

UNEP Vienna – SCC

Climate Change in Mountain Environments

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Outline

- Climate change in the Carpathians
 - CARPATCLIM
 - CARPIVIA
 - CarpathCC
 - Future Imperfect
- Carpathian and Alpine Convention cooperation
- Carpathian and Alpine Convention past projects on climate change
- Climate change in the West Balkans
- Cooperation with the IAEA
- Climate Change Action in Developing Countries with Fragile Mountainous Ecosystems from A Sub-Regional Perspective
 - East Africa
 - Central Asia
 - South Caucasus
 - Tropical Andes
 - West Balkans

Climate Change in the Carpathians

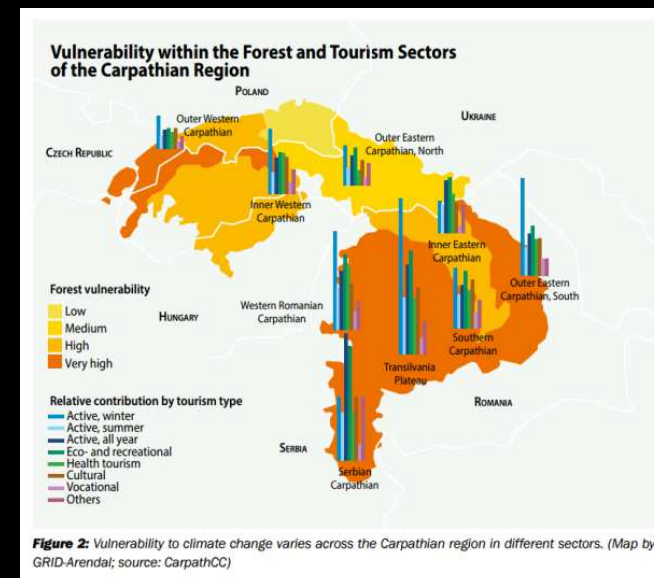
- CARPATCLIM
- CARPIVIA
- CarpathCC
- Future Imperfect →



Future Imperfect

Climate Change and Adaptation in the Carpathians

- Overview of climate change in the Carpathian region
- Assessment of vulnerability and adaptation actions in main policy sectors
- Recommendations for future actions



Carpathian and Alpine Convention cooperation

- MoU 2006 Kiev between the Alpine and Carpathian Conventions
- Rio +20 Joint contribution on mountain environments
 - First mention of mountains! 210-212
- Joint Alpine – Carpathian Statement On Adaptation to Climate Change

Adopted:

- COP4 Carpathian Convention
- Conference 13 Alpine Conference



Alpine and Carpathian past projects on climate change

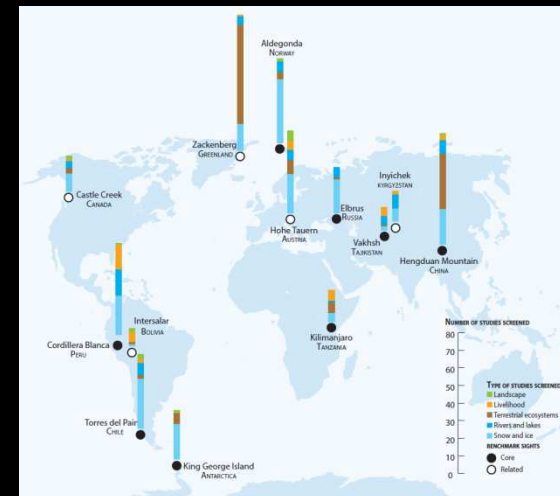
- CLISP
 - Spatial planning for the changing climate
- Climalptour
 - Climate change and Alpine tourism
- C3Alps
 - Sharing of best practices on adaptation to climate change



Cooperation with the IAEA

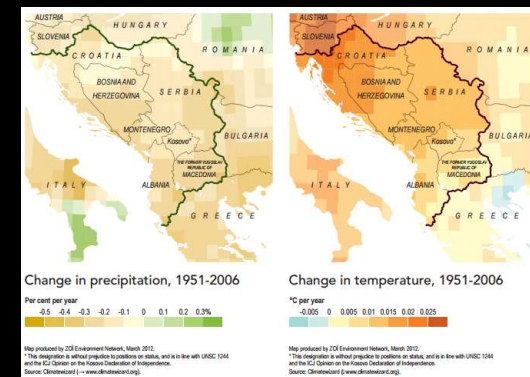
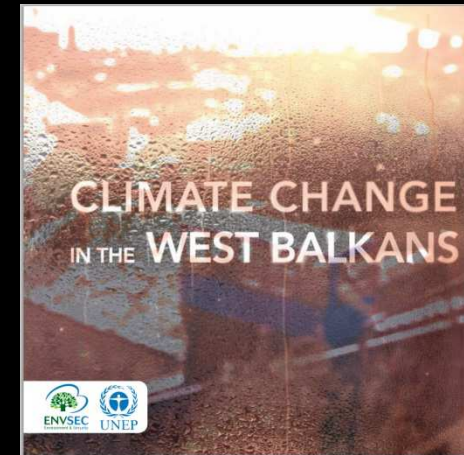
Project on Assessing the Impact of Climate Change and its Effects on Soil and Water Resources in Polar and Mountainous Regions

- Aims to improve the understanding of the impact of climate change on fragile polar and mountainous ecosystems
- Strengthening the science-policy interface



Climate Change in the West Balkans





- Latest state of the science on climate change
- State of emissions and mitigation
- Vulnerability assessment
- Assessment of adaptation policies and actions
- Currently producing new publication as part of the global assessment discussed later



Climate Change in the West Balkans

Main Trends

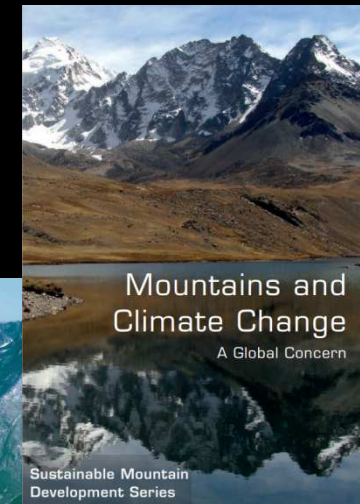
	ALBANIA ¹	BOSNIA AND HERZEGOVINA	CROATIA	THE FORMER YUGOSLAV REPUBLIC OF MACEDONIA	MONTENEGRO	SERBIA
Air temperature change (last half century)	↑	↑ ²	↑	↑	↑	↑
Precipitation change (last half century)	↓	↔ ³	↓	↓	↔	↔
Extreme weather events and climate-related hazards (1990–2009)	↑	↑	↗	↑	↑	↑
Water resources availability in the future (forecast period until 2100)	↓	↓ ⁴	↓ ⁵	↓	↓	↓
Health infectious and vector-borne diseases ⁶	↑	↑	↑	↑	↑	↑
Greenhouse gas emissions (in CO ₂ eq) for period observed	↓	n.a. ⁷	↗	↓	↓	↓
Policy instruments, actions and awareness	↑	↗ ⁸	↑	↑	↑	↑
Climate observation and weather services (1990–2009)	↗	↗	↑	↗	↗	↑

 increase, enhancement
  decrease, reduction
  mostly increasing, improving
  variable

Mountains and Climate Change

A Global Concern

- Why mountains matter for climate change and sustainable development
 - Hydrology
 - Glaciers
 - Natural Hazards
 - Biodiversity
 - Food security
 - Economy



Climate Change Action in Developing Countries with Fragile Mountainous Ecosystems from A Sub-Regional Perspective

Two main outputs:

- To produce participatory regional assessment of adaptation to climate change in developing areas:
 - Central Asia
 - East Africa
 - South Caucasus
 - Tropical Andes
 - West Balkans
 - Hindu Kush Himalaya
- To establish inter-regional platforms for cooperation on mountain adaptation



Example: Tropical Andes

- Contains 99 % of the last tropical glaciers on the planet, which is 1 % of the global total. These are melting at an alarming pace.
- Highly biodiverse with diverse and fragile ecosystems ranging from the humid Amazon basin, across snow covered peaks to the deserts on the western coast.
- The highest altitudes are observed and predicted to experience the highest warming in South America
- However! There are currently few mountain specific national policies and limited regional cooperation on mountains and climate change



Thank you for the attention!

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