

IPCC “New Scenarios” workshop (Noordwijkerhout, September 19-20-21 2007)

Richard Loulou

IPCC New Scenarios workshop ---RLoulou ETSAP-Brasilia Nov 2007

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Workshop Agenda

- To define new scenarios for climate research
- To harmonise work on scenarios among the three IPCC WG's
- To discharge IPCC of the responsibility of defining scenarios
- To establish an agenda for future work

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Workshop participants

- 134 researchers from the 3 Working Groups of the IPCC:
 - WG1: Climate science research (Earth Science Models: **ESM's**)
 - WG2: Impacts research (Impacts, Adaptation and Vulnerabilities: **IAV**)
 - WG3: Mitigation research (integrated Assessment Models: **IAM's**)
- IPCC leaders and group administrators
- Some guests from Policy circles

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Preparatory Phase: until Summer 2008

- Define Four Benchmark Concentration Pathways (BCP'S), i.e. 4 evolutions of the forcing from 2007 to 2100 and beyond
- 1 Baseline: Forcing increases to 8 W/m² in 2100
- 3 Stabilisation pathways: Forcings stabilise to 6, 4.5 and 3 W/m² in 2100 or shortly thereafter
- Note: small number of BCP's due to heavy computational burden on large Earth Science Models

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Phase I: 2008-2009

- WG1: run the four BCP's, publish results
- WG2: begin to assess impacts of BCP's
- WG3: open up scenario libraries to variants: sensitivities on technology, economic growth, etc.)
 - Could result in dozens of sub-scenarios for each BCP

Phase 2: 2009-2010

- WG3:
 - Link socio-economic scenarios and climate scenarios to create a set of climate-socio-economic scenarios
 - Conduct analyses with IAM's for this set of linked scenarios
- WG2: use this set of linked scenarios to conduct IAV studies

Phase 3: after 2010

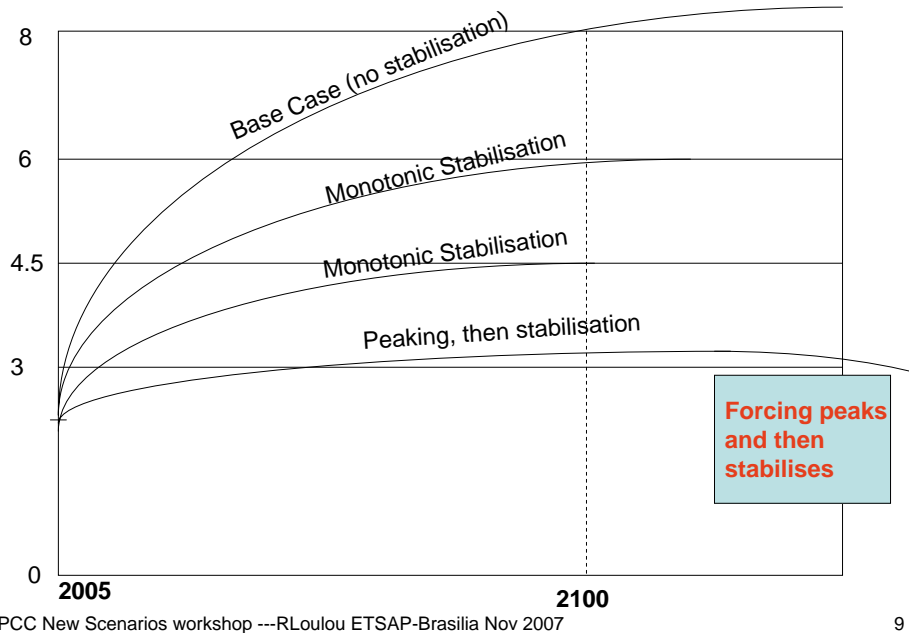
- WG3-WG2: conduct a full set of harmonised analyses on the set of linked scenarios, combining mitigation and adaptation characteristics. Re-evaluate impacts and vulnerabilities.

What are the four BCP's?

- Translated into concentrations, the four BCP's cover a broad range of concentrations from 482 to 1231 ppm CO₂-equivalent (from 1.8 to 4.5 times pre-industrial level).

	STABILISATION SCENARIOS			BAU
Forcing (W/m ²)	3	4.5	6	8
CO ₂ concentration (ppm)	482	639	846	1231

Possible shapes of the pathways



Focus on IAM's

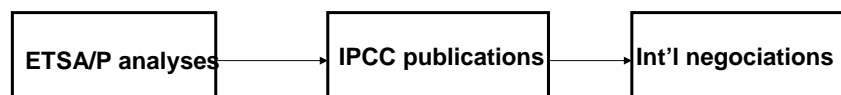
- Ideally, IAM'S should have the following capabilities:
 - Global, multi-regional
 - Climate module with life cycles of main GHG's
 - Long lived: CO₂, CH₄, N₂O, SF₆, CxFy
 - Others: Ozone (2), CFC's, CO, black carbon, organic carbon
 - Aerosols: SO_x, NO_x, particulates
 - Land-use changes
 - Some feedback mechanisms (from climate to socio-economics)
 - Techno-economic detail

Implications for ETSAP and TIAM

- IPCC is clearly the single most important forum on climate (visibility, dissemination, outreach)
- TIAM is already capable of playing in that court
- Unfortunately, the timing of the Fourth IPCC Assessment has prevented TIAM based work from being widely quoted in AR4

ETSAP priorities?

- Participation in AR5, and active collaboration with IPCC activities should be a high priority of ETSAP and its members for the following reasons:
 - Visibility (MESSAGE's example)
 - Dissemination of country and global results
 - Weight in international discussions and eventually negotiations (ex: Australia, MESSAGE)



Recommendation

- That ETSAP engage in active IPCC work, i.e.:
 - Continue to *collectively* improve TIAM, by
 - adding features and
 - improving databases
 - Have at least one ETSAP researcher in AR5 (membership through governmental channel)
 - Keep contact with key *IPCC-WG3 persons* (John Weyant, Rich Richels, van Ypersiel, Jae Edmonds, Richard Tol, etc.)
 - Participate in forums that feed into IPCC (*EMF-22, IAMC, EU projects, others*)

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Short term activities (2008)

- EMF-22 Transition Policies WG: meets in Dublin, Feb 21-22 2008
- IAMC: meets in Washington, Feb. 5-8 2008
- EMF-22: General meeting of all WG's around September 2008
- EMF-24 ? Energy Efficiency. Being proposed by Hillard Huntington. To be confirmed.
- IPCC scenarios: ready for Summer 2008
- IPCC-AR5 ? To be decided late 2008

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