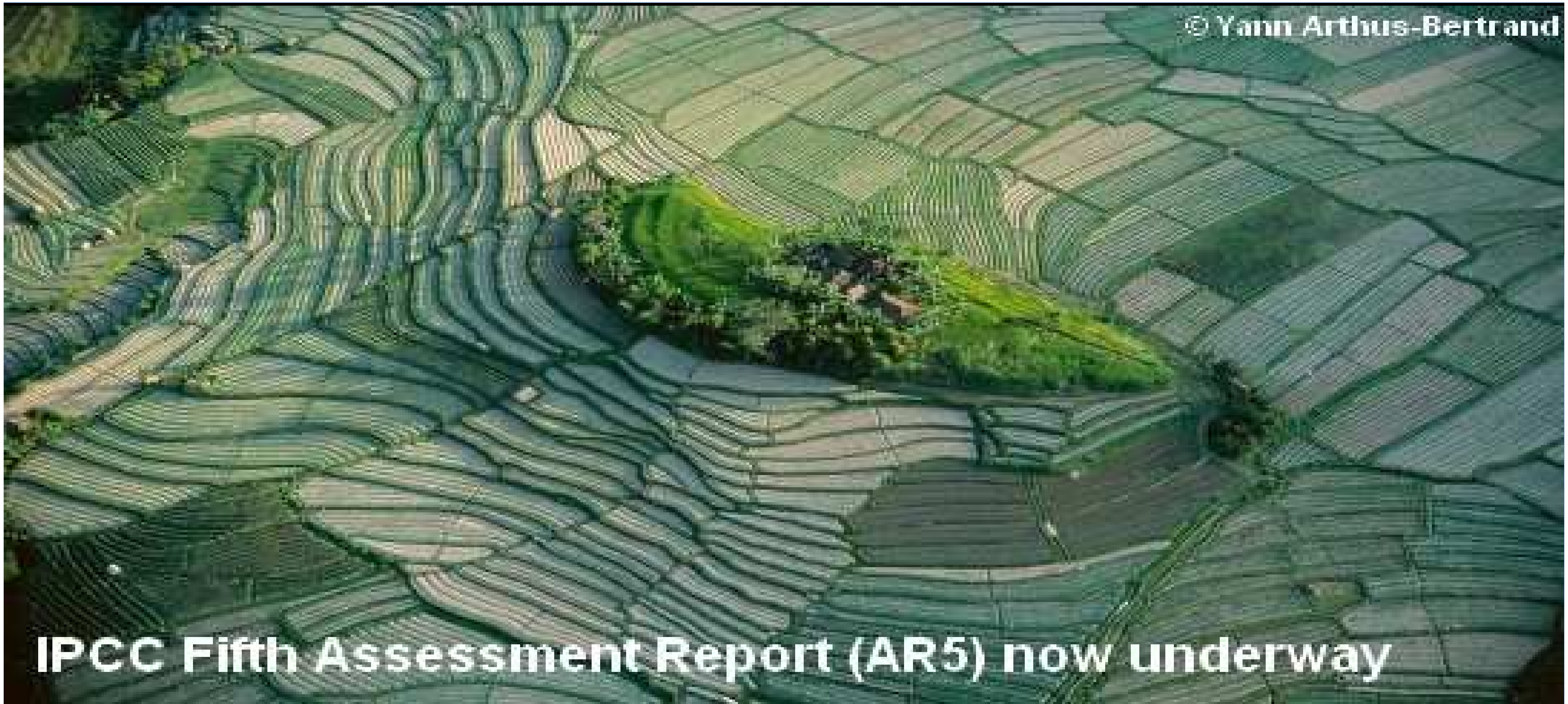

AR5 Cross Cutting issues

Jean-Pascal van Ypersele
Vice-chair of the IPCC

Cancún, December 2010

Thanks to Richard Moss, Martin Manning, and Mike Mastrandrea for some slides

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Lessons from AR4: How to improve the handling of Cross-Cutting Themes in AR5?

- CCTs should be carefully handled (using guidance papers/meeting reports for every CCT)

- WGs need to be fully involved, (implication of key WGs members and improved cross WG coordination)

- CCTs development should be closely linked to the SYR development process

From: AR5-SCOP/INF.2 (09 July 2009, Venice)

Cross-Cutting Issues in AR5

During the AR5 scoping process 9 cross-cutting issues were identified and grouped in two clusters:

- **Cross-Cutting Methodologies (CCMs)**
  (comprise methodology issues that apply to the presentation or content of the report)
- **Cross-Cutting Themes (CCTs)**
  (cover subjects that require adequate emphasis and need to be considered by more than one Working Group)

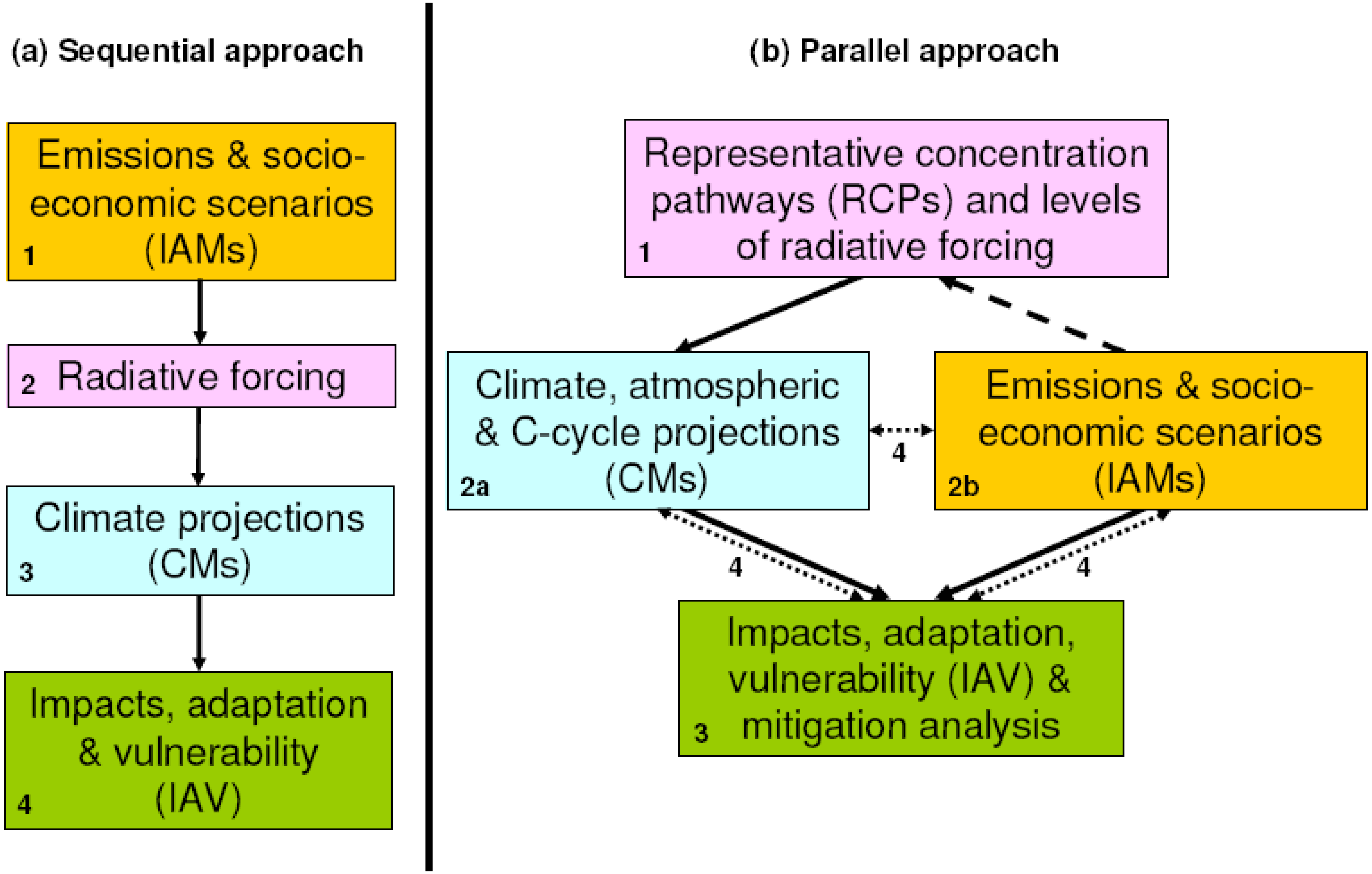
Cross-Cutting Issues in AR5: CCTs (5 Cross-Cutting Themes)

- Water and the Earth system: change, impacts and responses
- Carbon Cycle including ocean acidification
- Ice Sheets and Sea-Level Rise
- Mitigation, Adaptation, and Sustainable Development
- Issues related to Article 2 of the UNFCCC

Cross-Cutting Issues in AR5: CCMs (4 Cross-Cutting Methodologies)

- Regional Aspects
- Costing and Economic Analysis
- Scenarios
- Consistent Evaluation and Communication of Uncertainties and Risks

New scenarios development process – parallel vs. sequential approach



From Kathy Hibbard

Scenarios selected to span climate space.
(and new scenario development process with scientific communities as responsible party)

The IPCC has a catalytic role, and the Integrated Assessment Modeling Consortium (IAMC) delivers the scenario work

International Institute for Applied Systems Analysis (IIASA)	Energy Modeling Forum (EMF) Stanford University	National Institute for Environmental Studies (NIES)
➤**Australian Bureau of Agricultural and Resource Economics (ABARE)** - *Horn Pant* ➤**Business Council for Sustainable Development – Argentina** - *Virginia Vilariño* ➤**CEA-LERNA, University of Social Sciences** - *Marc Vielle* ➤**Centre for International Climate and Energy Research (CICERO), University of Oslo** - *H.Asbjorn Aaheim* ➤**Argonne National Laboratory** - *Donald Hanson* ➤**Centre International de Recherche sur l'Environnement et le Developpement, EHESS - U.A. CNRS 940 (CIRED)** - *Jean-Charles Hourcade* ➤**CRA International** - *Brian Fischer* ➤**Dept. of Energy, Transport, Environment, DIW Berlin** - *Claudia Kemfert* ➤**Electric Power Research Institute (EPRI)** - *Richard Richels* ➤**Energy Research Institute, National Development and Reform Commission (NDRC)** - *Kejun Jiang*	➤**Freelance Professional Economist** - *Thomas Rutherford* ➤**Hamburg University and Economic and Social Research Institute (ESRI)** - *Richard Tol* ➤**Indian Institute of Management** - *Priyadarshi Shukla* ➤**Institut d'Economie et de Politique de l'Energie, IEPE-CNRS** - *Patrick Criqui* ➤**International Institute for Applied Systems Analysis (IIASA)** - *Nebojsa Nakicenovic, Keywan Riahi* ➤**IPCC and San Marcos University** - *Eduardo Calvo* ➤**National Institute for Environment Studies (NIES)** - Mikiko Kainuma ➤**Ohio State University** - Brent Sohngen ➤**Pacific Northwest National Laboratory, Joint Global Change Research Institute at the University of Maryland** - *Jae Edmonds, Hugh Pitcher, Ronald Sands, Steve Smith* ➤**Programa de Planejamento Energético - PPE/COPPE/UFRJ** - *Emilio Lèbre La Rovere*	➤**Purdue University** - *Thomas Hertel* ➤**RAND** - *Rob Lempert* ➤**Research Institute of Innovative Technology for the Earth (RITE)** - *Keigo Akimoto* ➤**Stanford University** - *John Weyant* ➤**Texas A&M University** - *Bruce McCarl* ➤**The Institute of Applied Energy** - *Atsushi Kurosawa* ➤**The Netherlands Environmental Assessment Agency (MNP)** - *Detlef van Vuuren* ➤**Universidad de Los Andes / Universidad Nacional de Colombia** - *Jose Eddy Torres* ➤**Universidad Iberoamericana Puebla** - *Maria Eugenia Ibarraran Viniegra* ➤**US Environmental Protection Agency** - *Francisco de la Chesnaye, Allen Fawcett, Steven Rose*

To know more about scenarios, and the outcome of the recent WGII/WGIII workshop in Berlin, please come to the Research Dialogue this Thursday

1.0.4 ***With regard to uncertainties, we note that:***

(from IPCC WGI (1990))

- There are many uncertainties in our predictions particularly with regard to the timing, magnitude and regional patterns of climate change. especially changes in precipitation.

  - These uncertainties are due to our incomplete understanding of sources and sinks of greenhouse gases and the responses of clouds, oceans and polar ice sheets to a change of the radiative forcing caused by increasing greenhouse gas concentrations.

  - These processes are already partially understood, and we are confident that the uncertainties can be reduced by further research. However, the complexity of the system means that we cannot rule out surprises.

Consistent Treatment of Uncertainties and Risks (CCM)

- The quality of the uncertainty guidance notes for AR4 was recognized, but the IAC Review made suggestions for improvement

- Aspects of risks must be treated consistently among Working Groups

- Providing consistent information on uncertainty and risk = **useful input for decision-making**

Likelihood vs Confidence

Likelihood

The chance of a defined outcome occurring in the physical world.

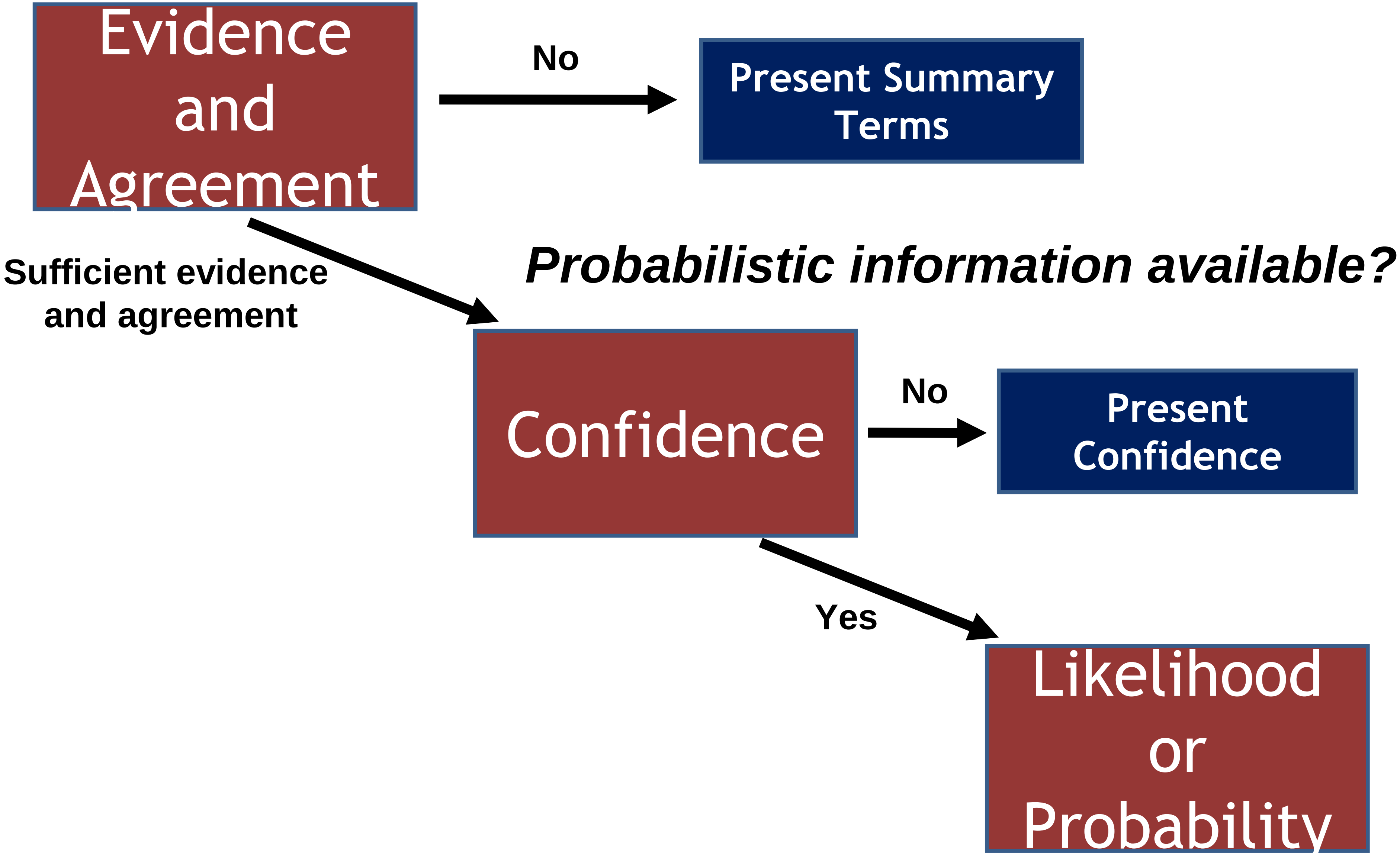
Is estimated, using appropriate information about probability and
expert judgment.

Level of Confidence

The degree of understanding and/ or consensus among experts.

Is a statement about the basis for the
expert judgment.

Degree of Certainty for Findings: Process



Likelihood or Probability

Likelihood scale

Likelihood expresses a probabilistic estimate of the occurrence of a single event or of an outcome lying in a given range.

Term	**Likelihood of the outcome**
Virtually certain	99-100% probability
Very likely	90-100% probability
Likely	66-100% probability
About as likely as not	33 to 66% probability
Unlikely	0-33% probability
Very unlikely	0-10% probability
Exceptionally unlikely	0-1% probability

Use more precise probability ranges when appropriate.

To know more:

Please visit www.IPCC.ch

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