



## **IPCC AR5: Innovations and Cooperation among WGs**

SBSTA, 32<sup>nd</sup> session, 31 May to 9 June 2010, Bonn, Germany

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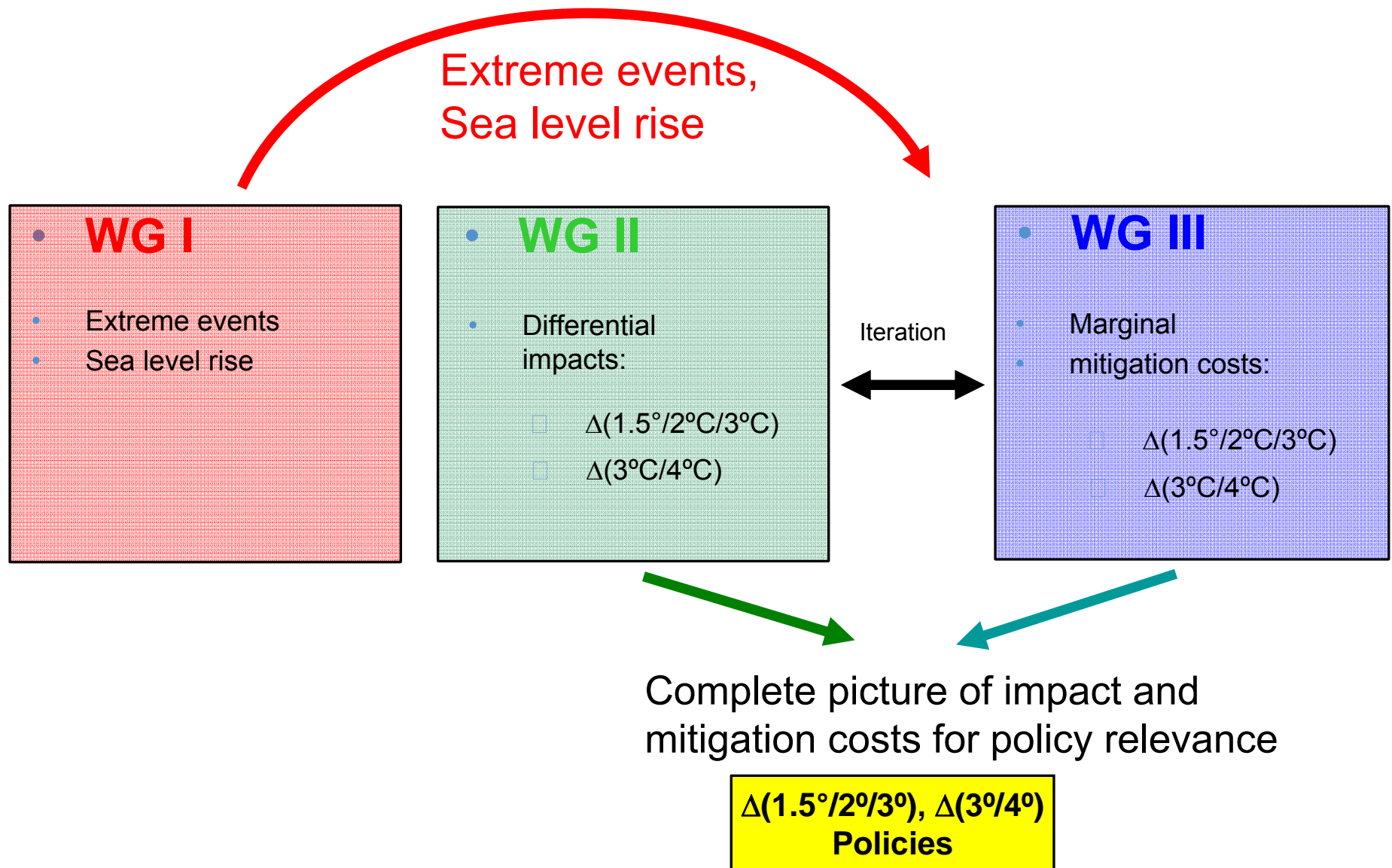
# Independent Review: Set Up

- On the request of IPCC Chairman Rajendra Pachauri and UN Secretary-General Ban Ki-moon.
- Executed by InterAcademy Council (IAC).
- Review of IPCC principles, procedures, management structures and the IPCC scenario process (“honest broker“ role).
- The report will be prepared for the IPCC Plenary in October 2010.

# Table of Contents

- **WG I, II and III Innovations in AR5**
- Cooperation among Working Groups
- Special Reports
  - SREX (WG I + II)
  - SRREN (WG III)

# AR5 Innovation: Considering Risk/Uncertainty in all WGs



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# WG I Science Gaps and Questions

- Trends and rates of observed climate change  
**Has climate change accelerated?**
- Large ice sheets in polar regions  
**Is the Greenland ice sheet stable?**
- Irreversibilities and abrupt change in the climate system  
**How robust and accurate is our understanding?**
- Clouds and aerosols and their feedbacks  
**What is the forcing uncertainty associated with cloud and aerosol processes?**
- Carbon and other biogeochemical cycles  
**Which carbon cycle feedbacks become relevant in the coming decades?**
- Near-term and long-term climate projections  
**How reliable is decadal prediction, what are the uncertainties beyond 2100?**
- Climate phenomena across regions  
**How do frequencies and amplitudes of monsoon, ENSO, and others change?**

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## WG II Major Themes

- Framing to support good decisions, including information on risk.
- Better integration of climate science with climate impacts.
- Broader range of assessed impacts.
- Climate change in the context of other stresses.
- Better treatment of extremes and disasters.
- Expanded treatment of adaptation.
- Better integration of adaptation, mitigation, and development at different regional scales.
- Human settlements, industry, and infrastructure.

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# Major Sections or “Superchapters”

- Part A: GLOBAL & SECTORAL ASPECTS
  - Context for the AR5
  - Natural and managed resources and systems, and their uses
  - Human settlements, industry, and infrastructure
  - Human health, well-being, and security
  - Adaptation
  - Multi-sector impacts, risks, vulnerabilities, and opportunities
- Part B: REGIONAL ASPECTS
  - With WG I and WG III input and collaboration

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# AR5 WG III Outline

## **I: Introduction**

1. Introductory Chapter

## **II: Framing Issues**

2. Integrated Risk and Uncertainty Assessment of Climate Change Response Policies

3. Social, Economic and Ethical Concepts and Methods

4. Sustainable Development and Equity

## **III: Pathways for Mitigating Climate Change**

5. Drivers, Trends and Mitigation

6. Assessing Transformation Pathways

7. Energy Systems

8. Transport

9. Buildings

10. Industry

11. Agriculture, Forestry and Other Land Use (AFOLU)

12. Human Settlements, Infrastructure and Spatial Planning

## **IV: Assessment of Policies, Institutions and Finance**

13. International Cooperation: Agreements and Instruments

14. Regional Development and Cooperation

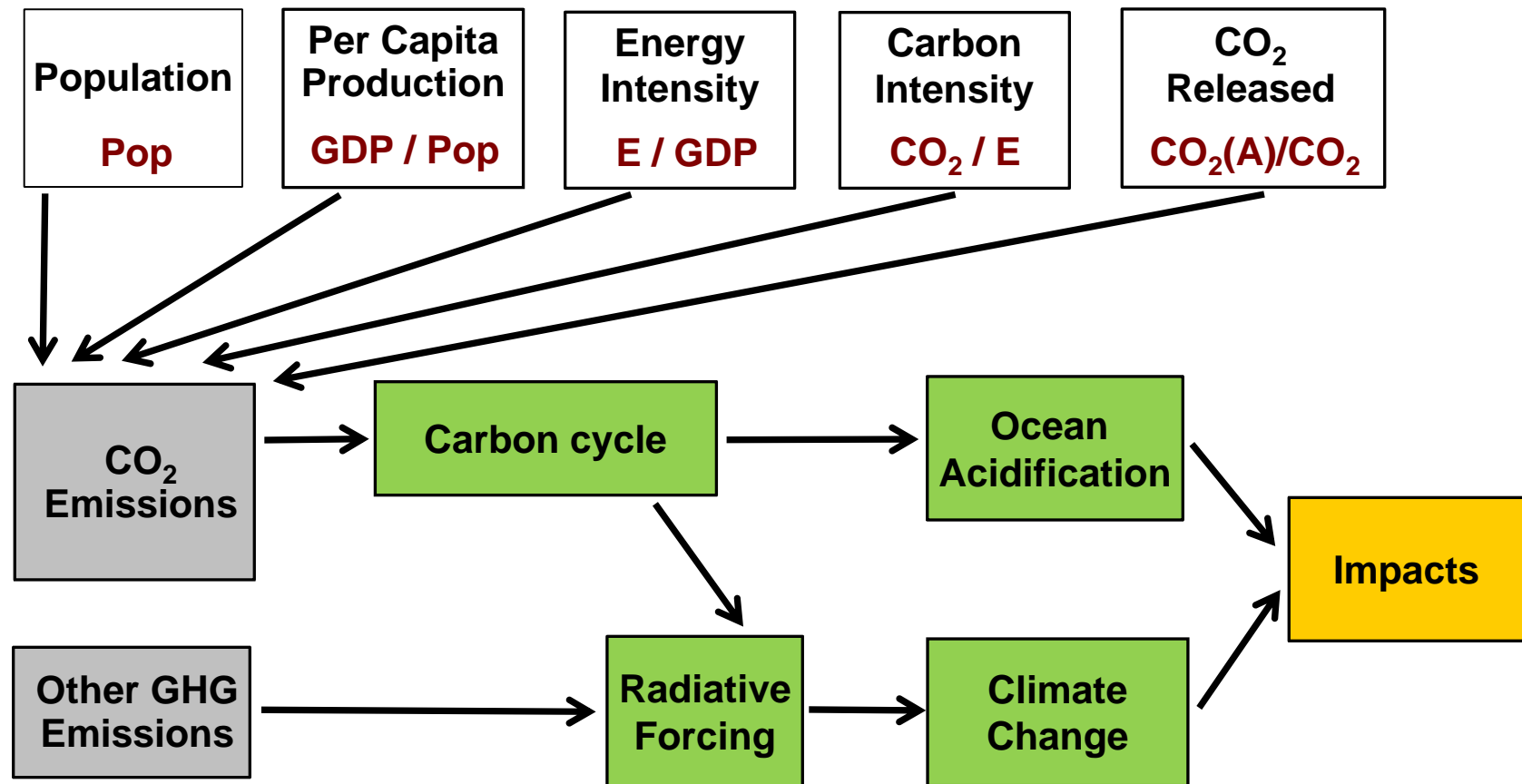
15. National and Sub-national Policies and Institutions

16. Cross-cutting Investment and Finance Issues

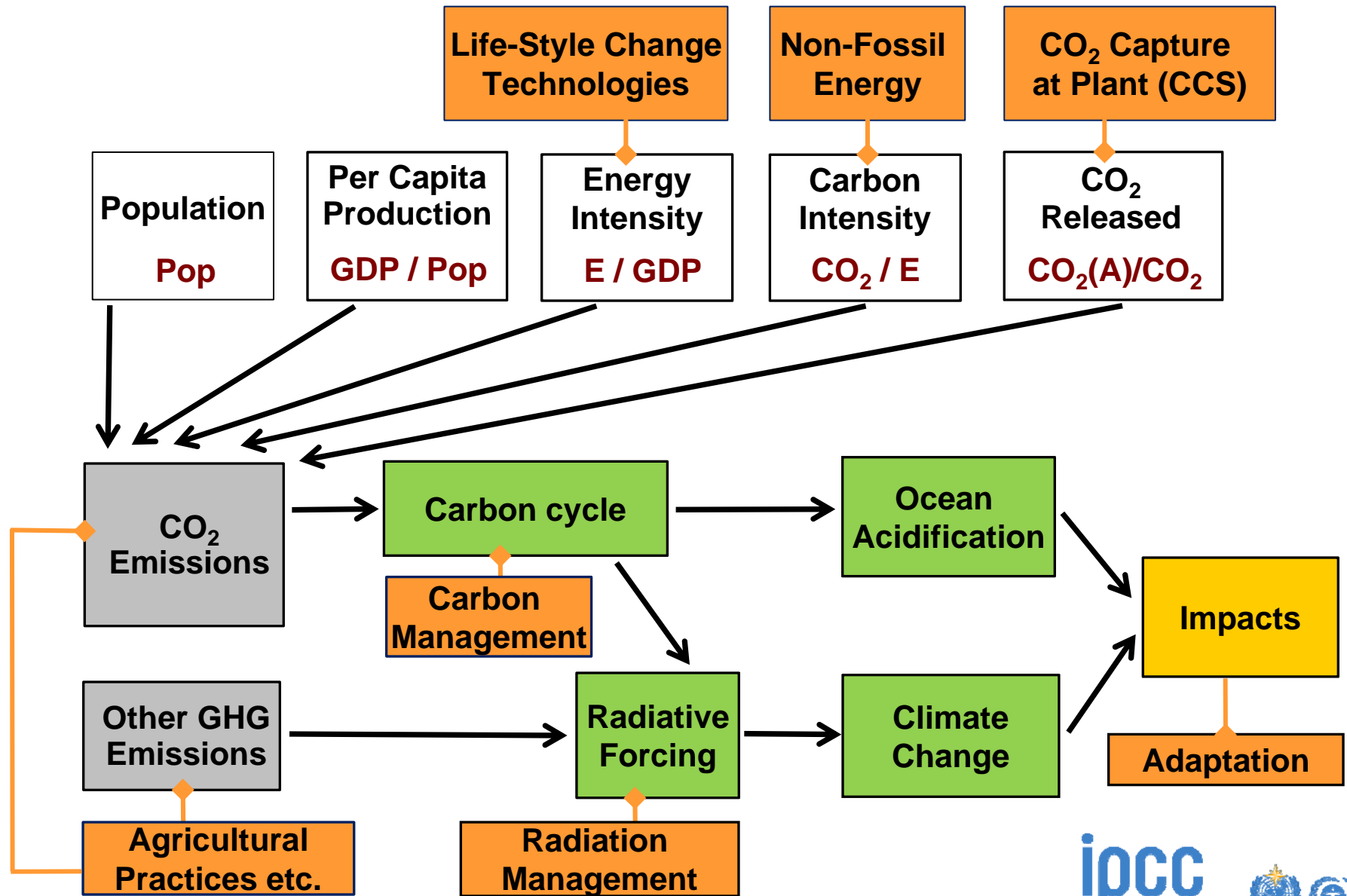
# The Research Challenge of WG III

- Low Stabilisation Scenarios which identify the technical and institutional requirements.
- Exploring the costs, benefits and risks of all relevant mitigation options.
- Identifying differential impacts and develop a classification of risks comprising tipping points in the natural environment and also in society.

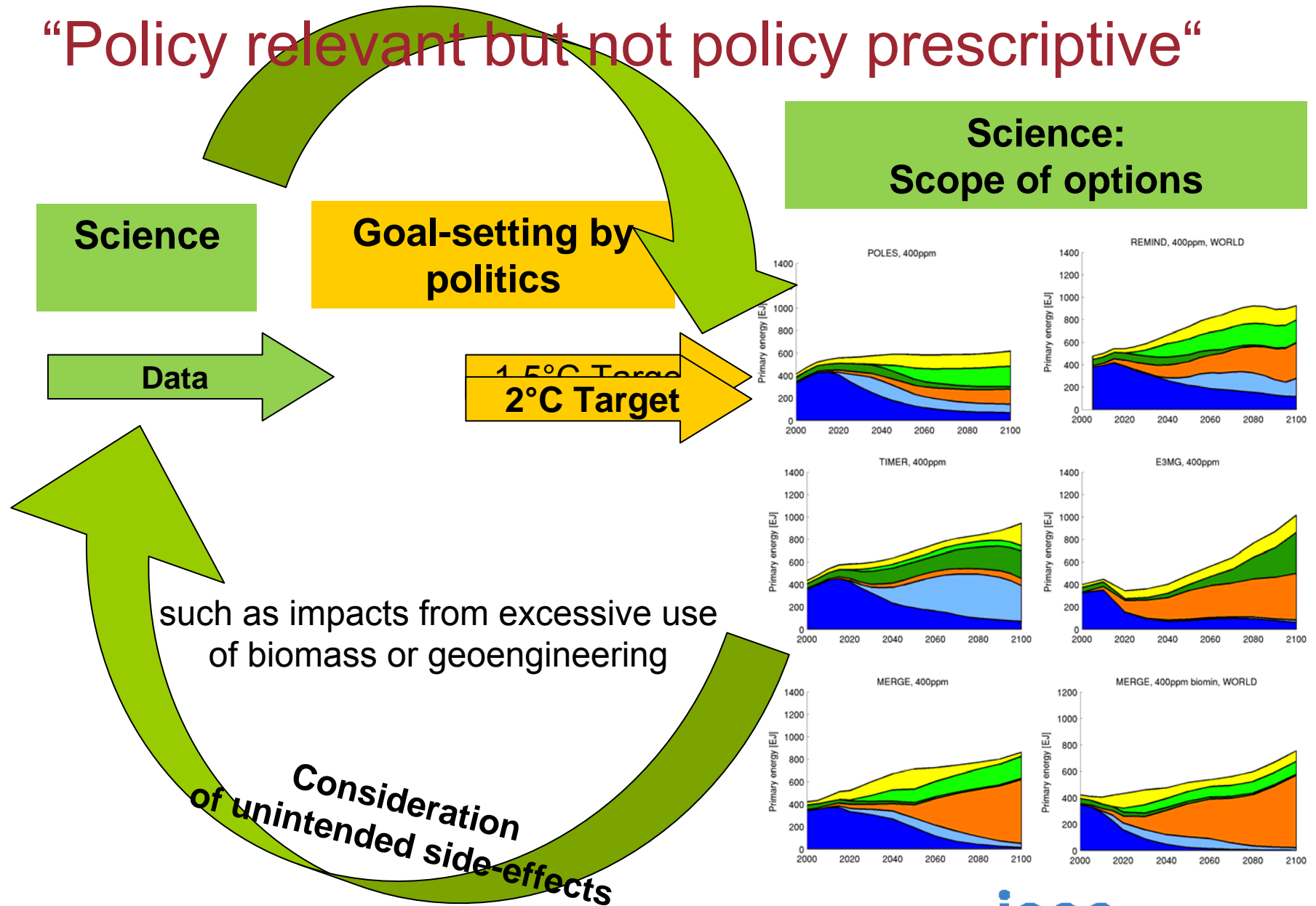
# Comprehensive Understanding of Solution Space



# Assessing the Solution Space



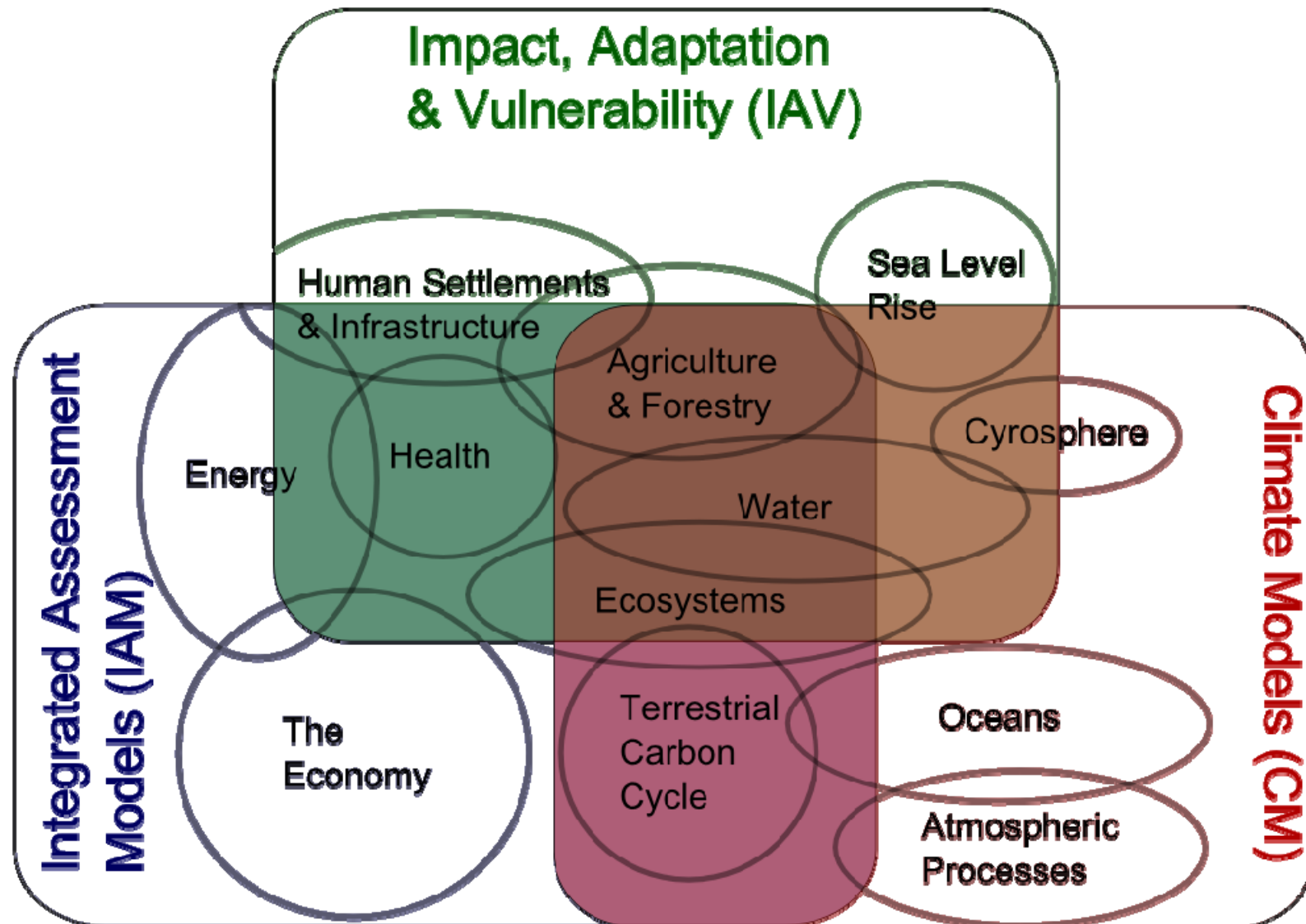
# “Policy relevant but not policy prescriptive”



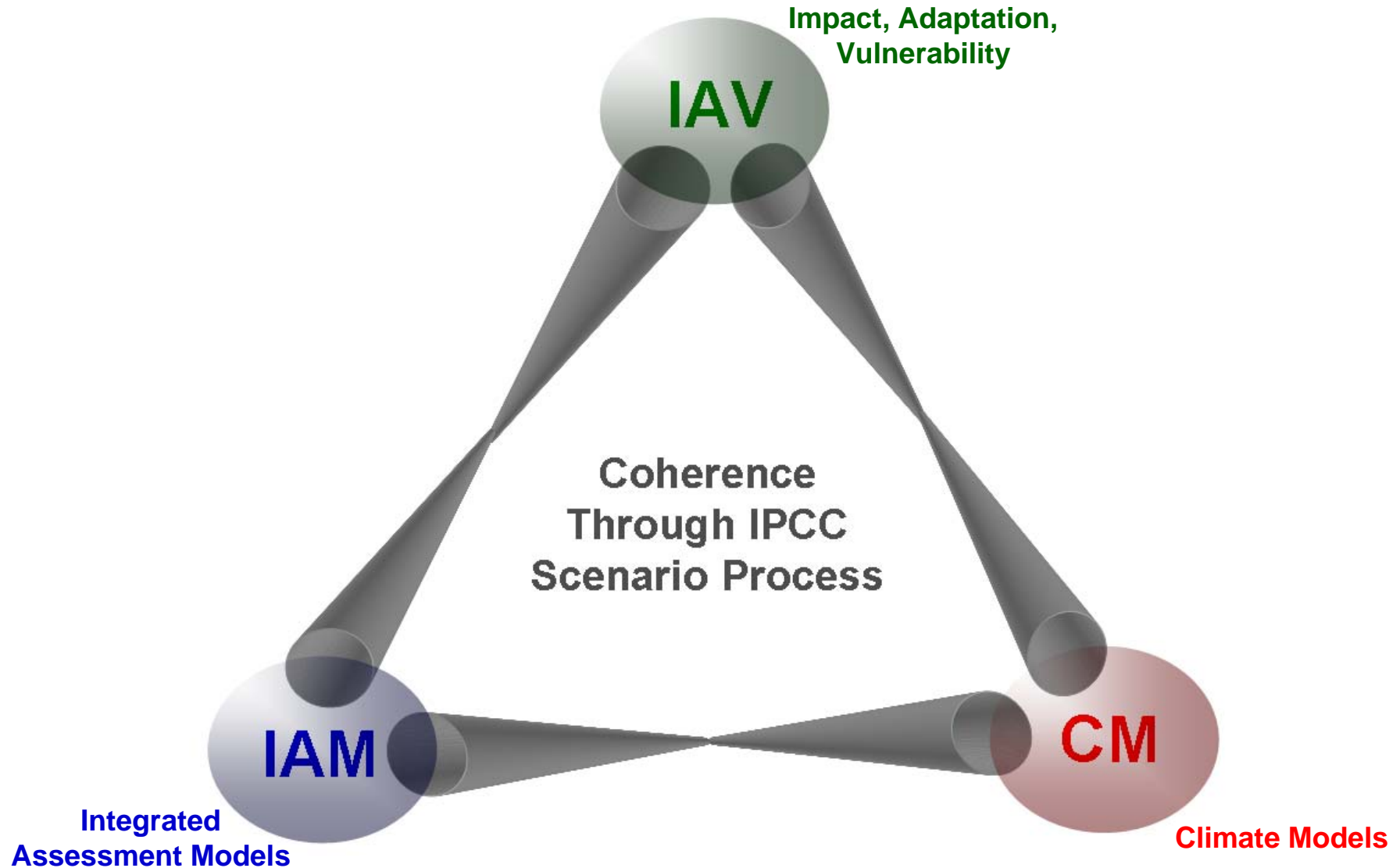
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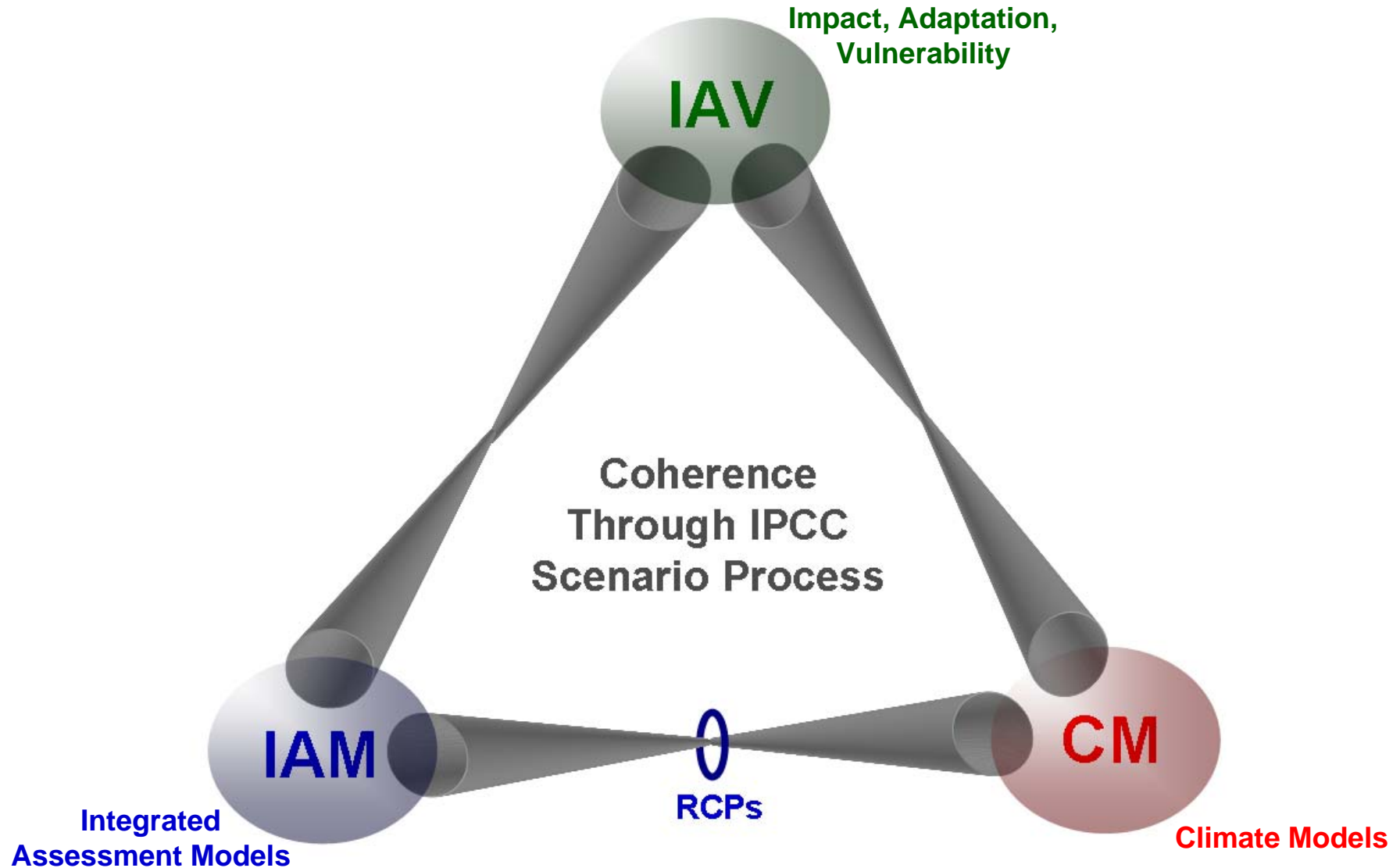
# Assessment Communities



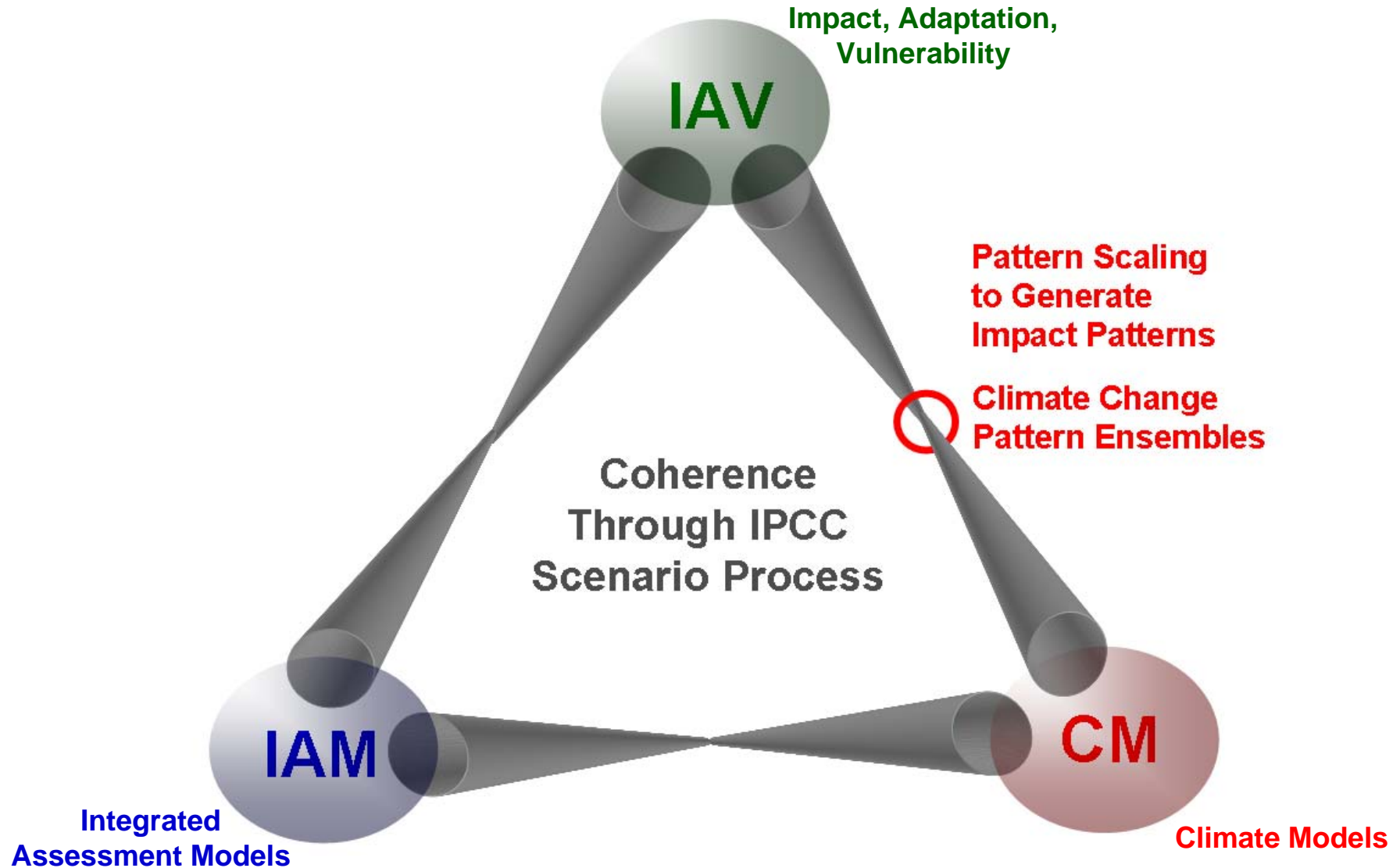
# IPCC Scenario Process



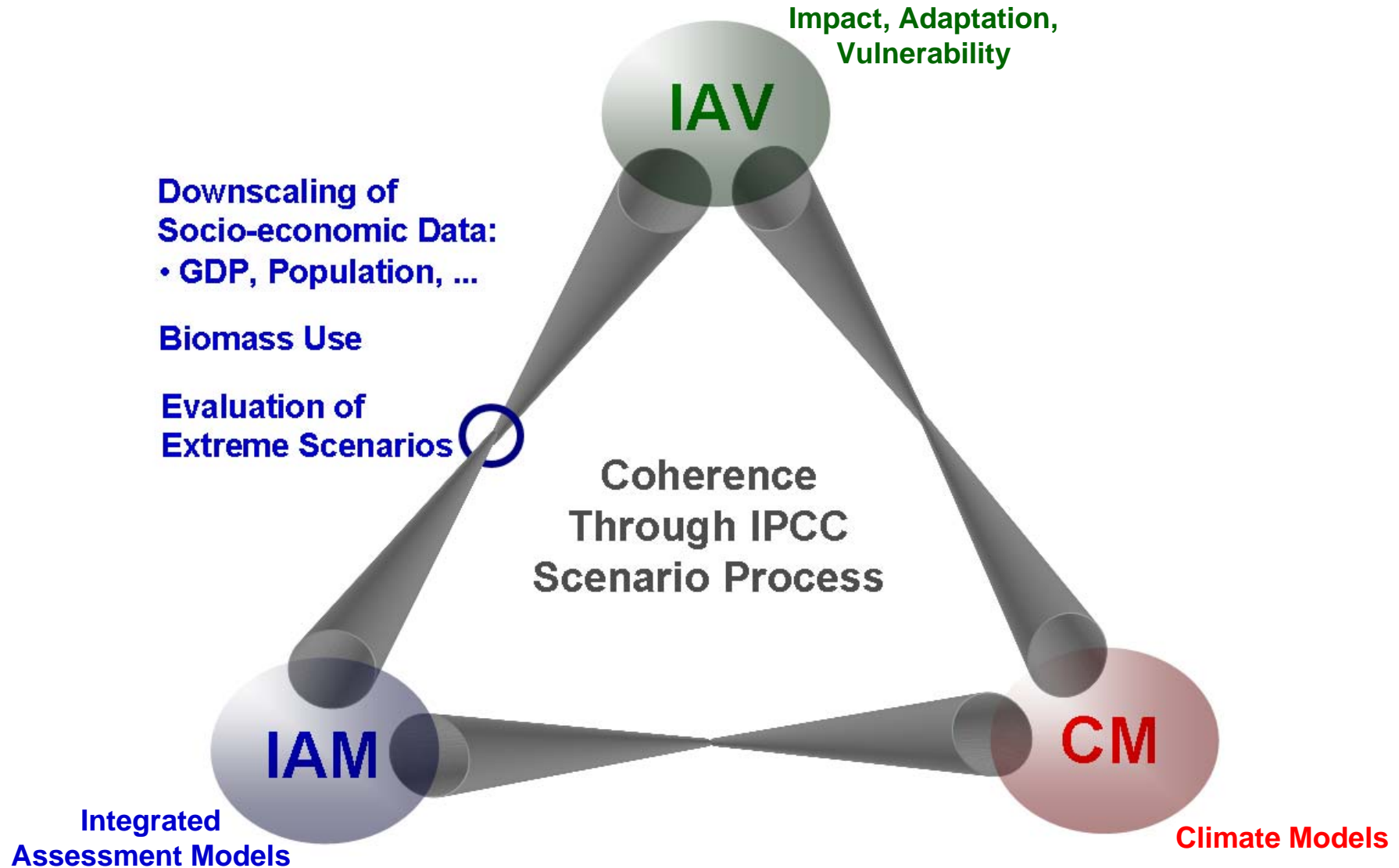
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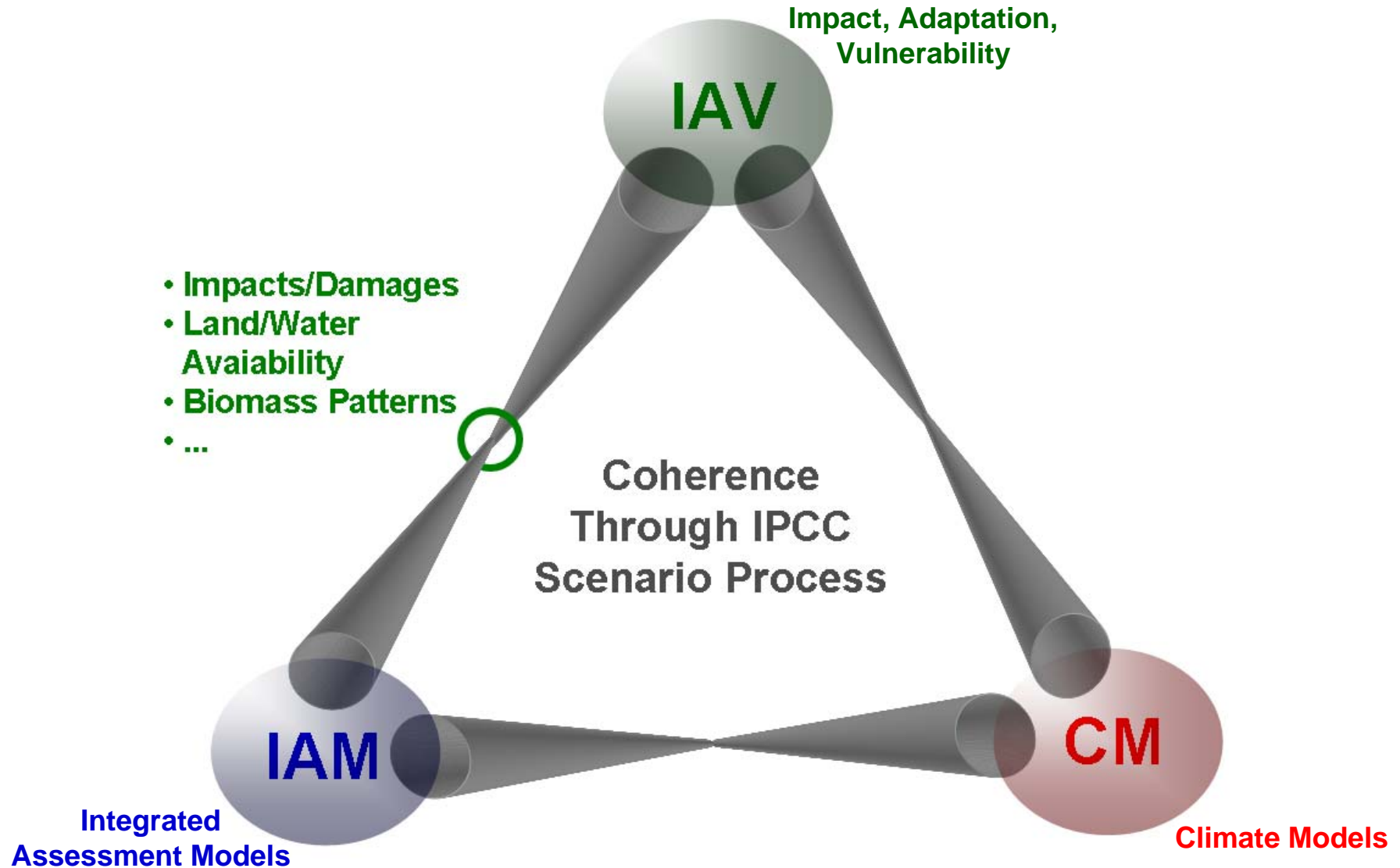
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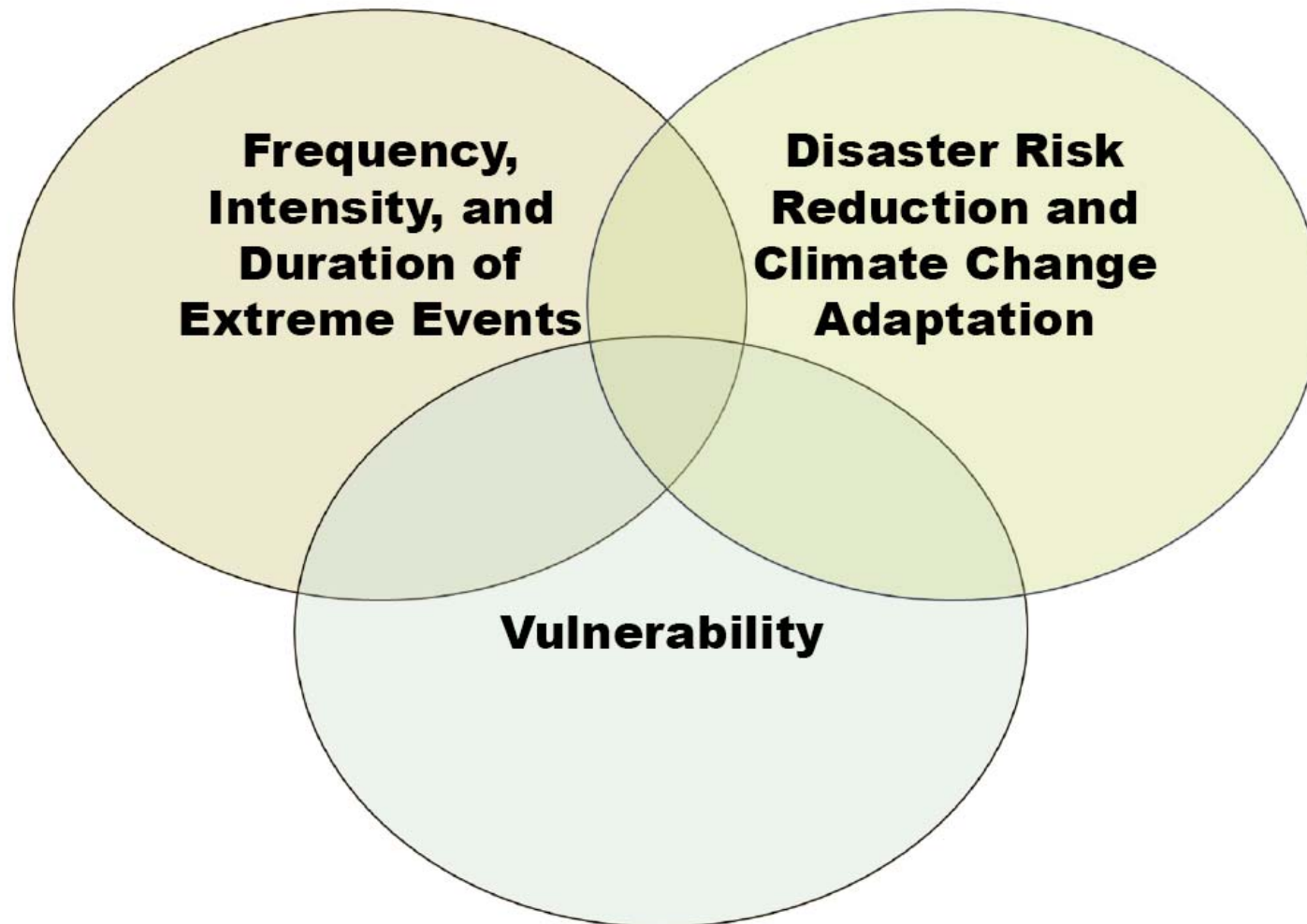
## Jointly Organized Meetings/Workshops

- Joint WGI / WGII Expert Meeting on Detection and Attribution related to Anthropogenic Climate Change (09/09)
- Joint WGI / WGII Expert Meeting on Assessing and Combining Multi-Model Climate Projections (01/10)
- Joint WG II / WG III Expert Meeting on Human Settlement and Infrastructure (postponed to early 2011)
- Joint WG II / WG III Workshop on Socioeconomic Scenarios for Climate Change Impact and Response Assessments (11/10)
- Joint WGI / WGII Expert Meeting on Impacts of Ocean Acidification on Marine Biology and Ecosystems (01/11)
- Joint WGII / WGIII Expert Meeting on Economic Analysis, Costing Methods, and Ethics (03/11)

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# SREX: Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation



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# SRREN: Special Report on Renewable Energy <sup>27</sup> Sources and Climate Change Mitigation

- 1. Renewable Energy and Climate Change
- 2. Bioenergy
- 3. Direct Solar Energy
- 4. Geothermal Energy
- 5. Hydropower
- 6. Ocean Energy
- 7. Wind Energy
- 8. Integration of Renewable Energy into Present and Future Energy Systems
- 9. Renewable Energy in the Context of Sustainable Development
- 10. Mitigation Potential and Costs
- 11. Policy, Financing and Implementation

Technology  
Chapters

## Final Remark

The IPCC is the honest broker between experts and decision makers in business, politics and civil society.

Policy relevant but not policy prescriptive!