources – both human and financial – to develop new environmental indicators to fill gaps in the sets of environmental indicators; problems with information storage, processing, analysis, use and the poor accessibility of information to a broad range of users.

In all countries, a number of government agencies, including statistics agencies, participate in data collection, maintain databases, and play a significant role in the provision of comprehensive environmental data. Given that several agencies deal with environmental data collection and storage, users spend a lot of time locating the right sources of information

for their intended purposes. In most countries information is only provided based on written requests to state agencies possessing the information.

These circumstances hinder the process of information collection, which is necessary to develop national reports for the secretariats of international conventions to which Central Asian countries are parties.

National workshops held in five countries (Kazakhstan, Kyrgyzstan, Turkmenistan, Uzbekistan and Tajikistan) revealed the strengths and weaknesses of environmental data collection and accumulation, and became a platform for the discussion of required actions for SEIS implementation at the national and, subsequently, regional levels.

Participants in the workshops have developed recommendations for further steps in each country, depending upon the country's level of development in the sphere of environmental information system.

EXAMPLE OF THE PROJECT EINP-SEIS IMPLEMENTATION

One of the successful projects was the European Neighborhood and Partnership Instrument project on SEIS creation – «Towards Shared Environmental Information System (SEIS) in the Region of European Neighborhood» (hereinafter -EINP – SEIS).

The principal goal of the Project was to promote environmental protection in participating EU neighbourhood states within the framework of the «European Neighborhood and Partnership Instrument» programme.

Key objectives of the project include: capacity building of environmental and statistics agencies of EU neighbourhood states; development of mutually beneficial cooperation and informational data exchange between states; development of data, information flow and indicators adequate for environmental policy development; rendering assistance in creation and enforcement of national and regional systems of environmental information that meet SEIS principles.

During the course of the EINP – SEIS project implementation, two National Focal Points were identified in each of the sixteen partner-countries. Bilateral and multilateral meetings have been held between EAOC representatives and state agencies and organizations of the participating countries, in order to discuss problems and prospects of cooperation on SEIS implementation.

The outcomes of the activities were reports uploaded onto the EINP website of the participant countries – the Project participants highlighted the state of interagency cooperation, current infrastructure for collection and presentation of environmental information, data availability and quality and further steps to implement the system in the region.

Reports of the participating countries are available on the EINP website:

http://enpi-seis.ew.eea.europa.eu/project-activities/country-report/country-report

REPUBLIC OF KAZAKHSTAN

To promote the SEIS Project in Kazakhstan a working group was established consisting of specialists and experts from different state agencies responsible for environment matters.

In general, the hydrometeorological monitoring network, as well as data collection and analysis systems for different statistic environmental data, are relatively well developed. Preparation of the National Report on state of the environment is done on a regular basis. A great deal of attention is directed to issues concerning compliance with obligations established in the framework of multilateral environment agreements (hereinafter – MEAs). National reports and information bulletins are also issued.



Photo: National Workshop, October 25, 2012, Astana city, Republic of Kazakhstan

A National Workshop, «Targeted Awareness Raising for Enhanced European Union - Central Asia Partnership», was held on October 25, 2012 in Astana city. The participants were been familiarized with the SEIS, the possibilities for its implementation in Kazakhstan, as well as with the guidelines and experiences of developing SEIS-oriented projects in other countries of Pan-European region. Participants in the workshop discussed current problems and perspectives of a system of environmental information collection and dissemination.

In the course of the workshop, participants have been given recommendations on the need to study the experience of Kazakhstan with regard to development of the National State of Environment Reports (NSoER); environmental statistics; and the application of indicators and environmental monitoring, including collection, processing and provision of environmental information. Apart from that, it was proposed to consider the possibility of Kazakhstan joining the "Eye on Earth" programme, to consider the possibility of performing assessments with regard to biodiversity, climate change, wastes and air, at the initiative of UNECE and CAREC in CA countries. The need, in SEIS-related publications, for a clear explanation of the goal, objective and methodology for implementing SEIS has been identified.

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REPUBLIC OF KYRGYZSTAN

An interagency working group on SEIS promotion has been set up, and a number of meetings have been held. Principle directions for further activities to promote SEIS have been developed. Specifically, the decision was made to give special attention to the improvement of water and waste-related statistics in the country.

The country meets the majority of its obligations on the implementation of multilateral environmental agreements (MEA) and regularly develops national reports. Preparation and publication of the National Report on environment status in the Republic of Kyrgyzstan is based on thirty-six environmental indicators recommended by UNECE for the EECCA countries.

Work for assessing the need for, and possibility of, water statistics improvement has been accomplished within the implementation of the «Bilateral support to Central Asian countries in SEIS oriented improvement of the environmental governance» project.



Picture: National Workshop, May 21, 2012, Bishkek city, Kyrgyz Republic

On May 21, 2012 a National Workshop was held in Bishkek, which was dedicated to awareness-raising of to SEIS within the framework of the Project «Targeted Awareness Raising for Enhanced European Union - Central Asia Partnership».

During the first Session of the National Workshop, issues were discussed related to SEIS implementation in the Pan-European region, along with the goals and objectives of the promotion of SEIS in countries of Eastern Europe and the Caucasus.

The second session of the National Workshop was dedicated to raising awareness of the need for implementing SEIS in Kyrgyzstan. Participants discussed problems and major lessons learnt from the development of the National Report on the environmental status, the status of statistical data on air and water resources, as well as the volume and quality of data and their accessibility.

During the third session comments were collected from representatives of the expert communities of Tajikistan and Kazakhstan. In particular the situations in CA and Kyrgyzstan were compared, and it was recommended that participants should exchange experiences and draw-upon, in the Republic of Kyrgyzstan, the best practices available in other CA countries.

Participants in the workshop, including the Interagency Working Group set up within the framework of the project, were recommended to continue generating ideas for projects that would further improve the environmental information system, as well as consider the possibility of developing guidelines that would help to promote the identification and effective use of environmental indicators specific to CA countries. Such refinements include the definition of indicators, units of measurement, basic legislative acts, methods of data collection, calculation procedures, and reporting methodology etc. These activities should be discussed by the Interagency Working Group for further EU support on capacity building (seminars, training workshops).

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REPUBLIC OF UZBEKISTAN

An environmental monitoring system is well established in Uzbekistan, and is regulated by the «Provision on State Environment Monitoring in the Republic of Uzbekistan», endorsed by the Resolution of the Cabinet of Ministers RUz of April 3, 2002.

The given provision regulates interaction between the state agencies whereby all the information collected should be integrated into the database of the Data Analytical Center (DAC) of Industrial Ecological Monitoring System, set up under the National Committee of Environmental Protection. In the country there are some projects being implemented by UNDP to enhance and improve the collection of environmental information. The outcome of one of these projects is the formation of an Environmental Indicators Database (EIDB).

Though Uzbekistan is not a party of Aarhus Convention on the access to environmental information and public participation in environmental decision-making, the Republic develops regular National State of Environment Reports, financed by the Conservation Foundation of Uzbekistan.

The EIDB, in addition to the well-developed monitoring network, represents a robust basis the implementation for SEIS implementation in Uzbekistan: i.e. in the country pre-existing information monitoring systems as well as the EIDB can be successfully harmonized with SEIS.



Picture: National workshop, September 17, 2012, Tashkent city, Republic of Uzbekistan

A national workshop took place on September 17,2012 in Tashkent city with the aim to implement SEIS-oriented projects within the framework of the «Targeted Awareness Raising for Enhanced European Union - Central Asia Partnership» project. The participants in the workshop were familiarized with the results of SEIS promotion in Europe, Caucasus and Russia. The current status of the collection, generation and preparation of environmental information was discussed during the workshop, alongside requirements and possibilities for the implementation SEIS in the country.

The following key recommendations emerged from the workshop:

- People in charge of the NSoER should consider the possibility of uploading NSoER's onto the website of the State Committee of Environmental Protection of the Republic of Uzbekistan (Goskompriroda) in a readable format.
- Analyse problems related to data-collection and processing, when developing NSoER's and other environmental reports, should be performed.
- Establish an inter-agency SEIS Task Force at the national level based on the existing regulations.
- Carry out an additional review of compliance of the national statistics with the environmental indicators towards their improvement and bringing them in line with the international practices of statistics on EP and natural resources, including development of Guidelines, instructions and manuals.
- Build capacity of specialists that provide data on environmental indicators, as well as of specialists from statistics bodies and GosKomPriroda.
- If possible, recommend the EC to link issues of biodiversity, forestry and environment monitoring in individual pilot territories, within the framework of FLERMONECA project.

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• Organize measures to raise awareness of SEIS in different sectors of civil society, including the media.

REPUBLIC OF TAJIKISTAN

In Tajikistan an environmental quality monitoring system has been devised, and State Authority on Hydrometeorology has been made responsible to undertake this monitoring. Nevertheless, the existing monitoring network needs updating, obsolete equipment needs to be replaced or repaired and qualified personnel need to be recruited.

As in other CA countries, different agencies and bodies not only collect different environmental information, but also perform regulatory, control and other functions in the area of protection of air, water, forest and land resources. The role of the Statistics Agency in the collection of information pertaining to air pollution and environmental investments indicators, under the President of the Republic of Tajikistan, is of considerable importance.

In general, expert reports suggest that difficulties of environmental information collection, processing and storage can be overcome through the development of regulatory-legal statute dealing with environmental protection issues. Steps are currently being made to develop NSoER in Tajikistan.



Picture: National workshop, October 11, 2012, Dushanbe city, Republic of Tajikistan

A National workshop, within the framework of the project «Targeted Awareness Raising for Enhanced European Union - Central Asia Partnership», took place on October 11 (2012) in Dushanbe. Based on the outcomes of this workshop, recommendations on analysis of the legislative and regulatory base necessary to prepare NSoER in Tajikistan have been developed. In addition, it was recommended that Guidelines, based on UNECE Guidelines for the development of national Environment Status reports, should be developed to aid preparation of the NSoER, taking into account the UN Environmental Performance Review recommended to enhance interagency cooperation whilst developing, such as through setting up an interagency taskforce under the Committee on Environmental Protection to improve the system of preparation and submission of environmental information, as well as the use of the Interagency Commission for Environmental Information, that functions within the structure of the Statistics Agency under the President of RT.



REPUBLIC OF TURKMENISTAN

In Turkmenistan, several state agencies are responsible for environmental data collection, formation and preparation. The country is also a party to a number of MEAs and develops national reports and bulletins as and where the respective MEA frameworks request them.

The Ministry of Environmental Protection of Turkmenistan deals with environmental protection issues, controls the implementation of environmental policy, carries out a wide scale awareness raising and develops environmental indicators to be integrated into the system of national statistics.

Some data are covered within the frameworks of several international projects. For example, information pertaining to certain aspects of, and data concerning, environmental issues in the Caspian Sea region, including the data from Turkmenistan, has been made available within the framework of the Caspian Environmental Programme and can be found on the programme's website.



Picture: National workshop, March 5, 2013, Ashgabat, Turkmenistan

The last of the five National workshops within the framework of the «Targeted Awareness Raising for Enhanced European Union - Central Asia Partnership» project took place on March 5 (2013) in Ashgabat. Its participants were familiarized with the experiences and lessons of SEIS promotion in the countries of Eastern Europe and the Caucasus, as well as with an overview of the major conclusions and recommendations of the Environment for Europe Assessment of Assessment (EE-AoA) made in Astana (2011) for the CA countries including Turkmenistan. Apart from this, the workshop discussed the challenges and needs of the country relating to the improvement of the system of environmental data and information collection, analysis and use.

Based on the outcomes of the workshop, it was recommended that an overview of the national environmental monitoring system should be performed in order to identify gaps and inconsistencies. Based on the overview, a strategy, including an action plan should be developed for further modernization of monitoring networks in compliance with international standards and best practices. It was also recommended to develop a system for the preparation of national environment status reports, based on indicators and Guidelines approved at the international level.



FURTHER STEPS TO PROMOTE SEIS IN CA

Conclusions and recommendations of the national workshops in CA countries are considered as a platform for partnership enhancement between EU and CA countries on SEIS promotion.

Based on the recommendations presented to each of the participating countries, it is possible to devise an action plan and mechanisms, together with the stakeholders, that will help to improve environmental monitoring, the collection of data using statistical reporting forms and electronic database creation, which together will contribute to effective SEIS implementation.

Based on the recommendations to each of the countries under discussion, it is possible to carry out activities aimed at assisting the countries to improve their environmental information collection systems. Such assistance can be provided, first of all, in the area of revision and development of indicators for water resources, wastes, biodiversity and climate change.

It is also possible to provide consultations on development of a unified database of environmental indicators in participating countries and render assistance in preparation of National State of Environment Reports.

Implementation of the recommended activities in CA countries, within the framework of the promotion of SEIS-oriented projects, may, in the first place, help to establish regular reporting system under MEAs, to establish a unified environmental monitoring system and to ensure access to recent, reliable and qualitative environmental information by the public. These activities will further develop and improve the system of information collection, processing and exchange between information holders and users.

We envisage that should the Shared Environmental Information System (SEIS) be implemented, as is evident from Figure 1.1, key state agencies — the producers and holders of information — will be able to integrate available informational databases into a unified SEIS database, accessible to both users and information holders.



Figure 1.1The scheme of proposed Shared Environmental Information System in CA countries

ADVANTAGES OF THE GIVEN SYSTEM IMPLEMENTATION

Firstly, the process of locating and exchanging information search and exchange between information holders themselves will be simplified, since they will be ensured access to the different available data in other agencies. This will facilitate timely environment assessment and will allow environmental pollution to be effectively responded-to and addressed. The process of development of national reports for MEAs will improve considerably given that the time to locate and request information will become shorter and all the necessary information will be concentrated in one place. National Reports concerning the given conventions will be developed and provided to Secretariats in a time-efficient manner, and the information contained within them will be both pertinent and reliable.

Secondly, ensuring ease of user-access to information will minimize the time state agencies spend on search, formation and processing responses to user requests, given that the vast majority of information will be accessible via the Network. Commitments made by the countries with regard to Aarhus Convention, pertaining to the implementation of the right of each national of the country to access information, including information on environmental protection issues will be respected.

Issues regarding the level of access granted to users and state authorities to different types of environmental information may be regulated by the legislation and policy of respective CA countries.

Thirdly, the given system will allow timely and effective performance of environmental policies, will drive measures aimed at improving the environment, and eliminate barriers in the sphere of information exchange between different agencies and users.

In the long-term, the Shared Environmental Information System in individual countries may be integrated into similar systems of the countries of pan-European region. This could be achieved by adopting the technological capacity of developed European countries. In future, establishing an integrated SEIS will facilitate the rapid exchange of information, eliminate barriers between countries, as well as address complex issues in the sphere of conservation of boarder natural ecosystems alongside regulating transboundary environmental problems.

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