



**Republika e Kosovës**  
**Republika Kosova - Republic of Kosovo**  
**Qeveria – Vlada - Government**  
*Ministria e Mjedisit dhe Planifikimit Hapësinor*  
*Ministarstvo Sredine i Prostornog Planiranja*  
*Ministry of Environment and Spatial Planning*

# **CLIMATE CHANGE STRATEGY ( CCS)**

## **2014-2024**

**Istambul**  
**April 2016**

### **INTRODUCTION**

The development of the Climate Change Strategy (CCS) has been initiated in December 2012 by the Ministry of Environment and Spatial Planning (MESP) with support from UNDP.

The present Climate Change Strategy is an initial step in an adaptive management feedback policy process. It is also an opportunity to look for mitigation and adaptation measures that will boost sustainable development. Therefore, it consists of two components:

Low Emission Development Strategy (LEDC) & National Adaptation Component (NAC) presented in this strategy simultaneously in two sections

## Adaptation Component II

- *Legislation related to climate change adaptation*
- *Spatial Plan of Kosovo 2010 - 2020 (MESP)*
- *Agriculture and Rural Development Plan, 2009 -13 (MAFRD)*
- *Strategy for Forest Development 2010 - 2020*
- *Strategy and Action Plan for Biodiversity 2011 - 2020*
- *Mining Strategy of the Republic of Kosovo 2012 – 2025*
- *Heating Strategy of the Republic of Kosovo 2011 – 2018*
- *Environmental Strategy (ES) 2013-2022*
- *Strategy on Air Quality 2013-2022*
- *Energy Strategy of the Republic of Kosovo 2009-2018*
- *Kosovo Strategy for Management of Waste 2013-2022*
- *Law No. 04/L-147 on Waters of Kosovo*
- *Law on Hydro-meteorological Tasks No. 02 /L-79*
- *Law on Public Health No. 02/L-78*
- *Law on providers of waste, water, and sewage services No. 03/L-086*
- *Law on Irrigation of Agricultural Land No. 02/L-9*
- *Law on Local Self Governance No. 03/L-040*
- *Law of Nature Protection No.03/L –233*
- *Law on Environmental Impact Assessment No. 03/L-214*
- *Law on Environmental Protection No. 03/L-025*
- *Law on Waste No.04/L-060*
- *Law on Spatial Planning No 04 - L - 174*
- *Law No. 04/L-027, Law for protection against natural and other disasters*
- *Law No. 03/L-230 on Strategic Environment Assessment*
- *Law No. 2004/30 on Air Protection*
- *Law No. 2003/3 on Kosovo Forests*
- *Law No. 03/L-184 on Energy*

## METHODOLOGY

- The strategy development is based on planning process including national and local stakeholders. For this purpose an Inter-Ministerial Working Group (IMWG) has been established by the Ministry of Environment and Spatial Planning (MESP).
- An important function of the planning process was to integrate different interests into one single Nation Adaptation Component, being streamlined with the Low Emission Development Component (LEDC), which has been developed parallel to the NAC development, both under auspices of the Ministry of Environment and Spatial Planning (MESP). The NAC and LEDC together form a Climate Change Strategy for Kosovo.

### 1. List of ministries and institutions involved in the strategy development

- Ministry of Environment and Spatial Planning (MESP)
  - Departament for environmnet protection
  - Division for nature protection
  - Division for waste management
  - Water department
  - Department of inspectorate
  - Kosovo environmnet protection agency
  - Hydro-meteorological institute of Kosovo
- Ministry of Agriculture, Forestry and Rural Development (MAFRD)
- Ministry of Economic Development (MED)
- Ministry of European Integration (MEI)
- Ministry of Infrastructure (MI)
- Ministry of Trade and Industry (MTI)
- Ministry of Internal Affairs (MIA)

### LIST OF STAKEHOLDERS INVOLVED IN STRATEGY DEVELOPMENT

- UNDP Kosovo and UNDP RBEC,
- European Commission Liaison Office to Kosovo
- Inter-Ministerial Water Council Secretariat, Office of the Prime Minister
- FAO team Kosovo
- Regional Environmental Centre (REC), Kosovo
- Emergency Management Agency (EMA), Kosovo
- World Health Organization (WHO) Kosovo
- Technical Assistance and Information Exchange Instrument managed by the Directorate-General Enlargement of the European Commission
- [Climate Change Adaptation Program in Western Balkans/ GiZ](#)

## LOCAL QUESTIONNAIRE SURVEY

- Questionnaire for adaptation measures in Kosovo which helped for assessing the current state of affairs on dealing with climate-related threats in Kosovo was prepared and disseminated to local and national level, including the Inter- Ministerial working group for the NAC.
- The questionnaire served as an instrument for the first participatory assessment of current and possible adaptation measures in Kosovo. Based on the results of 15 questionnaires at the local level and voting rounds by 12 members of the Interministerial Working Group (IMWG) at the national level, a list with total of 74 possible adaptation measures with high or medium priority was presented (see chapter 5). Potential adaptation measures with low priority have not been included.
- For identifying best practices and/or lessons learned the adaptation measures highlight municipalities where scores for implementation and/or planning are significantly higher than in other municipalities. Hence, since implementation or planning has occurred or is ongoing in these places they require specific attention to see whether obstacles and opportunities for adaptation, lessons learned or best practices can be identified and possibly up-scaled. A second selection took place in September 2013 based on multi-criteria analysis (MCA).

## CLIMATE CHANGE IMPACTS IN KOSOVO

- A Climate Change Adaptation Strategy is crucial for responding and anticipating the impacts of climate change in Kosovo. These current and expected impacts include (Sources: IPCC, 2007, 2013, UN-Habitat 2009, OSCE 2008, UNDP/WMO 2009):
- Climate change will increase exposure to hazards such as droughts, floods, and forest fires;
- Rising intensity and frequency of precipitation extremes like heavy rain events, as well as more severe drought. Flash floods are getting more common in mountain areas, while river floods occur more often in plains and lowlands;
- Higher temperatures will make heat waves and forest fires more likely. Since 2000 there have been an increasing number of forest fires in Kosovo;
- Ecosystem degradation and reduction of ecosystem services;

## CC- impacts

- Unprecedented construction boom and urbanization since 1999;
- High socio-economic vulnerability due to a high incidence of poverty (among 45% of the population) and a fragile economy, combined with limited provision in the health, social welfare and employment sectors;
- Illegal construction in hazard zones and failure to adhere to building codes;
- Inadequate design of drainage and sewage systems;
- Inadequate land use and municipal planning increase population exposure to hazards;
- Unsustainable water management and agronomic practices, deforestation, and destruction of slopes by mining activities.

### 1. Water resources

- Kosovo has relatively small and limited amounts of fresh water resources. Fresh water resource shortages are most likely to occur in near future dry years if appropriate adaptive actions are not implemented right now.
- 
- Furthermore, available water resources are unevenly distributed throughout the territory, divided into four river basins / watersheds: Drini i Bardhë, Ibër, Morava e Binçës and Lepenci. The western and southern parts of Kosovo, known as Dukagjini Plain, are richer in surface and groundwater resources. The northern and eastern parts of Kosovo, known as Kosovo Plain, have less water resources available. Yet, this area has the largest concentration of population and the most hot spots sites that causes extreme water pollution.

# Water quality

- River water quality in Kosovo is poor owing to the lack of wastewater treatment plants, disposal of wastes along / or near the river banks, poor or no maintenance of river beds. Usually the quality of rivers upstream represents a healthy aquatic habitat and meets the environmental standards. Some of the main rivers downstream of larger municipalities and industries are heavily polluted that the water cannot be used for water supply or for irrigation purposes. The main rivers in Kosovo belong to the pollution category 2 and 3.
- The impact of climate change may further aggravate the quality of water courses, in particular during summer months when it is expected the variation in the precipitation pattern that will be reflected in lower river stream and by the increase of temperatures, while the sources of contamination remain constant. Pollution of surface and groundwater resources would have serious effect on people's health, it may hamper economic growth and can impact food sufficiency and security.

## Goals and Objectives

- Mission statement for NAC is
  - to reduce the risk and damage from current and future impacts of climate change in a cost-effective manner and to exploit potential benefits stemming from climate change
- Objectives:
  - **Objective 1:** Introduce new and improve current mechanisms of disaster risk reduction, especially important for sectors of economic significance that are particularly vulnerable to climate change impacts;
  - **Objective 2:** To enhance adaptive capacity of most vulnerable natural systems, in particular the most vulnerable ecosystem and of the society;
- Adaptive capacity: the ability of a system to adjust to climate change, to moderate potential damage or take advantage of opportunities or to cope with the consequences (IPCC, 2001).

## Alternatives considered: Priority adaptation measures

- The list below presents a total of 74 possible adaptation measures with high or medium priority. Potential adaptation measures with low priority have not been included. Hence, the list provides a first and important step in the **selection of possible adaptation measures** for the NAC.
- Additionally, it highlights municipalities where scores for implementation and/or planning are significant higher than in other municipalities, in order to identify **best practices and/or lessons learned**.

## Priority

- Below priorities are presented in **high-low ranking**, related to necessity as indicated by the stakeholders at national and local level. Measures with an average score of more than 4 (on a scale of 1 to 5) are indicated as highly necessary, thus have highest priority. Measures with an average score between 2.5 – 4.0 (on a scale of 1 to 5) are labeled as medium priority, while average scores below 2.5 are labeled as low priority. Low priorities have not been included in the list.

## **Flood protection**

### **High priority (>4):**

- 1) Restriction of settlement/building development in risk-prone areas
- 2) Deepening of summer bed
- 3) Upgrade and/or raise dykes to prevent flooding
- 4) Adjustment or removal of hydraulic obstacles in river bed (e.g. buildings, trees, infrastructure, trash, etc)
- 5) Construction of retention areas (also called inundation areas to reduce flood run-off)
- 6) Upgrade drainage systems
- 7) Standards for building development (e.g. permeable surfaces, greening roofs etc.)
- 8) Floodplain restoration (which involves lowering/deepening of floodplain)
- 9) Reforestation areas to reduce flood run-off
  - Medium priority (<4):
- 1) Replacement of dykes to enlarge river bed capacity
- 2) Change of land use (for enabling natural retention of flood water)
- 3) Enlarge reservoirs to increase buffer capacity
- 4) River bypasses (also used as 'green rivers' when there is no peak discharge
  - Medium priority (<4):
- 1) Crop rotation (for soil recovery)

## **Drought / low flow / water scarcity**

### **High priority (>4):**

- 1) Landscape planning measures to improve water balance (e.g. change of land use, reforestation)
- 2) Leakage reduction
- 3) Water recycling and re-use, e.g. use of grey water, treated sewage and industrial water
- 4) Point-of-use conservation in households and industry
- 5) Water transfers (for more explanation see annex 3)
- 6) Securing minimum flows in dry periods
- 7) Crop adaptation: High resilient crop seeds & Crop choice (crops with more efficient water use)
- 8) Water saving technologies in irrigation
- 9) Rainwater harvesting
- 10) Sustainable groundwater management (including recharge measures)
- 11) Increase Reservoir volumes
- 12) Restriction of water uses
  - Medium priority (<4):
- 1) Crop rotation (for soil recovery)



# **Forest and biodiversity management**

## **High priority (>4):**

- 1) Strengthening forest protection policy
- 2) Educating people about the benefits of forest and the harmful effects of deforestation
- 3) Strictly handling cases of illegal cutting /deforestation
- 4) Planting trees/reforestation (see also measure 9 and 14)
- 5) Removal of fuel wood in order to decrease vulnerability to forest fires
- 6) Ecological corridors to help species migrate
- 7) Incorporating local biodiversity objectives into the planning, delivery and management of green infrastructure measures
  - Medium priority (<4):
- 1) Choosing tree species and forestry practices less vulnerable to storms and fires
- 2) Creating micro-climatic variation and ecologically resilient landscapes through varied topology to help species respond to changes in temperature and increase the chance that species will be able to migrate locally into newly favourable habitat

# **Public health**

## **Medium priority (<4):**

- 1) Public health programs for heat-related deaths (e.g. heat warning systems)
- 2) Awareness program on climate change and health among public health and medical practitioners
- 3) Public health programs related to changing patterns of infectious diseases
- 4) Infectious disease surveillance systems that can detect potential “signature” diseases that may affect Kosovo consequent to climate change
- 5) Alert practitioners and their patients to the potential for changes in patterns of exposure to aeroallergens that exacerbate allergic diseases like asthma and allergic rhinitis (“hay fever”)
- 6) Existing public health surveillance systems are sufficiently comprehensive and sensitive to detect potential effects of climate change on health
- 7) Public awareness program related to consequences of heat exposure

## Information management & exchange

### High priority (>4):

- 1) Uncertainties are not glossed over but communicated (in final reports, orally)
  - 2) Adoption of an M&E plan during project preparation that includes establishment of process indicators, stress reduction indicators, and environmental status indicators
- **Medium priority (<4):**
    - 1) Government actively disseminate information and data to the public: on the Internet, but also by producing leaflets, through the media, etc.
    - 2) Different government bodies are involved in setting the TORs for adaptation projects in related sectors and supervising the research, or at least consulted (interviews, surveys etc.)
    - 3) Long term monitoring of surface water (quality and quantity)
    - 4) Multidisciplinarity: Different disciplines are involved in defining and executing research on climate change adaptation: e.g. in addition to technical and engineering sciences also for instance ecology and the social sciences
    - 5) Decision support systems, e.g. hydrometeorological information systems are up to standards
    - 6) Long term monitoring of groundwater (quality and quantity)
    - 7) Modernizing the hydrometeorology sector (i.e. strengthening forecast & early warning or disaster warning system)
  - Governments exchange information and data with other governments

## Capacity building, training, awareness raising

- **Medium priority (<4):**
  - 1) Public awareness programs on climate change
  - 2) Awareness campaign on the risks of building, living and working in vulnerable areas
  - 3) Awareness campaign on saving water for citizens, companies, factories, etc.
  - 4) Training on efficient irrigation management for farmers
  - 5) Training on climate change adaptation for advanced professionals in water, agriculture, forestry, land use planning, public health, etc

## Finances and cost recovery

### High priority (>4):

- 1) Financial resources for adaptation program/projects are diversified by using a broad set of private and public financial instruments

- **Medium priority (<4):**

- 1) Costs of adaptation are recovered from the 'users' by public and private financial instruments (charges, prices, insurance etc.)
- 2) Authorities can take loans and depreciate their assets, to facilitate efficient use of resources and replacement of assets
- 3) Wide-spread private sector participation in water and natural resources management

## Cooperation structures

### High priority (>4):

- 1) Downstream governments (either local or national) are involved in decision-making by upstream governments

- **Medium priority (<4):**

- 1) Legal provisions concerning access to information, participation in decision-making (e.g. consultation requirements before decision-making) and access to courts
- 2) Non-governmental stakeholders actually contribute to agenda setting, analyzing problems, developing solutions and taking decisions ("coproduction")
- 3) Co-operation structures include government bodies from different hierarchical levels; many contacts generally
- 4) Co-operation structures include non-governmental stakeholders (e.g. environmental NGO's, user groups, citizen groups or private sector)
- 5) Sectoral governments actively involve other (national and local) government sectors (e.g. agriculture, nature, environment, tourism, forestry, health, navigation, spatial planning)
- 6) Lower level governments are involved in decision-making by higher level governments
- 7) Conflicts are dealt with constructively, resulting in inclusive agreements to which the parties are committed
- 8) International/ transboundary co-operation structures exist (e.g. river basin commissions); many contacts generally

## Risk management

### High priority (>4):

- 1) Harvest insurance mechanisms are available
  - **Medium priority (<4):**
- 1) Insurance against housing and property damage is available
- 2) Risk perception by formal expert judgment and risk perception by the stakeholders
- 3) Both governmental and non-governmental stakeholders are involved in decisions on what are acceptable climate change risks
- 

The criteria are measures of performance by which the interventions have been evaluated. The following 8 criteria have been used for the analysis:

- **Technical considerations** (e.g. ease of implementation, redundancy and robustness of the solution, flexibility to changing conditions, durability);
- **Estimated costs;**
- **Water quality and quantity impacts;**
- **Habitat disturbance** (aquatic, riparian, upland);
- **Ecological & environmental impacts;**
- **Socio-economic impacts** (community amenities, tourism opportunities, village disruption, religious considerations, historic/archaeological);
- **Institutional (compatibility) considerations** (which agencies are responsible for implementation, does it fit within existing national programs, does it help achieve or impact national goals, how will it complement, reinforce and build on existing projects/investments?);
- **Political considerations** (do the solutions enjoy political support or opposition etc.)

## *A summarized overview of scores used for evaluation*

	++	+	0	-	--	?
<b>Technical considerations</b>	Highly appropriate or feasible in technical terms	Appropriate	Neutral	Medium inappropriate	Highly inappropriate or not feasible in technical terms	Unknown / further study required
<b>Estimated costs</b>	Extreme low costs (≤ 0.5 mil. Euro's)	Low costs (0.5 - 2.0 mil. Euro's)	Neutral (2.0 - 5.0 mil. Euro's)	High costs (5.0 - 10.0 mil. Euro's)	Extreme high costs (≥ 10.0 mil. Euro's)	Unknown / further study required
<b>Water quality and quantity impacts</b>	Highly positive impact	Positive impact	Neutral	Negative impact	Highly negative impact(s)	Unknown / further study required
<b>Habitat disturbance</b>	No disturbance	Low disturbance	Moderate disturbance	High disturbance	Extreme disturbance	Unknown / further study required
<b>Ecological &amp; environmental impacts</b>	Highly positive impact	Positive impact	Neutral	Negative impact	Highly negative impact(s)	Unknown / further study required
<b>Socio-economic impacts</b>	Highly positive impact	Positive impact	Neutral	Negative impact	Highly negative impact(s)	Unknown / further study required
<b>Institutional (compatibility) considerations</b>	Highly positive	Positive	Neutral	Negative	Highly negative	Unknown / further study required
<b>Political considerations</b>	Strong political support	Some political support	Neutral	some opposition	Strong opposition	Unknown



**THANK YOU FOR YOUR ATTENTION!**