

Highlights of recent climate change research findings

- as presented at the workshop -

- The observational data and recent research findings confirm and reinforce results of the IPCC AR4
- Current global CO₂ emissions are near the upper end of AR4 emission scenarios
- Climate may be changing faster than projected by the AR4 or may have more severe impacts in this century

Highlights of recent climate change research findings

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- New areas of concern are emerging, including:
 - Multiple impacts of ocean acidification
 - Extensive and rapid changes in the cryosphere
 - New estimates of projected sea level rise
 - Effects of black carbon and tropospheric ozone
- Social sciences can make an important contribution to climate change research
 - Inter- and multidisciplinary research can help in addressing barriers encountered in mitigation and adaptation efforts
- Geo-engineering has limitations (e.g. ocean fertilization)

Needs and priorities for further research

- Uncertainties and research gaps still exist, for example with regard to tipping points and future feedbacks
- Areas for further policy relevant research highlighted include:
 - Relationship between climate change and extreme weather and climate events;
 - Possible ways to achieve low emission pathways (technical, economic and social aspects)
- Multidisciplinary research including social sciences is needed; more research on behavioral aspects of climate change as an example
- Strong need to maintain systematic observations on a continuous basis and improve coverage of observations (e.g. Himalayas, Africa)
- Need to collect and analyze historical data