

Adaptation to climate change – a multi-level approach

CroAdapt 

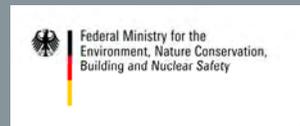


Zagreb, 23.01.2014
BEF

ABOUT THIS EVENT

Background

- > EU wide adaptation efforts
- > Recognition of the importance of the topic and first steps also in Croatia
- > Goal of the event: contributing to the adaptation to climate change in Croatia by increasing awareness of national, regional and local authorities
- > Supported by the German Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety as well as the Federal Environment Agency



Contents of the event

- > Climate change in Croatia
- > Planned policies in Croatia
- > First experiences and case studies from Croatia
- > Adaptation as multi-level governance issue: experience from abroad (Austria, Spain, Italy)
- > Regional working groups

Agenda

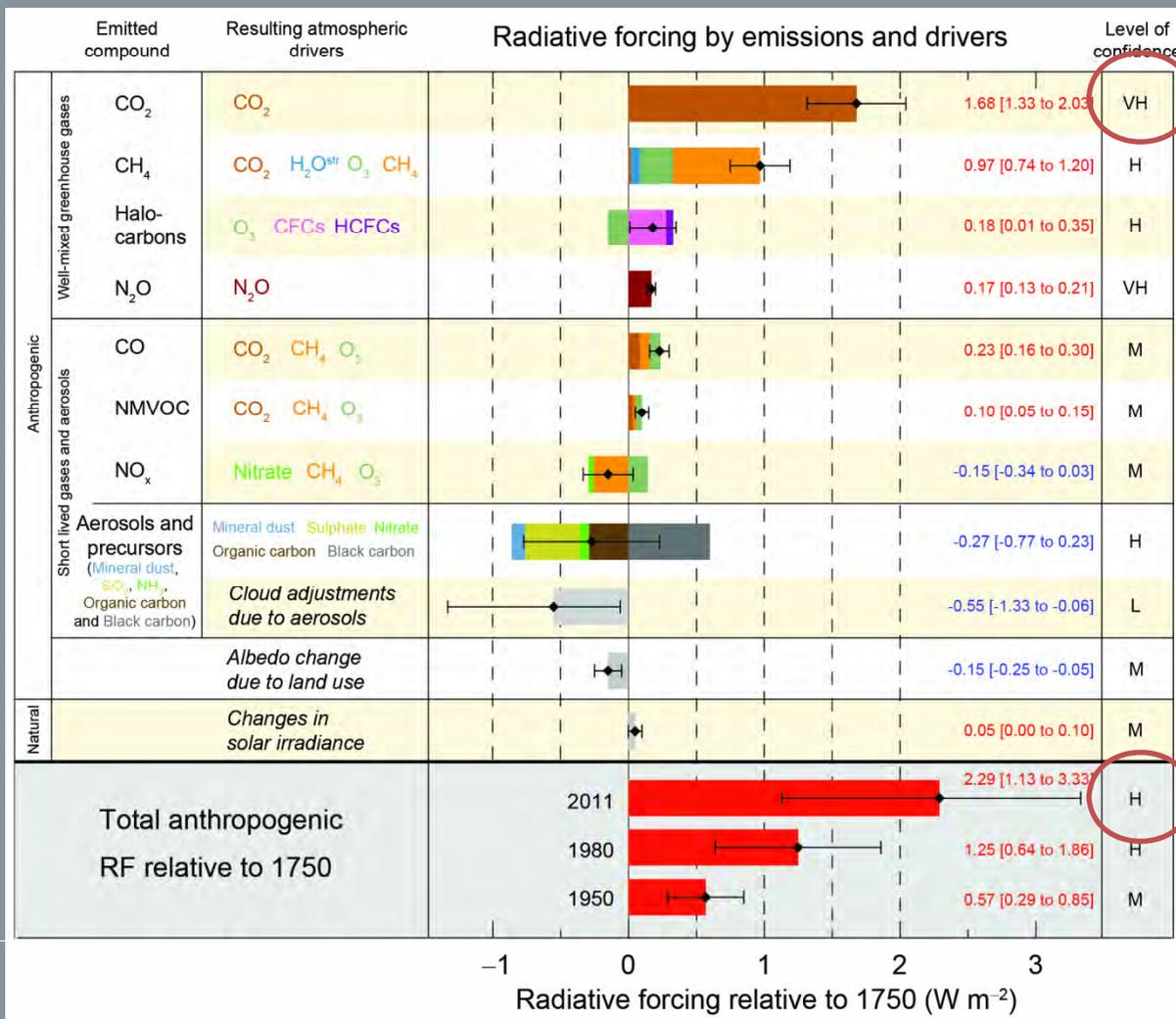
9:00-9:30	<i>Registration of participants</i>	
9:30 – 09:40	Welcome by the organizer	Marija Sculac-Domac, Assistant Minister, Ministry of Environmental and Nature Protection
9:40 – 10:00	Introduction to the meeting and to the issue	Matthias Grätz, Baltic Environmental Forum (BEF) Germany
10:00 – 10:20	Climate variability, expected climate change impacts and projections	Kreso Pandzic, Meteorological and Hydrological Service
10:20 – 10:40	Plans regarding the national climate adaptation policy of the Republic of Croatia	Visnja Grgasovic and Melita Zdilar, Ministry of Environmental and Nature Protection
10:40 – 11:00	Adaptation as a sectoral issue: examples from the agricultural sector in Croatia	Prof. Milan Mesic, University of Zagreb, Faculty of Agriculture
11:00 – 11:30	<i>Coffee break</i>	
11:30 – 11:50	Adaptation as a regional issue: results of the project “Integration of climate variability and change into national Integrated Coastal Zone Management strategies”	Daria Povh Škugor, UNEP/MAP’s Priority Actions Programme/Regional Activity Centre
11:50 – 12:20	Adaptation as multi-level governance issue: the EU frame and experiences in Austria	Sabine McCallum, Federal Environment Agency Austria, Head of Unit Environmental Impact Assessment and Climate Change
12:20 – 12:50	Adaptation as multi-level governance issue: the experiences in Spain from a regional perspective	Salvador Samitier i Martí, Head of the Catalan Office for Climate Change, Ministry of Territory and Sustainability Catalan Government
12:50 – 13:45	<i>Lunch</i>	

Agenda

13:45 – 14:15	Adaptation as multi-level governance issue: experiences from Italy and guidelines for municipalities	Domenico Gaudioso, Italian National Institute for Environmental Protection and Research, Head of the Atmosphere and Climate Service
14:15 – 15:30	Thematic workshop: Climate change adaptation in Croatia from a regional perspective (1) Adriatic coast (2) Panonian Plain (3) Dinaric Alps (4) How can adaptation be successfully addressed on regional and local level? (international speakers/ participants)	Moderation: REC Croatia Ministry of Environmental and Nature Protection BEF Germany
15:30 – 16:00	Coffee break	
16:00 – 16:30	Feedback from the working groups, wrap-up and closing of the event	

INTRODUCTION TO ADAPTATION TO CLIMATE CHANGE

Anthropogenic climate change is happening



Source: 5th Assessment report

Reactions to climate change

Mitigation

- Emission reduction
- Increase storage capacities of GHG gases

Adaptation

- Cope with climate change
- Prevent damages
- Make use of advantages

Changes in local climate...

- *Warmer on average*
- *Increased likelihood of torrential rains, dry spells*
- *Less annual precipitation*

...cause sectoral impacts...

- *More cardio-vascular problems in summer*
- *Changes in crop yields*
- *Different tourism patterns*

...that need adaptation.

Different sectors

- > Adaptation is an issue that effects many, if not most sectors
 - > Agriculture and industry
 - > Forestry, Fishery
 - > Tourism
 - > Health, civil protection
 - > Energy supply, infrastructure
 - > Biodiversity, nature conservation

Mainstreaming climate adaptation

- > Integrate adaptation into different policy sectors as horizontal issue
- > Ways to do that:
 1. Interministerial working groups
 2. Allocate budget to sectors
 3. Climate-proofing political decisions (strategies, investments, plans)



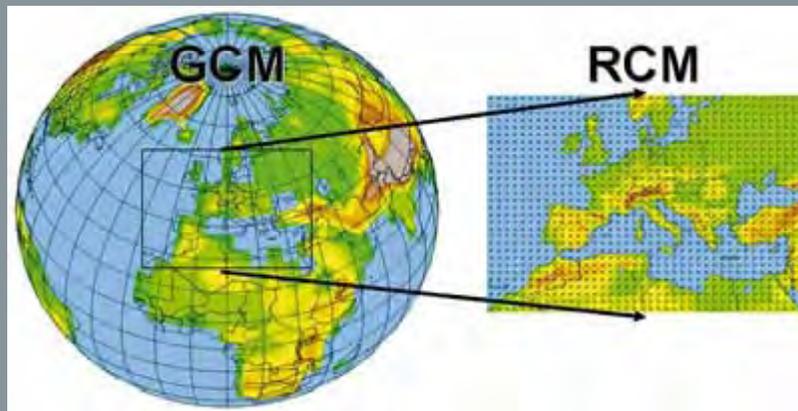
Basic principles for adaptation starters

1. Look for win-win solutions and no regret measures
2. Should not counteract mitigation or other adaptation efforts (maladaptation)
3. Increase capacities and knowledge basis
4. Integrate stakeholders from the beginning
5. Prioritize concerns and adaptation options

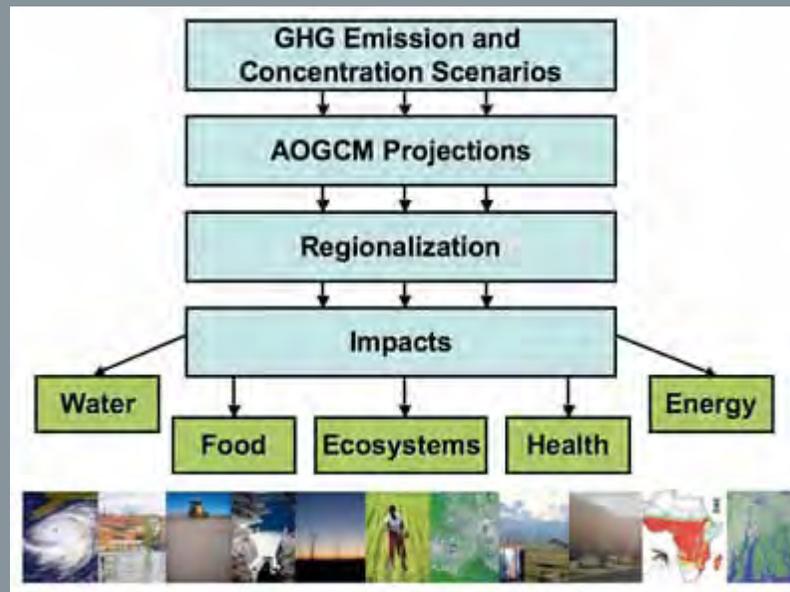
The adaptation process (roughly)

Preparatory step

1. Impact assessment (regionalised models for projections)



Source: WMO



Source: WMO

The adaptation process (roughly)

2. Assess vulnerabilities and indentify priority sectors (with stakeholder involvement)

Vulnerability ...describes the adaptive capacity of structures and processes to potential impacts, taking into account their value/importance

- Based on scientific assessment (either study, expert opinion)

The adaptation process (roughly)

3. Develop an adaptation strategy and an adaptation action plan (include mechanisms to enable adaptation on the local level)
 - > *The adaptation strategy explains goals and motivation (knowledge basis, impacts, vulnerabilities), lists priority sectors, needs for main-streaming and multi-level governance and attributes responsibilities.*
 - > *The action plan is a selection of measures from several adaptation options that aim at increasing the adaptive capacity. They can be selected according to different methods (cost-benefit analysis, multi-criteria analysis...)*

The adaptation process (roughly)

4. Monitor it, evaluate it regularly and improve

> *The adaptation strategy and the action plan need regular evaluation and revision*

> *Finland (2012), Germany (until end of 2014)*

Multi-level governance in adaptation

EU Adaptation Strategy (April 2013)



Promoting action by Member States



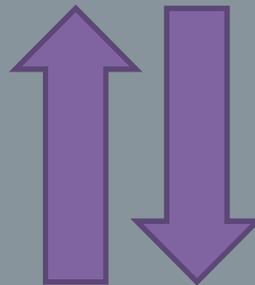
National adaptation strategies



...And action plan

- Needs
- Priorities

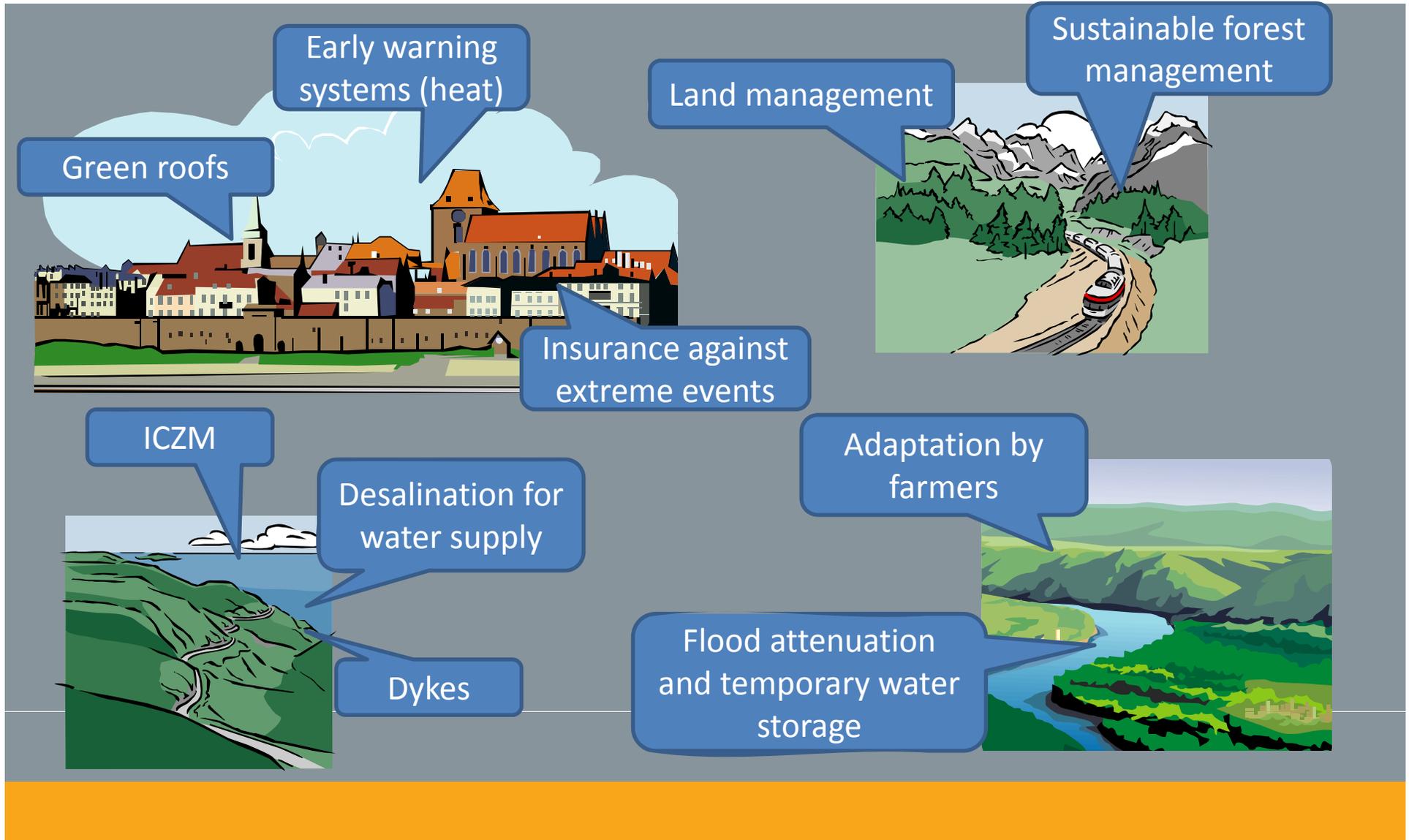
- Funding mechanisms & support
- Obligations, responsibilities
- Legal frame, planning system



Regional and local level



Grey, green and soft measures



Case studies 1 – new varieties and production systems in the wine sector (Spain)

- > **Adaptation goal:** adapt the wine sector to new, long-term variability, climate change, and market constraints
- > **Adaptation actions:**
 - > Assessment of changes in the ripening process of grapes in conditions of climate change
 - > Investigation of possible changes in the production process (e.g. disease control)
 - > Development of new genetic varieties and/ or the use of existing adapted grape varieties
 - > Discussion and possibly adjustment of the systems of protected designation of origins (PDO)
- > **Financing:** 27 mio. EUR for a 4-year research project (45% public funds, 55% private sector)

Case studies 2 – regional early warning system (Italy)

- > **Adaptation goal:** to monitor and prevent different health-related risks
- > **Adaptation action and costs:**
 - > Enhancing a monitoring system for insect-borne diseases, incl. scientific research and educational activities (ca. 9 m €/ year)
 - > Setting up of a warning and prevention system for health risks caused by heat waves in urban areas (ca. 5 m €/ year)
 - > Maintaining an early warning system for floods and landslides supporting the Regional Civil protection agency, incl. a daily hydrogeological bulletin on the likelihood of flooding (ca. 6 m €/ year)

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