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Managing Climate Change – From Regional To Global Scale

«Climate change research post Copenhagen»

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Major drivers calling for enhanced climate research

- The crucial role of science in the **UNFCCC process** has been highlighted during the *Copenhagen conference* in December 2009 (COP-15)
- The preparation of the *5th Assessment Report (AR5) of the Intergovernmental Panel on Climate Change (IPCC)*
- **Europe 2020 Strategy**: includes climate and energy and emphasizes the importance of structural and technological innovation changes required to move to a low carbon, resource efficient and climate resilient economy by 2050





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The role of climate research in the post-Copenhagen context





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Key issues to be addressed by research

(derived from Copenhagen Accord)

- **Projections of impacts of a global temperature change up to 2°C for Europe and in vulnerable regions**
 - The design of robust monitoring, reporting and verification methodologies related to the implementation of policy commitments
 - The design of mechanisms for reducing emissions from deforestation and land use (including agriculture)
 - The identification of gaps in knowledge and policies for ensuring the compatibility of the measures decided with the long term objective of the UN Climate Convention.
 - Robust quantification of emission reduction potential and associated costs in key sectors such as Energy, Transport and Agriculture with a view to facilitate decision making on climate commitments.





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FP7 replies

Work Programme 2011 (*Environment – incl. climate change*):

➤ **ENV.2011.1.1.6-1 Impacts of a global temperature increase of 2°C from pre-industrial level, in Europe and most vulnerable regions of the world**

Expected Impact: Identification and quantification of impacts of a global temperature increase up to 2°C in Europe and vulnerable regions of the world. Provision of updated scientific basis for the 2015 review of international climate commitments taken under the UNFCCC.

➤ **ENV.2011.1.1.6-2 Mitigation policies and measures in the world's major economies compatible with the objective of limiting global surface temperature increase below 2°C**

Expected Impact: Identification of challenges for major economies to implement policies in line with the requirements for meeting the 2°C target.





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Climate Research – a research priority since long in the FP

ADAM - Adaptation and Mitigation Strategies:

Supporting European Climate Policy

- To assess the extent to which existing climate policies can achieve a socially and economically tolerable transition to a world with a global climate no warmer than 2°C above pre-industrial levels (one of the project's key objective)

<http://www.adamproject.eu/>



RESPONSES – European responses to climate change: deep emissions reductions and mainstreaming of mitigation and adaptation

- To identify and assess integrated EU climate-change policy responses that achieve ambitious mitigation and environmental targets and, at the same time, reduce the Union's vulnerability to inevitable climate-change impacts.

<http://www.responsesproject.eu/index.html>





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Science – Policy Interface





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IPCC 5th Assessment Report (AR5)

Scope, Content and Process for the Preparation of the Synthesis Report (SYR) of the IPCC AR5; Topics to be addressed:

- **Observed changes and their causes**
- **Future climate changes, impacts, and risks**
- **Adaptation and mitigation measures**
- **Transformations and changes in systems**

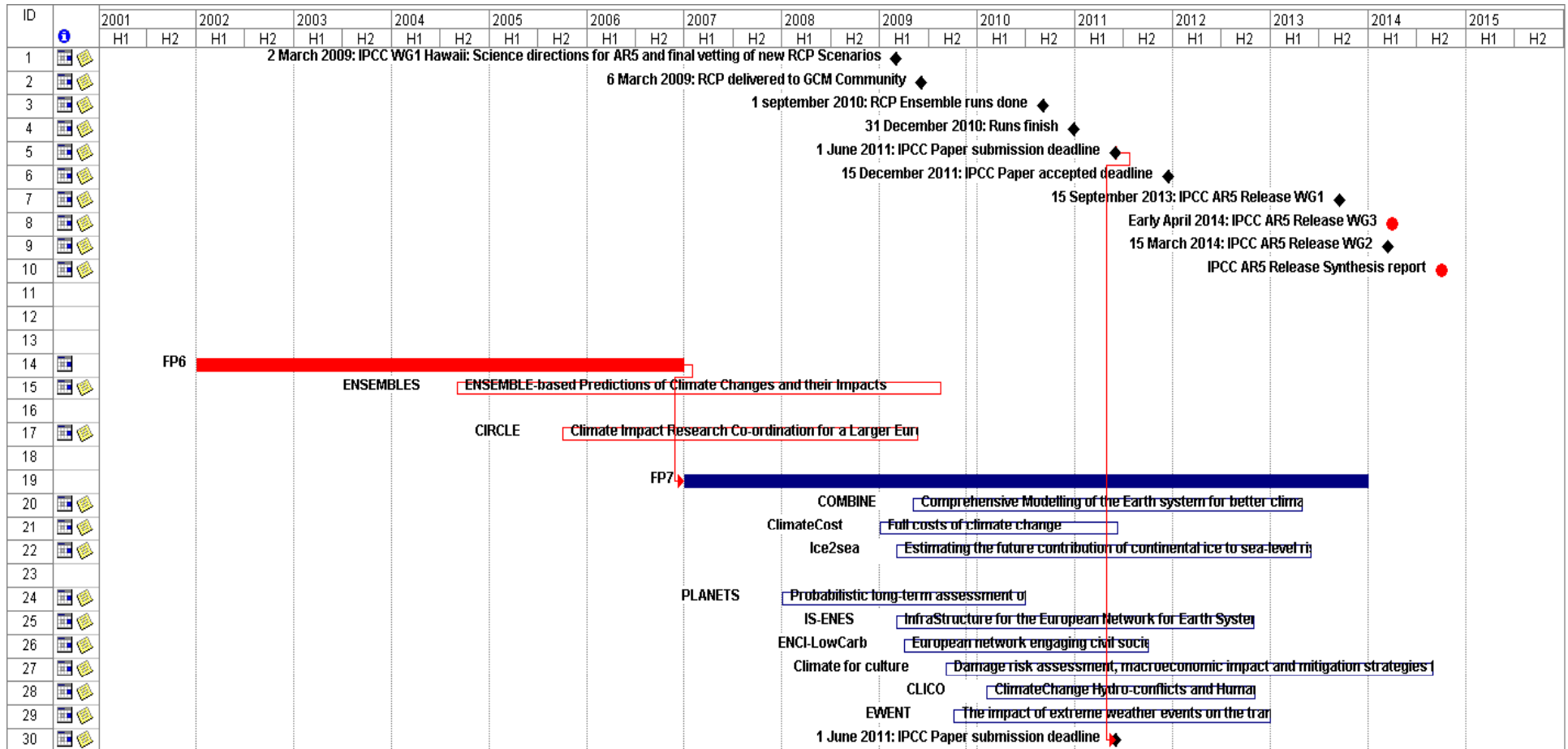




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Examples of potential FP contributions to IPCC AR5



PROGRAMME



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Key climate change issues addressed by FP research (examples)



*How much glaciers, ice caps
and ice sheet in both polar
regions will contribute to global
sea-level rise?*

- Projections of the contribution of continental ice to sea level rise over the next 200 years
- Identify thresholds that commit the planet to long-term sea-level rise.

ClimateCost

*What are the costs and benefits
of adaptation to climate
change?*

- Identification and development of consistent scenarios for climate change and socio-economic development, including mitigation scenarios.
- Quantification in physical terms, and value as economic costs, the effects of future climate change (the 'costs of inaction') under different scenarios for the EU and other major negotiator countries

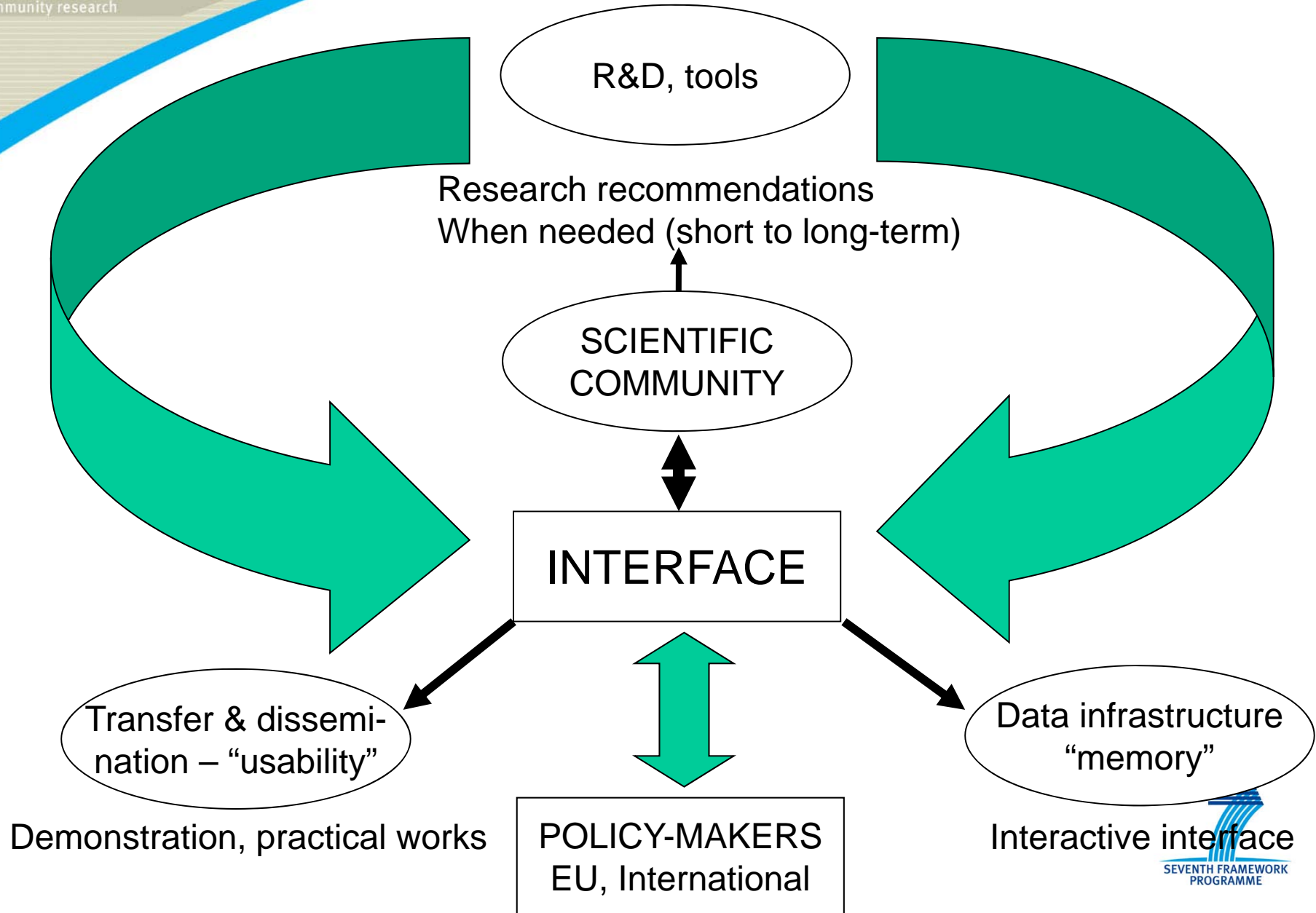




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Science-policy interface





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Communicating research on climate change





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The new context of communication post-Copenhagen

➤ **General public**

Goal: To sustain and enhance the credibility of scientific information; to go beyond the social awareness, facilitating active behavioural engagement

Message to emphasize the regional and local dimension of information of the impacts and implications at individual level; Present information in a way that affirms rather than threatens people's values.

➤ **Policy makers**

Goal: To increase awareness and use of research results relevant to the policy making process.

Communication to focus on scientific evidence and propose policy options; explain research methods used will increase credibility; new mechanisms to improve translation of results.



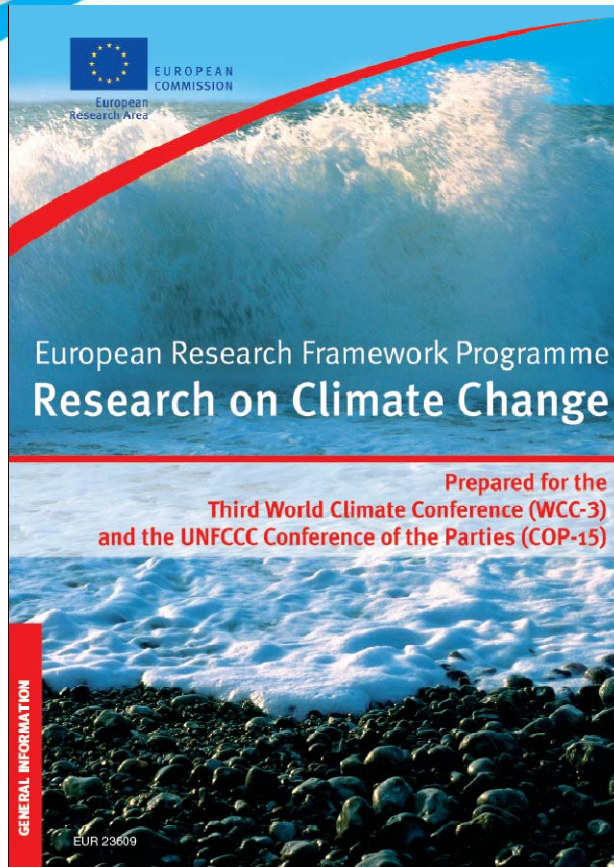
SEVENTH FRAMEWORK
PROGRAMME



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<http://ec.europa.eu/research/environment/pdf/cop-16.pdf>



<http://ec.europa.eu/research/environment/pdf/cop-15.pdf>

Thank you for your attention

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