



Netherlands Environmental Assessment Agency

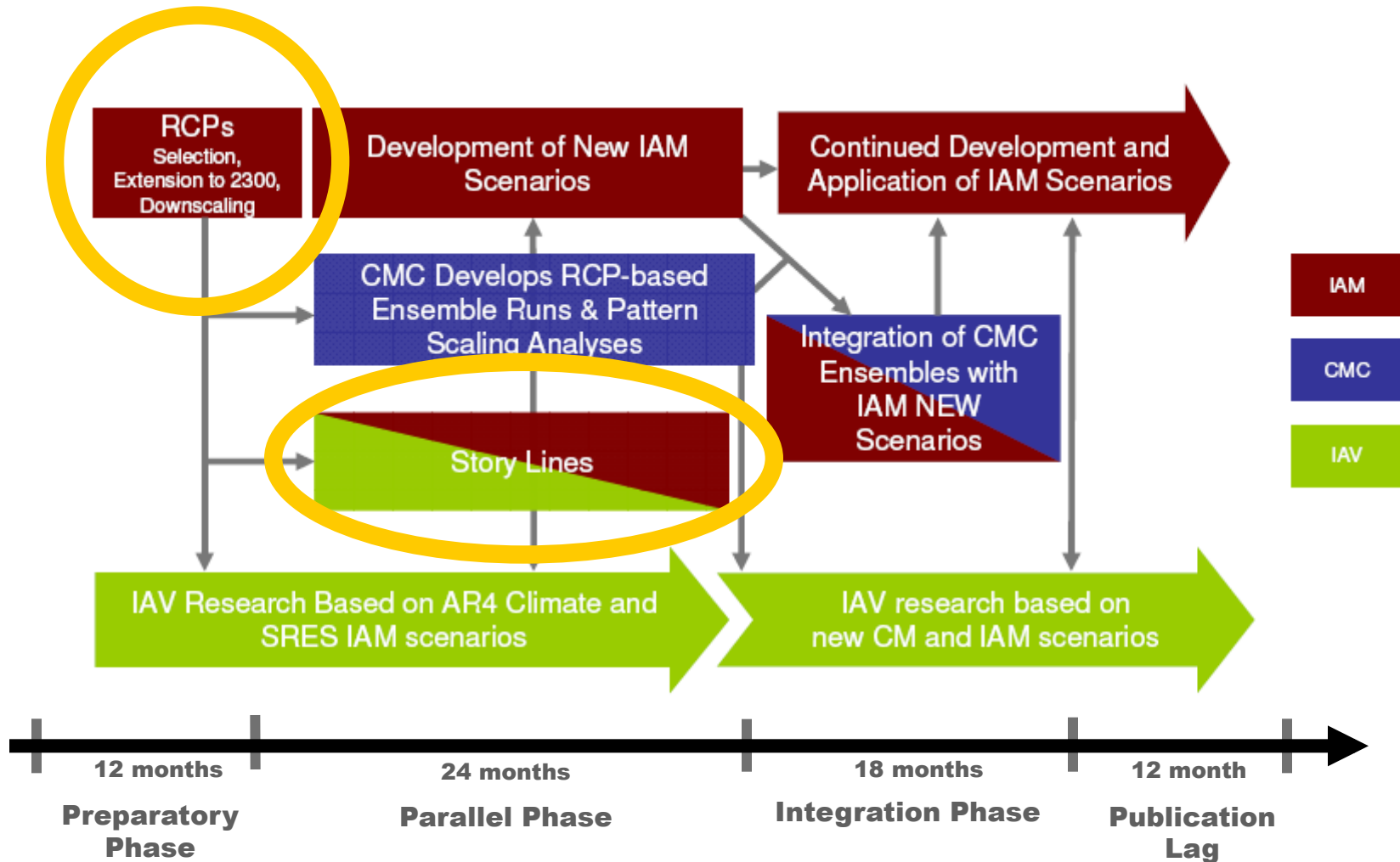
Scenarios/Narratives

Tom Kram

3rd Annual IAMC Meeting, 28-29 October 2010



The New Scenario Development Process



What was done since IAMC-2?



- Strawman thoughts for SWG plan
- Involvement in NAS and IPCC meetings
- (Limited) contribution to two papers



Strawman thoughts



1. Goal, purpose and ‘client’/product combinations

- Scenarios/Narratives + supporting tools
- ST/MT - parallel phase: RCP analysis IAV and IAM
- LT – integration phase: CM and IAM and IAV

2. Issues to consider:

- SE scenarios relation with RCPs
- Confine to RCPs or explore alternative levels/pathways
- Work backward or forward
- Resolution – geographic, time, sector; and downscaling
- Database template for storylines and scenarios
- Explore alternative scenarios consistent with RCPs (multi-model, multi-baseline, resource/technology and policy uncertainties)

3. Process, next steps

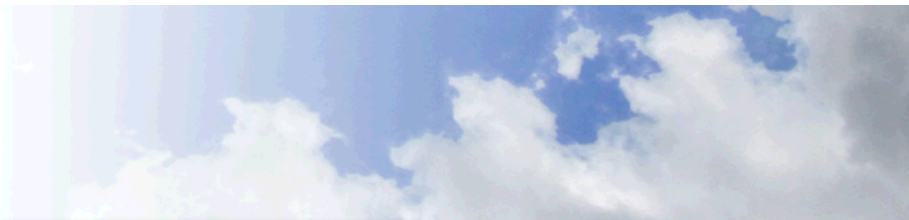


Status by end October 2010



- NAS ‘Snowmageddon’ workshop, DC, Feb 2010
 - Presentations on SE-RCP relations and downscaling
 - Break-out discussion on ideas/proposals for scenario framework
- Two papers: *van Vuuren et al. & Kriegler et al.*
- SSG for IPCC expert meeting, Berlin, 1-3 Nov 2010 (scope, agenda, participants)
- Small framing document for NAS report + 2 papers





Highlights from (Detlefs) NAS presentation



Further use of RCPs in climate research (RCPs are not the final products)

- RCP are/could be used in different ways:
 - Basis for climate calculations (ongoing)
 - Basis for impact assessment
 - Basis for mitigation analysis

What is needed?

Climate impacts depend on:

- Exposure (climate change)
- The subject at risk (f (population, income etc))
- Adaptive capacity (f (technology, income, governance etc))

Available from RCPs



Possibly

Possibly

Further use of RCPs in climate research (RCPs are not the final products)

- RCP are/could be used in different ways:
 - Basis for climate calculations (ongoing)
 - Basis for impact assessment
 - Basis for mitigation analysis

What is needed?

Mitigation depends on:

- Baseline + target
- Assumptions on technology etc.
- Assumptions on climate governance (global cooperation etc)

Available from RCPs



Possibly

Possibly

Conclusions on current SE - RCPs



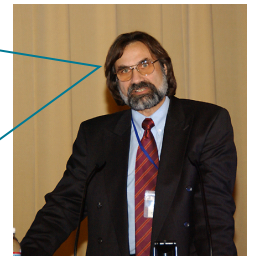
- There are scenarios reaching each RF level, independent of population assumption
- There are scenarios reaching each RF level, independent of income assumption
- Each scenario underlying the RCPs provides a consistent combination of population, GDP, energy, RF; however as a set they provide no logic ordering (not selected for that) nor do they always cover the full range of possible outcomes



What else is new?



Similar future GHG emissions can result from very different socio-economic developments, and similar developments of driving forces can result in different future emissions (SRES).



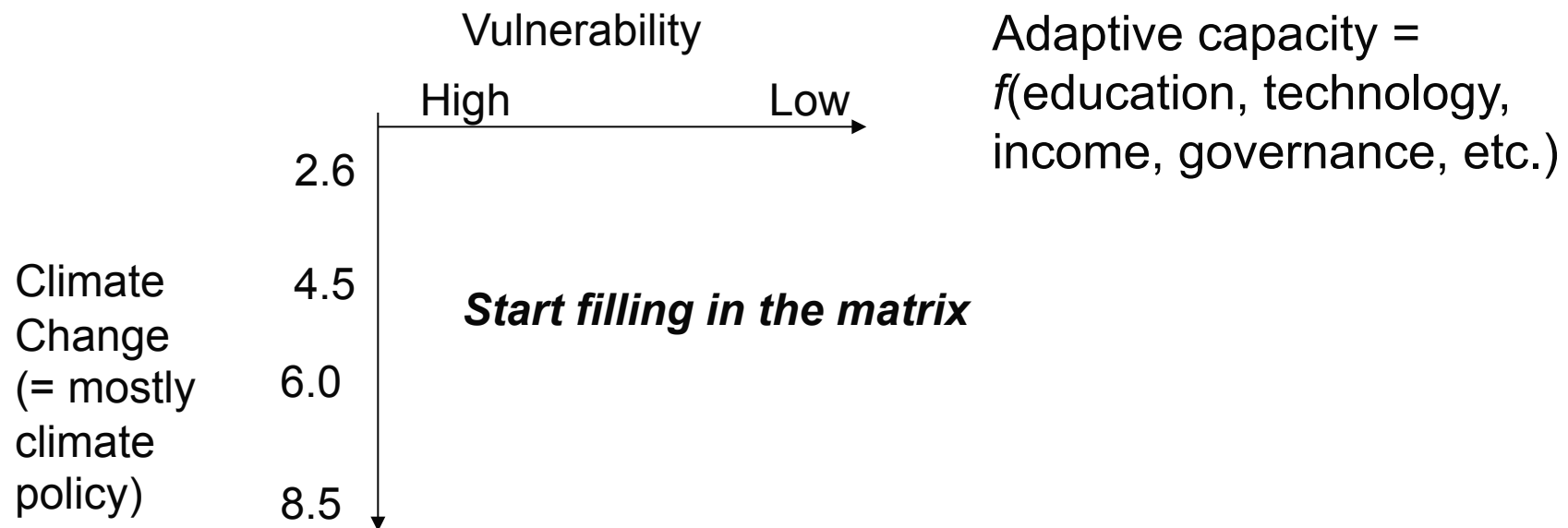
So: can we create useful storylines for IAV/mitigation work, in accordance with RCPs?

The main observations from current SE assumptions behind each RCP level, and for the current set as a whole, points at need for alternative scenario/narrative assumptions



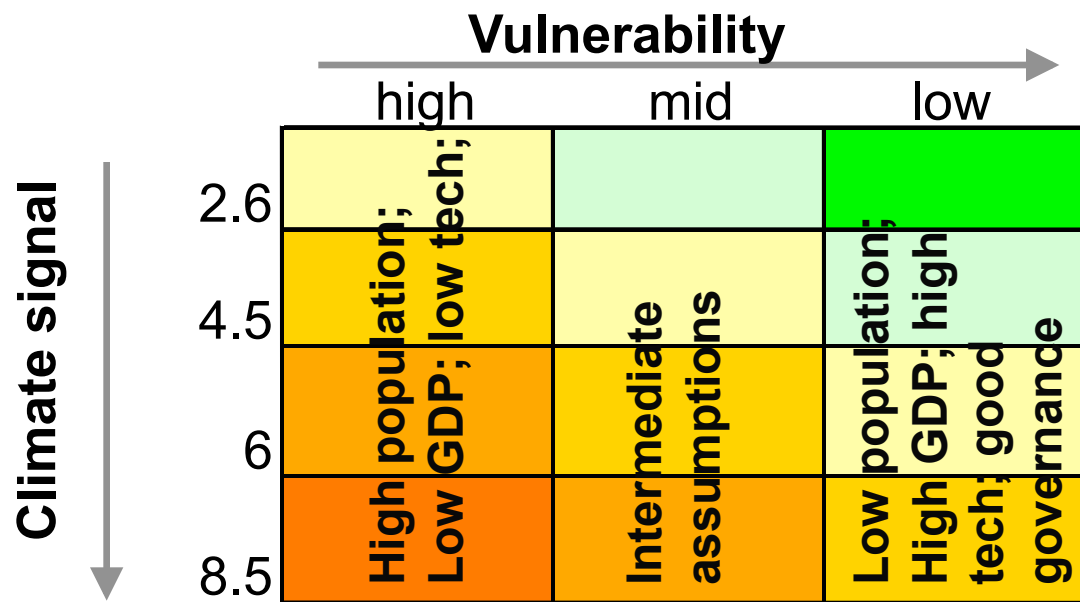
Suggested use of RCPs in IAV research

- If the intention of the impact analysis is to map out all possibilities → analysis shows that it is safe to assume decoupling (within bounds?) of climate change and socio-economic assumptions
- Impacts = f (Climate Change, Vulnerability)



Suggested use of RCPs in IAV research

➤ Impacts = f (Climate Change, Vulnerability)



IMPACT = Climate + Vulnerability!

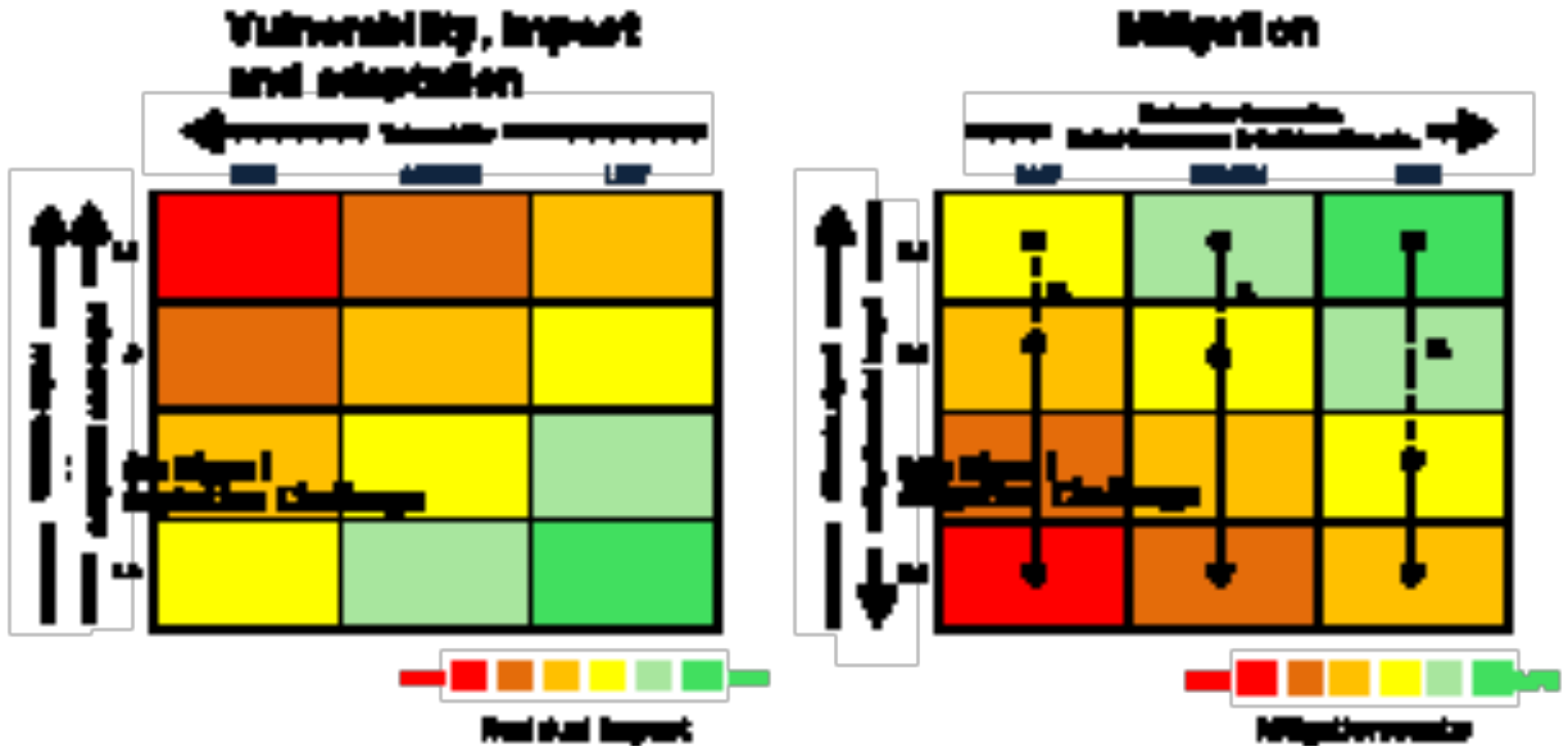




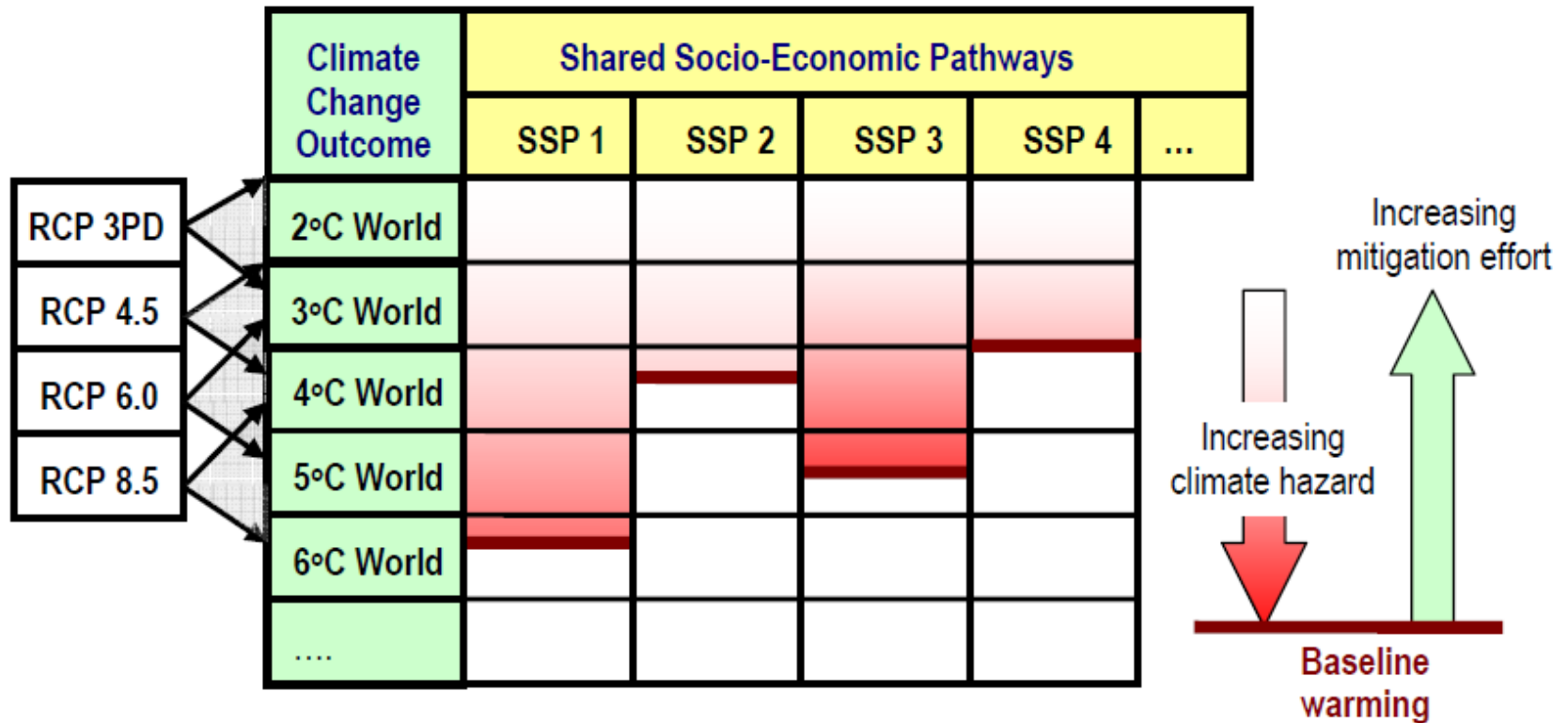
‘The Matrix’ idea picked up and elaborated
in two papers (sneak preview)



Van Vuuren et al.: *Developing new scenarios as a common thread for future climate research.*



Kriegler et al.: Socioeconomic Scenario Development for Climate Change Analysis



Progress and prospects



- Way too little done as IAMC activity!
- Process ongoing by other initiatives: meetings, papers (many IAMC members involved)
- Progress on:
 - RCPs replication
 - structuring ideas for frameworks, key characteristics
 - involving IAV expertise (slow process)
 - building bridges between research communities
- Not so much yet on:
 - Narratives/driving forces; ranges and discrete scenario settings
 - common views on common set(s)
 - different requirements and how to meet them
 - SE assumptions across spatial scales

