


CARPIVIA project support for Working group objectives

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**Session Objective:
Linking working group objectives with
Carpivia progress;**

**Get feedback on expected results of
working group and how YOU would like to
contribute**

WG Tasks (ToR)

- The WG aims at supporting the Parties to the Carpathian Convention in their cooperation for the implementation of relevant articles of the Convention, including Article 12 on environmental assessment/information system, monitoring and early warning .
- The WG shall consider and consolidate the background documentation made available to it within the CARPIVIA project with the aim to:
 1. Benefit national and regional authorities of the Carpathian Region
 2. Support policy proposals in line with Commission White Paper on Adapting to Climate Change and objectives of Carpathian Convention
 3. Contribute to a Carpathian and EU Information System on Climate Change Vulnerability and Adaptation

Field of activities

- Collect information on vulnerability to climate change impacts in Carpathian Region, analyse available information, identify gaps for further research;
- Provide guidance and actions with regard to the contribution to a *Carpathian* and EU Information System on Adaptation to Climate Change;
- Provide guidance and recommendations for the development of policy proposals in line with the Commission White Paper on Adapting to Climate Change and the objectives of the Carpathian Convention;
- Provide guidance and recommendations for development of follow-up projects in the area of vulnerability to climate change and ecosystem-based adaptation measures;
- Explore ways of cooperation with other relevant institutions such as the IPCC (Intergovernmental Panel on Climate Change) and ICPDR (International Commission for the Protection of the Danube River);
- Elaborate a proposal on how the results of CARPIVIA project can benefit national and regional authorities of the Carpathian Region.

About Carpivia, Progress vulnerability assessment by Saskia Werners, Wageningen UR, NL

The CARPIVIA project will run until 2013.

**Partners: Alterra Wageningen UR with ECNC, ECORYS,
Grontmij and WWF-DCP**

CARPIVIA funded by European Commission

Contributes to preparatory action "Climate of the Carpathian Basin" approved by the European Parliament. Action proposed to:

- *Vulnerability of water, ecosystems & ecosystem based production systems to climate change and other man-made pressures*
- *Adaptation measures, particularly adaptive water management & ecosystem-based approaches*

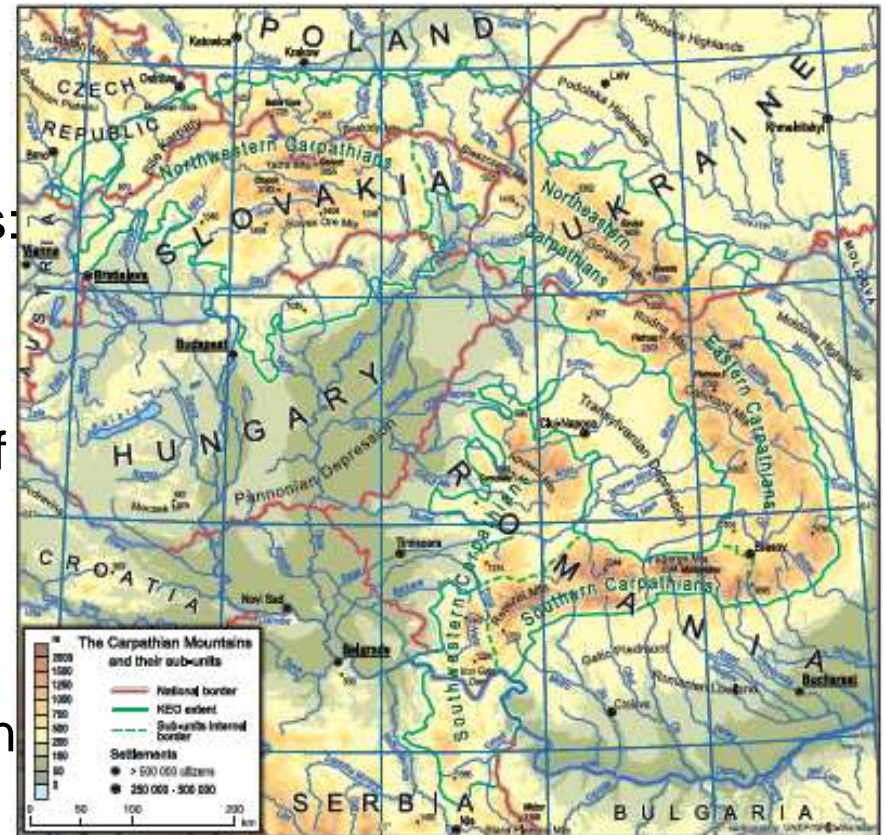
Focus selected to:

- *Benefit national and regional authorities of Carpathian Region*
- *Support policy proposals in line with Commission White Paper on Adapting to Climate Change, National or Regional adaptation strategies, or a Danube Climate Adaptation Strategy*
- *Contribute to EU Information System on Climate Change Vulnerability and Adaptation (EU Clearinghouse / CLIMATE ADAPT)*

Scales/boundaries of assessment

For CARPIVIA:

- Differentiate in activity and output
- Combination of geographical boundaries:
 - Present climate data for larger area, including Pannonian plain etc.
 - Use study area of Carpathian convention to focus at vulnerability of different ecosystems
 - Discuss adaptation option for a number of reference areas (e.g. target river basins)
 - Consider all countries in larger region for policy and actor involvement



Adaptation to climate change

Adaptation measure/option

Water retention / irrigation

Who takes action?

Can take actions?

Can afford?

ADAPTATION

Reaches goal?

People

Government /

Farmers / migrants

Goal

Reduce flood risk /

Reduce crop failure

What goal?

What risks perceived?

“*Vulnerability* of what to what with respect to what”:

Vulnerability **of:**

- Water resources
- Ecosystems [follow CORINE classes + differentiate by altitude ranges]
- Ecosystem based production systems (agriculture, forestry, energy, tourism, navig.)

To:

- Increasing drought tendency
- Increasing frequency of heat waves
- Increasing frequency of both winter floods & torrential flood events
- Other man-made pressures (*relative to climate change*)

With respect to:

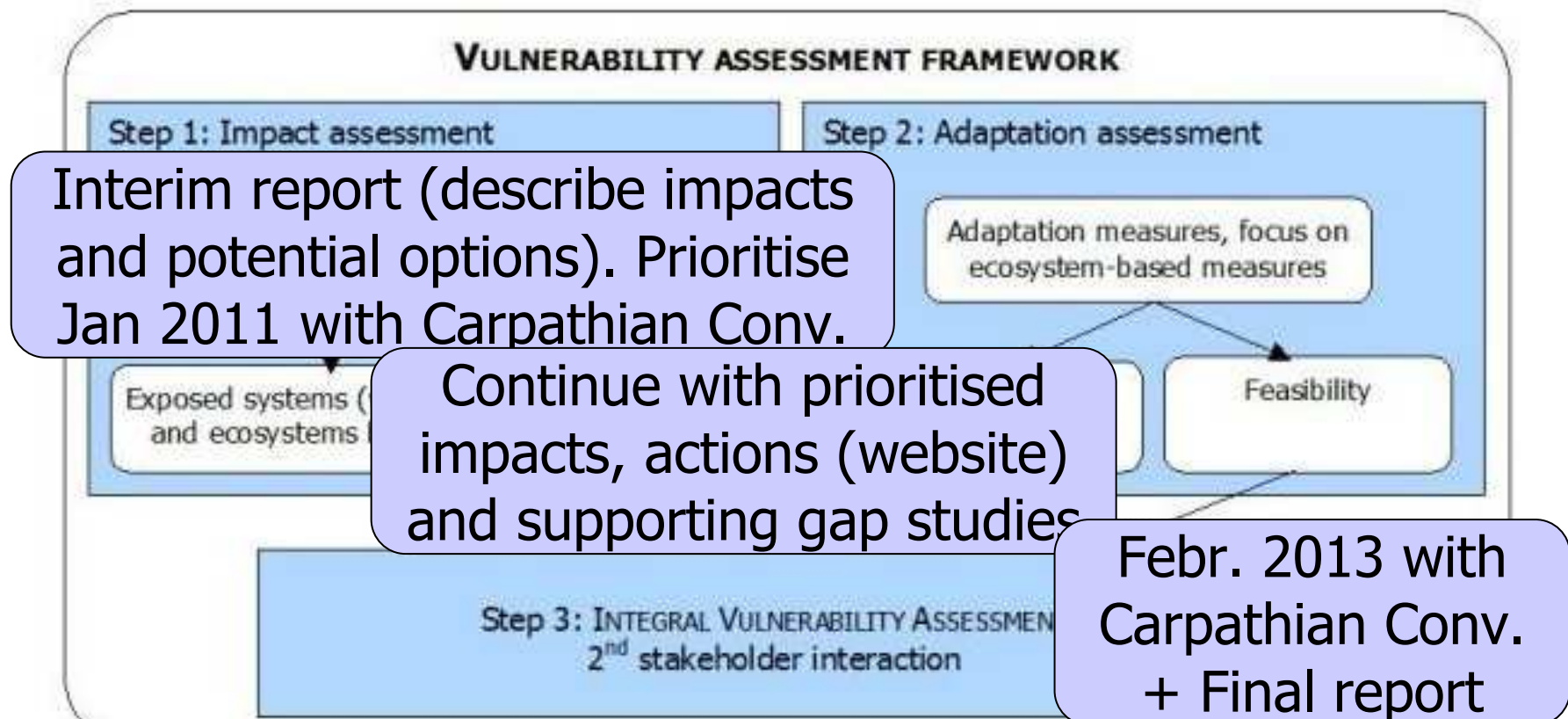
- Indicators selected in stakeholder interaction + indicative for potential policy failure

Step 1: Assessment of the potential climate change impacts on ecosystems and ecosystem based production systems, including:

- Description of exposed systems (water resources, ecosystems and ecosystem based production systems)
- Development of a long list of possible consequences of climate change for the ecosystems and sectors
- Prioritization of climate change trends and impacts, analysis of policy objectives to contribute to selection of impact indicators and impact threshold values.

Step 2: Identification and assessment of potential climate change adaptation measures, focusing on adaptive water management and ecosystem based approaches.

Step 3: Integration of the impact assessment and adaptation assessment along with results from supporting studies into a comprehensive vulnerability assessment.





 TIMESIGNS

**Now
What?**

Reported impacts of climate change

1) Water resources:

- Seasonal shifts, e.g. earlier spring peak discharge, droughts
- Increase water temperature in lakes

2) Ecosystems:

- Changes species distribution, migration, habitat fragmentation, e.g.: decline Norway spruce in lower mountain forest, loss of high grasslands

3) Ecosystem based production systems & human health:

- o Changes in forest and agricultural productivity, e.g. agriculture can move to higher altitude, extension growth season
- o Changes in tourism potential, incl temperature, snow security

Main knowledge gaps (done over next 1.5 years)

1) Study on the key climate change threats & impacts on water resources

- Map floods, droughts and changes snow cover
- Risk of landslides in relation to changing precipitation & flash floods

2) Study on impacts of climate change threats on ecosystems

- Assessing the risk of forest disease and new pathogens
- Protective function of montane and subalpine forests against hazards
- Changes species composition

3) Study impact climate change on ecosystem based production systems

- Positive and negative climate impacts on ecosystem services, focus: multifunctional landscapes, grasslands + tourism sector

4) Study on adaptation measures

5) Supporting stakeholder interaction

6) Integral vulnerability assessments in focal areas

Main knowledge gaps

4) Study on adaptation measures

5) Supporting stakeholder interaction

6) Integral vulnerability assessments in focal areas

SUMMARY: CARPIVIA Tasks and Outcomes:

- Integrated assessment & discussion of key of vulnerabilities & adaptation measures, including cost-benefit analysis and policy recommendations
- Data inventory & knowledge gap analysis (->framework proj)
- Web-supported information system
- Stakeholder consultation and cooperation with Carpathian Convention

CARPIVIA runs until 2013. Partners: Alterra Wageningen UR with ECNC, ECORYS, Grontmij and WWF-DCP

Feed-back part

The main question is how the working group WG prioritizes its tasks and be able to provide the expected WG results

Issues:

- Expected Results
- Possible inputs
- Focus?
- Who will contribute to what issue?
- Follow-up..... (to be discussed in subgroups tomorrow

Back to expected WG Results

as taken up in the WG ToR resulting from the request of DG Environment to the Secretariat during Third Conference of the Parties to the Carpathian Convention (COP3)

1. A Report on climate change impacts in the Carpathian Region and identification of gaps requiring further research (**research**);
2. Discussion on cost, benefits & feasibility of adaptation measures, in particular adaptive water management & ecosystem-based measures (**measures**);
3. Proposal on how the results of CARPIVIA project can benefit national and regional authorities of the Carpathian Region (**dissemination**);
4. Guidelines on contribution to the EU Information System on Climate Change Vulnerability and Adaptation (**EU Policy, information sharing**);
5. List of recommendations for development of policy proposals in field of adaptation to climate change in the Carpathians (**policy recommendations for Carpathian Convention**);
6. Proposals for follow-up activities and projects on vulnerability to climate change and ecosystem-based adaptation measures (**projects**).

Inputs for Working Group include

1. **INTERREG IIIB CADSES** Carpathian Project;
 - Atlas of the Carpathian Region,
 - Report on water resources, natural disasters (climate change), flood risk mapping,
1. **Carpathian Environment Outlook** (KEO), which provides a holistic and integrated assessment of the current state and future trends of the Carpathian environment;
2. **Existing strategies, tools and sources of information** at EU level and at national and regional level in the Carpathian Countries;
3. The experience of the work developed within the frame of the **Alpine Convention** and the Alpine Space Programme;
4. The decisions and recommendations of the **IPCC**;
5. Relevant declarations, resolutions, decisions and documents with regard to the **United Nations Framework Convention on Climate Change** (UNCC);
6. The **CARPIVIA** project;
7. Other related documentation.

Hand-out

/my organization,(name), would like to contribute to:

- Discussing information on vulnerability and adaptation, define gaps and follow-up research (research);
- Identification of cost, benefits and feasibility of adaptation measures (measures);
- Dissemination of information to international organizations (e.g. ICPDR, national and regional authorities in Carpathian Region (dissemination));
- Web-based information System on Climate Change Vulnerability and Adaptation for the Carpathians (knowledge base);
- EU Information System on Adaptation to Climate Change (EU Policy, information sharing);
- Preparation of policy proposals in the field of adaptation to climate change in the Carpathians (policy recommendations);
- Preparation proposals for projects to reduce vulnerability and implement ecosystem-based adaptation measures (projects).
- Other,

! Thank you !

Info:

www.carpivia.eu

Contact:

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Main knowledge gaps (done over next 1.5 years)

1) Study on the key climate change threats and impacts on water resources

- Map floods, droughts and changes snow cover
- Seasonal shift in water balance and impacts on soils
- Assessment of impacts of climate change on the implementation of the water framework directive and flood directive
- Risk of landslides in relation to changing precipitation patterns & flash floods

2) Study on the impacts of climate change threats on ecosystems

- Assessing the risk of forest disease and new pathogens
- Protective function of montane and subalpine forests against hazards
- Climate change and forest management practises
- Changes species composition

3) Study on impact of climate change on ecosystem based production systems

- Positive and negative climate impacts on ecosystem services with specific reference to multifunctional landscapes and grasslands
- Assessment of the vulnerability of the tourism sector

Main knowledge gaps

4) Study on adaptation measures

- Ex post evaluation of adaptation measures
- Supporting costs and benefits studies
- Ecological networks and ecosystem fragmentation
- Assessing/ tailoring adaptation measures for Carpathian region
- Agri-environmental schemes and other farmer support

5) Supporting stakeholder interaction

6) Integral vulnerability assessments in focal areas

- TATRA mountains, including Zakopane, Rodnei & Maramures, Târnava Mare area, Iron gate national park + foothills, basin