



CROATIAN
ENVIRONMENT AGENCY

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Workshop "Climate Change in South-Eastern European Countries IV"

Project "Data Flow System and Indicators to Enhance Integrated Management of Global Environmental Issues in Croatia"

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CEA activities

- ① Develops the system of collection/ processing / using environmental data
- ① Reports on the state of the environment
- ① Advises in implementation of environmental policy
- ① Cooperates with European Environment Agency(EEA)

INFORMATION = KEY

- ① Only integral, relevant, timely and easy accessible information can be the basis for relevant decision-making
- ① Information availability
 - many datasets
 - different locations
 - many data sources





- Environmental Act (Official Gazette 110/07)
- Ordinance on the Environment Information System (Official Gazette No. 68/08)
- CEIS is designed as a decentralised but integrated information system, available via an Internet portal, based on information and the data provider's network
 - Links datasets and databases in joint system
 - IT based
 - Available to all stakeholders
- Program of Croatian EIS management (CEIS) for the period 2009-2012





- Indicators - quantify information by aggregating different and multiple data, and therefore simplify information that can help to reveal complex phenomena [definition source: European Commission]
- National List of Indicators (NLI) is produced taking into account regulations, reporting obligations, international contracts and respecting the specific national needs in environment sector
- Final draft of the National List of Indicators 2009 by CEA
 - 15 thematic areas, 266 indicators

Indicators/databases	NLI	Databases and datasets
Number/type	37 (14 established, 23 planned in long term) indicators of air pollution, and indicators of CC and damages to ozone layer	6 operational, 12 in development (2009-2011)

Available data and indicators for climate change in CEIS



GHG emissions and removals -example of indicator

- Acronym in NLI: CC2
- Data needed for calculation of the indicator: emission of CO₂, CH₄, N₂O, HFCs and PFCs, SF₆
- Metadata
 - position in DPSIR system – P (pressure)
 - level of priority for data flow establishment – short term (1-2 years after adoption of NLI)
 - methods of calculation – IPCC methodology
 - frequency of data collection-annually
 - reporting obligations – UNFCCC, Kyoto protocol



GHG emissions and removals -example of indicator

- Sources of data
 - Central Bureau of Statistics (CBS)
 - Energy Institute Hrvoje Požar (EIHP)
 - Croatian Environment Agency
 - Ministry of Internal Affairs
 - Ministry of Regional Development, Forestry and Water Management
 - Ministry of Agriculture, Fishery and Rural Development
 - Ministry of Economy, Labour and Entrepreneurship
 - Ministry of Sea, Transport and Infrastructure
 - Croatian Waters
 - HEP d.d.
 - Končar Group
 - Ministry of Environmental Protection, Physical Planning and Construction
 - Authorized institution for NIR development according to the Ordinance on the monitoring of greenhouse gas emissions in the Republic of Croatia (OG No. 01/07)
- Data availability
 - Common reporting format and National Inventory Report – CEA
 - Statistical year book – CBS
 - National energy balance - EIHP



Project “Data Flow System and Indicators to Enhance Integrated Management of Global Environmental Issues in Croatia”

- **Duration:** 3 years (2009-2011)
- **Budget:** 954 000 USD
- **Donor:** UNEP/GEF (50%), Government of the Republic of Croatia (50%)
- **Main Project goal** – to develop a comprehensive data flow system and indicator model for the purpose of sustainable collection and management of common data related to UNFCCC, UNCCD and UNCBD conventions and to implement this model through a small-scale GIS supported pilot project



- **Signed international Conventions** UNFCCC (1996), UNCBD (1996), UNCCD (2000), **obligations for National Reports**
- Lack of legal framework (mainly related to desertification)
- Lack of financial and human resources for collection and management of data related to Conventions and consequently
 - Databases are missing
 - The competence and obligations for collection and analysis of data and calculation of indicators are vaguely defined and often overlapping
 - There are deviations and inconsistency of NLI and the list of internationally recognized indicators
 - Exchange of data and information between the relevant institutions is irregular, and delivery deadlines are not respected
 - Data that should be consolidated by CEA are archived on different locations, on non-compatible hardware
 - There is low level of harmonization of data transfer, distribution, protection and archiving technologies

Legal framework

- **Air Protection Act** (OG No. 178/04, [60/08](#)) => Ordinances and Regulations
- **Ordinance on the monitoring of greenhouse gas emissions in the Republic of Croatia** (OG No. 01/07) – establishment of GHG Inventory

Reports

- National Report on implementation of UNFCCC
 - First National report 2001
 - Second, third and fourth National Report on UNFCCC (2007)
- Annual National Inventory reports (NIR)+Common Reporting Formats

Projects relevant for CEA

- CARDS 2004: equipment, installation of the Registry, training of CEA employees (2007-2008)
- Capacity development related to Climate policies in Croatia, 2009, G2G Program, Kingdom of the Netherlands

Institution	Responsibilities
Ministry of Environmental Protection, Physical Planning and Construction (MoEPPPC)	Responsible for planning and implementation of policy and measures for mitigating climate change. Operational implementation is within Directorate for Atmosphere and Waste Mgmt., Department for Climate and Ozone Layer Protection. MoEPPPC issues the licences for emission quotes and acts as the implementation body for flexible mechanisms of Kyoto protocol.
Environmental Protection and Energy Efficiency Fund (EPEEF)	Responsible for: -calculation and charging the CO ₂ emission fees -financial incentives for projects and programs related to mitigation of climate change and ozone depletion
Croatian Environment Agency (CEA)	Collection and archiving of emission data, organisation of national inventory reporting, assurance and quality control of national emission data, mgmt. of GHG registry
Meteorological and Hydrological Service of Croatia	Climatology and global system for monitoring climate change, coordinates activities related to climate change impacts and adaptation to climate change



Initial project activities

- Establishment of Steering Committee (SC) and Thematic Working groups (TRS)

First phase – national level

- Analysis of current data collection system for the calculation of indicators for 3 conventions
- Identification of common indicators
- Identification and linking of sources/institutions relevant for data sharing and flow
- Design of data flow system for all three conventions
- Data collection for identification of pilot coastal area affected by fires

Second phase – pilot area

- Identification of pilot area and collection of historical and baseline data
- Development of database
- Pilot testing of data flow system through the visibility event for stakeholders and public in pilot area
- Development of web site accessible to relevant stakeholders
- Testing of data flow system with feedback from various stakeholders



Third phase –national level

- Analysis of pilot project results
- Identifying capacity building needs for relevant stakeholders in the process of data collection, analysis and calculation of indicators
- Development of recommendations to stakeholders



- Analysis of data collection system
- List of indicators for all 3 conventions
- List of stakeholders in data flow system, their roles and obligations
- New and effective data flow system proposed
- Pilot in coastal pilot area affected by fires
- Database for pilot area used by relevant stakeholders
- Drafted national capacity building program for relevant stakeholders in the process of data collection, analysis and calculation of indicators
- Recommendations for policy changes provided to stakeholders



Project stakeholders

- State, regional and local authorities, education, research and expert organisations, public institutions, NGOs, etc.
- Various sectors:
 - Energy and transport
 - Industry
 - Agriculture
 - Forestry
 - Waste management
 - Hydro-meteorology
 - Nature protection
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- Complex and long-time process for development of joint databases/linking databases
- Availability of data
- Lack of adequate inter-sectoral/inter-institutional cooperation

**datasets, databases => environmental indicators
=> reports on the state of environment => basis
for policy and decision-making**



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