



Kosovo environmental research priorities
Skopje, June 2009

Current situation of environmental issues in Kosovo

- Environmental problems with regard to water quality, waste management and air and soil pollution
- Pollution of surface and ground waters caused by untreated municipal and industrial wastewater and by sources of diffused pollution
- Air pollution is a significant problem in larger cities and industrial areas caused by heavy emissions from the electricity, mining and transport sectors

- Air is polluted mainly by SO₂, NO_x, heavy metals, CO₂, dust suspended solids, dioxins, hydrocarbons etc.
- Unplanned constructions due to lack of spatial planning, little management of industrial land and improper use of natural resources.
- Permanently or temporary lost of the agricultural land destroyed by illegal constructions, industry, transport, erosions, landfills etc.
- Climate change: main energy resource in Kosovo is coal with economic expansion, so it is expected to have general increase of emission of gases with “green house” effect.

- Waste: lack of waste management policy, services (collection, transport, information content, analytic services).
- Radiation: lost sources of radiation, soil contamination with depleted uranium (DU) and ashes from the power plants
- Natural heritage:

Area	IUCN	Number of areas	Size in/ha	%
Natural reserves	I	11	698,4	1.52
National parks	II	2	39.000	84.55
Natural monuments	III	38	4867.9	10.55
Protected landscapes	V	2	1681	3.17
Total			46 247,3	100

Kosovo national background report on environmental research

- In consultation process for the national background report on environmental research are involved the following stakeholders:
- National research and development policy makers: MESP, MoH, MEST, MAFRD etc.
- Research actors: Kosovo Academy for Sciences and Arts, University of Prishtina, National Institute of Public Health, Institute of Hydrology and Meteorology , INKOS
- International and local governmental and nongovernmental organizations involved in environmental issues and researches.

Kosovo environmental policy framework

- Kosovo Assembly has three operating Committees that develop the legal framework in areas of environment and research:
 1. Committee for Agriculture, Forestry, Rural Development, Environmental and Spatial Planning
 2. Committee for Education, Science, Technology, Culture, Youth and Sports
 3. Committee for Health, Work and Social Welfare

- Environmental protection and environmental research activities in Kosovo are partially regulated by the following laws and policy documents:
 - a) The Law on Scientific Research Activity
 - b) Environmental Law
 - c) Strategy for Development of Higher Education in Kosovo (2005-2015)
 - d) Environmental Protection Strategy and Sustainable development for Kosovo (2005-2015)
 - e) Kosovo Environmental Action Plan (2006-2010)

The overall environment policy framework

- The Kosovo's national policy includes the process of European Integration.
- One of main challenges in this process is environment, so Kosovo has a new environmental legislation which adheres to European environment principles (Report p.11).
- In a period 2006-2007, European Commission has monitored the progress, made in harmonization of the Kosovo's environmental legislation, with EU and its implementation (Report p.12)

The elements of Environmental research policy making

- There is no Environmental research strategy developed by MEST or MESP
- The main policy goals driven by Environmental Strategy and Sustainable Development are:
 1. Completing the legislation for Environmental Protection
 2. Establishment of competent capable institutions completed with human capacities and equipments
 3. Gradual increase of access to clean potable water, sewage system, waste-water treatment etc.
 4. Rational use of natural resources: soil, water, minerals, forests etc.
 5. Expansion of protected natural heritage areas.

6. Establishment and functioning of environmental monitoring network.
7. Provision of necessary financial and economic instruments for environmental protection.
8. Support the concept of clean technology import in Kosovo.
9. Development of long-term education programs, public awareness and support for environmentally focused scientific projects.
- 10 Application of the energy efficiency concept in all sectors of energy users.

Overview of Environment Scientific Research Activities in Kosovo

- Environmental research activities in Kosovo are conducted mainly on personal initiatives at some faculties of Prishtina University.
- Research institutions had insufficient interest to use opportunities available for the development of research area, such is 7th Framework Program of the European Commission.
- From 1999-2007 there were investments for environmental issues from KCB (1.031.699 Euro) and donators (168.090.000 Euros).
(Report p.18)

Key drivers of Environmental Research

The key environmental sector trends are:

- Climate changes and air pollution monitoring
- Water resources management
- Land management
- Biodiversity and natural heritage
- Waste management
- Health and environment
- Radiation
- Energy
- Transport
- Agriculture
- Integrated spatial management

SWOT Analysis of Environmental Research Capacities in Kosovo

Strengths

- The government has set up a legal framework in science and higher education
- Environmental legislation established
- Environmental Protection and Sustainable Development Strategy developed
- Environmental Action Plane developed
- Active participation and collaboration in regional and international environmental initiatives

Weaknesses

- Inadequate allocation of budget for Research and Development
- Lack of national strategy on scientific research
- Low priority placed on environmental health research by Government
- Research is not linked to real needs of community
- Lack of project management skills
- Lack of skills for writing proposals for EU-funded research programs
- Overload of research staff with education and routine professional duties
- Lack of environmental curriculum based on integrated approach at all levels of education
- Small usage of existing environmental research equipments

Opportunities

- Implementation of Environmental Protection and Sustainable Development Strategy
- Implementation of Environmental Action Plane
- Organization of doctoral studies based on European experience
- Increased mobility of research staff
- Increased awareness of the position of environmental issues in overall economic development
- Participation on EU research programs
- Presence of international organizations actively involved in environmental sector
- Potential to enhance collaboration and strengthen capacities with neighboring countries on environmental research issues.

Threats

- Economic threats (global financial crisis)
- Insufficient direct communication between research and industrial sector
- Brain drain
- Low level of research culture
- Insufficiency of specialized and experienced researchers in the environmental field.

Environmental Research Priorities for Kosovo

Focused on the great lines of the FP7 Work Program on the Theme of Environment.

Research areas:

- I. Climate change, pollution and risks**
- II. Sustainable management of natural and man-made resources**
- III. Environmental technologies**

Research priorities from each selected environmental research area:

- I. 1. Monitoring emissions from energy production, industry and transport
- I. 2. Establishing Early Warning Systems due to the harmful effects of Climate changes on humane health
- I. 3. Impact of climate changes on the effects of extreme events such as forest fires, forestry and agriculture production.
- I. 4. Air pollution and human and ecosystem health from molecular to ecosystem level
- I. 5. Indoor air and impacts on health
- II. 1. Capacity building needed for implementation of ecosystem approach in nature management.
- II. 2. Monitoring of water quality and quantity of freshwater ecosystems
- II. 3. Water pollution and waterborne diseases
- II. 4. Trans boundary ecosystems

- II. 5. Inventory of flora, fauna and fungi of Kosovo
- II. 6. Preparation of Red Book of plants, animals and fungi of Kosovo
- II. 7. Setting up of gene bank for genetic conservation of herbal resources in Kosovo under in situ conditions
- II. 8. Soil degradation (constructions, polluters, erosion) and rehabilitation
- II. 9. Waste hazards sources (radiation, heavy metals, pesticides) and effects on living systems
- II. 10. Application of GIS for preparation of map of degraded and threatened ecosystems (soil degradation, vegetation damage, erosion, drought, flood, forest fire)
- II. 11. Urban design and environmental problems
- III.1. Ground water treatment as a source of drinking water in rural area.
- III.2. Waste water treatment in industrial and municipality sector.

Environmental Research Priorities on the Basis of Country Readiness

- **Priority 1**
Feedbacks between ecosystems pollution and climate changes
- **Priority 2**
Environment and health
- **Priority 3**
Biodiversity Management
- **Priority 4**
Water Resources Management
- **Priority 5**
Land use

Environmental Research Priorities on the basis of Future Potential

- **Priority 1**

Energy resources in Climate Changes

- **Priority 2**

Consequences of climate changes on biodiversity

- **Priority 3**

Molecular tools in nature conservation

NOTHING CAN BE DONE, EVERYTHING IS POSSIBLE!

“The major problems in the world are the result of the difference between the way nature works and the way man thinks”

**Gregory Bateson, Lindisfarn, Long
Island, 1976**

*“Study nature, love nature, stay close to nature. It will
never fail you”*

Frank Lloyd Wright (1868-1959)