

# Climate Change in SEE Countries IV: Adaptation strategies for economy&society



## Identification and Implementation of Adaptation measures in Drini-Mati River Deltas

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# Content

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- V&A activities in the light of NCs.
- Project:
  - Objectives, outcomes, outputs, activities.

# Expected climate changes

different IPCC scenarios

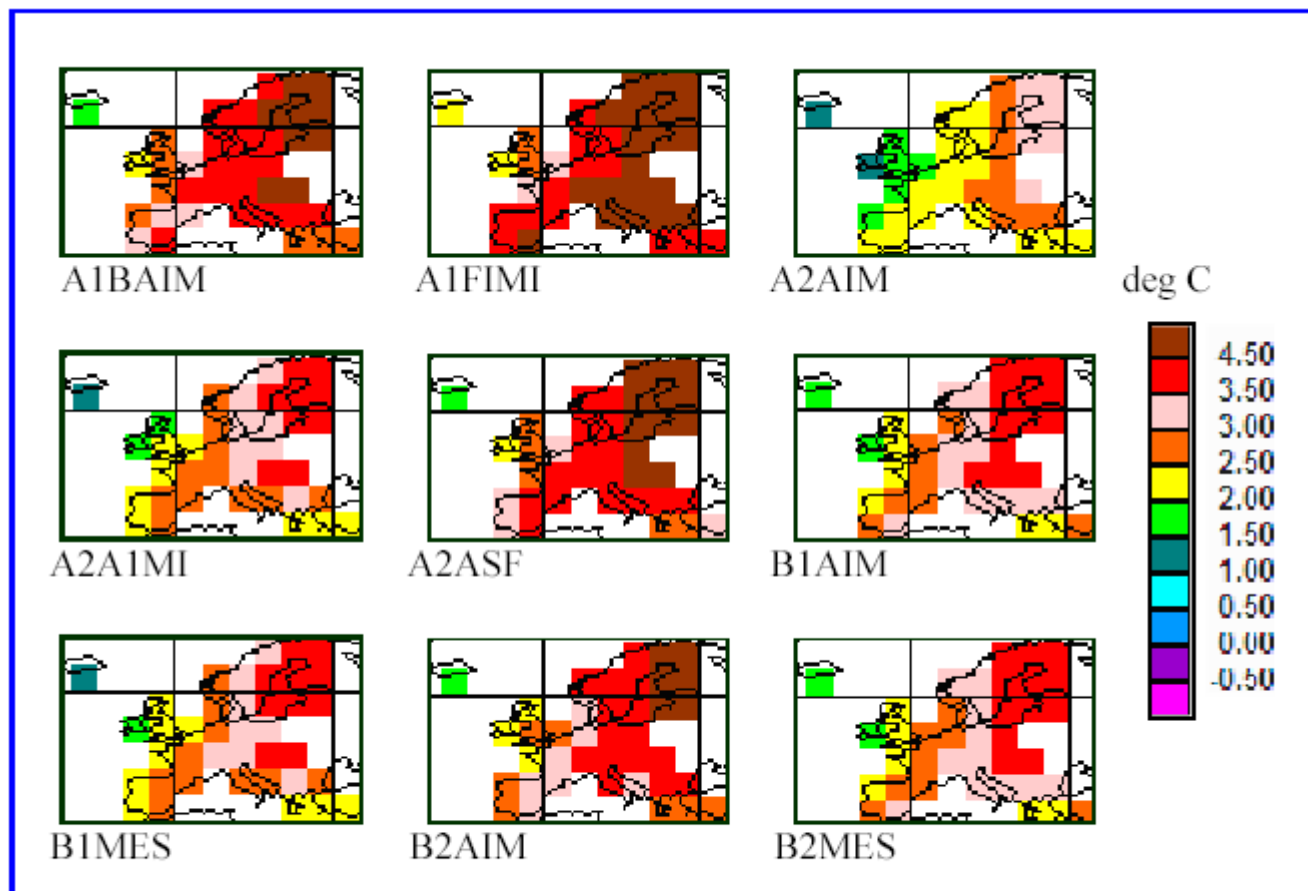
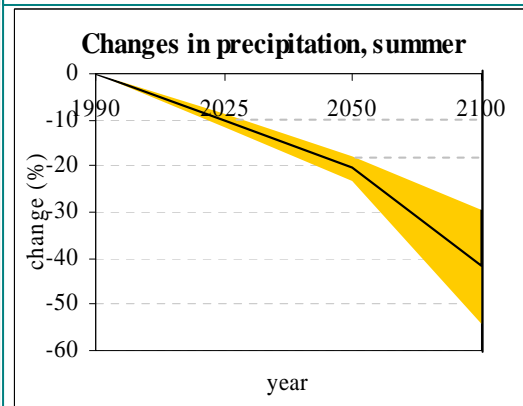
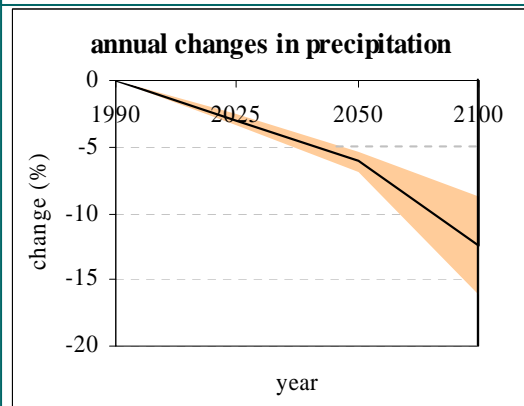
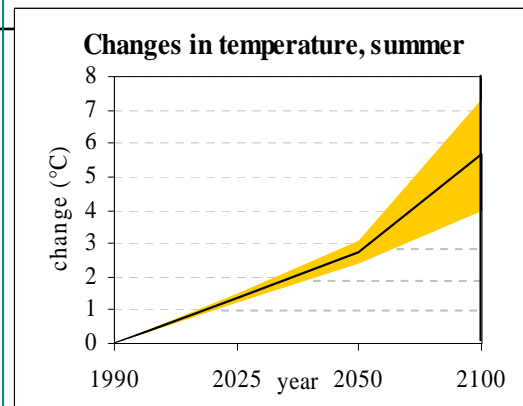
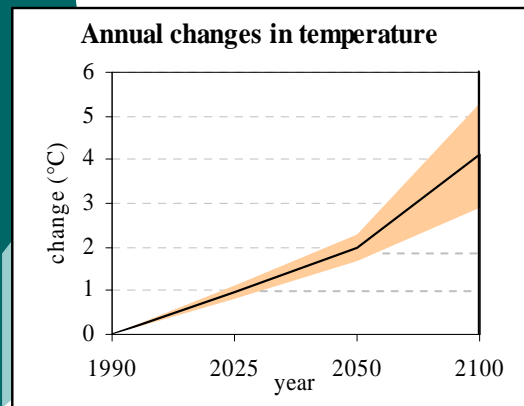


Fig. 3 Annual temperature changes (°C) for the 2080s, for different climate scenarios, region Europe

# Climate change scenarios



**!!!! Increase in temperature and decrease in precipitation !!!!**

The annual increase in temperature : 1.0, 2.0 and 4.1°C respectively by 2025, 2050 and 2100

Decrease in annual precipitation: up to 3.0%, 6.1% and 12.4% respectively by 2025, 2050 and 2100

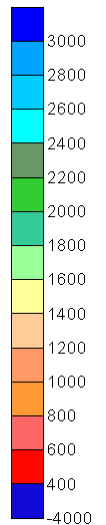
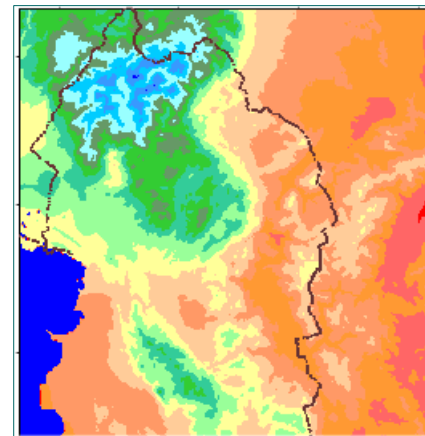
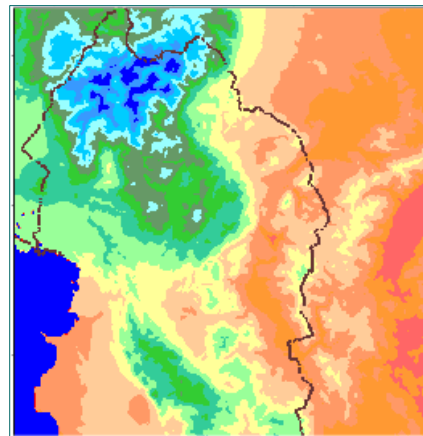
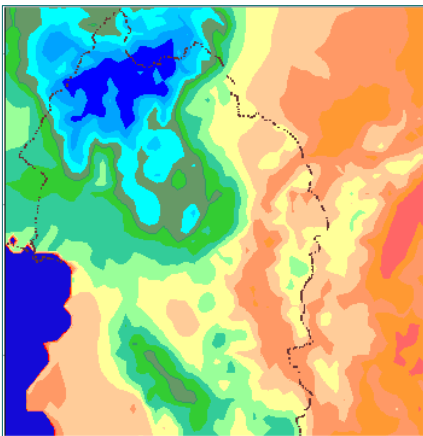
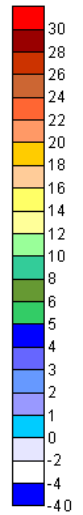
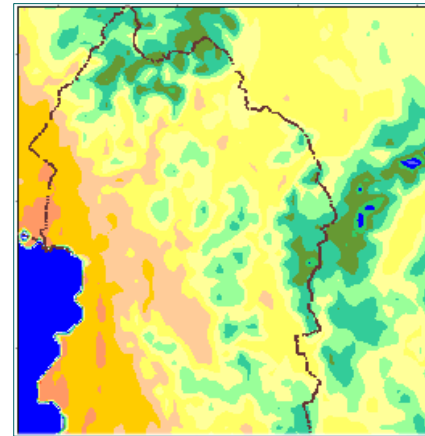
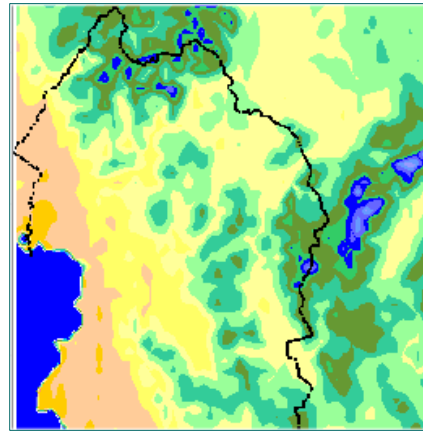
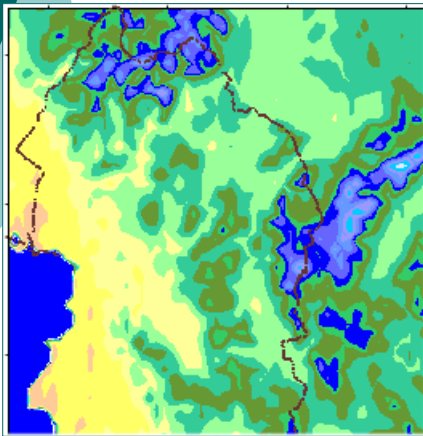
**!!!! may expect: milder winter, warmer springs, hotter and drier summers and autumn.**

# Expected changes

1961-90

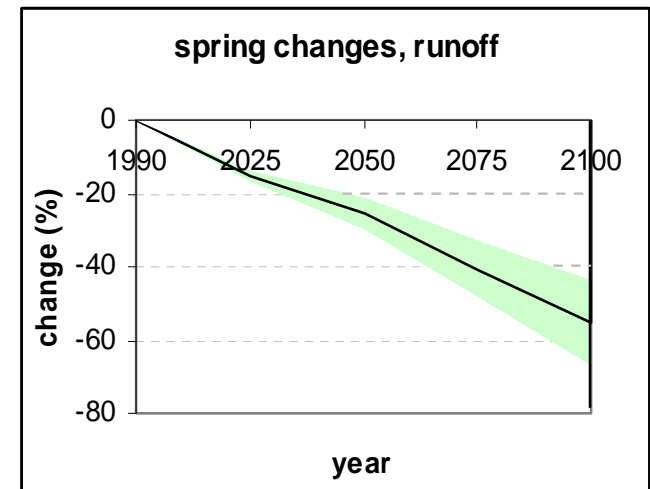
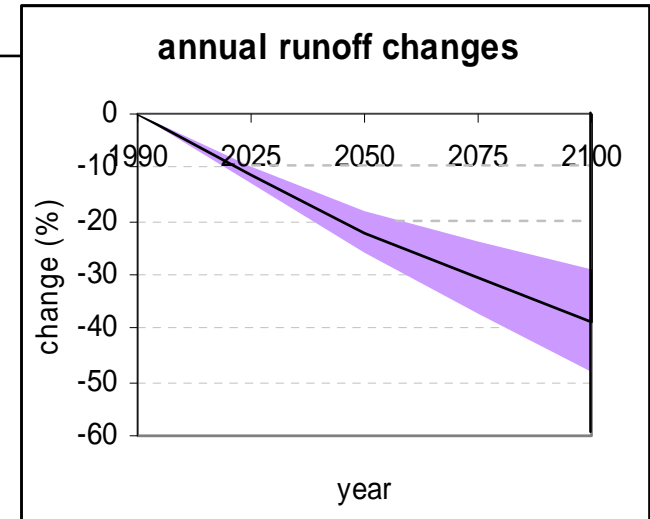
2050

2100



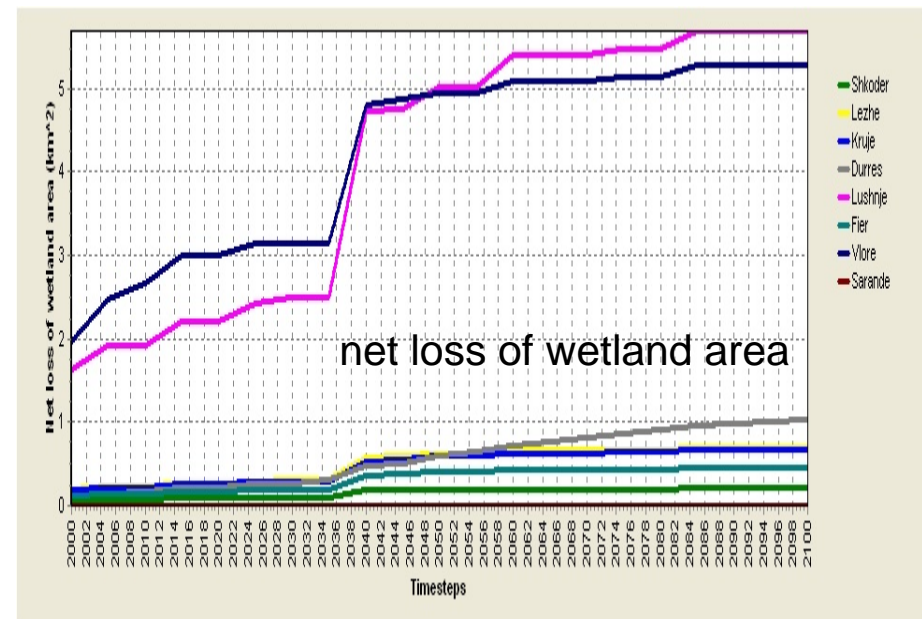
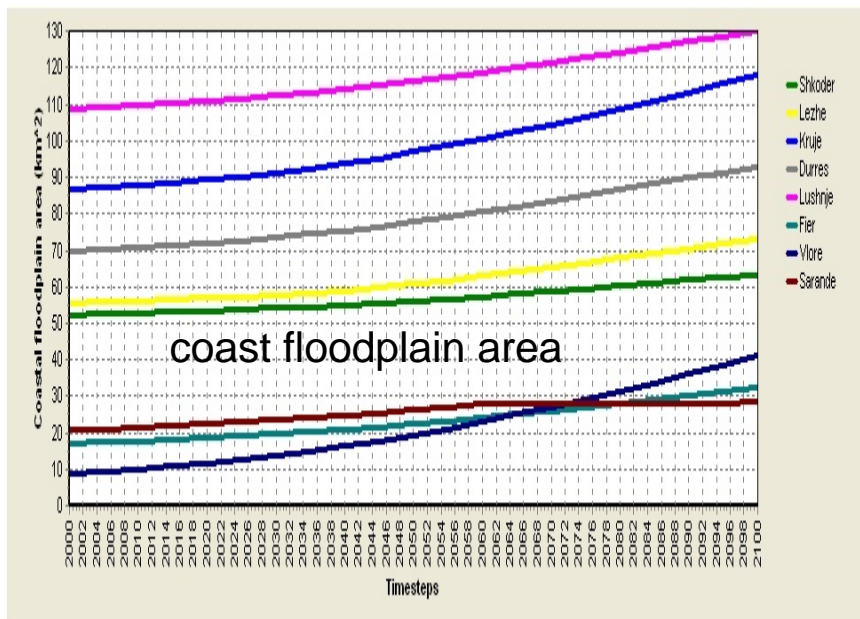
# Expected impacts

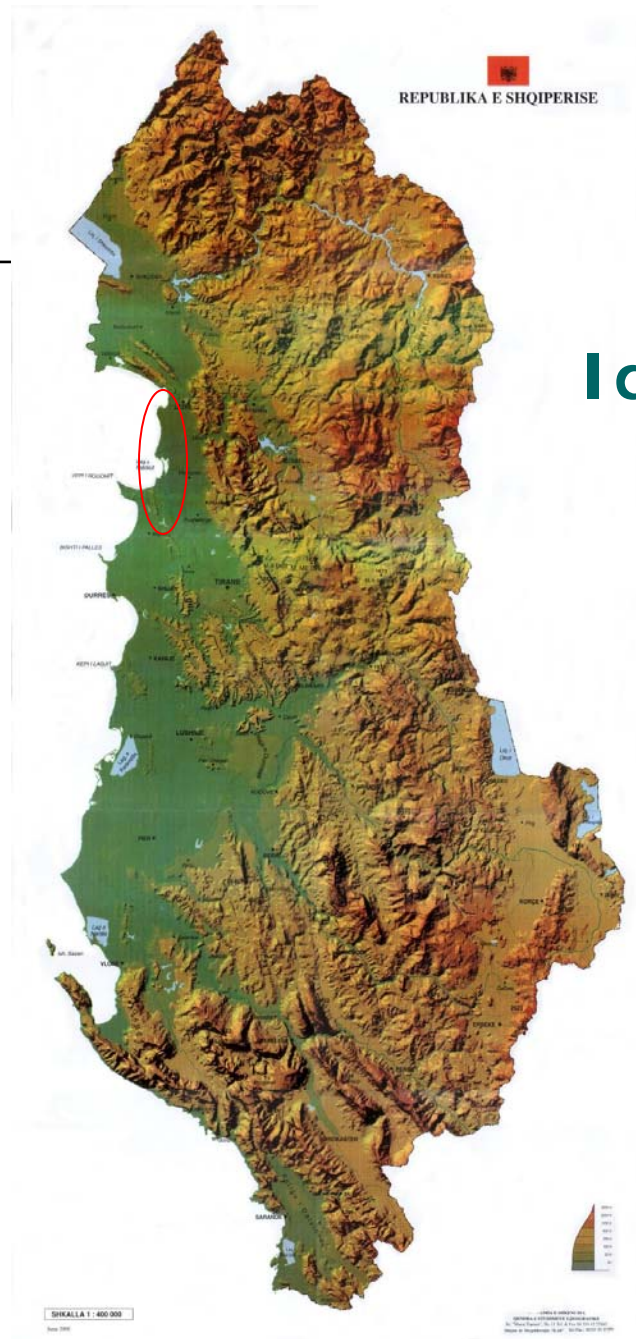
- **Increase in the frequency of extreme weather events** (heavy rains, potential flood risk, strong winds, droughts)
- **Decrease in runoff, both annual and seasonal**
  - A decrease of 20% in runoff ⇒ a reduction up to 60% of power generation!!!
- Increased energy demand for space cooling.
- Reduction of water supply.
- **Water quality problems** (salinisation and water algae blooms).



# Expected impacts

- Decrease of wetland area;
- Lost of species;
- Increased risk of health related diseases;
- Reduced yields due to heat stress





# Identification and Implementation of Adaptation measures in Drini-Mati River Deltas

○ DMRD harbors **significant biodiversity values**:

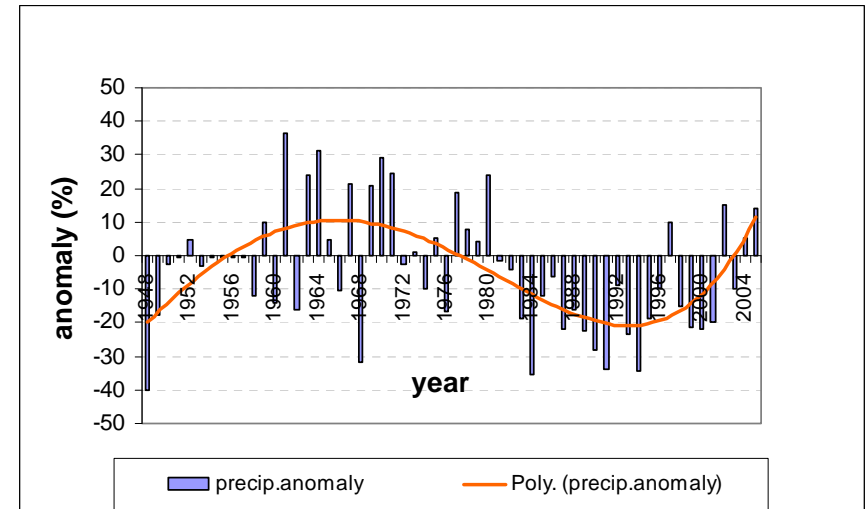
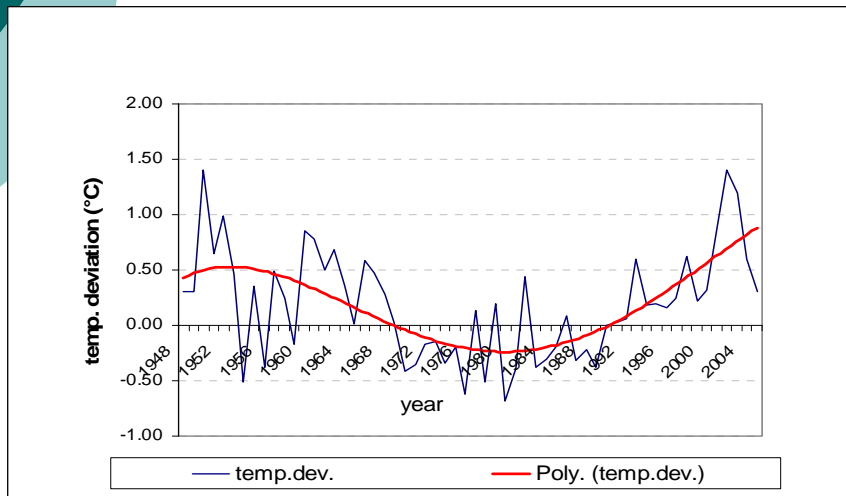
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- Three main types of habitat (i) marine,
  - (ii) wetlands and (iii) non-wetland habitats
  - DMRD is Internationally recognized area:
    - Important Bird Area (IBA)
  - DMRD provides wintering ground for globally endangered species:
    - pygmy cormorant (*Phalacrocorax pygmaeus*)
    - Patok lagoon is known as feeding area of endangered loggerhead turtles (*Caretta caretta*)
  - Over 70 species of waterfowl and water-bird with a total population of 180,000 individuals
- DMRD is found to be a **critical vulnerable region** of the country from ecosystem point of view:
- Habitat loss and fragmentation
  - Gradual inundation and submersion of low laying areas
  - Loss of dune and marshland habitats and destruction of valuable lagoon ecosystems
- DMRD is an area of **priority** from the **development point of view** (MDG Regional Report of Lezha)



# Distribution of temperature and precipitation anomaly for DMRD (1948-2005) Ref. to long term average 1961-90



# Project strategy

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- "adaptive capacity approach" aiming at increasing the capacity of the DMRD ecological system to be resilient to climate change.
  - This will be achieved by:
    - Assessing current adaptive capacity of DMRD ecosystem
    - Propose ways to increase adaptive capacity of DMRD to better cope with CC variability
    - Addressing the information, awareness, and technical capacity barriers



# Objectives

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- The **long-term development goal** : assist Albania in beginning a process by which strategies to moderate, cope with, and take advantage of the consequences of climate change are enhanced, developed, and implemented.
- The **specific objective** of the project is to **build adaptive capacities** in the DMRD in order to **help vulnerable ecosystems and local livelihoods to adapt to CC.**
  - first identifying, and then
  - integrating CC response measures into development programming in the DMRD.

○

## Outc. 1: Capacities to monitor & respond to anticipated CC at the institutional&community levels developed

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### ○ Outputs

1. A system for **monitoring** climate change and its impacts on DMRD ecosystems is in place;
2. Local capacities to **analyze** data on climate variability and associated ecological impacts and integrate this into decision making are in place;
3. Community capacities to **understand** the impacts of climate fluctuations and changes on natural ecosystems and local livelihood are build up

### ○ Main Activities

1. Decide on techniques available to be applied for assessment and training of experts to apply them
2. Update the climate scenarios and impact scenarios for DMRD
3. Train local experts to analyze data and climate risk and integrate them
4. Application of local knowledge / bottom-up assessment of current impact
5. Raise awareness on CC and its risk at community level

## Outc. 2:DMRD conservation and development programs/plans/policies integrate CC risk and take local pilot actions for coastal adaptation

### Outputs

1. A **package of amendments** to biodiversity conservation activities within **PA** of the DMRD aimed at integrating adaptation measures is prepared and implementation is initiated
2. A **package of amendments** to sustain. development activities in the wider landscape **surrounding protected areas** in the DMRD aimed at integrating adaptation measures is prepared and implementation initiated

### ○ Main Activities

1. Review and update the list of the ongoing projects/programs;
2. Set-up a dialogue with relevant stakeholders
3. Identify key region –wide programs
4. Select adaptation measures on basis of multi-criteria analysis and in close cooperation with ongoing programs/projects
5. Identify CC impacts into bio-physical systems of the target area
6. Integrate CC risk into programs focused in DMRD and in surrounding protected areas of DMRD

# Outcome 3: Capacity for adaptive management, M&E, learning and replication of projects lessons developed

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## ○ Outputs

1. System for monitoring and evaluating project impacts is established
2. Communication strategy, and knowledge products are developed

## ○ Activities

1. Set-up the project management team
2. Set-up a multidisciplinary team to assess CC impacts to DMRD
3. Develop a communication strategy for the project
4. Organize seminars and workshops to show the results of the project
5. Share and exchange information with other SPA adaptation projects in Europe and beyond
6. Document lessons learnt and good practices to replicate them within the country and share with other countries in the region and beyond.

# Thank you !



[www.ccalb.org](http://www.ccalb.org)