



REPUBLIC OF SLOVENIA

MINISTRY OF THE ENVIRONMENT
AND SPATIAL PLANNING

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Environmental Agency
of the Republic of Slovenia



Potentials for Territorial Cooperation with Western Balkans Maribor, 19.-20. April 2010

Session 2 – Recognised Potentials, Opportunities and Problems

Environmental Agency of the Republic of Slovenia

Dr. Silvo Žlebir, Director General





This presentation:

- About the Environmental Agency of the Republic of Slovenia
- Examples of present cooperation with Western Balkan countries: DMCSEE, RIC
- Future opportunities
- Some problems (obstacles ?)





Environmental Agency of the Republic of Slovenia (EARS) - General facts

- Working areas:
 - National meteorological service
 - National hydrological service
 - National seismological service
 - Environmental monitoring (air, water, soil)
 - Administrative procedures – environmental permitting and licensing
 - Water management
- 430 employees
- ~ 35 mio EUR annual budget
- Synergy of working areas !!!





Monitoring of the State of Environment

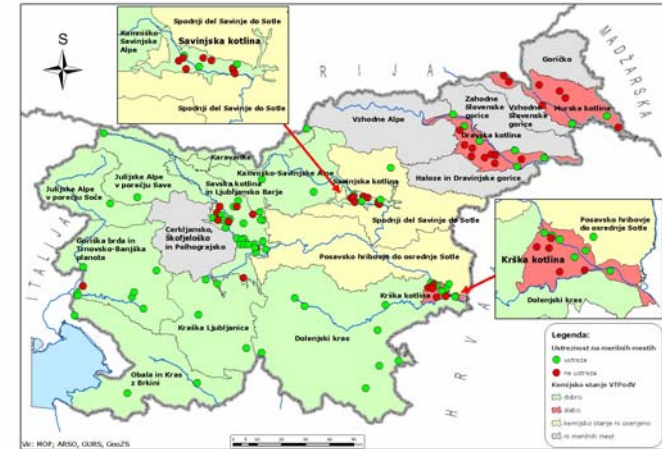
Pollution monitoring

- Water quality
- Air quality
- Soil quality

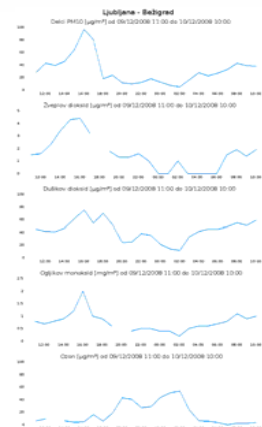


Monitoring of natural phenomena

- Meteorology
- Hydrology
- Seismology

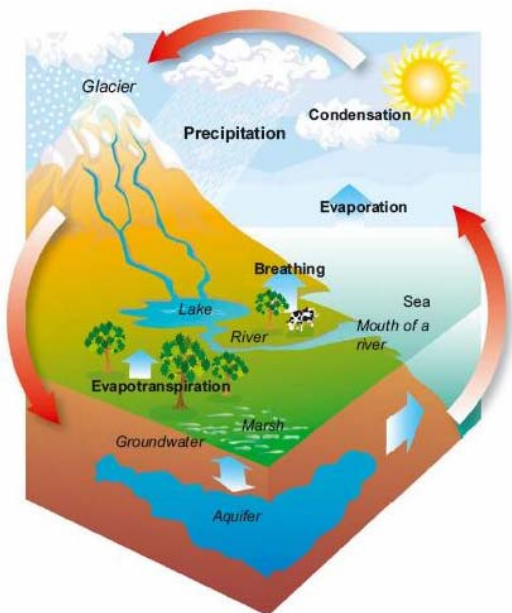
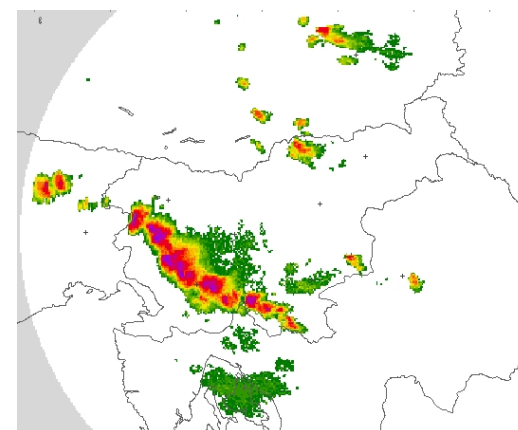
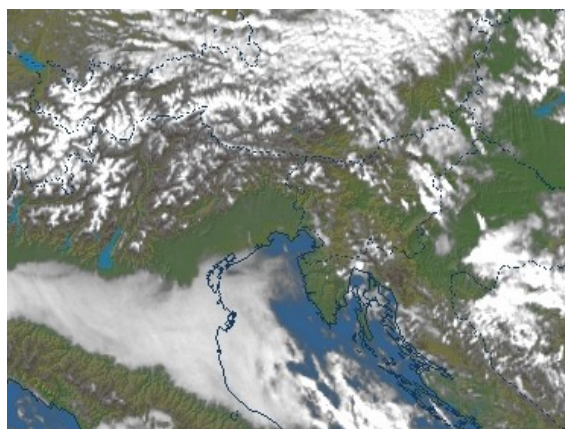


- Measuring network and laboratories with QA
- 1100 measuring spots
- 30.000.000 measured point data /year
- 204 measured parameters
- 330 different types of measuring equipment





Meteorology, Hydrology and Seismology





Administrative Procedures - Environment



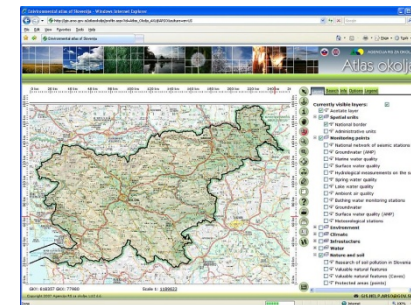
- Environmental Impact Assessments
- Environmental permits: IPPC, other permits based on EU legislation and EP Act
- Authorization of operational monitoring for water, air, soil, noise, electromagnetic radiations
- Environmental taxes
- GHG Emissions Trading Registry





Environmental registers, records and databases

- Databases of:
 - state of environment
 - meteorological, climatological, hydrological and seismological data
 - industrial emissions
 - GHG emissions
 - waste and treatment
 - purification facilities
 - polluters
 - providers of public services
 - authorized providers of operational environmental monitoring
 - facilities built from environmental tax money
 - GIS based !
 - etc





Nature conservation

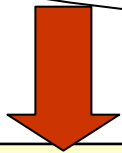
- Official records:
 - areas, important for preserving biodiversity (Nature 2000, Ecologically Important Areas)
 - endangered species in Slovenia - Red lists
 - natural values, including caves
 - protective measures for endangered species
- Administrative procedures related to natural values protection, areas important for biodiversity and protected areas
- CITES convention related tasks



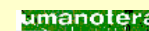


Reporting obligations of the Republic of Slovenia

Obligations stemming from international legal norms,
adopted in the RS and referring:



- To the bodies of the international institutions:
 - DG-Environment at EC
 - European Environment Agency
 - Secretariats of the Conventions etc.
- To the Government
- To the public, media, NGO...











EARS Quality System

- The pillars of EARS QA system:
 - ISO 9001:2000 – Management System
 - Laboratory accreditation – ISO/IEC/SIST 17025
 - *Calibration laboratory, Chemical Analysis Laboratory*
 - QA for EARS measurement network – Regulation on network quality assurance
 - QWEB 2.0 certificate www.arso.gov.si
 - Certified Service Provider for Aviation Meteorology (Regulation EC No. 2096/2005 – Provision of Air Navigation Services)






Cooperation with international, national and EU institutions and organizations

- European Environment Agency (EEA) 
- World Meteorological Organization (WMO) 
- European Centre for Medium-Range Weather Forecasts (ECMWF), EUMETSAT, ESA... 

- European Commission, Joint Research Centre (JRC) of the EC 

- Bilateral cooperation with comparable institutions in EU and neighbouring countries

Involvement in international and EU programmes and initiatives

- GEO / GEOSS
- GMES
- Interreg, FP7 (as end user), COST
- EPA Network
- IMPEL... 
- ...



Example of present cooperation with Balkans:

Drought Management Centre for Southeastern Europe (DMCSEE)

Background

- October 2004: A “Balkan Drought Workshop” in Poiana/Brasov (RO), co-sponsored by the UNCCD
- April 2006: “2nd technical workshop” in Sofia (BG).
Participants: UNCCD focal points, permanent representatives with the WMO, observers from UNCCD and WMO;
Outcome: Framework for the preparation of a project proposal on the establishment of DMCSEE within the context of the UNCCD,
- September 2006: Decision on Environmental Agency of Slovenia as DMCSEE host institution under the auspices of **UNCCD and WMO**
- **13 Member countries from SEE region**





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DMCSEE

Currently, DMCSEE is a TCP-SEE supported project!

15 partners from 9 countries
Total project budget 2.2 M€

Not all countries participate!
(not all countries are eligible)



| | | |
|---|------------|----------------|
| Environmental Agency of Slovenia | Slovenia | (lead partner) |
| Slovenian Institute of Hop Research and Brewing | Slovenia | |
| Hungarian Meteorological Service | Hungary | |
| VITUKI Environmental Protection and Water Management Research Institute | Hungary | |
| Directorate for Environmental Protection and Water Management of Lower Tisza District | Hungary | |
| Institute of Soil Science "Nikola Poushkarov" | Bulgaria | |
| National Institute of Meteorology and Hydrology | Bulgaria | |
| Agricultural university of Athens | Greece | |
| GEORAMA (non-governmental and non-profit organization) | Greece | |
| Meteorological and Hydrological Service | Croatia | |
| Republic Hydrometeorological Service of Serbia | Serbia | |
| Hydrometeorological Institute of Montenegro | Montenegro | |
| Hydrometeorological Service | FYROM | |
| Institute for Energy, Water and Environment | Albania | |



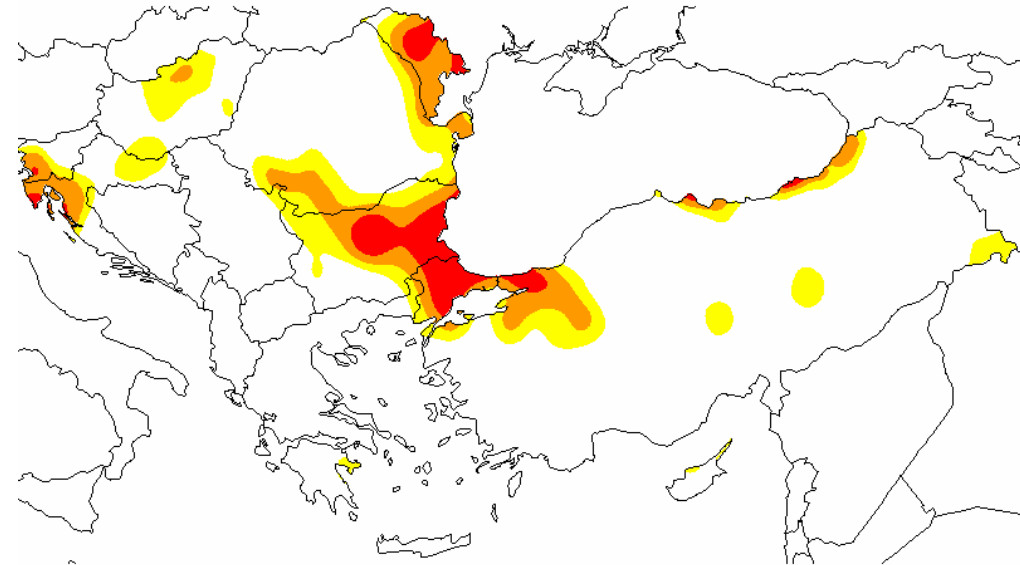
DMCSEE

SPI Jun 2009 (3 months)
GPCC final analysis

Foreseen outcomes of the TCP project

Overview of existing procedures for climatological mapping;
Can we profit from existing capacities in climatological analyses to perform drought monitoring?

Preparation of drought impact archive



■ extreme drought $SPI \leq -2$ ■ severe drought $-2 < SPI \leq -1.5$ ■ moderate drought $-1.5 < SPI \leq -1$

Standardized precipitation index (SPI), computed from GPCC data

Example of late spring drought in 2009 which resulted in crop yield losses in Bulgaria and Serbia



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DMCSEE

Recent past events

Project kick-off meeting, Budapest, September 2009

Training on meteorological drought indices, Ljubljana,
September 2009 (in collaboration with JRC)

Training on climatological practices for drought monitoring,
Budapest, February 2010



Future events

Training on irrigation scheduling
systems, Ljubljana, June 2010

BALWOIS conference –
Dedicated DMCSEE session

BALWOIS
Water Observation and Information System
for Decision Support
Ohrid, Republic of Macedonia, 25-29 May 2010
www.dmcsee.eu





Example of present cooperation with Balkans:

Regional Instrument Centre (RIC) for Southeastern Europe

- WMO **Regional Instrument Centre (RIC)** appointment in 2005 in the RA-VI designated for the SE Europe.
- The main perspective is to ensure quality of measured data in meteorology, hydrology, air quality monitoring
- Important objective of RIC: cooperation among calibration laboratories to assist WMO Member countries in the Region in calibrating their national measurement standards
- **There are 3 nominated RICs in Europe (France, Slovenia and Slovakia) !**





EARS RIC

Introduction of EARS Calibration laboratory

- EARS Calibration laboratory is **accredited** according to the standard ISO/IEC 17025 for calibration temperature, relative humidity, air pressure and air quality instruments: O₃, CO, SO₂ in NO_x
- Highest BMC !
- Calibration laboratory also performs **different non-accredited** calibrations
- Nominated as **National reference laboratory** for air quality parameters in 2004.



Air pressure laboratory



Air quality laboratory



Past activities of EARS RIC in SE Europe

- **Training workshop on metrology** for RA-VI South-Eastern Europe, Ljubljana, April 2006.
Participants: Bulgaria, Bosnia and Herzegovina, Croatia, Cyprus, FYR Macedonia, Serbia and Montenegro, Romania and Turkey.
- **RIC intercomparison** of basic metrology quantities (temperature, relative humidity, air pressure) for NHMS in the South-Eastern Europe in 2007.
Participants: Croatia, Hungary
- **On-job training** for calibration personell in 2008.
- Hosting Serbian colleagues in 2008 for metrology training and **calibration** of their **air pressure standard**



Laboratory for temperature and relative humidity





Present activities of EARS RIC in SE Europe

In the frame of 'Regional cooperation in SEE for meteorological, hydrological and climate data management and exchange in support of disaster risk reduction (**DRR/SEE Project**) RIC is involved in following activities:

- **Metrology expert mission to the national meteorological services in SE Europe** with objective to strengthen cooperation in the field of quality assurance and to evaluate calibration capabilities of national meteorological services.
- Organization of **Workshop on Calibration** in May 2010 at EARS.

Participants: Albania, Bosnia and Herzegovina, Serbia, FYR of Macedonia, Montenegro, Kosovo and also Croatia in Turkey

EARS UmL is involved in the **IPA 2008 project** (training for proficiency testing) as expert laboratory in the field of proficiency testing for anorganic air pollutants (CO, SO₂) in the SE Europe.





Potential opportunities for cooperation with Balkans:

Hydrometeorological Information and Flood Forecasting/Warning System for the Sava River Basin

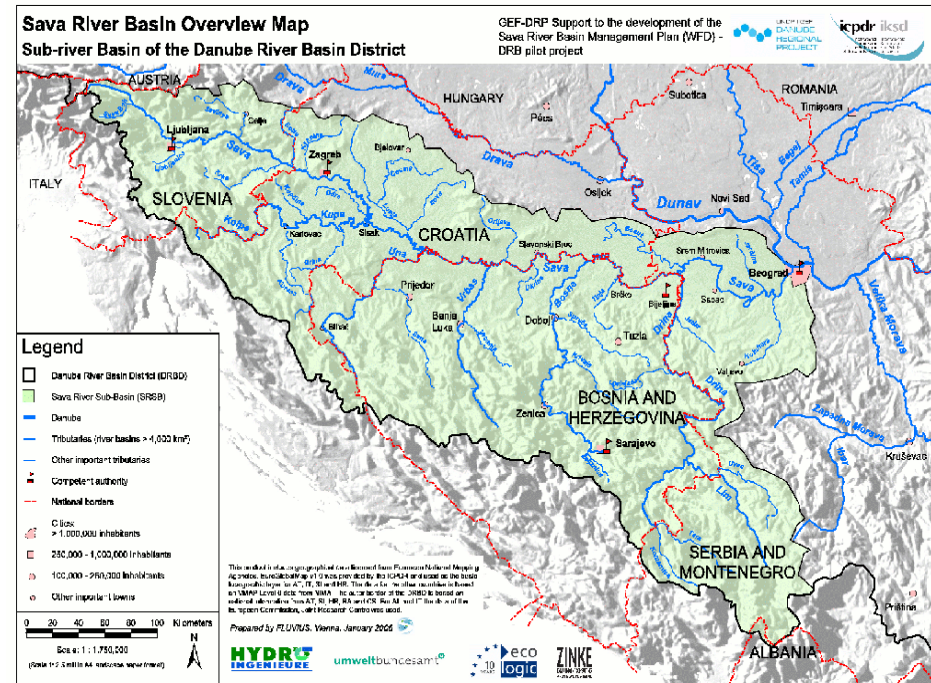
BASICS:

- South Eastern Europe is vulnerable to severe storms and consequently floods
- At present, basic forecasts over the region are less accurate because of the lacking of complete data and modern forecasting techniques in some countries
- To improve the disaster preparedness, there is a need to improve service delivery in each country through modernization of national meteorological and hydrological services to reduce economic losses caused by weather induced disasters
- **River basin is the basic unit for addressing hydrological and water management activities (EU approach)**



Sava River Basin Project

| COUNTRY | Size in the SRB [km ²] | Share of the SRB [%] | Total country size [km ²] | Share of National Territory in the SRB [%] |
|------------------------|------------------------------------|----------------------|---------------------------------------|--|
| SLOVENIA | 10,700 | 10.99 | 20,273 | 52.8 |
| CROATIA | 25,550 | 26.25 | 56,542 | 45.2 |
| BOSNIA AND HERZEGOVINA | 38,750 | 39.81 | 51,129 | 75.8 |
| SERBIA | 15,341 | 15.76 | 88,361 | 17.4 |
| MONTENEGRO | 6,859 | 7.05 | 13,812 | 49.6 |
| ALBANIA | 170 | 0.14 | 27,398 | 0.59 |
| TOTAL SIZE OF THE SRB | 97,340 | 100.00 | - | - |





Sava River Basin Project

Background

- Informal meeting on the Sava River Cooperation in operational hydrology, held at the side lines of the Fourteenth WMO Congress (Cg-XIV) in **Geneva, 13 May 2003**
- The meeting supported the idea of a common hydrometeorological project in the Sava River Basin: **data exchange, monitoring, modelling, numerical forecasting, warning...**
- A series of preparatory meetings followed:
 - Dubrovnik (Croatia, 2003)
 - Sarajevo (BiH, 2004)
 - Belgrade (Serbia, 2004) and
 - Ljubljana (Slovenia, October 2005);
 - Zagreb (ISRBC Secretariat, May and December 2006)
 - Podgorica (April, 2007)





Sava River Basin Project

Implementation plan

After the inclusion of **ISRBC**, elaborated **Project idea** and **Project plan** was prepared in 2008/2009

Institutional framework and coordination arrangements defined:

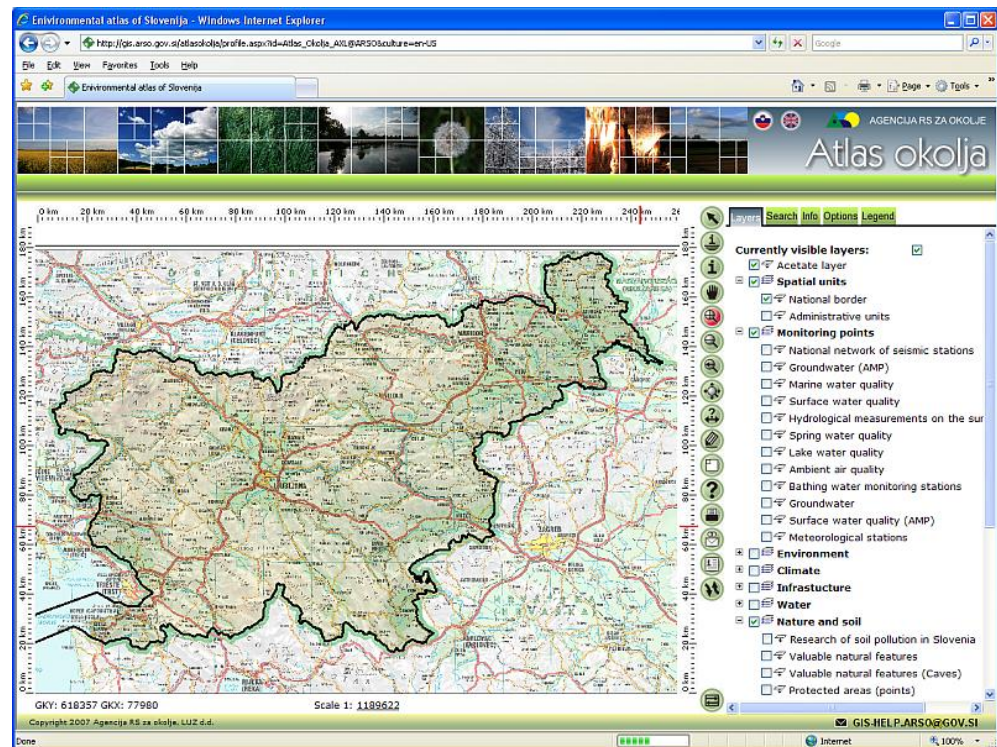
- Regional Counterpart Organisation:
International Sava River Basin Commission and its Secretariat
- Executing Agency: **World Meteorological Organization**
- National Counterpart Institutions: **Ministries, responsible for Water Resources Management in the SRB Countries and NMHSs**
- Project coordinated and steered by:
International Project Steering Committee
- Project duration: **Four years**



Potential opportunities for cooperation with Balkans:

Spatial presentation of environmental data and Implementation of INSPIRE Directive

EARS Environmental Atlas



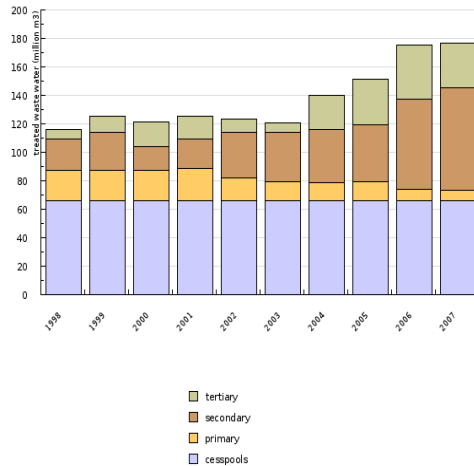


Spatial presentation of environmental data

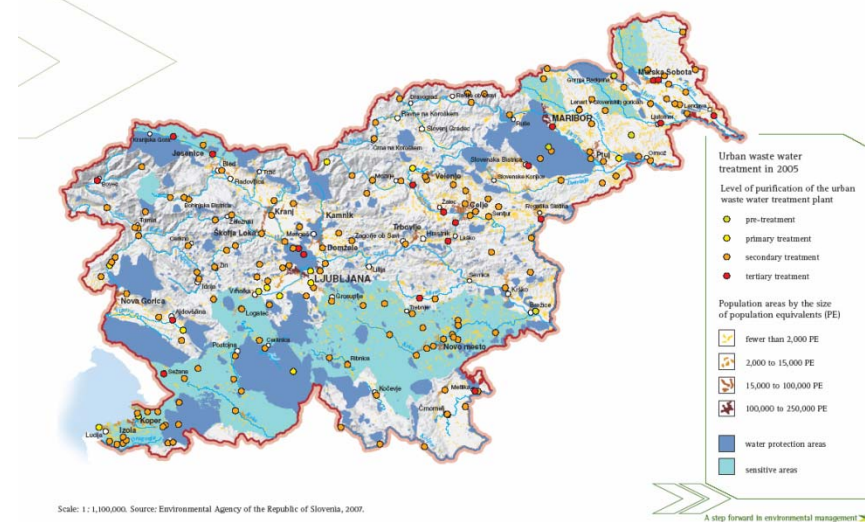
Environment in the palm of your hand

- **Maps** → enable presentation of more attributes in one figure → correlation of key contents → new perspective on the evaluation and understanding of phenomena in the environment

Picture 22-2: Quantity of waste water treated regarding level of purification treatment



29. Urban waste water treatment



Graphs + maps = the basis for integral reporting and decision making in the field of environmental management



Other potential opportunities for cooperation with Western Balkans

- Twinning and other bilateral projects – toward EU accession
 - Building organizational capacities
 - Strengthen administrative and juridical capacities
 - Transposition and implementation of EU legislation

- Cooperation in the field of seismology

- Other...





Cooperation with Western Balkans – Some specific problems

- Funds available from different EU sources
- Slovenia together with Western Balkan countries eligible

but

- Environmental sector in Slovenia is lacking human resources
- Budgetary legislation for public sector (ministries) in Slovenia is lacking a mechanism to prolong the usage of received funds in the next year's budget

