TOWARDS A SHARED ENVIRONMENTAL INFORMATION SYSTEM IN THE EUROPEAN NEIGHBORHOOD

ENPI-SEIS implementation of priority data flows

GEORGIA COUNTRY REPORT

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List of Acronyms

BOD	Biological Oxygen Demand
CBD	Convention of Biological Diversity
CDM	Clean Development Mechanisms
COP	Conference of the Parties
CSI	Core Set of Indicators
DB	Data Base
DHI	Danish Hydraulic Institute
DNA	Designated National Authorities
EBRD	European Bank for Reconstruction and Development
EC	European Commission
EEA	European Environment Agency
EECCA	Eastern Europe, Caucasus and Central Asia
ENPI	European Neighborhood and Partnership Instrument
EU	European Union
GEOSTAT	Georgian Statistics Service
GHG	Greenhouse Gases
GIS	Geographic Information System
IPCC	Inter-governmental Panel for Climate Change
ISO	International Organization for Standardization
JTF	Joint Task Force
LEPL	Legal Entity of Public Law
LRTAP	Long-Range Transboundary Air Pollution
MAC	Maximum Allowable Concentrations
MEA	Multi-lateral Environmental Agreements
MoE	Ministry of Energy and Natural Resources
MoENRP	Ministry of Environment Protection
NEAP	National Environmental Action Plan
NFP	National Focal Points
OECD	Organization for Economic Cooperation and Development
POP	Persistent Organic Pollutant
SEIS	Shared Environmental Information System
SOE	State of the Environment
UNDP	United Nations Development Programme
UNECE	United Nations Economic Commission for Europe

UNEP	United Nations Environmental Programme
UNFCCC	United Nations Framework Convention on Climate Change
USAID	United State Agency for International Development
WHO	World Health Organization

Introduction

The Country Background Report was prepared for the European Environment Agency (EEA) by Zoi Environment Network, with inputs from Shared Environmental Information System (SEIS) focal points and based on the interviews of data owners' institutions in Georgia.

The purpose of this document is to support the implementation of SEIS within the country and support the practical sharing of data/information on the agreed environmental indicators, in line with the country's international reporting obligations. The approach is to focus on organizational, administrative and technical aspects to allow open access and sharing of common national datasets underpinning a selected set of environmental indicators for our priority areas of air, climate, water, waste and biodiversity.

The report has been prepared to assess the current state of environmental data and selected environmental indicators/datasets to advance the implementation of SEIS project in Georgia. Thus, this Country Report describes the priority datasets for the thematic areas: air, climate, water, waste and biodiversity, assesses current state of national environmental data flow in consideration of their compatibility to SEIS structure, and identification of actions need to improve and advance situation for taking SEIS implementation forward.

The SEIS project aims to promote the protection of the environment in the countries of the European Neighbourhood and Partnership Instrument (ENPI) area by extending the principles of the Shared Environmental Information System (SEIS) to the Neighbourhood area, and developing the capacities of the relevant authorities responsible for environmental data management and reporting. The SEIS is an EU initiative to modernise and simplify the collection, exchange and use of the data and information required for designing and implementing environmental policy.

In 2010, the ENPI-SEIS project set out to assist countries in the European neighbourhood to improve and better manage their environmental monitoring, data collection and reporting, and to gradually extend the use of SEIS principles. The SEIS principles establish that 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 of the environment at the appropriate geographical scale;
- fully available to the general public, and at the national level in the relevant national language(s)
- supported through common, free open software standards.

Participation in the ENPI SEIS project provides Georgia the opportunity to acquire valuable EU experience and to improve its environmental performance. The project works with the national environmental and statistical organizations - Ministry of Environment and Nature Resources Protection of Georgia, National Environmental Agency and National Statistics Office "GeoStat" - responsible in the field of environmental information within the ENPI area for collecting, producing, storing and disseminating environmental data and information. The project helps to develop the capacities of the relevant authorities in the areas of cooperation, networking, monitoring, data management, assessment and indicator based reporting on the environment.

Georgia generate the environmental data by monitoring, collecting and reporting as for domestic purposes as for participation in international conventions and processes that have their own specific requirements. The application of the SIES principles has proven to be an effective solution to what can appear to be an ever-growing and changing reporting burden. Strong core-set indicators can be used for multiple purposes.

1. Priority data sets and thematic areas

In order to carry out effective environmental activities it is important to have objective and up-to-date analytical information. This information should be available both for governmental authorities and for public at large. The state of environment reports are key information products in many UNECE countries. Indicators are important tools for state-of-the-environment reports. Moreover, they can be tied to policy goals, and thus provide a mechanism for tracking and evaluating policy implementation.

A formalized or adopted list of environmental indicators does not exist in Georgia. The Ministry of Environment and Natural Resources Protection and the National Statistics Office of Georgia "GeoStat" regularly participate in UNECE's Inter-sectoral Joint Task Force on Environmental Indicators. The UNECE Joint Task Force has developed a specifically designed core set of indicators and guidelines to apply in the Eastern Europe, Caucasus and Central Asia (EECCA). However Georgia made very limited progress on development of its own indicators, or applying these guidelines in everyday life.

Following the decision taken at the 6th session of the Joint Task Force on Environmental Indicators, the Joint Task Force is currently working on the revised version of the Guidelines for the Application of Environmental Indicators in Eastern Europe, Caucasus, Central Asia and South-Eastern Europe (Indicator Guidelines). 11 datasets under ENPI SEIS are available in the UNECE guidelines, which characterize the core content of the SEIS initial implementation in practice at present phase. Details for each of the 11 datasets are available in the UNECE guidelines (http://www.unece.org/env/europe/monitoring/iandr_en.html)

SEIS is focused on the path towards a modernisation and simplification of the collection, exchange and use of data and information required to underpin Community environmental policy, by shifting from traditional reporting towards information systems based on access, sharing and interoperability. Amongst the measures to be undertaken to reach such objectives, the communication explicitly mentions the intention to give priority to the implementation of INSPIRE. It is equally important to take into account the INSPIRE directive for which it is mutually understood that cross-links are essential.

10 thematic data centres are being developed and deployed involving EEA, Eurostat and the JRC, which are considered part of the European input into the SEIS architecture. Given the thematic diversity, and the fundamental differences and approaches that have been applied so far for each of the themes, for fully justified reasons, it has been acknowledged in an early phase that the geospatial dimension of the environmental data should become an important integrating factor to make SEIS fully operational and interoperable. Whereas compliance with the INSPIRE specifications framework is essential to reach that objective, it is equally important to include the GMES data and information services as complementary sources for coherent geospatial information at pan-EU level.

Countries report some of the datasets to internal purposes and to international conventions or regional processes. Some indicators, the data generated from monitoring survey and other, the data are derived from statistics. In Georgia, environmental agencies and/or national statistical office collect data on emissions into the air from stationary sources using standardized reporting form. Data on emissions from mobile sources are frequently calculated on the basis of fuel consumption by vehicle fleets. By reason of the absence of the scaleable and detailed level of statistical data, the only simple, most basic level of methodological complexity tier 1 can be used to calculate the aggregated data.

To improve the collection and exchange of environmental information, SEIS intends to assist the providers of public information to simplify and modernize their existing systems and processes. This effort entails the development of web-enabled technical infrastructure that can take advantage of leading information and communication technology to allow machines to communicate without labour-intense human input. Such infrastructure improves information exchange and reduces costs.

The effectiveness of SEIS also depends on cooperation and coordination. Data collected for one purpose often serves other purposes as well. When countries meet the reporting requirements under international

agreements, they are putting their data to a single purpose. They may not even be aware of other potential users, who may not be aware of the available data. As the home for SEIS in Europe, the European Environment Agency (EEA) is working towards more effective coordination of information by receiving all the data reports – or links to the reports – that countries submit.

Ambient Air Quality and Climate Change

Neither air quality data is referred to in a single register, nor a single air quality indicators database is available: **Emissions of sulphur dioxide (SO_2), Emissions of nitrogen oxides (NO_x), Mean concentration of nitrogen dioxide in urban air (NO_2)**. National Environmental Agency is liable for the monitoring data. The Agency monitors only mean concentration of nitrogen dioxide in urban air (NO_2) from the three indicators listed above. And the database of Air Protection Service of the Ministry of Environment and Natural Resources Protection covers the following the aforesaid three indicators: sulphur dioxide (SO_2) and nitrogen oxides (NO_x). The Ministry obtains such data from the activity of entities once a year. The Ministry furnishes the National Statistics Office with air pollution information and publishes an annual statistical digest "Georgian Natural Resources and Environmental Protection".

Air Protection Service of the Ministry of Environmental Protection receives data from stationary sources in hard copies approved by a normative act of Air Protection Service. The obtained findings are put into the database presented in Excel files and cover data from 2004 till today. LRTAP data is presented in the form approved by them which is also in Excel and if it fits EEA, then we can start the data exchange.

Collection, maintenance and analysis of environmental pollution monitoring data, as well as its further processing as environmental datasets (or DBMS - database management system) is carried out by the **National Environmental Agency– NEA** (www.nea.gov.ge, www.meteo.gov.ge), a legal entity of public law (LEPL) operating under the Ministry of Environment Protection. NEA is the only institution in Georgia having legal mandate to carry out regular observation on hydro-meteorological processes, chemical and biological monitoring of marine, surface and ground waters, atmospheric air, as well as soil contamination, geological hazards, etc. The NEA's Pollution Monitoring Department and its subsequent laboratories are responsible for monitoring ambient air quality. Currently ambient air quality monitoring is conducted at eight stations located in five cities: Tbilisi, Kutaisi, Batumi, Zestaponi and Rustavi. Four stations are located in Tbilisi, but not all operate 25 with a full capacity and only limited parameters are being measured. Air samples at the observation points are taken three times a day on weekdays only (sampling is not automated). Concentration of the pollutants is compared to the national standards, or Maximum Allowed Concentrations (MAC) of harmful substances in ambient air determined by the Ministry of Labour, Health and Social Protection of Georgia in 2003. However, this document does not differ too much from the old Soviet norms for protecting ambient air quality. Therefore one of the priorities of the Ministry is to establish modern standards that will correspond to the EU norms and WHO recommendations. NEA is responsible to collect the Mean concentration of Nitrogen dioxide in urban air (NO_2).

Data on monitoring of ambient air quality that is being collected by the National Environmental Agency (NEA) in five Georgian cities at eight measurement locations is recorded in an electronic database. However, the raw data is not available for download from the NEA website however is accessible for the general public of free of charge. NEA produces annually air emission bulletins that are accessible online in Georgian language on the address: http://meteo.gov.ge/index.php?l=2&pg=rd&ct=1&cm=. In addition NEA produces monthly bulletins „Short Overview of Environmental Pollution in Georgia", where one chapter is dedicated to situation with air pollution. Some information was open for public use as analytical bulletins through the web site of the former Aarhus Centre of Georgia (http://www.aarhus.ge), currently from May 2013- Center for Environmental Information and Education.

With the help of Government of Netherlands, NEA gains sustainable and practical experience of modern EU-compatible urban air quality monitoring in combination with the application of a suitable air quality model. The project therefore was included the full chain of monitoring urban air quality, that is: measuring

air quality data at a reference station; applying the air quality model; transferring, storing, analyzing and disseminating the acquired data; building public awareness; and yielding policy recommendations directed towards the improvement of urban air quality as well as the future expansion of the air quality monitoring network in Georgia. NEA have the modern automated Air monitoring station installed in Tbilisi. However, the data from the new automate station are not available in the web.

In addition to mentioned monitoring points, the first semi-automated transboundary EMEP monitoring station has been installed in Abastumani with the help of Government of Norway. This station is aimed to support monitoring and evaluation of the Long-range Transmission of Air Pollutants in Europe under the Convention on Long-range Transboundary Air Pollution and in the pollution-free conditions measure stations and anions in precipitation, PM10 in the air and tropospheric (ground-level) ozone. Data from this station are not included in the database and is not available via the Internet.

In addition MoENRP publishes annual Air Quality bulletins that also include descriptions on causes and mobile and point sources of air pollution in Georgian language on the address: http://moe.gov.ge/index.php?lang_id=GEO&sec_id=50. Observations of air pollution are carried out on the basis of " A Guide to Air Pollution Control " - RD 5204 186-89. The main problem is insufficient quantity of air pollution control posts, as well as the lack of an automatic station. The data on ambient air pollution quality is obtained based on the results of air pollution control stations belonging to the National Environment Agency of the Ministry of Environment Protection of Georgia. Data on ambient air quality in urban areas is published monthly as an information bulletins and is available online through a website http://www.moe.gov.ge. Ministry of Environment and Natural Resources Protection of Georgia (MoENR) circulates annually statistical forms on air pollution and emission of greenhouse gases (GHG) among large industrial enterprises that they have to fill in and report back to the MoENR.

1.1. Emissions of sulphur dioxide (SO_2)

i.

Reporting levels	Reporting obligations
National	National environmental statistics, national SoE
International	1. CLRTAP

ii.

Dataset owners and providers at domestic and international level	Responsible institutions / units
National statistics agency: data provider at domestic level National Statistics Office of Georgia	Division of Agricultural and Environmental Statistics, address: 30, Tsotne Dadiani Ave, 0180. Tbilisi, email: vtsakadze@geostat.ge, Mr. Vasil Tsakadze, head of Division
Ministry of environment: data owner and provider at domestic and international level	Air Protection Service, 6 Gulua str., 0114 Tbilisi, air@moe.gov.ge, Ms. Ketevan Kordzakhia

iii.

Dataset formats (or shape in general) and language	Accessibility and sharing rights
National and user-specific reporting formats: 1. xls tables (GEO) 2. annual statistical compendiums: PDF, paper (GEO) 3. annual SoE report air chapter: PDF, paper (GEO/ENG)	National and user-specific reporting: 1. MoU-based access / no sharing with third parties 2. open access 3. open access
International reporting formats: 1. CLRTAP	International reporting: 1. UNECE LRTAP Secretariat portal and publications / data sharing rules of the Secretariat apply http://webdab1.umweltbundesamt.at/download/submissions2013/FR_NFR2013.zip?cgiproxy_skip=1

iv.

Temporal aggregation levels and comment	Geographic aggregation levels and comment
1. annual only / being shared internationally	1. Country-wide / being shared internationally 2. City and regions-specific (8 cities and 12 regions) / could easily be shared internationally

Conclusion: Emissions of sulphur dioxide (SO_2) can be shared internationally with EEA in the same format as reported to LRTAP Convention.

Example of air quality dataset (different from air emissions dataset) - for point iv:

Temporal aggregation levels and comment	Geographic aggregation levels and comment
1. Annual air quality data / data easily available and can be shared 2. Monthly air quality data / data is collected for domestic use only and published locally only 3. Daily air quality data / data is collected for domestic use only	1. 4 cities. Data for cities can be shared 2. 4 cities. Data for cities potentially can be shared (National Environmental Agency)

1.2. Emissions of nitrogen oxides (NO_x)

i.

Reporting levels	Reporting obligations
National	National environmental statistics, national SoE
International	1. CLRTAP

ii.

Dataset owners and providers at domestic and international level	Responsible institutions / units
National statistics agency: data provider at domestic level National Statistics Office of Georgia	Division of Agricultural and Environmental Statistics, address: 30, Tsotne Dadiani Ave, 0180. Tbilisi, email: vtsakadze@geostat.ge, Mr. Vasil Tsakadze, head of Division
Ministry of environment: data owner and provider at domestic and international level	Air Protection Service, 6 Gulua str., 0114 Tbilisi, air@moe.gov.ge, Ms. Ketevan Kordzakhia

iii.

Dataset formats (or shape in general) and language	Accessibility and sharing rights
National and user-specific reporting formats: 1. xls tables (GEO) 2. annual statistical compendiums: PDF, paper (GEO) 3. annual SoE report air chapter: PDF, paper (GEO/ENG)	National and user-specific reporting: 1. MoU-based access / no sharing with third parties 2. open access 3. open access
International reporting formats: 1. CLRTAP	International reporting: 1. UNECE LRTAP Secretariat portal and publications / data sharing rules of the Secretariat apply http://webdab1.umweltbundesamt.at/download/submissions2013/FR_NFR2013.zip?cgiproxy_skip=1

iv.

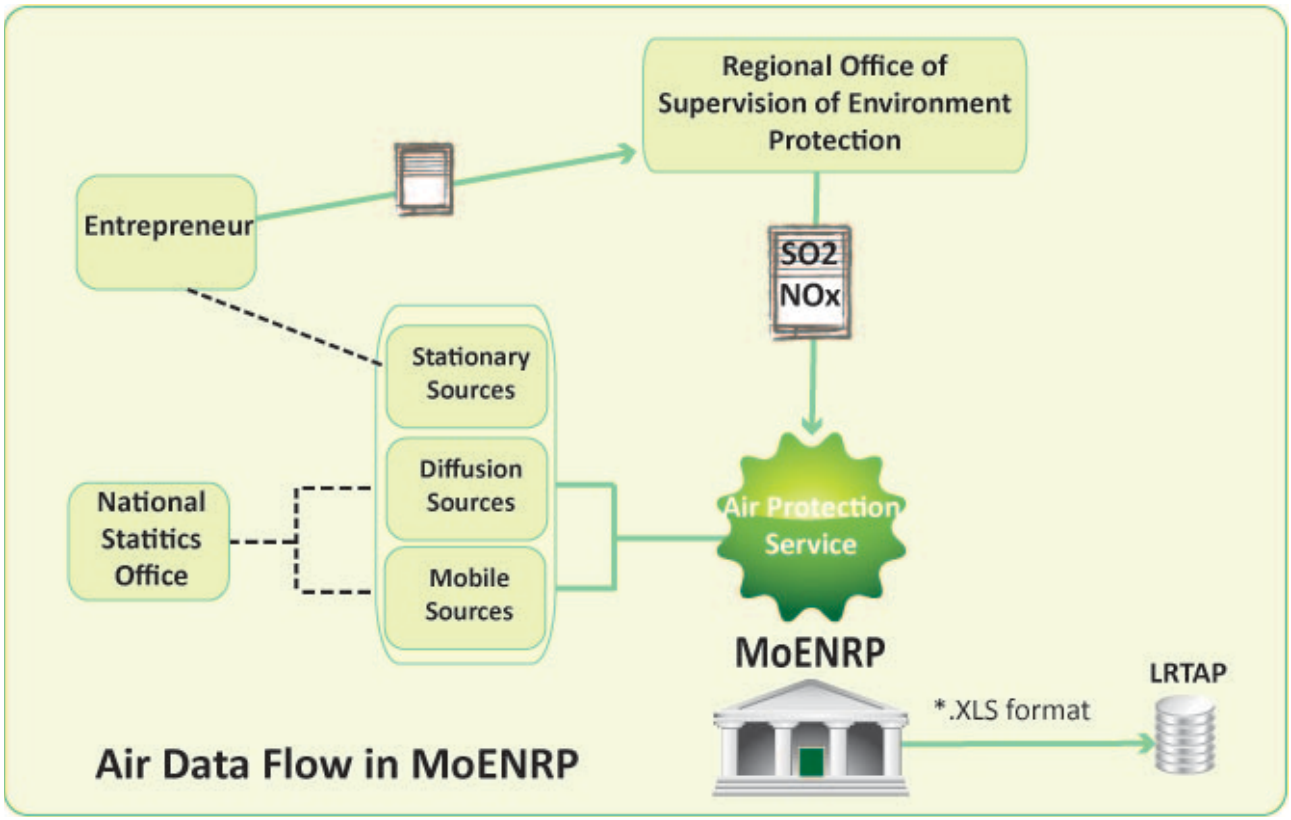
Temporal aggregation levels and comment	Geographic aggregation levels and comment
1. annual only / being shared internationally	1. Country-wide / being shared internationally 2. City and regions-specific (8 cities and 12 regions) / could easily be shared internationally

Conclusion: Dataset on Emissions of nitrogen oxides (NOx) can be shared internationally with EEA in the same format as reported to LRTAP Convention.

Example of air quality dataset (different from air emissions dataset) - for point iv:

Temporal aggregation levels and comment	Geographic aggregation levels and comment
4. Annual air quality data / data easily available and can be shared 5. Monthly air quality data / data is collected for domestic use only and published locally only 6. Daily air quality data / data is collected for domestic use only	1. 5 cities. Data for cities can be shared 2. 5 cities. Data for cities potentially can be shared (National Environmental Agency)

v. **Schematic illustration of dataset flow chain inside the country and to the international level**



Synopsis:

In the EECCA countries, national statistical and/or environmental agencies collect data on missions into the air from stationary sources using standardized reporting form. Data on emissions from mobile sources are frequently calculated on the basis of fuel consumption by vehicle fleets. Aggregated data are published in annual national environmental and statistical reports and on websites. Parties to CLRTAP report emission data for the main air pollutants, metals and POPs and (if available) emission projections. Reported data may be accompanied by Informative Inventory Reports. The emission database is managed by EMEP. EECCA countries report emission data for sulphur dioxide and nitrogen oxides to UNSD in response to the UNSD/UNEP questionnaire on environmental statistics. Emission data for indirect greenhouse gases are reported under the UN Framework Convention on Climate Change.

1.3. Mean concentration of nitrogen dioxide in urban air (NO_2)

i.

Reporting levels	Reporting obligations
National	National SoE Monthly bulletins "Short Overview of Environmental Pollution in Georgia" Annual Air Quality bulletins Annual Statistical Publication

ii.

Dataset owners and providers at domestic and international level	Responsible institutions / units
National Environmental Agency	Pollution Monitoring Department 150, D.Aghmashenebeli Ave., Tbilisi, 0112 info@meteo.gov.ge Marina Arabidze (head of department)
Ministry of environment and Natural Resources Protection (data provider at international level)	Service f Ambient Air Quality 6, Gulua Street, Tbilisi, Keti

iii.

Dataset formats (or shape in general) and language	Accessibility and sharing rights / Conditions
National and user-specific reporting formats: 1. MS Access database (GEO) 2. Monthly bulletins: PDF, paper (GEO) 3. Annual bulletins: PDF, paper (GEO) 3. Annual SoE report air chapter: PDF, paper (GEO/ENG) 4. user-specific (GEO/ENG/RUS)	National and user-specific reporting: 1. Sharing with public based to the request (no online accessibility) 2. open access 3. open access 4. free of charge
International reporting formats:	International reporting:

iv.

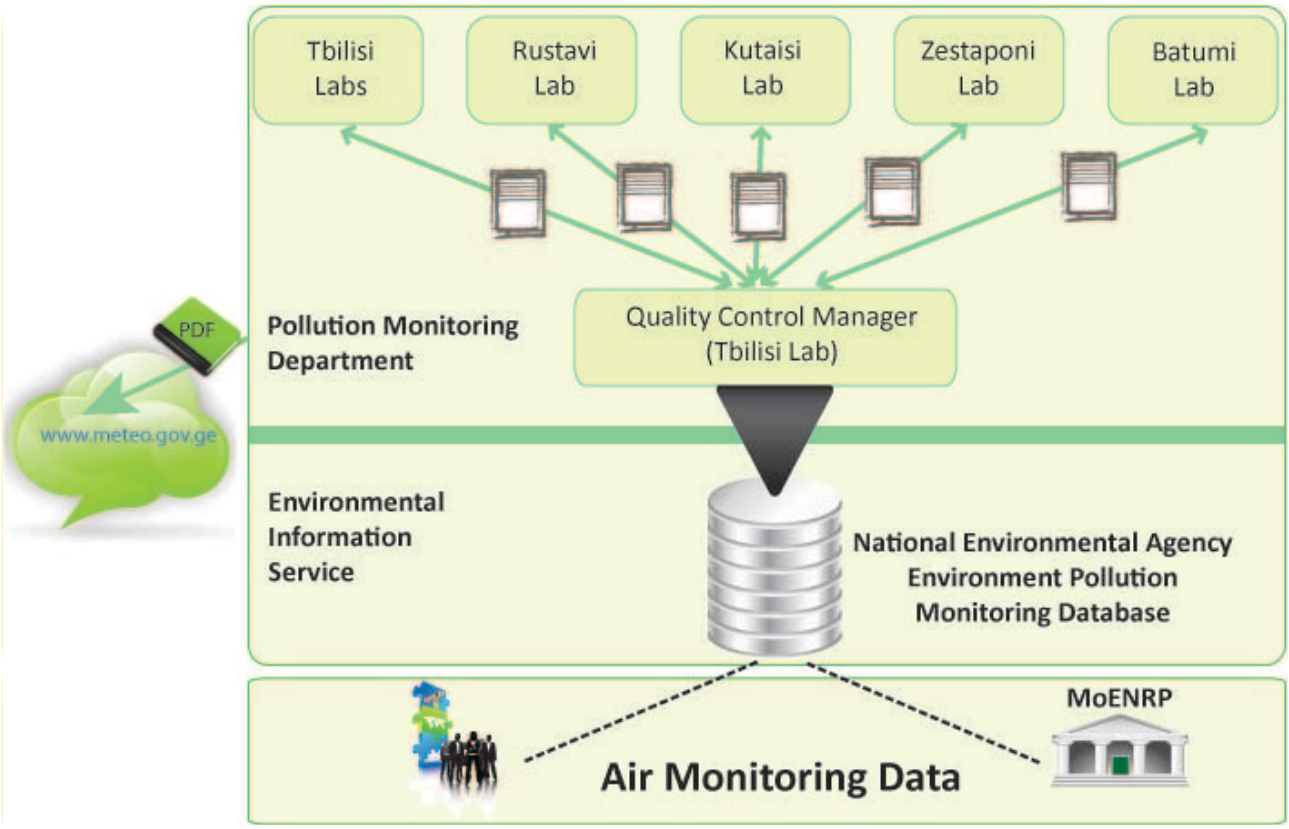
Temporal aggregation levels and comment	Geographic aggregation levels and comment
1. Monthly 2. Annual	1. City / being shared internationally 2. City or province-specific (in this case how many cities or provinces covered?) / could easily be shared internationally

Conclusion: Dataset on **Mean concentration of nitrogen dioxide in urban air (NO_2)** cannot be shared internationally with EEA in the same format as existed in the database. These data need to process (these are the raw data).

Example of air quality dataset (different from air emissions dataset) - for point iv:

Temporal aggregation levels and comment	Geographic aggregation levels and comment
1. annual / data easily available and can be shared 2. monthly / data is collected for domestic use only 3. daily / data is displayed and published locally only	1. city (how many ?). Data for city XX can be shared 2. city (how many ?). Data for city XX potentially can be shared (how? by whom?), pending decisions 3. city. Data for city XX cannot be shared

v. **Schematic illustration of dataset flow chain inside the country and to the international level**



Synopsis:

NEA only measures only mean concentration of nitrogen dioxide in air (NO_2). The mentioned data are sent from 5 different urban laboratories (Kutaisi, Batumi, Zestaphoni, Rustavi, Tbilisi) to Tbilisi Laboratory in completed forms (papers). Thereafter, a quality monitoring specialist checks them and sends back to the lab for adjustment and, simultaneously, to Environmental Information Service for input data into the database. Environment Pollution Monitoring Department is responsible for monitoring and collection of data, and Environmental Information Service is responsible for putting the received data into the database and providing data upon data request.

NEA has a stand-alone database in MS Access format in one computer to which only the operator (database specialist) has access. The Agency itself has no access to the database within its structure. For the requested data they send a written application to the Agency and a person requesting such data receives the requested information free of charge (the environmental protection data has become free of charge from 2013. Before the Agency had a service price list with fixed prices and tariffs.). The existing database needs improvement both in view of interface and content. The data lack metadata (there is no information on received data and the processing methods thereof). Supported by the Dutch Government, a new modern pilot station "Air Quality Monitoring" was added to Tbilisi. The data obtained from this station is not put into the database. The data is received from laboratories in filled paper applications that provoke high risks of omissions.

vi. **Methodological and technical capacity building needs at country level (excluding data collection and processing), which would enable or strengthen data flows/data sharing with EEA**

It is necessary to modify and to improve the interface of the base and make it customer-oriented and user-friendly.

It is necessary to ensure a permanent access to the database and make it open to the NEA and the Ministry of Environmental and Natural Resources Protection or/and public and parties concerned.

In view of infrastructure, laboratories should be able to put data into the database themselves or receive electronic versions thereof.

it is necessary to conduct training from time to time and share experiences, specially when introduction of a new method is intended.

Skilled personnel is required.

National Environmental Agency needs to enhance its technical facilities.

Replacement of the existing stations with the stations similar to the new Tbilisi Monitoring Station will be welcomed.

Climate

In Georgia systematic observations of climatic parameters have been carried out since 1844 and hydrologic parameters, since 1905. In 1980's the observation network covered all areas of the country, including high mountains. Tbilisi station is part of a global observation network.

Hydrometeorilogical stations equipped with special facilities are used for climatic observations, that collect data on climatic parameters (temperature, precipitations, humidity etc.) at different locations throughout the country. The data collected is analyzed in the hydrometeorological centre. On the basis of data collected over many years it is possible to forecast future trends. Based on this information and other statistical data, studies are conducted to predict future climatic conditions.

In the last 20 years the number of hydrometeorological stations has been significantly decreased in Georgia. Nowadays only 40 stations operate. As a result of less data available the conclusions made might be not as comprehensive. A subordinate body of the Ministry of Environment and Natural Resources - the National Environmental Agency is the body responsible for the hydrometeorological network and observations.

Georgia reports on ozone-depleting substances to the **Montreal Protocol**, and the country's data are available at the convention website http://ozone.unep.org/new_site/en/ozone_data_tools_access.php. The Ministry of Environment and Natural Resources Protection reports annually at the international level; and the information is not available at the MoENRP website. Copying these data or sending the link to EEA would be feasible.

1.4. Consumption of ozone depleting substances

i.

Reporting levels	**Reporting obligations**
National	National environmental statistics, national SoE
International	1. Ozone Secretariat 2. MLF Secretariat

ii.

Dataset owners and providers at domestic and international level	**Responsible institutions / units**
Ministry of environment: data owner and provider at international level	Air Protection Service, 6 Gulua str., 0114 Tbilisi, air@moe.gov.ge, Mr. Noe Megrelishvili, National Ozone Focal Point

iii.

Dataset formats (or shape in general) and language	Accessibility and sharing rights
National and user-specific reporting formats: 1. xls tables (GEO) 2. annual statistical compendiums: PDF, paper (GEO) 3. annual SoE report air chapter: PDF, paper (GEO/ENG)	National and user-specific reporting: 1. MoU-based access 2. open access 3. open access
International reporting formats: 1. Ozone Secretariat 2. MLF Secretariat	International reporting: 1. Ozone Secretariat portal and publications / data sharing rules of the Secretariat apply Web-link to the latest report/ http://ozone.unep.org/Data_Reporting/Data_Access/

iv.

Temporal aggregation levels and comment	Geographic aggregation levels and comment
1. annual only / being shared internationally	1. Country-wide / being shared internationally

1.5. Greenhouse gas emissions

Countries that are Parties to the UNFCC Convention submit national greenhouse gas (GHG) inventories to the Climate Change secretariat. The years 1987-1997 were considered and assessed in Georgia's first national inventory of greenhouse gases (GHGs) undertaken during the preparation of the Initial National Communication (INC). In the Second National Communication (SNC), the GHG inventory continued into the 1998-2006 period. Calculations were based on the IPCC 1996 Guidelines and were specified under the IPCC Good Practice Guidance (GPG) recommendations.

The national GHG inventory includes 6 sectors: Energy, Industrial processes, Solvents and other products use, Agriculture, Land Use Change and Forestry, Waste. The UNFCCC requires information on the following greenhouse gases, which are controlled by the Kyoto Protocol: Carbon dioxide (CO2), Methane (CH4), Nitrous oxide (N2O), Hydrofluorocarbons (HFCs), Perfluorocarbons (PFCs), Sulphur hexafluoride (SF6).

Each Party is obliged to provide the governing body of the Convention – the Conference of the Parties (COP) - with information on national GHG emissions and sinks. For the non-Annex I countries, the main mechanism of reporting was defined to be the National Communication, while the Annex I Parties have been obliged to present annually an independent national report on the inventory of GHGs.

i.

Reporting levels	Reporting obligations
National	National environmental statistics, national SoE
International	1. UNFCCC

ii.

Dataset owners and providers at domestic and international level	Responsible institutions / units
National statistics agency: data provider at domestic level National Statistics Office of Georgia	Division of Agricultural and Environmental Statistics, address: 30, Tsotne Dadiani Ave, 0180. Tbilisi, email: vtsakadze@geostat.ge, Mr. Vasil Tsakadze, head of Division
Ministry of environment: data owner and provider at domestic and international level	Air Protection Service, 6 Gulua str., 0114 Tbilisi, g.lazrievi@moe.gov.ge , Mr. Grigol Lazriev

iii.

Dataset formats (or shape in general) and language	Accessibility and sharing rights
National and user-specific reporting formats: 1. xls tables (GEO)	National and user-specific reporting: 1. MoU-based access / no sharing with third parties

2. annual statistical compendiums: PDF, paper (GEO) 3. annual SoE report air chapter: PDF, paper (GEO/ENG)	2. open access 3. open access
International reporting formats: 1. UNFCCC	International reporting: 1. UNFCCC Secretariat portal and publications / data sharing rules of the Secretariat apply http://unfccc.int/di/DetailedByParty/Event.do?event=go http://unfccc.int/ghg_data/ghg_data_unfccc/ghg_profiles/items/4626.php

iv.

Temporal aggregation levels and comment	Geographic aggregation levels and comment
1. annual only / being shared internationally	1. Country-wide / being shared internationally

Conclusion: Dataset on Greenhouse Gas Emissions can be shared internationally with EEA in the same format as reported to UNFCC Convention.

Waste

1.6. Municipal waste generation

There is no data on waste. Data on solid waste inventory and access to it is least developed in Georgia. Information on exact amount produced is not available. The amount has been calculated based on approximate values, including the population number and waste accumulation factors as assessed by experts. At the moment in Georgia there is no systematic and unified approach to the data collection because of segmented legislation. There is still no national waste classification system applied, currently Georgia uses the Basel Convention classification. Since waste statistics is not collected they are not published anywhere.

No legal instruments regulating the waste statistics data generation, collection, compilation and processing exist (unless is Basel Convention Data). Georgia is the party of Basel Convention on the Control of Trans-boundary Movements of Hazardous Wastes and Disposal. Country follows Convention requirements, furthermore was adopted the Law on the Transit and Import of Waste within the Territory of Georgia (1995). According the law the transit and import of industrial, municipal or other type of hazardous and radioactive waste are prohibited.

The only systematic collection of waste data is done by the Customs authorities on import and export of waste, based on the customs tariff codes.

The last national waste inventory, carried out in 2007 under international UNDP project, was done on occasional case, based on random grouping of waste categories, without using any nomenclature, and contains only not verified data. The data corresponds only to the sites where the inventory has been carried out, and they correspond to only a fraction of the total industrial waste. Moreover, although the questionnaires tried to capture the volume of waste generated per annum and the amount of waste stored at the industrial sites, the final results do not clearly distinguish between these two types. Data is hence to be dealt with care and provide only an order of magnitude estimate. During the implementation of waste inventory project, the main focus was made on stationary sites, having potential of generating substantial volumes of waste.

According to the inventory report the data is based on estimates provided by the owners of the sites. There is no information regarding the toxicity of accumulated waste, their physical state and chemical composition. Evident the lack of updated information required for monitoring and controlling the industrial waste produced and managed. The inventory is weak on the part of commenting on issues of disposing,

processing, recycling or sterilising the wastes. Consequently an inventory of industrial wastes and an overall waste management information system in Georgia are essential.

At the moment there is an on-going Twinning project on development of waste management legislation, which includes Waste Management Law, introduction of the European Waste list (Commission Decision (2000/532/EC) and procedures for waste classification, sub legislation on data collection and reporting as well as the other relevant legislation. In addition under the Twinning Project purchase of a server is provided, together with elaboration of the necessary software and appointment of staff for data processing.

The necessary steps to ensure compatibility of the data with the respective statistic nomenclatures and data sharing among the data users are envisaged.

Georgia is taking the necessary steps to improve the current situation and after adoption of the waste management law, developed under the Twinning project, the practical implementation of data collection will be initiated and the actual problems and challenges that might arise after enforcement will be addressed.

Twinning project shall produce the legislation and then the by laws will follow to ensure the enterprises and municipalities and most entities entitles to generate, collect, manage, recycle.

The biggest problems currently are the

- No legislation on waste management
- By by laws defining the procedures, methodologies, sanctions, monitoring, evaluation
- No respective capacity among staff in either MoENRP to manage the statistics or at the Geo Stat.

Water quality

As with air quality, the NEA's Department of Environmental Pollution Monitoring is in charge of regular monitoring of freshwater resources, both for surface and ground, as well as coastal sea waters. Routine monitoring of surface water quality in Georgia currently counted 48 gauges on 24 rivers and 4 lakes. Since 2004 NEA works very enthusiastically to upgrade existing monitoring network, mostly thanks to financial institutions for their supports, in addition to the government funding.

Current sampling frequency for water quality monitoring is practiced once per month for 33-35 different parameters, mostly physical and chemical. Therefore, sampling of these 33-35 parameters does not give full picture of pollution load in Georgia. It is important to modernize quality standards according to recommendations of the EU Water Framework Directive. Monitoring data is used to produce monthly environmental pollution bulletins distributed by NEA to the selected state institutions, also available through the internet at the NEA's web-site (www.meteo.gov.ge) in Georgian language.

NEA monitoring the above mentioned first three indicators: BOD5 concentration in rivers, Ammonia nitrogen concentration in rivers, Nitrates concentration in water bodies (lakes, reservoirs). The fourth indicator: Total phosphorus concentration in water bodies, the methodology of analysis was developed and its implementation is planned at the end of 2013 in the lab.

Water Resources Management Service of the Ministry is responsible for overall management of the surface water related issues in Georgia. Among the other responsibilities of the service include as well collection of statistics on water use, data processing and analysis, initiating and drafting laws and regulations in the field of water resources protection and supporting compliance with international obligations of Georgia in the field of water resources protection.

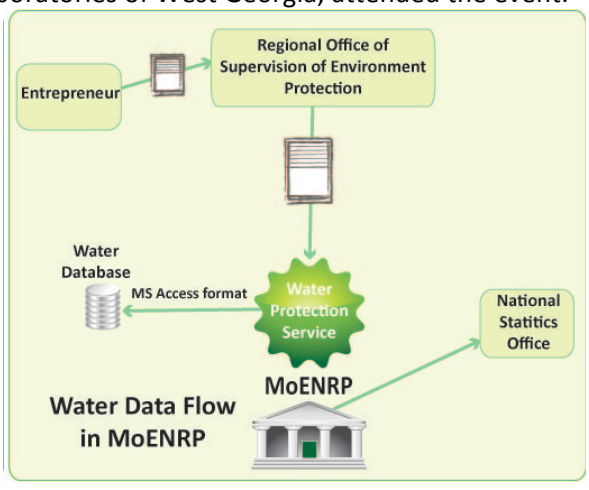
The Water Resources Management Service keeps regular records on water use in MS Access Database format. These data derived from the forms named as State Accounting on Water Use, which is approved by National Statistics Office. These forms are filed by enterprise water users: industrial enterprises; agricultural units, including irrigation systems and fish farms; water supply and sanitation networks; thermal power plants; hydropower plants, etc. These forms are too complicate to fill, especially for the small enterprises and needs to simplify.

There is no formal commitment between NEA and Water Resources Management Servicec of MoENRP on the data sharing. These two bodies are supervised by the various Deputy Minister.

With the help of a number of international projects the water sector received considerable assistance for organizing data collection and flow. The project - Integrated Natural Resources Management in Watersheds (INRMW) of Georgia - aims to introduce innovative approaches and practical models of participatory integrated natural resources management in targeted watersheds by facilitating reforms to and harmonization of national policies and by increasing the capacity of national as well as regional institutions to replicate these approaches and models throughout the country. These models will be introduced in four representative watersheds of Rioni and Alazani-Iori river basins, and efforts will be made to upscale and disseminate them across the country. The project goal will be achieved by implementing a number of sequential activities, including: baseline assessments of existing laws, policies, institutions and practices in the area of natural resource management as well as other related sectors (e.g. potable water supply and sanitation, energy, agriculture, health protection, disaster management, etc.); rapid assessments of existing socio-economic and environmental situation in targeted river basins; selection of four representative upstream and downstream pilot watersheds/areas for on-the-ground interventions; detailed assessments of the four selected pilot watersheds/areas; development of integrated natural resources management plans in a watershed context within the selected pilot watersheds/areas; implementation of a number of priority interventions at the community level through community small-scale grants program to demonstrate the benefits of sustainable and integrated natural resources management.

Technical support for development of water related database management system has been followed by EU funded water project - Trans-Boundary River Management Phase II for the Kura River Basin. This project paid more attention to the practical side of the Actual Water Use Database created specifically for the MoENRP's Water Protection Service. On the base of the existing State Water Registry paper forms the project has developed Actual Water Use database in electronic form. This database was further linked to a GIS system and information on users, ownership, water withdrawal, discharge permits, sectoral use, water quality categories, etc., was integrated in the system as well.

On November 2007, the hydromet and water quality monitoring departments of Armenia, Azerbaijan and Georgia participated in the Program's Joint Water Quality Monitoring Excursion to trans-boundary reaches of the Debed-Khrami and central Kura River basins. Additionally, Program staff, representatives from the ISO-certified control laboratory, and staff from the Finnish Foreign Affairs donor project on improving water quality analysis in regional laboratories of West Georgia, attended the event.



1.7 BOD5 concentration in rivers
1.8 Ammonia nitrogen concentration in rivers
1.9 Nitrates concentration in water bodies (lakes, reservoirs)

i.

Reporting levels	**Reporting obligations**
National	National SoE Monthly bulletins "Short Overview of Environmental Pollution in Georgia" Annual Water Quality bulletins Annual Statistical Publication

ii.

Dataset owners and providers at domestic and international level	**Responsible institutions / units**
National Environmental Agency	Pollution Monitoring Department 150, D.Aghmashenebeli Ave., Tbilisi, 0112 info@meteo.gov.ge Marina Arabidze (head of department)
Ministry of environment and Natural Resources Protection (data provider at international level)	Service of Water Quality and Management 6, Gulua Street, Tbilisi, Ms. Marina Makarova

iii.

Dataset formats (or shape in general) and language	**Accessibility and sharing rights / Conditions**
National and user-specific reporting formats: 1. MS Access database (GEO) 2. Monthly bulletins: PDF, paper (GEO) 3. Annual bulletins: PDF, paper (GEO) 3. Annual SoE report water chapter: PDF, paper (GEO/ENG) 4. user-specific (GEO/ENG/RUS)	National and user-specific reporting: 1. Sharing with public based to the request (no online accessibility) 2. open access 3. open access 4. free of charge
International reporting formats:	International reporting:

iv.

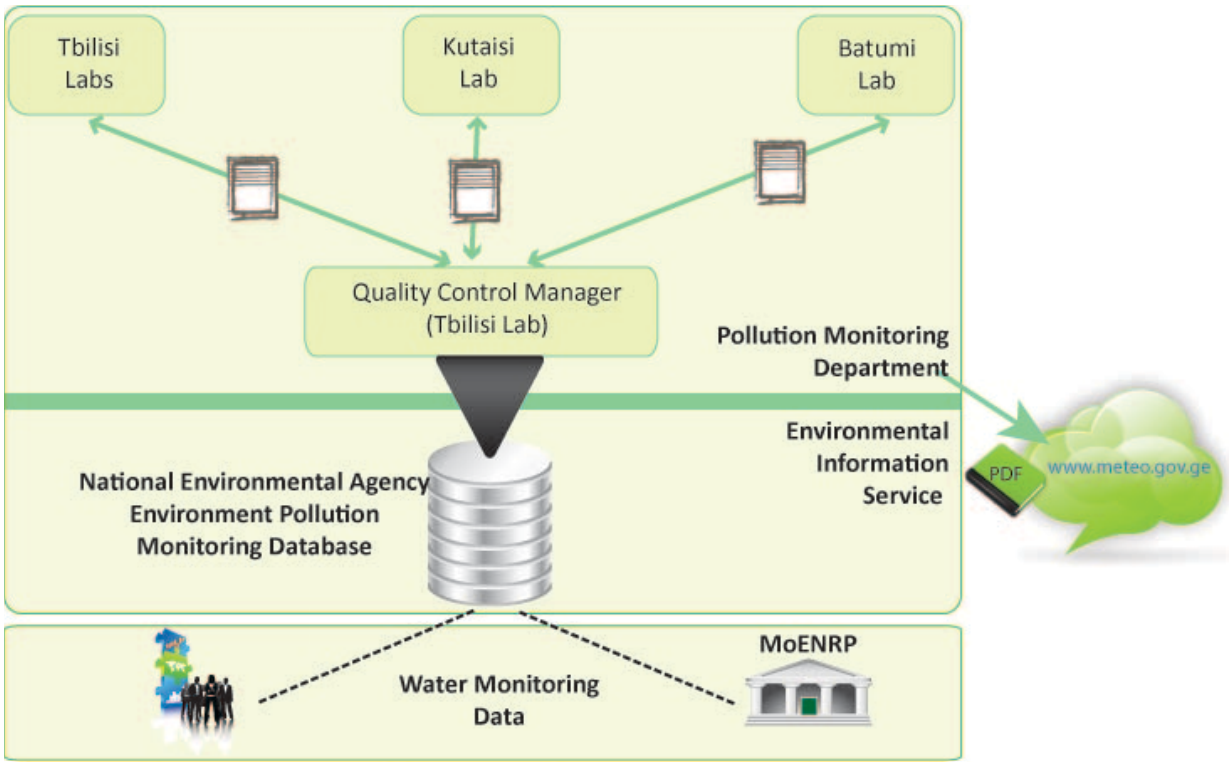
Temporal aggregation levels and comment	**Geographic aggregation levels and comment**
1. Monthly 2. Annual	1. rivers / being shared internationally 2. Rivers / could easily be shared internationally

Conclusion: These 3 above mentioned dataset cannot be shared directrly without additional processing to internationally with EEA in the same format as existed in the database. These data need to process.

Example of air quality dataset (different from air emissions dataset) - for point iv:

Temporal aggregation levels and comment	**Geographic aggregation levels and comment**
1. annual / data easily available and can be shared 2. monthly / data is collected for domestic use only 3. daily / data is displayed and published locally only	1. rivers. Data for rivers can be shared 2. rivers. Data for rivers potentially can be shared 3. rivers. Data for rivers can be shared in a format as it exists.

v. **Schematic illustration of dataset flow chain inside the country and to the international level**



Synopsis:

NEA has a stand-alone database in MS Access format in one computer to which only the operator (database specialist) has access. The Agency itself has no access to the database within its structure. For the requested data they send a written application to the Agency and a person requesting such data receives the requested information free of charge (the environmental protection data has become free of charge from 2013. Before the Agency had a service price list with fixed prices and tariffs.). The existing database needs improvement both in view of interface and content. The data lack metadata (there is no information on received data and the processing methods thereof).

vi. **Methodological and technical capacity building needs at country level (excluding data collection and processing), which would enable or strengthen data flows/data sharing with EEA**

It is necessary to modify and to improve the interface of the base and make it customer-oriented and user-friendly.

It is necessary to ensure a permanent access to the database and make it open to the NEA and the Ministry of Environmental and Natural Resources Protection or/and public and parties concerned.

In view of infrastructure, laboratories should be able to put data into the database themselves or receive electronic versions thereof.

it is necessary to conduct training from time to time and share experiences, specially when introduction of a new method is intended.

Skilled personnel is required.

National Environmental Agency needs to enhance its technical facilities.

1.10 Total phosphorus concentration in water bodies

Currently, no measures are carried out of total phosphorus concentration, however the method is tested and approveand it is planned to start this analysis since 2014.

Biodiversity

Data on protected area are available through the Agency of Protected Areas and the National Statistics Office with annual records for major bird and mammal species as well as plants and animals included in the Red List of Georgia,, as well as the area of protected areas.

Commission of Endangered Species of the Academy of Sciences of Georgia conducted evaluation of species' status in 2006 in accordance of IUCN criteria, which provided basis for the updated Red List of Georgia.

Georgia is a member of all global biodiversity conventions:

- Convention on Biological Diversity (ratified in 1994);
- Convention on Wetlands of International Importance especially as Waterfowl Habitat. Ramsar (Iran), 2 February 1971. (ratified in 1996);
- Convention on International Trade in Endangered Species of Wild Fauna and Flora (ratified in 1996);
- Convention on Migratory Species (Georgia joined in 2000 year)

In 2008 Georgia ratified Cartagena Protocol of Bio-safety (ratification of this protocol was important to regulate Transboundary Movements of genetically modified organisms) and Convention on the Conservation of European Wildlife and Natural Habitats. Nowadays the preparation works are implemented for ratification of European Landscape Convention.

As a signatory to the Ramsar Convention of Wetlands of International Importance since April 1996 Georgia's reporting obligations include providing regular technical reports for the each Conference of the Parties (COP meetings). The latest National Report on the Implementation of The Ramsar Convention On Wetlands was submitted for the Conference of the Contracting Parties 11th Meeting in June 2012 and is available for download from the Ramsar Convention website at: http://www.ramsar.org/pdf/cop11/nr/cop11-nr-georgia.pdf. This National Report Format (NRF) has been approved by the Standing Committee in Decision SC41-24 for the Ramsar Convention's Contracting Parties to complete as their national reporting to the 11th meeting of the Conference of the Contracting Parties of the Convention (Bucharest, Romania, June 2012). The COP11 Format also now includes an additional, optional, section (section 4) to permit a Contracting Party to provide additional information, if it wishes to, on indicators relevant to individual Wetlands of International Importance (Ramsar Sites).

Formation of national biodiversity monitoring system is very important. It is acknowledged as one of the priorities of national biodiversity strategy and action plan. Nowadays work on biodiversity monitoring system indicators and corresponding legal base is continued.

In 2006 Red List of Georgia was adopted by president decree #303. The Red List was worked out by the Commission of Georgian Scientific Academy working on Endangered Species. It consists of 56 timber species (including species of 52 flowering plants (Angiosperm) and 4 seed-bearing plants (Gymnosperm). At present the commission works on the assessment of other species by the IUCN criteria, according to that assessment, additional list will be presented to add to Red List of Georgia.
Red List of Georgia includes 135 species and 4 sub-species. 33 species of mammals are in Red List. Among them 4 species are extinct on national level, 5 species are critically endangered *(Lynx, leopard, Striped Hyena, Red Deer, Wild goat)* and 6 species are endangered species *(Brown Bear, Common Bottlenose Dolphin, West Caucasian ibex, Chamois)*. There are 35 species of birds in Red List. Among them *Saker Falcon* and *Lesser Kestrel* are critically endangered. White Pelican, Lesser White-fronted Goose, Velvet Scoter, White-tailed Eagle, White-headed Duck, Cinereous Vulture, Red-footed Falcon and Barn Owl are

endangered species. Red List includes 11 species of reptiles, 2 species of amphibians and 11 species of fish. There are all species of sturgeons among the fishes.

Besides migratory birds, in Georgia hunting is allowed only in hunting farms. There are 22 hunting farms in Georgia by 2009. Outside hunting farms hunting is allowed only on 15 species of birds but the daily quota is limited according to the species.

1.11. Areas under protection: total

i.

Reporting levels	**Reporting obligations**
National	National environmental statistics National SoE Annual report of the Agency of Protected Areas
International	1. CBD 2. RAMSAR Convention

ii.

Dataset owners and providers at domestic and international level	**Responsible institutions / units**
1. Agency of Protected Areas 2. National statistics agency: data owner and provider at domestic level	1. Agency of Protected Areas ,6 Gulua str., 0114 Tbilisi 2. Division of Agricultural and Environmental Statistics, address: 30, Tsotne Dadiani Ave, 0180. Tbilisi, email: vtsakadze@geostat.ge, Mr. Vasil Tsakadze, head of Division
Ministry of environment: data provider at international level	Department of Biodiversity 6 Gulua str., 0114 Tbilisi, biodepbio@moe.gov.ge

iii.

Dataset formats (or shape in general) and language	**Accessibility and sharing rights**
National and user-specific reporting formats: 1. xls tables, shp files (GEO/ENG) 2. annual statistical compendiums: PDF, paper (GEO) 3. annual SoE report Biodiversity chapter: PDF, MS Word, paper (GEO/ENG) 4. Annual report of the Agency of Protected Areas: : PDF, paper (GEO/ENG)	National and user-specific reporting: 1. MoU-based access / on-line available http://www.apa.gov.ge/map/index_en.html 2. open access, internet version is available http://geostat.ge/index.php?action=page&p_id=431&lang=eng 3. open access http://soegeorgia.blogspot.com/p/english-version.html 4. open access http://www.apa.gov.ge/index.php?site-id=17
International reporting formats: 1. Ramsar	International reporting: 1. Ramsar Secretariat portal and publications / data sharing rules of the Secretariat apply Web-link to the latest report/dataset: http://ramsar.wetlands.org/Database/SearchforRamsarsites/tabid/765/Default.aspx

iv.

Temporal aggregation levels and comment	**Geographic aggregation levels and comment**
1. annual only / being shared internationally	1. Country-wide / being shared internationally

	2. Site-specific / being shared internationally

At present the total area of Protected Areas is 520 273 hectares, which is about 7.46 % of the country's territory. About 75 % of Protected Areas are covered by forests. Primary function of the Protected Areas is protection of natural heritage of the country, unique biodiversity and ecosystems. There are 6 different categories of Protected Areas according the IUCN:

- 14 Strict Nature Reserves
- 10 National Parks
- 18 Managed Nature Reserves
- 24 Natural Monuments
- 2 Protected Landscapes

The SEIS biodiversity dataset is a core part of what Georgia has provided to the Convention on Biological Diversity (CBD) in the national reports submitted to CBD. Sharing the existing dataset and reporting to SEIS should be a feasible.

All data concerning biodiversity are available online on Biodiversity Monitoring of Georgia's webpage: http://biomonitoring.moe.gov.ge/ .

2. Concluding remarks on 11 datasets

1. 9 priority datasets from 11 are available in Georgia and can be shared internationally, including with EEA.

2. Monitoring-based data (air and water quality) has very broad temporal and geographic resolution, different sources of origin and require expert discussions about main data sources, locations and technicalities of data reporting. As the initial step, the existing selected data could be shared, while specific reporting systems are being studied and implemented.

3. Municipal waste data generation needs to be streamlined at a domestic level and decisions need to be taken on which datasets should be prioritized for international reporting and sharing.

4. Synergies between Twining projects and ENPI-SEIS activities are useful and should to be encouraged for data generation, not only in the field of waste although in the field of air and water.

3. The Development of National Systems Compatible with SEIS

The most of the priority environmental datasets, necessary for SEIS participation, considered to the previous chapter are available in Georgia. Government of Georgia is open to develop an electronic systems and the further development of e-governance, which are likely to promote to underpin the SEIS initiative.

The recent support of the Georgian environmental decision-makers to join on-going European and global initiatives contributing into the implementation of SEIS, such as GEO/GEOSS and INSPIRE. In particular, the Minister of Environment and Natural Resources Protection of Georgia expressed her willingness to join GEO/GEOSS with the intention Georgia to become 90th member at the 10th GEO Ministerial forthcoming in January 2014. There is a very close complementarity of SEIS and GEO/GEOSS initiatives, and support of various completed and ongoing national and international EU projects is indeed critical in this regard, as

well as the interministerial cooperation between environmental authorities (such as NEA) and national public registry agency (such as NAPR) and other sectors as key factor in developing the INSPIRE compatible national SDI capacity.

National level reforms and participation in SEIS will help Georgia to anticipate and adjust to changes in reporting formats – at the UNFCCC, UNECE LRTAP or CBD, for example – and to the advent of new indicators, such as for a green economy.

The participation of the Eastern Europe, Caucasus and Central Asia (EECCA) countries in the development of the UNECE guidelines may ease the transition to SEIS. Based on the work of the UNECE joint task force, next year (in 2014) the countries will begin domestic reporting on 36 indicators in a compatible format, and will exchange publicly available data via weblinks. Some EECAA countries are already doing this. The UNECE process is moving from physical data submitting to electronic access, and as the web links become available the countries will be able to compare themselves to each other, and the international community will have access to the same information. The SEIS system will take time to implement, but it will help the countries put their ideas into practice and will move them closer to SEIS principles.

All data owners are the governmental bodies and their data should be publicly available. From 2013 the environmental data are free of charge and are available on request. Sharing of data that are not part of the current international reporting obligations of Georgia.

From the inter-institutional perspective, the development of e-governance is likely to enhance coordination and clarify the divisions between regulatory and reporting responsibilities between the statistics authorities and the Ministry of Environment and Natural Resources Protection. In some cases, the statistics professionals may want to delegate data responsibilities to the environmental professionals who are more likely to understand the implications of the data collected.

Ministry of Environment and Natural Resources Protection may want to develop a special reporting system within the Ministry, this step would facilitate to support MoENRP's role with EEA and other regional and international bodies. The former Aarhus Center, currently the Center of Environmental Information and Education, NEA and newly created division under the MoENRP are among potential candidates to provide environmental information hub within the county.

4. Make it happen!

This report outlines the steps required to initiate and implementation of data flows via EEA for Georgian environmental datasets. It is envisaged that Georgia moves ahead with implementation of SEIS principles, became environmental information free since 2013.

SEIS implementation is achievable in several steps: from relatively easy and straightforward solutions and trial approaches to the more complex, long-term and strategic interventions. It is envisaged that as Georgia moves ahead with implementation of SEIS principles, some of the identified challenges could be addressed in parallel, while others would require political or technical solutions and experience exchange.

Short-term steps and milestones may include

- Improve capacities in the field of monitoring, collection, storage, assessment, and reporting of selected environmental indicators in the relevant environmental authorities including the national statistical

systems, in compliance with reporting obligations to international agreements and in coordination with relevant regional initiatives;

- To set up national environmental information systems in the Ministry of Environment and Natural Resources Protection that are in line with the EU's SEIS as well (including creation of SEIS coordination mechanism and data exchange hub);
- The future priority areas in the field of waste statistics in Georgia are
  1. Implement waste management legislation
  2. Establish operational national waste classification system, based on European Waste List;
  3. Establish national data system, based on uniform legislation requirements and systematic approach for data collection and reporting;
  4. Ensure compatibility of the data with the respective statistic nomenclatures and data sharing among the data users;
  5. Ensure the necessary administrative capacity and capacity building.
- Formalize agreement with EEA on data exchange (if such agreement will be necessary)
- Initiate dataflow for selected indicators and assessment of successes and deficiencies of the pilot exercise on data exchange
- Facilitate training and exchange of experience with EEA and other EU institutions in the priority areas, such as water quality and waste data collection and reporting to offer a good opportunity to consolidate and improve existing monitoring systems:

• helping to identify and address gaps in currently available data and information products and;
• ensuring their sustainable, operational provision.

The proposed draft text for the discussion with Georgia and agreement at the national workshop:

1. The application of the principles of the Shared Environmental Information System (SEIS) will considerably improve access to, quality and usability of environmental information in Georgia for national state and non-state actors as well as for the international community. Tangible progress in this area will depend on a continued commitment of the Government of Georgia.

2. To mark and implement such commitment the participants advise the Ministry of Environment and Natural Resources Protection and the National Statistics Office "GeoStat", in their capacity as the host organisations for national focal points of the ENPI-SEIS project, to initiate the establishment of an inter-agency and inter-sectorial working group or similar mechanism for coordinating SEIS-related activities in Georgia. To enable the discussions and decisions from the sides of both supply and demand, such mechanism should include the representatives of the producers as well as the users of environmental information. This initiative is advised to be implemented in synergy with GEO me INSPIRE coordination activities, through the establishing single national level coordination and cooperation mechanism.

3. As a concrete step towards the further implementation of SEIS in Georgia, the meeting asks the Ministry of Environment and Natural Resources Protection, the National Statistics Office and other involved parties to undertake practical steps to enable the trial exchange of information underpinning the initial set of 11 environmental indicator datasets selected within the ENPI-SEIS project with the European Environment Agency, other international organisations and countries involved in ENPI-SEIS activities, and was also agreed during the meeting of UNECE Joint Task Force of Environmental Indicators on 5-7 November 2013. This set of environmental indicators is in line with the one discussed in the context of the UNECE collaboration.

4. In the long-term perspective, SEIS progress in Georgia will strongly depend upon continued cooperation with the European Environment Agency, other institutions of the European Community and individual countries who may be in a position to provide relevant experience, expertise, access to European and

ernational networks as well. Joining the global (GEO/GEOSS) and European (INSPIRE) initiatives would be instrumental in this regard.

Long-term steps and milestones may include

- Introducing e-governance at national level and integrating/linking environmental databases
- Optimizing inter-agency system of environmental monitoring, statistics and dataflow
- Building-up the core set of indicators consistent with domestic and international priorities, guidelines and reporting obligations