



SEIS Country Report Republic of Macedonia

BRIEFING Version June 2012

	Location:	Europe
	Status:	UN Country
	Capital City:	Skopje
	Main Cities:	Bitola, Ohrid, Štip and Tetovo
	Population:	2 057 284 (2010) ¹
	Population density per km ²	79,6 (2009) ²
	Area:	25 713 km ²
	GDP per capita	4 461 USA \$ (2010) ³
	Currency:	Denar (MKD)
	Languages:	Macedonian, Albanian, Turkish, Roma and Serbian ⁴
	Administration:	Parliamentary republic



¹ <http://www.stat.gov.mk/Publikacii/MakBrojkiM2011.pdf>

² <http://www.stat.gov.mk/Publikacii/MakBrojkiM2011.pdf>

³ <http://data.worldbank.org/indicator/NY.GDP.PCAP.CD>

⁴ http://en.wikipedia.org/wiki/Republic_of_Macedonia#Religion

Summary

The current cooperation between the Ministry of Environment and Physical Planning and the European Environment Agency is supported through the Instrument for Pre-Accession Assistance and under the “Preparatory measures for the participation of candidates and potential candidates in the Community Agencies: Specific project for the participation of West Balkan countries in the work of the European Environment Agency 2011-13”. The cooperation under this project presents a continuation of the support under IPA 2009-2011 and has contributed to the successful national contributions to the work of the EEA.

The measurable progress and success of the Republic of Macedonia in its European integration process is reflected in the various key EEA products. The successful cooperation with the EEA, not only reflects a strong national will to succeed on the EU agenda, but also to contribute to the concerted effort to improve the state and outlook of the European environment.

Content

SUMMARY	2
CONTENT	3
1. INTRODUCTION	4
2. THE SEIS COUNTRY VISIT	5
3. STATUS OF TRANSPOSITION OF THE EU ACQUIS	7
4. ENVIRONMENTAL INVESTMENTS	8
5. REPUBLIC OF MACEDONIA'S PERFORMANCE IN EEA REPORTING	10
6. DESCRIPTION OF CURRENT STATUS OF INFORMATION SYSTEMS	11
6.1 <i>Description of current status of air emissions</i>	11
6.2 <i>Description of current status of Air Quality</i>	12
6.3 <i>Climate Change</i>	13
6.4 <i>Water data management</i>	13
6.5 <i>Environmental monitoring of soil and access to environmental information</i>	15
6.6 <i>Waste</i>	15
6.7 <i>Corine Land Cover</i>	16
6.8 <i>Environmental Noise - Current status</i>	17
6.9 <i>Nature and biodiversity monitoring</i>	18
6.10 <i>Protocol on PRTR</i>	19
7. DEVELOPMENT OF NATIONAL ENVIRONMENTAL INFORMATION SYSTEM	20
8. OTHER INFORMATION PRODUCTS	21
8.1 <i>Process of environmental indicator development</i>	21
8.2 <i>Environmental Reports</i>	22
8.3 <i>Forward Looking Information and Scenarios - FLIS</i>	22
9. CONCLUSIONS	23
ANNEX 1. DETAILED DATA FLOW ANALYSIS FOR THE REPUBLIC OF MACEDONIA	24

1. Introduction

The overall aim of the SEIS (Shared Environmental Information System) is to maintain and improve the quality and availability of information required for environmental policy, in line with better regulation, while keeping the associated administrative burdens to a minimum both at the European and the National level.

“A key step in implementing the SEIS approach will be to modernize the legal provisions relating to the way in which information required in various pieces of environmental legislation is made available. By doing away with paper reporting, the processes for making information available will be made simpler, more flexible and more efficient. Provided that such a proposal is accompanied by political commitment around the SEIS principles it will also lead to further simplification benefits in relation to (i) the content of information requirements in thematic environmental legislation, (ii) the content and procedure for reporting at international level, and (iii) more efficient organization of data-gathering activities within Member States”⁵.

This second SEIS country report intends to describe and assess the current state of the information systems, identify the country's capacity for taking SEIS implementation forward, as well as to reflect of the numerous success stories in the respective thematic areas. This report has been produced by the National Focal Point in the Republic of Macedonia.

⁵ Quote from COMMUNICATION FROM THE COMMISSION TO THE COUNCIL, THE EUROPEAN PARLIAMENT, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS **Towards a Shared Environmental Information System (SEIS)** COM (2008) 46 final.

2. The SEIS country visit

From 30-31 May 2012, the EEA Deputy Director, Gordon McInnes and the EEA/Eionet Coordinator, Milan Chrenko were on their first SEIS country visit to the Republic of Macedonia. This important event, not only allowed for raising the profile and importance of the cooperation process between the Ministry of Environment and Physical Planning and the EEA, but also aimed to strengthen the support to the MoEPP and its efforts to contribute to the EEA work program. This event and its organization aspects have been given the highest priority in the Macedonian Environmental Information Center, as the National Focal Point for cooperation with the EEA.

Country visit agenda

Venue: Ministry of Environment and Physical Planning, Bul. Goce Delcev No. 8, Skopje

May, 30, 2012	
9:00 – 9:30	Pre-meeting with NFP and NFP assistant
	<p><i>Venue:</i> NFP Office, room 1107 Svetlana Gjorgjeva, NFP</p> <p><i>Participating experts:</i> Risto Jordanovski, NFP Ass.</p> <p>Mr. Gordon McInnes, EEA, Deputy Director</p> <p>Mr. Milan Chrenko, EEA EIONET Coordinator</p>
9:30 – 10:00	Meeting with Minister Abdilqim Ademi
	<p><i>Venue:</i> Minister's Cabinet Svetlana Gjorgjeva</p> <p><i>Participating experts:</i> Risto Jordanovski</p> <p>Mr. Gordon McInnes, EEA, Deputy Director</p> <p>Mr. Milan Chrenko, EEA EIONET Coordinator</p>
10:00 – 10:30	SEIS and the national environmental data and information system
	<p><i>Venue:</i> MEPP meeting room Svetlana Gjorgjeva, Risto Jordanovski, Igor Paunovski, Maja Gramatikova, Nikola Jakimovski,</p> <p><i>Participating experts:</i></p> <p>Mr. Gordon McInnes, EEA, Deputy Director</p> <p>Mr. Milan Chrenko, EEA EIONET Coordinator</p>
10:30 – 13:00	Discussion between NRCs and EEA Representative – Current and future activities
	<p style="text-align: right;">Participants with presentations</p> <p><i>Venue:</i> MEPP meeting room Jadranka Ivanova,</p> <p><i>Participating experts:</i> Kaja Sukova,</p> <p>Mr. Gordon McInnes, EEA, Deputy Director Aleksandra Nestorovska Krstevska,</p> <p>Mr. Milan Chrenko, EEA EIONET Coordinator Nikola Golubov,</p> <p>Martina Toceva,</p> <p>Teodora Grncarovska Obradovik</p> <p>Azemine Shakiri,</p>
11:45 – 12:00	Coffee break
	Katerina Nikolovska, Margareta Cvetkovska, Arminda Rushiti,

May, 30, 2012	
	Risto Jordanovski, Margareta Cvetkovska, Katerina Nikolovska, Zoran Velickov - SARIS
13:00 – 13:15	Conclusions and Initiatives
13:30 – 15:30	Lunch (offered by MEPP)
15:30 – 16:30	Meeting with EU Delegation and Secretariat of European Affairs
	<p><i>Venue:</i> EU Delegation Offices</p> <p><i>Participating experts:</i></p> <p>Mr. Gordon McInnes, EEA, Deputy Director</p> <p>Mr. Milan Chrenko, EEA EIONET Coordinator</p> <p>Svetlana Gjorgjeva, Risto Jordanovski, Darinka Jantinska, Olivera Lazarevska – SEP, Maja Bogdanovska Zendelska EUD,</p>
17:00	Travel to Ohrid
May, 31, 2012	
09:30 – 10:30	Meeting with representative of Ohrid Lake conservation Project (project office)
	<p><i>Venue:</i> Ohrid Lake Project office</p> <p><i>Participating experts:</i></p> <p>Mr. Gordon McInnes, EEA, Deputy Director</p> <p>Mr. Milan Chrenko, EEA EIONET Coordinator</p> <p>Dejan Panovski Svetlana Gjorgjeva Risto Jordanovski</p>
10:30 – 11:30	Meeting with representative of National Park Galicica
	<p><i>Venue:</i> Ohrid Lake Project office</p> <p><i>Participating experts:</i></p> <p>Mr. Gordon McInnes, EEA, Deputy Director</p> <p>Mr. Milan Chrenko, EEA EIONET Coordinator</p> <p>Andon Bojadzi Svetlana Gjorgjeva Risto Jordanovski</p>
11:30 – 13:30	Sightseeing of Ohrid
13:30 – 15:00	Lunch (offer by MEPP)
16:00	Travel to Skopje (arrival around 18.30)

3. Status of transposition of the EU acquis

The Progress Monitoring - screening of the Transposition and Implementation of the EU Environment and Climate Acquis is a process which is under the auspices of European Commission – DG Environment

- Detailed Screening on the transposition and implementation of the EU environmental acquis;
- ToC and IQ are prepared for each environmental legislation (directive, regulation, decision);
- 1-st PM 2006/2007;
- Progress Monitoring Reports :Summary Review/Detailed Analysis;
- Useful tool;
- 7-th PM (period May 2011 - March 2012) completed and PM report drafted;

Status of transposition per sub chapter and separate directives

HORIZONTAL LEGISLATION - 70% transposition

- Full transposition: EIA, SEA, Public Participation, Environmental Information directives, Liability dir. (90%)
- INSPIRE Dir. – 0% and Environmental Crime Dir. – 20%

AIR QUALITY - 60% transposition

- NEC Dir. – 100% , Sulphur Content Liquid Fuels Dir. - 95% and CAFÉ Dir. – 80%
- VOC petrol stations and Phase II VOC directives – 5 %

WASTE MANAGEMENT- 78% transposition

- Full transposition: Landfill, Packaging Waste, Batteries & Accumulators, end-of-life Vehicles, Sewage Sludge, PCB/PCT directives, WEEE (92%)
- New RoHS Dir. -1% (old RoHS dir. – 20 %) & Extractive Industries Waste Dir. – 23%

WATER – 58% transposition

- Full transposition: UWWT & Drinking water directives, Framework dir.(92%)
 - Floods directive – 15 %

NATURE PROTECTION – 52% transposition

- Wild Birds dir. – 82%
- ZOO dir. – 20%

INDUSTRIAL POLLUTION CONTROL – 90% transposition

- Waste Incineration dir. – 100%, VOC paints and varnishes, COMAH, IPPC, LCP, Volatile Organic Compounds directives - over 90%
- Industrial Emission Directive – 61%

CHEMICALS – 66% transposition

- CLP dangerous substances dir. – 100% and CLP dangerous preparations dir. – 98%
- Animal for Scientific Purposes dir. – 8% (old Experimental Animal dir. – 100%)

NOISE – 100% transposition (Environmental Noise Dir.)

CLIMATE CHANGE - 17% transposition

- Quality of Petrol and Diesel Fuels Directive – 44%
 - Geological Storage of CO2 Directive - 0% and Emission Trading Directive – 5 %

4. Environmental Investments

The investments in the sector environment are done through several public bodies:

- Ministry of Environment and Physical Planning
- Ministry of Transport and Communication
- Ministry of Local – Self Government
- Ministry of Finance through capital donation to municipalities and loans
- Municipalities

A. Funds from the state budget

State budget MoEPP (denars)	2012	2013	2014 onward
Foreseen under the National Strategy for environmental investments (2009-2013)	1.056.570.000	1.006.755.000	1.055.340.000
Secured	398.700.000	93.300.000	213.300.000

+ EIB and KFW Bank loan, and Programs for Regional Development

Activities under the Ministry of Environment and Physical Planning

Waste management activities

- Implementation of tender procedure in a form of Competitive
- Dialogue aimed at awarding concession for integrated regional landfills management in Southeastern and Polog planning regions

Water management activities

- Construction of sewerage network in the settlement of Singelic, Gazi Baba Municipality. Total funds in an amount of 0,97 mil. EUR
- Construction of sewerage and storm water collection canal in the Municipality of Arachinovo. Total funds in an amount of 0,62 mil. EUR;
- Designing and construction of drinking water treatment station for the water supply system of Gostivar. Total funds in an amount of 2 mil. EUR;
- Construction of wastewater treatment plant in the villages of Glumovo and Shishevo, Saraj Municipality. Total funds in an amount of 0,72 mil. EUR;
- Providing of additional quantity of water for Dojran lake and the new Irrigation System Paljurci. Total amount of 3,3 mil.EUR.

Activities under the Ministry of Transport and Communications:

- Loan of **European Investment Bank** - total amount of 50 mil. EUR are allocated for realization of the projects for water supply and drainage waste water systems in the municipalities in the Republic of Macedonia. Until now, **12 projects** are approved in amount of 4,6 mil. EUR. Additional 24 applications are under approval.
- Loan of **KFW Bank** - total amount of 8.635.000 EUR are allocated for projects for construction and rehabilitation of water supply systems for the municipalities. The contracts were signed at the beginning of 2011. Until now, **8 municipality** projects are approved in the amount of 5.825.000 mil. EUR. The rest of the finances are allocated for the second phase of the project which aims to provide urgent investments to municipalities which need intervention in their water supply systems.

Activities under the Ministry of Local self government

- 2011, implemented Programs for Regional Development, financing projects for development of the villages, areas with specific development needs and projects applied from planning regions in Republic of Macedonia.
- Within those programs, projects were implemented in total amount of 2,1 mil. EUR, out of which, for the water sector were financed 30 small-scale projects in amount of 0,72 mil. EUR, for preparation for technical documentation and construction for water supply, collect and treatment waste water.

The percentage of funds secured from the state budget, according to the National environmental investment strategy (2009-2013) for 2012, not accounting for the loans from EIB, is less than 40%.

B. Funds through IPA

IPA (millions Euro)	2012	2013	2014 onward
Foreseen under the National Strategy for environmental investments (2009-2013)	11,67	9,28	21,54
	Total: 42,49		
Planned	48,4 (from which 85% are IPA allocation)		

Ministry of Environment and Physical Planning – current projects, financed by IPA Component - Regional Development:

- Major project for improvement of wastewater collection and treatment in Pileup (Phase I), financed under IPA Component III – Regional Development, OPRD 2007-2009 in total amount of 19,8 mil. EUR. (IPA funds 14,5 mil. EUR, National co-financing 5,3 mil. EUR)
- Project for rehabilitation and extension of 43 km sewerage network in Prilep (Phase II), in amount of 9,8 mil. EUR financed under IPA Regional Development OPRD 2007-2011
- The second process concerns preparation of technical documentation and institutional activities towards future construction and management of regional landfills for Eastern and Northeastern planning regions, to be financed from pre-accession assistance instrument (IPA) of the European Union.

C. Bilateral and foreign aid

Bilateral and foreign aid (millions Euro)	2012	2013	2014 onward
Foreseen under the National Strategy for environmental investments (2009-2013)	5,32	4,06	
Secured	13,76		

- Construction of wastewater treatment plant in Gevgelia. Total amount of 9.6 mil EUR (70% - Government of Switzerland, SECO, 19% - Greek Government, 11% - Government of the Republic of Macedonia)
- Designing and construction of wastewater treatment plant in the settlement of

- Volkovo, Municipality of Gjorce Petrov. Total amount of 5.8 mil EUR (26 % - Slovenian government and 74% - Government of the Republic of Macedonia);
- Development of River Basin Management Plan for Bregalnica. Total amount of 4.37 mil EUR (85% - Government of Switzerland SECO, and the 15% - Government of the Republic of Macedonia);

5. Republic of Macedonia's performance in EEA reporting

The EEA Eionet Priority Data Flows is used as an overall indicator for monitoring the performance of the countries in reporting. In the exercise a set of agreed, stable, well-defined objectives are defined in order to provide a focus for countries when they are putting procedures in place for regular reporting.

Reporting performance 2000-2011

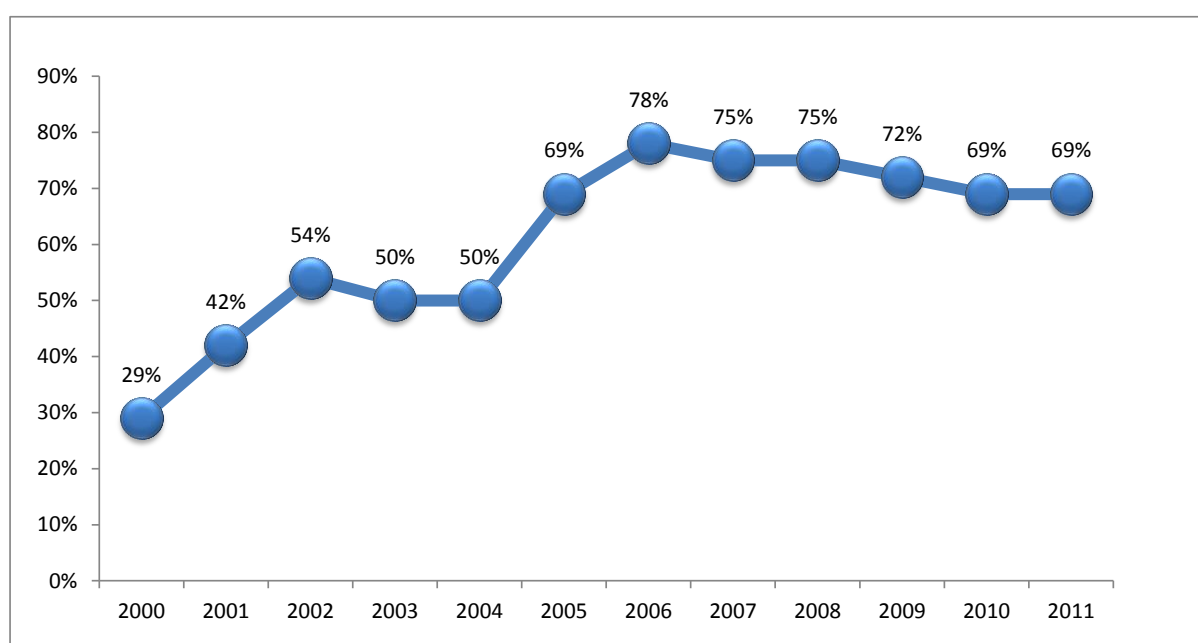


Figure 1: Republic of Macedonia Priority Data flow reporting performance (in %)

The overall performance is described in the figure above. From delivering 29 % of the data required in 2000, the performances have generally improved up to 69 % 2011⁶.

Table: Republic of Macedonia Priority Data flow reporting performance in 2000-2011(in %)

Country	Score 2000	Score 2001	Score 2002	Score 2003	Score 2004	Score 2005	Score 2006	Score 2007	Score 2008	Score 2009	Score 2010	Score 2011	Trend compared to last year	
Republic of Macedonia	29	42	54	50	50	69	78	75	75	72	69	69	0	➔

In the latest report covering the reporting from May 2011 to April 2012 the Republic of Macedonia had been ranked as 31st (of 39 reporting countries) reaching 69 %. The details in the data flow analysis for the Republic of Macedonia are shown in Annex 1.

⁶ Source: The EEA report EIONET Priority Data Flows (May 2011 – April 2012)
<http://www.eea.europa.eu/publications/eionet-priority-data-flows-2012>

Republic of Macedonia's obligations under ROD

ROD is part of Reportnet, which is a group of web applications and processes developed by the EEA to support international environmental reporting.

ROD⁷ – EEA's Reporting Obligations Database contains records describing environmental reporting obligations that countries have towards international organizations.

Republic of Macedonia has agreed to 112 reporting obligations including terminated obligations.

The full list of Republic of Macedonia's current reporting obligations including terminated obligations is presented at:

http://rod.eionet.europa.eu/obligations?country=24&id=&filter=GO&issue=-1&client=-1&terminated=Y&_sourcePage=YrHv5bQ4MEt8YYULH4DUIm0WuA-zk3z5gl650CioVuU%3D&_fp=G6tR7bCU5W5OmewDE0flxI2JqrsUbK8Z06PelsSZ_4RIH6ThhKnmD4IgridCo41

6. Description of current status of information systems

6.1 Description of current status of air emissions

There are three existing AE inventories in the Republic of Macedonia:

National Cadastre of air polluters and pollutants was prepared in 2004 and updated in 2009 by consulting company. The finance was procured from Swiss foundation. The cadastre was prepared according national methodology and contains the following data: identification of the polluters, description of the areas, location, and description of the technological process, general data for the business subject, amount and type of pollution, electricity consumption.

CORINAIR inventory was established in 2005. This inventory contain data for the basic pollutants SO₂, NO_x, NMVOC, CO, NH₃, TSP. Except in 2005, IIR was submitted also in 2010 and 2012. In 2011, Macedonia participated in the stage 3 review. In 2012 the CORINAIR inventory has been updated with HM data and their recalculations for period 1990-2010. Projections for SO₂, NMVOC, NH₃ and TSP for period 2010 and 2020, and recalculations upon them for period 1990-2010 were determined and are under revision. These data will be submitted next year. All IIR as well as CORINAR inventories reported in 2006 and 2012 were prepared by consulting company founded by EU projects. Inventories reported in the years between were prepared by Ministry staff and contained data only for the first three SNAP sectors.

GHG Inventory

The first GHG Inventory was established in 1998 containing data for the main GHGs (CO₂, N₂O, CH₄ for period 1990-1998. The aim of the Second National Communication was preparation of inventory for the main GHGs (CO₂, N₂O, CH₄) and other non-direct GHGs: HFCs, PFCs and SF₆ for the period 1999-2002. Third National Communication is currently under preparation. All communications were and are carried out with the financial support of UNDP.

⁷ Reportnet ROD at the EIONET website: <http://rod.eionet.europa.eu/index.html>

Identification of main concerns/problems/shortcomings/insufficiencies

The main problem is that there is no Established National Inventory System. As can be seen from above the preparation of inventories is project based, because of the lack of staff and lack of yearly allocated budget. Additionally there is lack of National emission factors and reliable activity data especially in the agriculture, traffic and waste sector which influence on the representatives of the data reported for these sectors.

Planned developments/projects + opportunities and constraints

In order to support international reporting obligation regarding Air emissions, we propose that EEA in cooperation with ETC/ACC organize hands on trainings and workshops with following topics:

- Determination of national emission factors;
- Calculation of PM10 and PM2.5 taken into account TSP emission data;
- Calculation of EMEP gridded data using appropriate national datasets including data on population, land use, spatial energy supply and use, road and other transport traffic;
- Review of the prepared projections for the period 2010-2020 for the basic pollutants;
- Presentation of the reporting process and obligations with regards of NEC Directive and LCP directive.

6.2 Description of current status of Air Quality

Air quality monitoring in Republic of Macedonia is performed by two institutions: Institute for public health and Ministry of Environment and Physical Planning. Institute for Public Health has 10 monitoring stations and Ministry of Environment and Physical Planning 17 monitoring stations and they comprise the State Automatic Quality Monitoring System. The data from the SAQMS arrives in the database, these data are being validated and from this processed and validated data we are making daily reports, monthly reports, annual reports and the preliminary assessment report.

EU Reporting

Current reporting towards EEA and EC are the following:

- EoI data (97/101/EC)
- Monthly ozone data (2002/3/EC)
- Summer ozone data (2002/3/EC)

Ongoing projects

Twining project “Strengthening the central and local level capacities for environmental management in the area of air quality”

- Improvement of air quality assessment
- Introduction of dispersion modeling
- Preparation for accreditation of calibration laboratory
- Establishment of air quality information system
- Preparation of pilot action plan and program for air quality protection for city of Bitola

UNECE project for ratification and implementation of the three last protocols under the LRTAP convention in which the following documents (containing measures for air quality protection) have been prepared:

- National plan for air quality protection
- National plan for emission reduction

Identification of main concerns/problems/shortcomings/insufficiencies

The main problems are: regular service and maintenance of the monitoring stations because of the problem occurred during the procurement of spare parts, regular calibration because of the regular procurement of gas bottles and lack of personal. All of the above problems are connected with lack of allocated budget.

Planned developments/projects + opportunities and constraints

We propose that EEA in cooperation with ETC/ACC to organize hands on trainings and workshops for implementation of QA/QC procedures in calibration laboratory, give support in further implementation of the CAFÉ directive in the area of determination of the chemical composition of PM_{2.5} at rural site and experts support air quality data analysis and source apportionment studies. We also stress the importance that EEA continue with the financial support for participation to the inter-comparison exercises organized by EC/JRC and by WHO and for participation of AQUILA group.

6.3 Climate Change

Among the goals which Republic of Macedonia has set forth under the UNFCCC is to obtain stabilization of GHG concentrations in the atmosphere on levels which would prevent dangerous anthropogenic (human induced) impact on the climate system.

The principles pertaining to the success are the following:

- Equality and shared, but differentiated responsibilities
- Acknowledging requirements and circumstances of developing countries
- Precautionary principle
- Promotion of sustainable development

Preparation of national communications

The obligatory chapters are the following:

- GHG inventory
- Climate scenarios
- Measures for mitigations and adaptation to climate changes
- Environment friendly transfer of technologies
- Research, education, capacity building and public awareness strengthening

Country specifics

- the country has no legally-binding quantitative commitments for reduction of GHG emissions
- the potential for emissions reduction is compared to the BAU scenario for 2020
- In all three scenarios the trend of emissions is increasing. The Second mitigation scenario exhibits the lowest annual growth rate of 1.4%

Further needs and challenges

The transposition and further implementation of the EU climate *acquis* is closely related to the assessment of the best practices in governance for the implementation of the *acquis*. An inventory process, which will be able to deliver results in accordance with MMD should be established and an in-depth analyses of the mitigation potential and costs by sectors need to be conducted.

Implementation modalities on reporting of **actions** and **measures** taken by different responsible institutions with regard to GHG emissions reductions need to be developed.

6.4 Water data management

Institutions responsible for monitoring of waters

The monitoring of quality and quantity of waters is under the jurisdiction of several institutions. Hydro-meteorological Administration (HMA) performs monitoring of quality and quantity of rivers and quantity of lakes and groundwater bodies. The quality of the rivers is

being monitored in the framework of the RIMSYS program, at 20 monitoring points on which there is continuous monitoring of the following parameters: nutrients, hazardous substances, organic micro-pollutants and other.

The hydrological state of the rivers and natural lakes is also monitored by the HMA, and the network contains 115 monitoring stations, on which the hydrological parameters are being followed. Due to the inadequate maintenance and lack of finances, almost half of these stations are not operational. The data from RIMSYS is available online at the website of the HMA: www.metoo.gov.mk.

The HMA also monitors the quantity of groundwater through the measurement of the following parameters: water level and temperature.

The Hydro-biological Institute of Ohrid is responsible for investigations of the pelagic zone of Lake Ohrid and Lake Prespa, at one measuring location with the use of the method with a vertical column with ten depths (0, 10, 20, 30, 40, 50, 75, 100, 150, 240 m). The following parameters are being analyzed: physico-chemical, biological, etc.

In the framework of the UNDP program: "Integrated ecosystem management in the Lake Prespa watershed", a river basin management plan was developed, according to the WFD requirements, and it contains: description of the location, delineation and typology of the water bodies, monitoring, pressures and impacts on water bodies, ecological status of water bodies and economic analysis of the river basin. For the identification of the water-bodies typology, the "System A" methodology is being applied, but the parameters from "System B" are also elaborated for the delineation of the water bodies in the Prespa river basin.

Within the framework of the same project, a monitoring network consisting of 18 monitoring points, located on the rivers, lakes and groundwaters in the Prespa river basin have been established, which are in compliance with the Water Framework Directive. It is expected in future that this network will not only be financially supported by international projects, but to be acquired with responsibilities from the state authorities.

According to the Law on Water, the state authorities responsible for public health protection are obliged to perform monitoring of the bathing waters, drinking waters and the implementation of measures for active protection of the population against infective and other diseases with high social and health related relevance. These institutions perform microbiological, parasitological, hygienic, toxicological and biochemical analysis in the scope of their work.

In the Macedonian Environmental Information Center a database is established, containing data on water quality and quantity. The database is being developed on the basis of collection, processing, analysis and presentation of data obtained from the institutions involved in the monitoring of waters (Hydro-meteorological Administration, Hydro-biological Institute of Ohrid and Public Health Institute with its regional offices in Republic of Macedonia, the Central Laboratory of the Ministry of Environment and Physical Planning, Public Enterprise on Water Supply and other subjects which perform monitoring of waters and which have obligations to submit data and reports to the MEIC).

The processed data are presented on a yearly basis in the form of annual reports and brochures, reflecting the status of waters in the Republic of Macedonia. Also, annual reports on river quality, lake quality, groundwater quantity and water emissions are being developed for delivery to the EEA.

Challenges

Although the Water Framework Directive (2000/60/EEC) is transposed in the national legislation (Law on Water, adopted in 2008) its practical implementation started in January 2011. For complete and successful implementation of water monitoring, according to the

WFD requirements, further allocation of finances and the securing of up-to-date technical equipment are needed, as well as well trained staff and additional human resources.

Future Plans

In the following period, full implementation of the WFD is expected, including intercalibration of water bodies, expansion of the cooperation within Eionet and full implementation of the UWWTD in practice.

6.5 Environmental monitoring of soil and access to environmental information

Permanent monitoring, i.e. systematized measurement, monitoring and control of the state, quality and changes in the soil as environmental media in the Republic of Macedonia does not exist. There has been no comprehensive strategy and national policy for contaminated sites management or specific legislation to regulate contaminated sites investigation and cleaning up.

Macedonian Environmental Information Centre within the Ministry of Environment and Physical Planning is responsible for collection of data and information related to any way of soil degradation and contamination, land use change, erosion, salinization, etc. Such data is processed and indicators Progress in management of contaminated sites and Land take have been developed and public is informed on the state of the soil as environmental medium. Data and information of the Macedonian Environmental Information Centre originate from certain published papers, mainly as scientific works and books of individual authors or group of authors, as well as established environmental statistics. There is an erosion map to the scale 1:50 000 completed in 1992, but the digital version was finished in 2002. There is a map of the irrigation net in Macedonia, and these data, combined with a climatic map, could be used for the quick assessment of area vulnerable to salinization. A soil map to the scale 1:50 000 has not been finished yet. The PHARE projects Corine Land Cover 2000 (data of 1996) and Corine Land Cover 2006 (data of 2006) based on decoding of satellite images give data about land cover and changes. All maps are to the scale 1:100 000. Based on these data an area vulnerable to land degradation and land use change could be assessed. All activities regarding soil management are spread over different institutions in agriculture, forestry and water economy. One of the biggest problems is the communication between different institutions.

There has been an increasingly recognized need to adopt appropriate law in the Republic of Macedonia, to regulate soil from several points of view, as environmental medium, to establish the maximum permissible concentrations in soils for different purposes, with regard to heavy metals, certain substances as pesticides, polycyclic aromatic hydrocarbons, halogen hydrocarbons, etc. and to establish the permanent monitoring of the soil, with an accent on areas with highest contamination of the soil. There is a need for comprehensive strategy and national policy for contaminated sites management specific legislation to regulate cleaning up of contaminated sites.

6.6 Waste

The Waste management information system (WMIS) has been developed under the IPA project titled: Strengthening the central and local level administrative capacities for implementation and enforcement of waste management legislation. The WMIS is a web application installed on a Microsoft SQL Server 2008 of the Ministry of Environment and Physical Planning, and it can be used from any computer with Internet access and an Internet browser. The overall objective of WMIS is to enable the Republic of Macedonia to meet the requirements specified in the European acquis regarding - reporting of information on the production and treatment of waste, aide the process of preparing and monitoring of

the implementation of waste management plans and programs at all levels, and for reporting to the Basel Convention.

Currently, the WMIS contains data and information that comes from the five sources of information according to the current legislation on waste management. The first source are the Annual consolidated reports from legal and physical persons, dealing with collection of hazardous waste, storage, treatment, processing and disposal of hazardous as well as non-hazardous waste, which contain information about types, quantity and origin of the collected, treated or processed waste and landfilled waste. The second sources are the Annual reports from mayors of municipalities which contain information for the type, quantity and origin of the collected, transported and disposed non-hazardous waste. The third sources are the Annual reports that come from the generators of hazardous waste which contain information about types and amounts of generated hazardous waste, as well as the manners of waste storage, treatment and disposal. The fourth source of information are the Plans and Programs for waste management from the municipalities. According to national legislation, the responsibilities of the waste producers, collectors, traders and land fillers of hazardous waste and collectors, traders and land fillers of non-hazardous waste - are to control individual waste streams, to register their quantities and characteristics and to provide such treatment and disposal operations, that according to regulation, are acceptable from the environment and from the economic aspect. The implementation and maintenance of the waste management information system shall cover data on the sources, nature, quantities and final destination of waste, the main information on facilities for recovery, recycling and energy utilization of constituents of individual waste streams and, information on final disposal facilities. The fifth source of information is the Information provided by the Companies performing the import, export or transboundary movements of waste, according to Basel convention.

The development of the waste management information system (WMIS) is an on-going process involving many stakeholders, including the Waste Management Department (WMD) and the Macedonian Environmental Information Centre (MEIC) of the Ministry of Environment and Physical Planning (MoEPP). The system shall develop in the wider context of waste management in the country, including the introduction of Municipalities, Regional Waste Management Bodies (RWMBs), Companies, etc.

WMIS has to be extended to cover data and information on packaging and packaging waste, waste batteries and accumulators and waste from electric and electronic equipment, and to have possibilities to enter data about the type and quantities of products (electric and electronic equipment, batteries, accumulators, and packaging materials) that is put on the market.

For the full enforcement of legal acts regarding the waste management reporting through WMIS, there is necessity of amendments in the current legislation and submission of reports. There is an evident need for allocating the financial resources for interpretation and instruction of all relevant stakeholders for WMIS usage, as well as proper allocation of responsibilities and obligations of all involved parties.

6.7 Corine Land Cover

The CLC2006 project implementation: September 2007 - November 2008;

It is important to note that Macedonia has only one CLC inventory which was completed in 2000 year, based on the images of 1995-1996 year. However, this data set was accepted as CLC2000 for the purpose of CLC2006 project.

Macedonia in the CLC2006 needed to pass the phase of geometrical errors correction that most of the participating Countries have eliminated in CLC2000 phase (for Macedonia, about 5% of the territory of the country)

The Current status – usage

The CORINE LandCover database is distributed by the MoEPP. The database is freely available to potential users, but unfortunately, the only official request for this data was received from the Spatial Planning Agency, to be used in the Spatial planning process at National Level. Thus, the database is frequently used for reporting purposes, mainly by MoEPP, for national or international obligations.

Encountered problems

- The level of details is inadequate or insufficient for national/local usage. The development of the forth level in CORINE LandCover nomenclature on national level is essential.
- The data interchange between institutions is difficult due to the not harmonized data sets between institutions.
- There is a very low level of data availability/accessibility and awareness between institutions.
- We are missing an official national infrastructure for data promotion and sharing.

6.8 Environmental Noise - Current status

Noise level measuring and monitoring is not a continuous process and usually is conditioned by the availability of funds. In the Republic of Macedonia, noise monitoring is performed by following IPHs:

- **Skopje** - 14 measurement points, for the period from 1990 to 2005, and all this data are not consistent with the requirements of the Law on Protection Against Noise in the Environment.
- **Bitola** - 9 measurement points, for the period from 1998 to 2009, and all this data are not consistent with the requirements of the Law on Protection Against Noise in the Environment. The data for 2010 and 2011 are consistent with the requirements of the Law on Protection Against Noise in the Environment.
- **Kicevo** - 7 measurement points, for the period from 2005 to 2009, and all this data are not consistent with the requirements of the Law on Protection Against Noise in the Environment. The data for 2010 and 2011 are consistent with the requirements of the Law on Protection Against Noise in the Environment.
- **Kumanovo** - 10 measurement points, for the period from 2007 to 2009, and all this data are not consistent with the requirements of the Law on Protection Against Noise in the Environment. The data for 2010 and 2011 are consistent with the requirements of the Law on Protection Against Noise in the Environment.

Progress

- The Noise monitoring Program, which is a part of comprehensive Environmental monitoring program, is under construction
- In 2011 we Adopted:
 - Major agglomeration (Skopje, Bitola, Tetovo and Kumanovo)
 - Major road (13 sections)
 - Major railway (Tabanovci – Gevgelija)
- Preparatory training for municipalities with obligation to prepare noise strategic maps
- In the framework of the project supported by Dutch government we produce the Pilot strategic map for Skopje

Activities related to work with EEA

- Macedonia actively participates in workshops for NRC-Noise

- Few months ago, we started activities for filling-in the templates for ROD:
 - Noise Directive DF1/DF5: Report on major roads, railways, airports and agglomerations
 - Noise Directive DF2: Competent bodies
 - Noise Directive DF3: Limit values in force

Main Problems

- Lack of human resources on central and local level, for the implementation of Noise regulation
- Lack of appropriate training
- Raising the profile of Noise on the environment agenda
- Lack of financial support for:
 - Establishment of national monitoring for noise
 - Establishment of calibration laboratory for noise equipment
 - Preparation of strategic noise maps

6.9 Nature and biodiversity monitoring

The activities and cooperation with the EEA for the part of biodiversity is more objectively reflected in the annually reports for CDDA which are submitted to the EEA. The national data is collected from the nature department and GIS department in the Ministry of Environment and Physical Planning.

According to the law on nature protection, the protected areas in the Republic of Macedonia are divided into the following six categories: Strict natural reserve, National park, Natural monument, Nature Park, Protected landscape and Multipurpose area.

The net of designated areas in the Republic of Macedonia includes 75 objects with total area of which is approximately 7,97% of the total territory of the country. Under the Law on Nature Protection, the categories of designated areas are harmonized with the categorization of IUCN and the law imposes an obligation to make a revalorization of most of the protected areas according to the new categorization. Currently, this process is making a slow progress due to a need of further allocation of funds and human capacities.

Emerald network

In the period from 2002 until 2008 in Republic of Macedonia, four projects have been finalized for the identification of areas of special conservation interest (ASCI). With the first project finalized in 2002-2003, three areas have been identified. In 2004, a second project was finalized, with which 3 more areas have been identified. With the third project finalized in 2005-2006, 10 areas have been identified, while with the fourth project finalized in 2008, 19 more areas have been identified. These areas amount to a total of 35 protected areas or approximately 29% of the territory of the Republic of Macedonia.

All future activities related to the Emerald network and the obligations deriving from the EEA and European Union, are dependent on further national allocation of finances and human resources, which would allow for a completion of the recommendations given to the Ministry of Environment and Physical Planning, at the last Emerald Biogeographical seminar organized by the EEA. This means that a completion of the national inventory is needed according to the recommendations from the Emerald Biogeographical seminar, a correction of the inconsistencies in the national database and the scientific research, as well as identification of new areas if there is recognition of such a need.

6.10 Protocol on PRTR

The process of implementation of the Protocol on PRTR started with the signing of the PRTR Protocol to the Aarhus Convention (Kiev 2003, Ministerial Conference) on 22 May 2003. In 2010 the Protocol on PRTR was ratified with the law of ratification of the Pollutant Release and Transfer Register (Official gazette No 135/2010, from 08.10.2010).

Rulebook on the form, the content, the methodology and the manner of maintaining of the Pollutant Release and Transfer Register (Official Gazette No: 27/2011 from 03.03.2011) was prepared and adopted but it will enter in force in January 2013.

Translated in to Macedonian the following documents:

- Protocol on Pollutant Release and Transfer Registers
- Pollutant Release and Transfer Registers (PRTRs): A Tool for Environmental Policy and Sustainable Development - 1996, OECD/GD(96)32,
- Guidance on Implementation of the Protocol on pollutant Release and Transfer Registers to the Convention on Accesses to Information, Public Participation in Decision-making and access to Justice in Environmental Matters

Cadastre of polluters (air, water and waste generation) was established.

The Cadastre of Air Polluters and Pollutants contains data on air pollutants and polluters. This database contains data for 2004/2005 from some 1,600 entities on their emissions of five pollutants: CO, NO_x, SO₂, VOC and TSP, as well as data on entity location, description of the technological process, general data for the business subject, electricity consumption, etc. The data stem from the replies to a dedicated questionnaire by business subjects, emission measurements and estimation. In 2010, the database was updated with data for the years 2008 and 2009.

The Cadastre of Wastewater and Solid Waste Generators, a self-standing database, has been under development since 2004. It contains data on activities and installations, which pose or may pose a threat to the environment. The Cadastre covers:

- Production and industrial entities
- Public enterprise
- Transport companies
- Hotels, resorts
- Medical facilities (public health institutions, hospitals, clinics, polyclinics, laboratories and veterinary stations)
- Services (dry cleaning and other cleaning services)

The CORINAIR Inventory covering emissions of main air pollutants (CO, NO_x, SO₂, VOC and total suspended particles-TSP) was established in the country in 2004-2005. It is used for both national needs and for reporting under the Convention on Long-Range Transboundary Air Pollution (CLRTAP) and to the European Environmental Agency. The most recent cycle of CORINAIR inventory was finished in 2010.

The national greenhouse gas (GHG) inventory was prepared for the years 1999-2002 (with 2000 as base year) under the second national communication to the UNFCCC (2008).

An inventory of substances belonging to the group of greenhouse gases (GHGs Inventory) was prepared for the first time in 2002. In 2008, a Second National Communication on Climate Change was produced covering both direct GHG and non-direct GHGs (HFCs, PFCs, SF₆, CO, NO_x, SO_x and NMVOCs). No other update of the GHG inventory has been established since then because of the lack of funds.

All the above-mentioned databases are in fact "locked in", not-interconnected databases. There is no real-time access to data via Internet and are going to be used for development of national PRTR.

Future steps

For full and successful implementation of the Protocol on PRTR we need the following:

- Strengthen the system for integrated control and prevent pollution.
- Establish a comprehensive national monitoring program for environmental and unique methodology
- Develop user friendly software and publicly accessible web portal on PRTR
- Well-trained human resources (authorities, operators and NGOs),
- Development of a reporting form etc.
- Campaigns for awareness raising
- Cooperation with international organizations and institutions

7. Development of National Environmental Information System

Establishment of the National Environmental Information System (NEIS) is a part of NPAA and it is stated in the Environmental data management strategy, which was approved by the Government of the Republic of Macedonia in 2006.

In the past few years, based on the performed estimations of the current systems for environmental data management in the Republic of Macedonia, the following deficiencies were found:

In the Republic of Macedonia more institutions are included in the establishment of the regulated environmental programs, such as: pollution control and quality of air, water and soil; noise control; solid and liquid waste control etc. Within this programs information systems have been developed that refer to strictly focused areas in the environment and are suitable only for special needs. The institutions manage with a large amount of small, mutually unconnected and unsynchronized databases, inadequate for fulfilling wider needs and requests;

No predefined and established criteria and standards for the design of the information systems and unreliability of the data management methods used by different institutions or in the frame of the same institutions that results with creation of mutually independent an incompatible information system. Coordination and cooperation between the relevant institutions is not on the satisfying level

Besides these deficiencies, Environmental Information Systems for 3 different environmental topics were developed:

National Biodiversity Information System

The National Biodiversity Information System is the national database dedicated to the collation, management, analysis and dissemination of data and information on Macedonian biological diversity. It was developed under UNDP project and it is running on Microsoft SQL Server 2008. The National Biodiversity Information System is structured in local and central database. It is accessible via internet on the following URL: <http://nbis.moep.gov.mk/>

National Waste Management Information System

The National Waste Management Information System is the national database dedicated to the collation, management, analysis and dissemination of data and information on waste management. It was developed under EU funded IPA project and it is running on Microsoft SQL Server 2008. The National Waste Management Information System is accessible via internet on the following URL: <http://ewmis.moep.gov.mk/>

National Air Quality Information System

The National Air Quality Information System is the national database dedicated to the collation, management, analysis and dissemination of data and information on air quality. It was developed under Twinning IPA project and it is running on Red Hat Linux server. As part of the twinning project a web portal for air quality was developed for near-to-real time publishing of data for the State Monitoring network for air quality. The Web portal is accessible via internet on the following URL: <http://airquality.moepp.gov.mk/>

Future steps for Development of the National Environmental Information System

- Establishment of the National Environmental Databases for all environmental topics in the MEPP, with appropriate application modules, that will enable automated and standardized data gathering and automated data validation.
- Establishment of environmental data and metadata standards and repositories;
- Legal and technical standards, to regulate methodologies and procedures in the creation, access, protection and uniformity of environmental information in the related institutions and the Country as a whole;
- Preparation of appropriate secondary legislation on different environmental areas related to the data acquisition and sharing between the MEPP and other stakeholders;
- Developed web interface that will allow data access via internet in real time that includes import of spatial data that enables GIS integration for all environmental topics

Main problems for development of the National Environmental Information System are the following:

- Lack of national funding for further development of the National Environmental Information System
- Lack of database administration IT staff in the Ministry
- Lack of web programming IT staff in the Ministry
- Lack of regular IT trainings in the Ministry

8. Other Information products

8.1 Process of environmental indicator development

One of the useful and practical ways of environmental data use is development of National set of environmental indicators.

In Republic of Macedonia, this process was initiated by activities carried out in the frames of several projects supported by EEA for regional environmental indicators development, to be in line with EEA CSI.

As a result of these projects, 25 regional indicators were identified.

On national level, 27 indicators are in line with EEA CSI out of the total 37 EEA CSI.

With regard to the rest 10 indicators:

- 5 indicators are not relevant for the Republic of Macedonia and
- for 5 indicators we have lack of data.

The Draft National Set of Environmental Indicators was prepared on the basis of the EEA Core Set of Indicators, i.e. indicators developed during EEA Projects. Each indicator is presented by a fact sheet, produced in accordance with the template adopted by the

European Environmental Agency. Each indicator is presented by: legal basis, methodology, data source, assessment etc.

At national level, we adopted 40 Environmental indicators, focused on 12 themes, as well as around 75 Environmental statistics indicators, focused on 10 themes, which are consistent with EEA Core set of indicators and EUROSTAT. In indicators development we apply DPSIR framework approach and most of them are compatible with SDI and Thematic indicators.

8.2 Environmental Reports

Macedonian Environmental Information Centre is responsible for the development of the environmental reports. Developed indicators are used to produce adequate environmental reports, such as: Annual Report on the Quality of Environment, Environmental indicators reports and Environmental Statistics on a national level and State of environment reports and various reports for Pan-European Ministerial Conferences, on international level.

We also produced daily information and monthly report for air quality, and several thematic brochures.

Main Problems and Challenges

- **Monitoring is not fully developed** for all environmental media, which results in non-continuous data collection by the relevant institutions and organizations resulting
- **Lack of data series in specific areas**, especially lack of historical data to be compared with the present state
- Insufficient cooperation among the relevant institutions. Namely, existing data is owned by different institutions and regular data/information flow has not been established yet, although the legal grounds for that purpose has been provided
- Different methodologies for calculations
- **Quality**, i.e. format of data which in most cases requires detailed analysis, checking and reprocessing
- Lack of experts in individual areas
- There is lack of financial resources to cover the costs of external experts that need to be involved, for example, in the SOER development

Next steps

- The process of indicators updating, through which current indicators should be reviewed, their justification and relevance for environmental policy making should be checked, is ongoing.
- Also, the process for developing of list of indicators is ongoing. This list of indicators, is metadata base,

Expectations from EEA

- Extension of the projects for regional environmental indicators development
- Guidelines and training for SoE reports preparation
- Inclusion of data from MK and WB in the preparation of all EEA reports

8.3 Forward Looking Information and Scenarios - FLIS

We have acknowledged the importance of Forward Looking Information and Scenarios (or Services) as part of the EEA work program and we have understood the relevance both for the national aspects and the activities related to the EEA – more specifically, use of Forward Looking information in State of Environment report, both national and those prepared by the EEA.

We have also acknowledged the importance of using of Forward Looking information in the processes of national policy creation and policy optimization by other countries and relevant institutions; but further national efforts are needed in order to raise the profile and importance of FLIS and its multi-disciplinary use by the highest executive level in our Ministry of Environment and Physical Planning.

Our current experience is mainly from the annual NRC FLIS meetings, which provide insight on the issues and allow for networking which increases the availability of success stories, support and future training. Several other events have allowed our NRC FLIS to gain further insight and knowledge in this direction:

- “Energy availability in Central and Eastern Europe and West Balkan” – a workshop on which the impacts of global megatrends have been assessed.
- “Opportunities for development in the Western Balkan in the context of Climate Change impacts and Water Scarcity” – thematic workshop.

The overall assessment of the current status of our national capacities related to FLIS implies a very limited experience and the need of further training, both within the cooperation process with the EEA, as well as the consolidation of national human capacities.

Among the future planned activities under the EEA work program and cooperation with the West Balkan countries is the following:

- “Integrated forward-looking assessment of good water availability in the West Balkan region” – which could be used as a backgrounds study for environmental reporting and policy optimization, as well as to strengthen the national capacities for FLIS.

Among the national prospects and outlook for FLIS is the possible added value in the national state of environment reporting, the policy relevant role in our national legislation, as well as the strengthened capacities for successful contribution to specific projects such as the EEA's SOER2015.

9. Conclusions

The successful cooperation between the EEA and the Macedonian Environmental Information Center, as the National Focal Point for Republic of Macedonia, has been given new dynamism with the IPA project 2009-2011 and continues under the IPA 2011-2013 project. The regular participation of our national experts at the annual NRC and other thematic workshops has strengthened our capacities to effectively respond to the EEA requests and obligations, as well as to reflect this capacity in our national activities and results. Through our contribution to flagship products such as the SOER2010, the development of the publication - West Balkan Core Set of Indicators 2012 and other thematic products, we have demonstrated our ability to deliver and grow. Such activities have allowed us to work side-by-side with many European experts who have transferred their knowledge and skills to our team.

The financial support provided by the EEA through the EU Commission's IPA instrument, has provided unprecedented dynamism in capacity building and institution building in Republic of Macedonia, which is reflected in our national contributions to the EEA work program towards improving the availability and quality of environmental information and the actual state of Europe's environment.

Many of the problems, shortcomings and concerns which pertain to the success of Republic of Macedonia and its environmental agenda, have been carefully reflected upon in the respective thematic sections of this report. The aim was to provide an objective idea on the

current status and success in the thematic areas, which not only depict the state of the national monitoring infrastructure, data gathering, analysis and communication aspects, but also assess the national capacities to respond to an ever growing European environmental agenda.

Annex 1. Detailed data flow analysis for the Republic of Macedonia

Data flow name	Progress 2011-2012	Remark
AE1: LRTAP data		Delivery on time in CDR. Shorter length of time series provided for criteria pollutants (2010). LRTAP/EMEP emission inventory status report also provided.
AE1b: NEC data	N/A	Data flow is relevant for EU MS countries only.
AE2: UNFCCC data		No information available in CDR (15 May 2012).
AE2b: EU GHG data	N/A	Data flow is relevant for EU MS countries only.
AQ1: EoI data		Data delivered on time. Data on particulate matter available for 2010. More than 50 % active stations monitoring PM ₁₀ . Response to feedback report provided but not available in CDR.
AQ2: Air quality questionnaire	N/A	Participation in the 2011 data flow is voluntary for countries which are not EU Member States.
AQ2b: Monthly and summer ozone data		All monthly reports for 2011 provided on time in CDR. Summer report delivered on time. Requested metadata provided.
CDDA1: Designated areas		Delivered on time: 75 sites reported. All sites have designation, IUCN category information and coordinates. Size has been reported for 57 sites (76%). Boundary data provided for 72 sites (96%).
E-PRTR1: European Pollutant Release and Transfer Register	N/A	Country did not participate in this data flow.
EWN1: River quality		Data delivered on time, but not in the requested format. Monitoring stations provided without coordinates. Data for 4 of the 5 preferred SoE nutrient groups delivered. Some hazardous substances data delivered. Proxy pressures data provided. Some long time series on nutrients available.
EWN2: Lake quality		Data delivered on time and in the requested format. Monitoring stations with coordinates provided. Data for 2 of the 5 preferred SoE nutrient groups delivered but only for one station. Hazardous substances data not delivered. Proxy pressures data not provided. Only limited long time series on nutrients available. No reply to critical QA issues on previously reported data.
EWN3: Groundwater quality		Data delivered on time and in the requested format. Data for 3 of the 5 requested chemical substances provided, all in disaggregated form. Monitoring sites with coordinates and links to GW bodies provided. List of GW bodies with most important attribute data provided. GIS data missing.
EWN4: Water quantity ⁽¹⁾		Data delivered on time. Reported only regional data. Reported: 42 regional parameters at NUTS level for 100 % of NUTS all of which in annual scale. Did not report the total number of available stations.
ME1: Marine data	N/A	Country does not have a coastline.
NRT03: Near real-time ozone data ⁽¹⁾	N/A	Country did not participate in this data flow.
WISE1: Emissions to water ⁽¹⁾		Data delivered on time. Nutrients and organic matter emission discharges not provided for determinands from diffuse sources and for 4 determinands from point sources that are split between urban and industrial discharges. No hazardous substances emission discharges provided.

⁽¹⁾ The scores are provided for information only.