



## **IPCC Perspective**

Netherlands Meeting on New Socioeconomic Pathways for Climate Change Research, The Hague, 14-16 May 2012

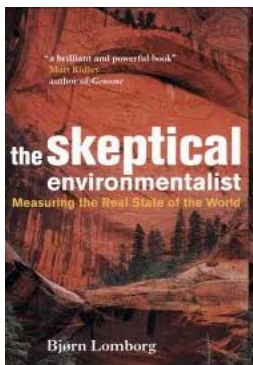
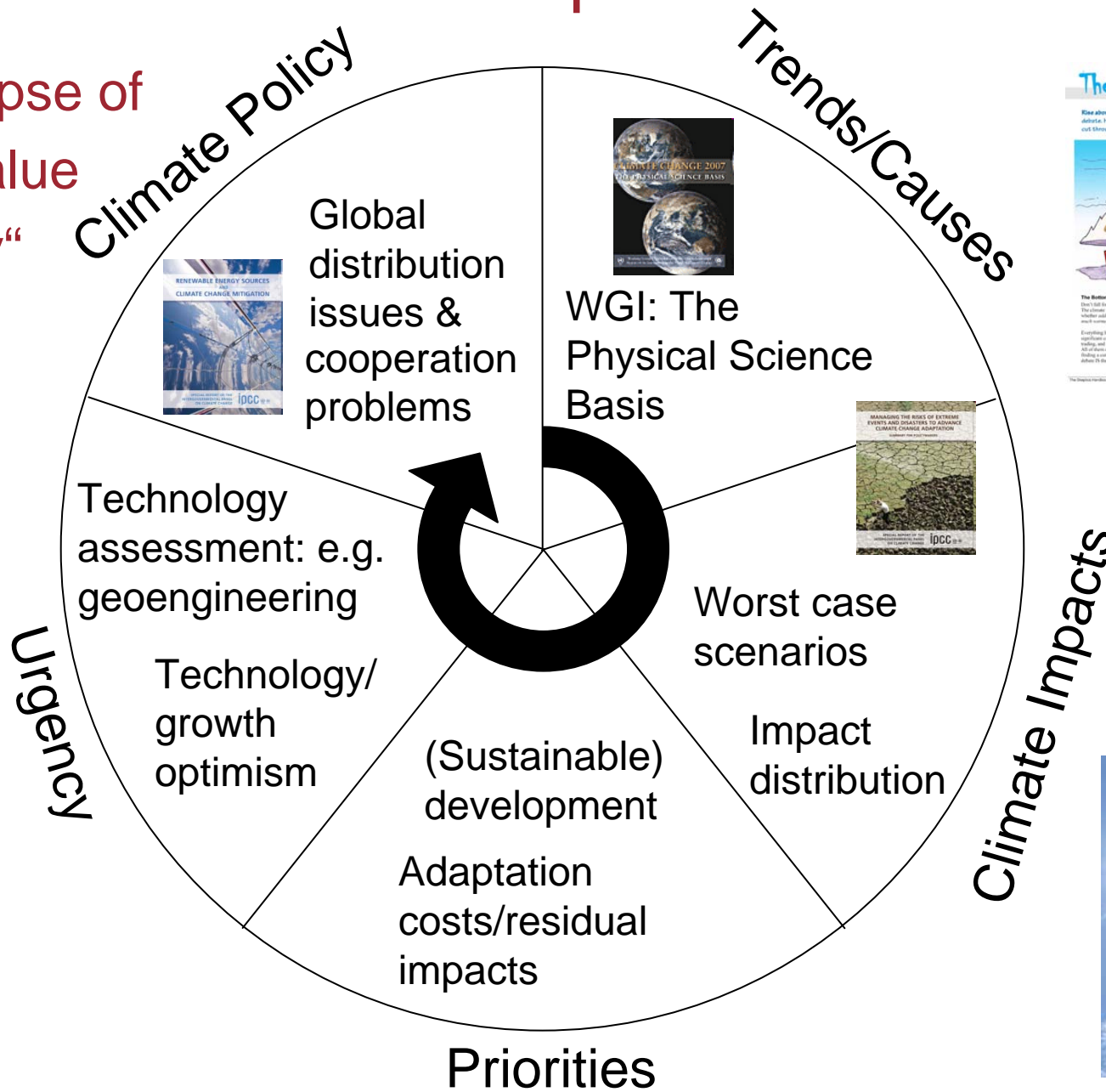
**Prof. Dr. Ottmar Edenhofer**

Jan Minx, Christoph von Stechow



# Five forms of climate scepticism

„The collapse of the fact/value dichotomy“



# The policy arena: the COP16 outcome



Advance unedited version

**Draft decision -/CP.16**

## **Outcome of the work of the Ad Hoc Working Group on long-term Cooperative Action under the Convention**

*The Conference of the Parties*

*Recalling* its decision 1/CP.13 (the Bali Action Plan), and decision 1/CP.15,

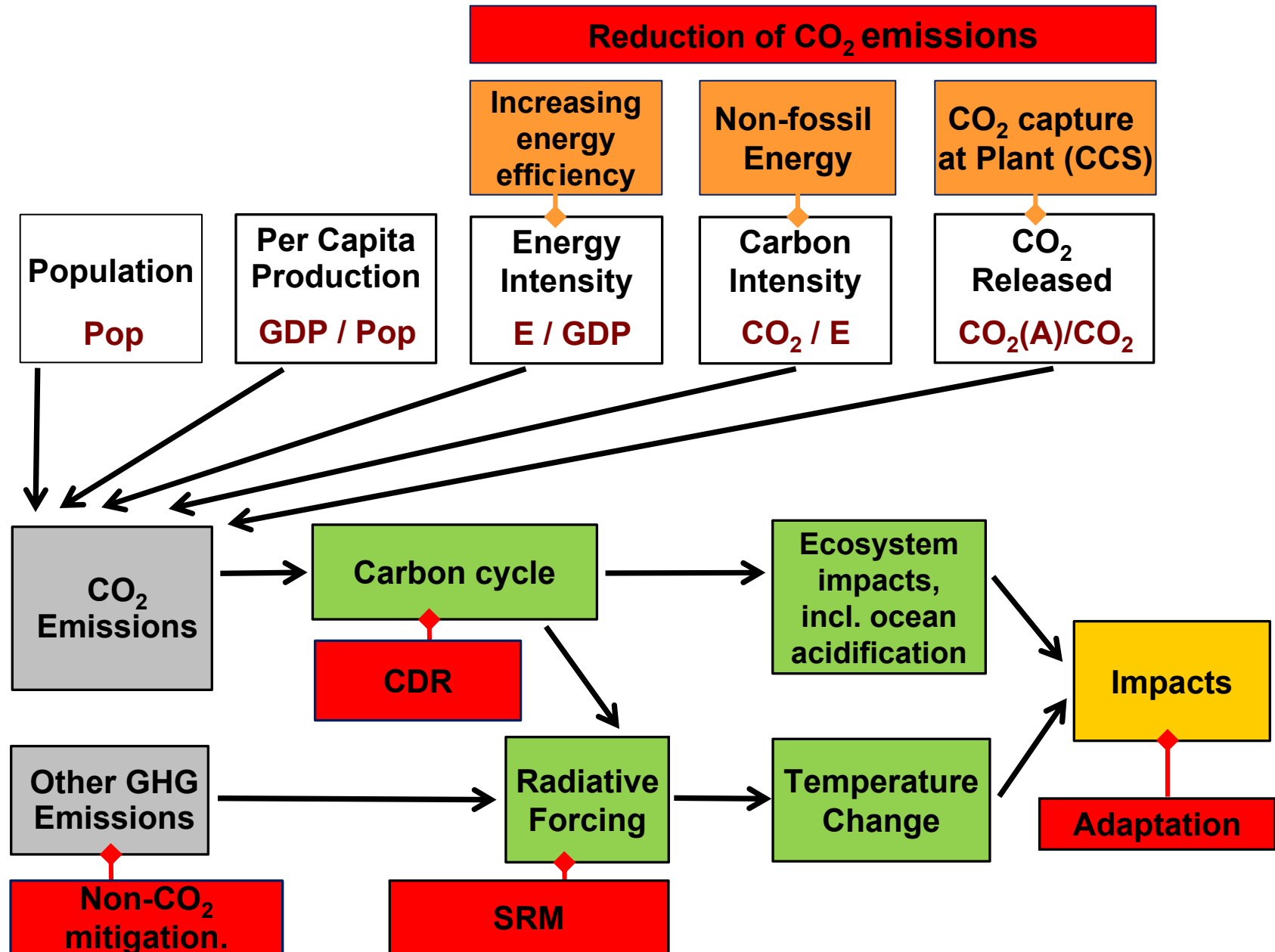
*Seeking* to secure progress in a balanced manner, in the understanding that, through this decision, not all aspects of the work of the Ad Hoc Working Group on Long-term Cooperative Action under the Convention are concluded, and that nothing in this decision shall prejudice prospects for, or the

*The Conference of the Parties...*

[...] recognizes that deep cuts in global greenhouse gas emissions are required [...] to hold the increase in global average temperature **below 2°C** ...

[...] also recognizes the need to consider, [...] strengthening the long-term global goal [...], including in relation to a global average temperature rise **of 1.5°C**.

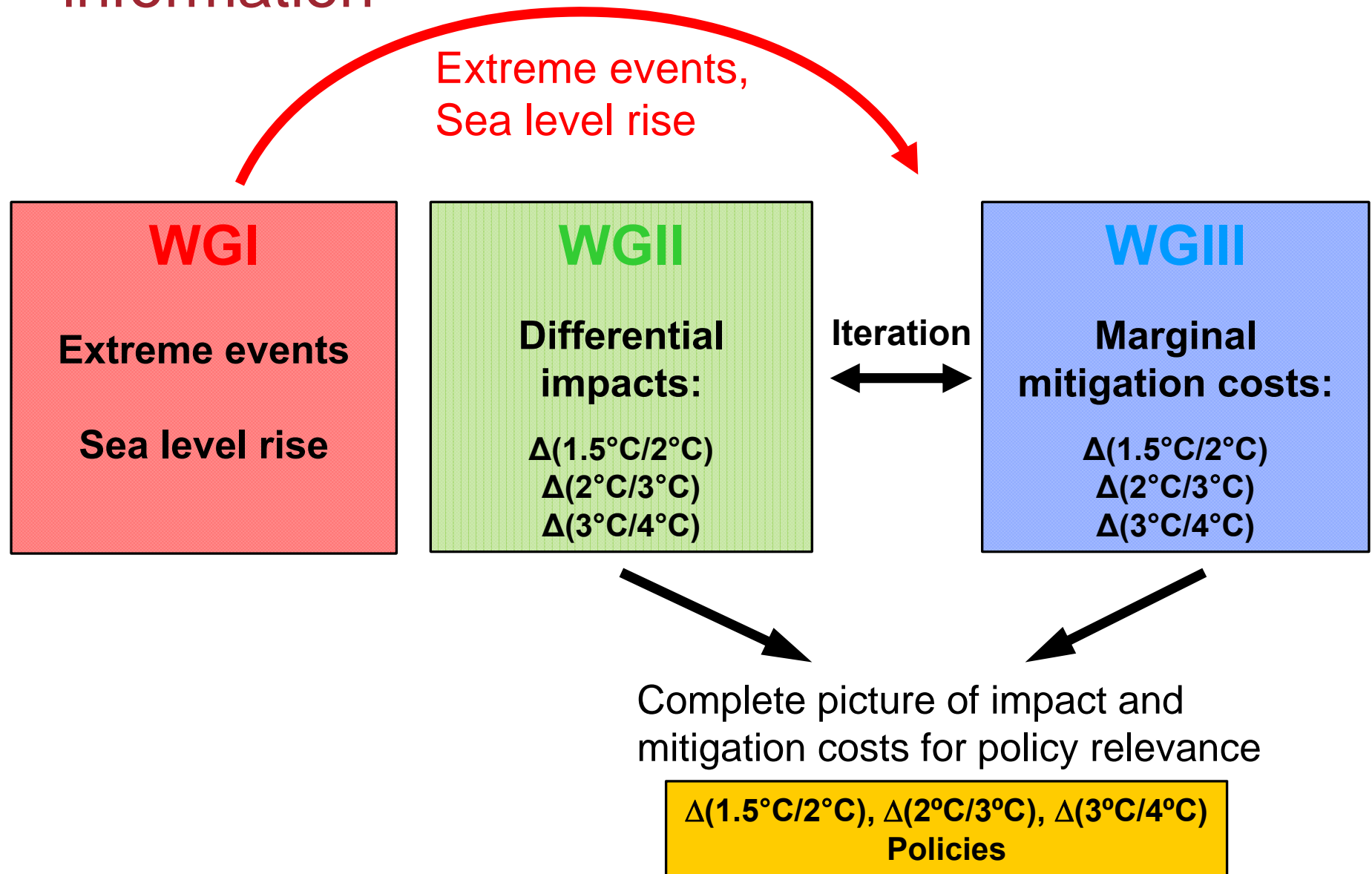
# Exploring and assessing the solution space



## Exploring and assessing the solution space: 'seven virtues' of assessment making

1. Reviewing comprehensively the relevant scientific, technical and socio-economic literature
2. Describing consistent transformation pathways
3. Evaluating costs, risks and opportunities of different pathways in a consistent way within and across Chapters and WGs
4. Specifying underlying value judgements and worldviews
5. Communicating quantitative and qualitative uncertainties
6. Using neutral language along good scientific practice
7. Making text, figures and tables accessible

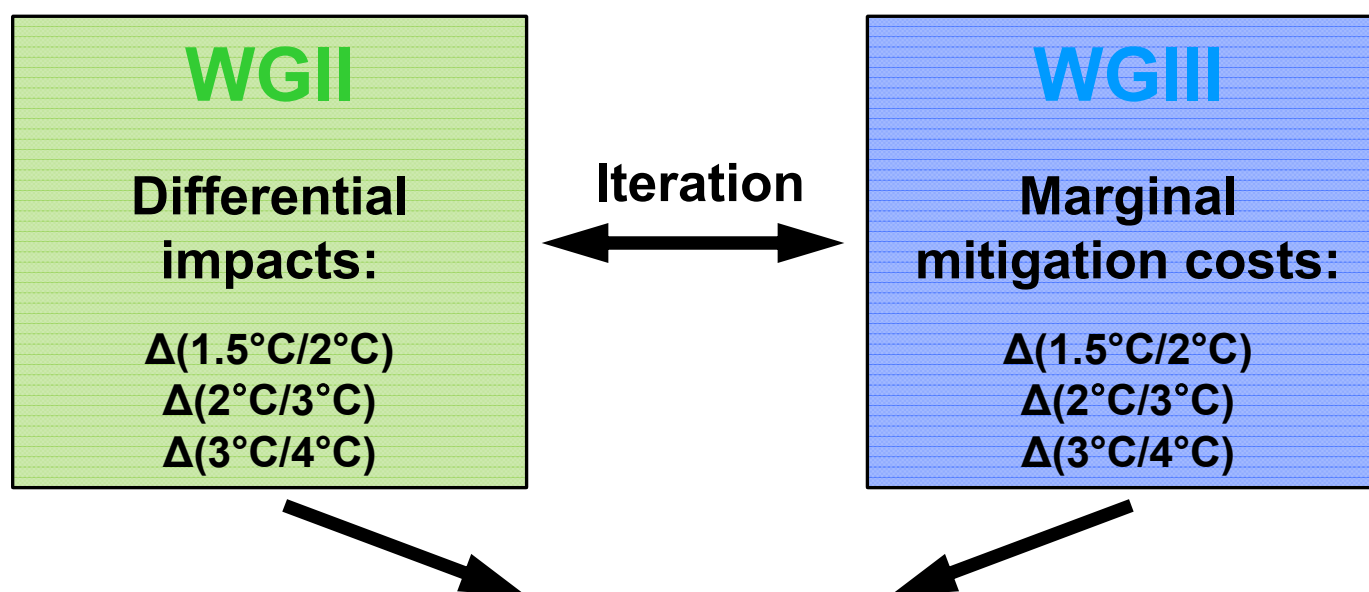
# Need for broadly comparable scenario information



# Assess human response options

Explore adaptation and mitigation options

Explore benefits, costs, and risks of adaptation and mitigation



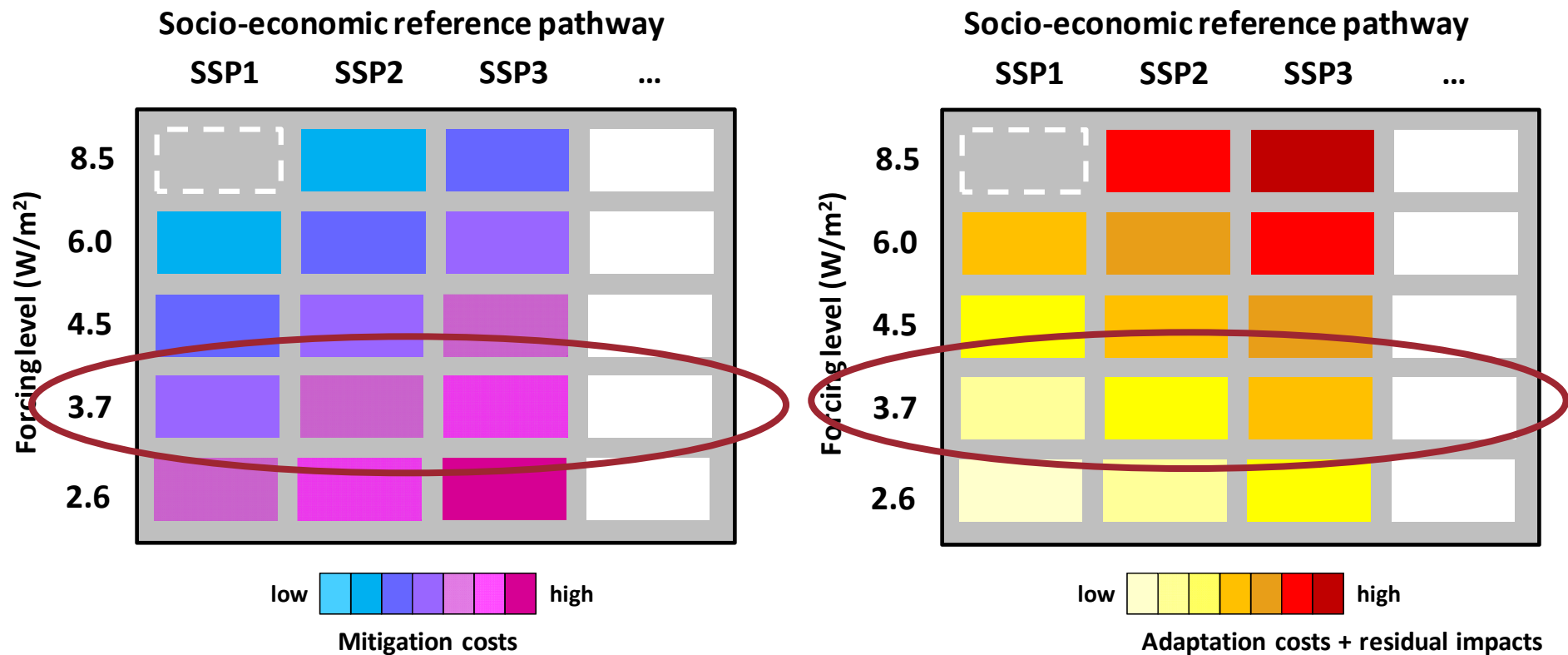
$\Delta(1.5^{\circ}\text{C}/2^{\circ}\text{C})$ ,  $\Delta(2^{\circ}\text{C}/3^{\circ}\text{C})$ ,  $\Delta(3^{\circ}\text{C}/4^{\circ}\text{C})$  policies:  
Consistent understanding of costs of impacts and of mitigating impacts

Establish smallest common denominator between both communities

# Application of the scenario architecture

**Matrix** cells can be filled with results of IAM & IAV studies that

- are based on RCPs / CMIP5 projections / new SSP scenarios OR
- use existing assumptions that can be mapped to those (→ heuristic tool)



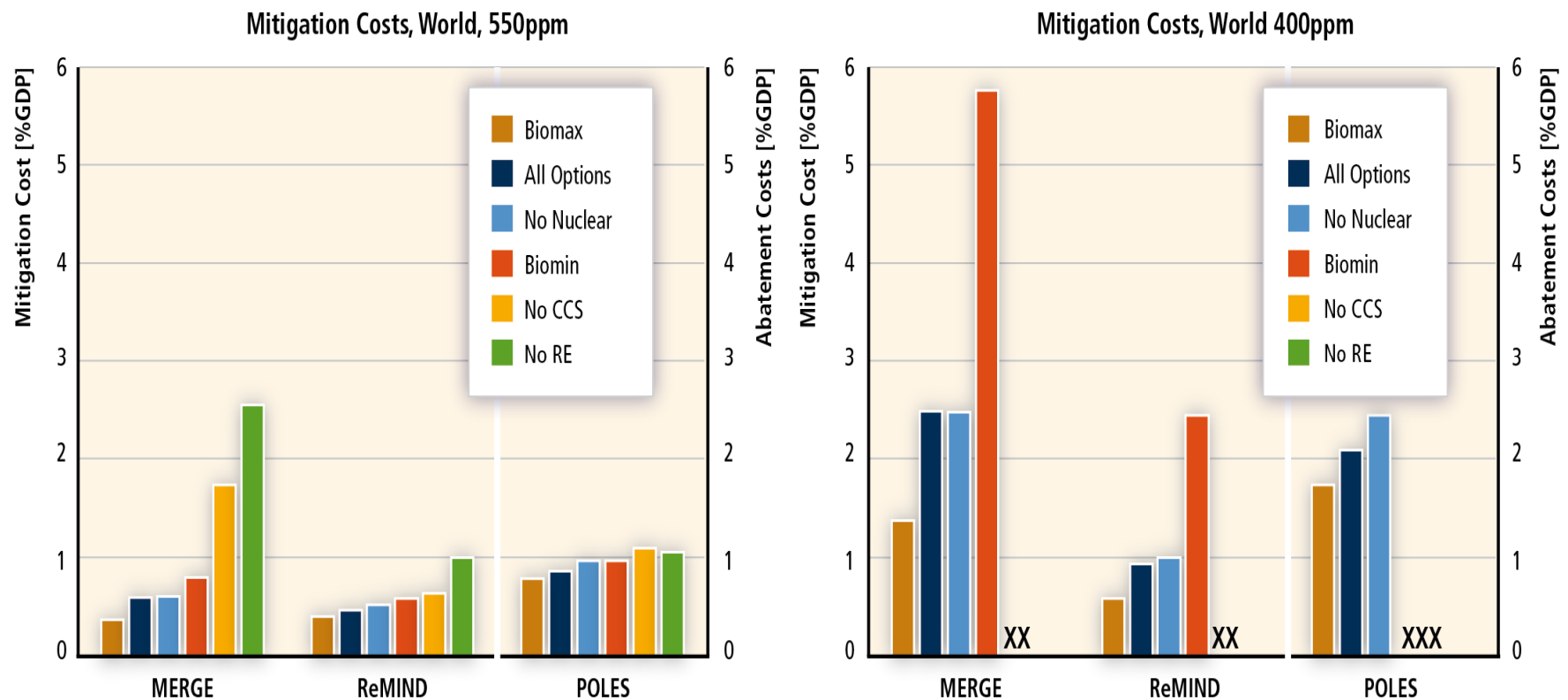
# Post-AR4 scenarios in WGIII

- Describe consistent transformation pathways
- Explore the costs, risks and opportunities of different long-term stabilization targets...
- ...in perfect and imperfect worlds

**Table 10.2** | Categorization of the 164 scenarios reviewed in this section based on CO<sub>2</sub> concentration levels in 2100, the inclusion of delayed participation in mitigation (second-best policy), and constraints on and/or variations in the deployment of fossil energy with CCS, nuclear energy and RE. The CO<sub>2</sub> concentration categories are defined consistently with those in the IPCC Fourth Assessment Report (AR4), WGIII (Fisher et al., 2007). Note that Categories V and above are not included here and Category IV is extended to 600 ppm from 570 ppm, because all stabilization scenarios lie below 600 ppm CO<sub>2</sub> in 2100 and because the lowest baseline scenarios reach concentration levels of slightly more than 600 ppm by 2100.<sup>1</sup> Data adapted from Krey and Clarke (2011) modified to include two additional scenarios.

	CO <sub>2</sub> concentration by 2100 (ppm)	Number of scenarios	Policy Scenarios			
			First-best	Constrained technology	Second-best policy	Constrained technology & second-best policy
Baselines	>600	27	—	—	—	—
Category IV	485–600	32	11	13	6	2
Category III	440–485	63	20	29	11	3
Category II	400–440	14	7	6	1	0
Category I	<400	28	10	16	2	0

# Example from the SRREN: mitigation in a technologically constrained world



# Transition into the new scenario architecture

- Use matrix architecture as heuristic tool
- Populate matrix new scenarios
- Need for marker scenarios?

Socio-economic reference pathway

	SSP1	SSP2	SSP3	...
8.5				
6.0				
4.5				
2.6				

# Exploring and assessing the solution space in the AR5 requires timely delivery of scenarios from CM, IAV & IAM communities

- AR5 literature cut-off date Working Group I:
  - 15 March 2013
- AR5 literature cut-off date Working Group II:
  - 31 August 2013
- AR5 literature cut-off date Working Group III:
  - 3 October 2013

# Final Remark

- Policy relevant but not policy prescriptive!



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