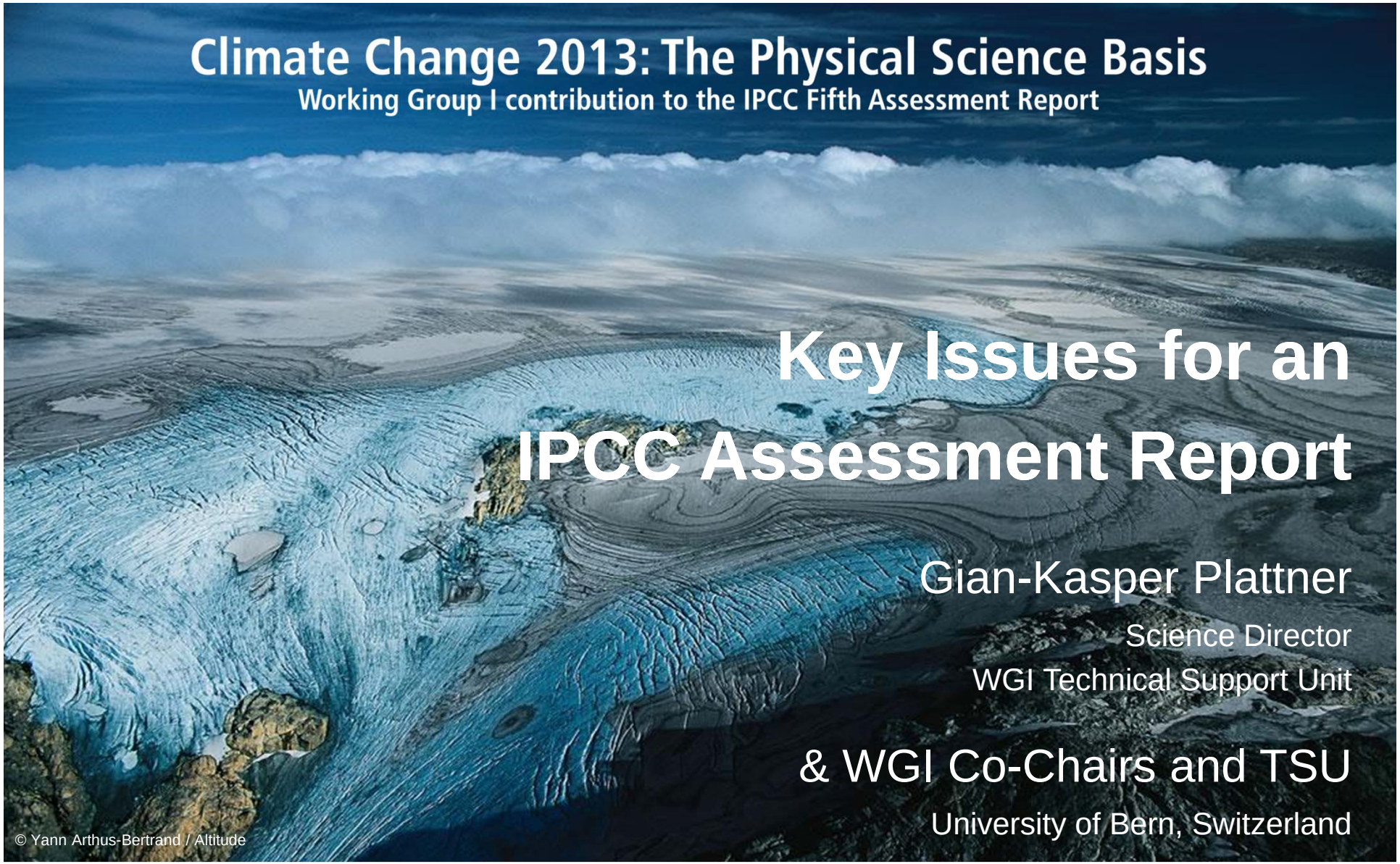

Key Issues for an IPCC Assessment Report

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Outline

- Treatment of uncertainties
- Use of literature sources
- Handling of errors
- Some challenges

Treatment of uncertainties

- How to determine uncertainty?
- How to display uncertainty?
- How to formulate uncertainty?
- How to communicate uncertainty?

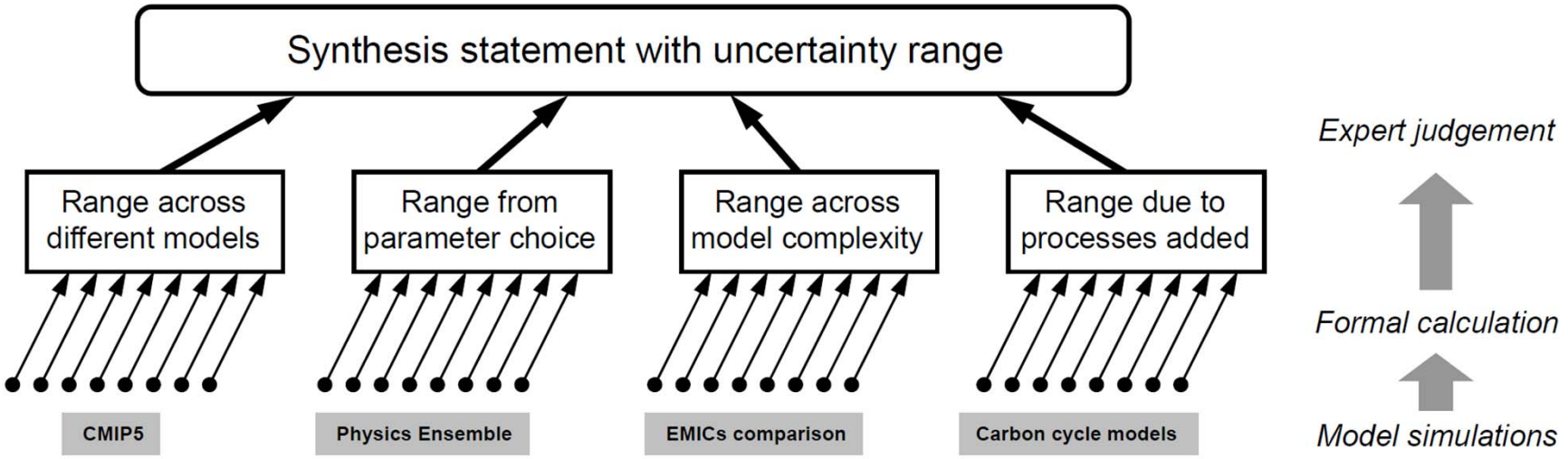
Revised IPCC Guidance Note on the
Consistent Treatment of Uncertainties for AR5

(the result of an IPCC cross-WG meeting, July 2010)

Treatment of uncertainties

Information under uncertainty

How to determine uncertainty?

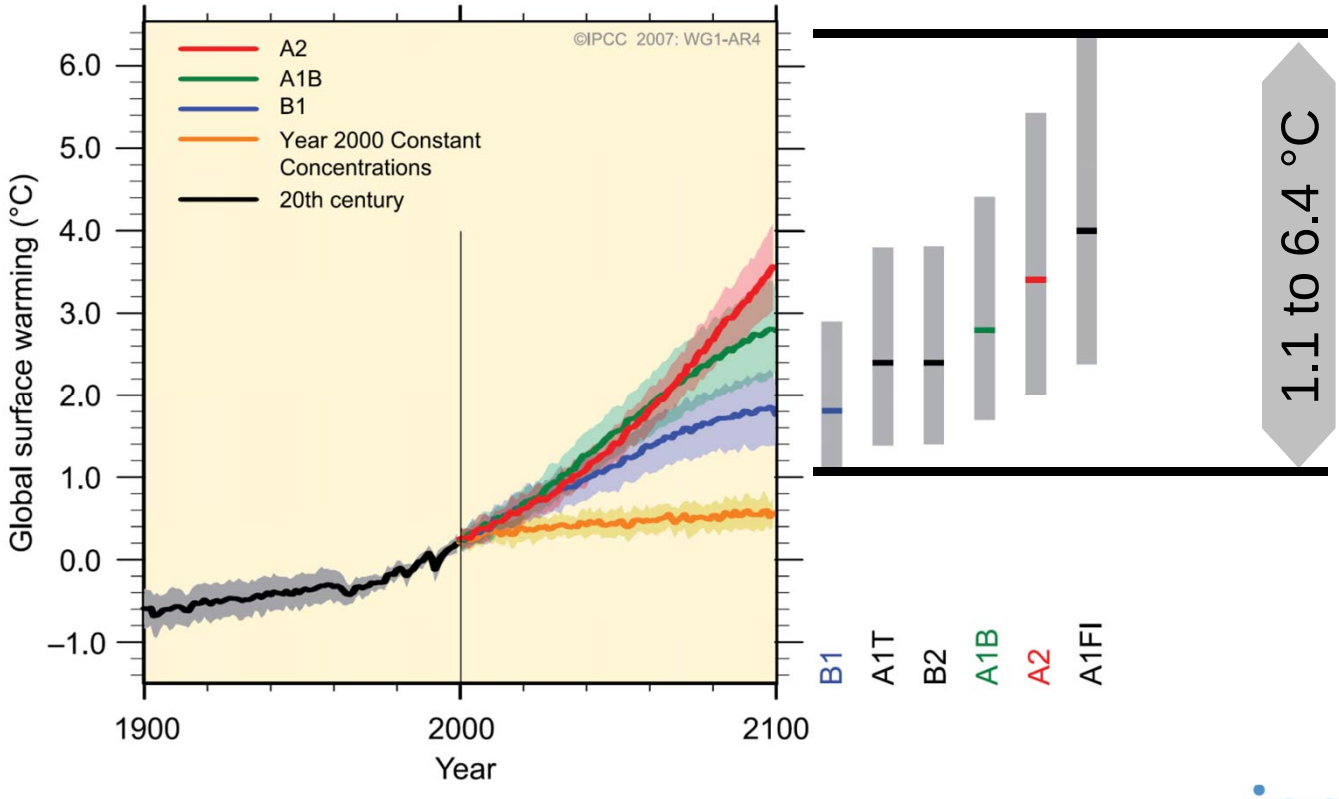


(Mastrandrea et al., 2011)

Treatment of uncertainties

Information under uncertainty

How to display uncertainty?

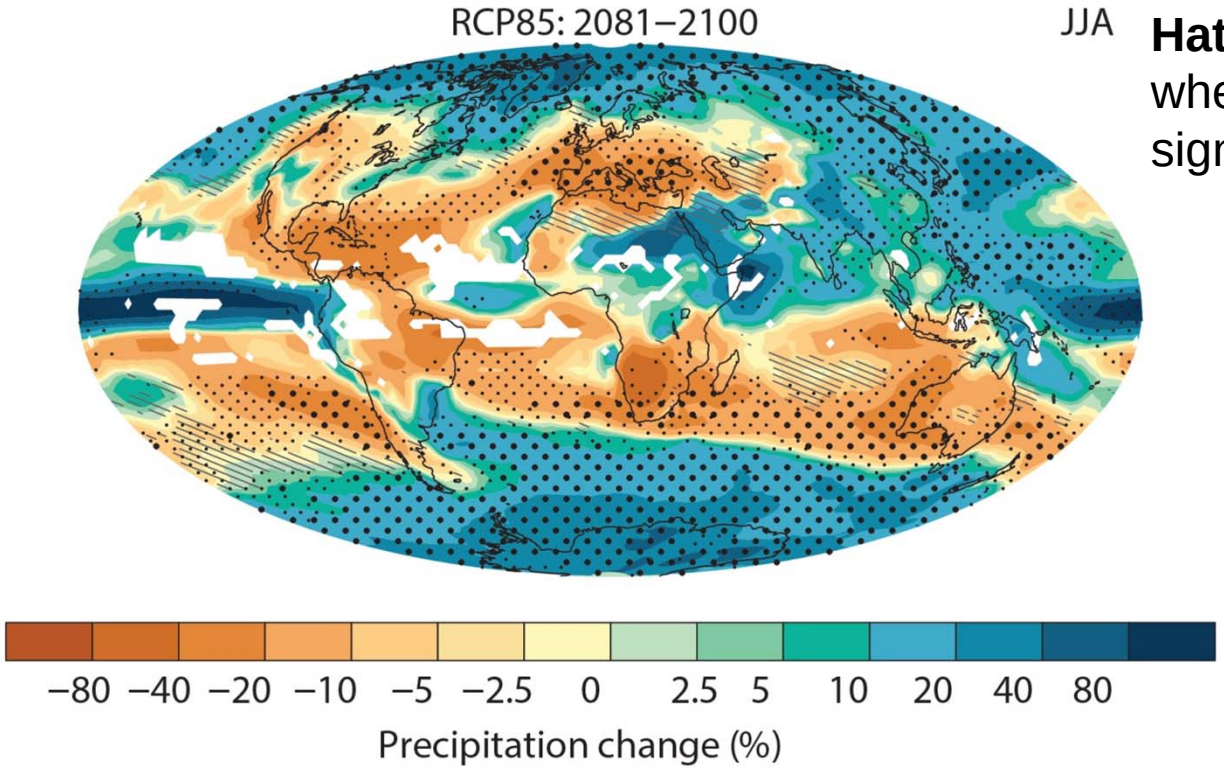


(IPCC, 2007, Fig. SPM-5)

Treatment of uncertainties

Information under uncertainty

How to display uncertainty?



White to indicate regions where models disagree about the sign of change

Stippling to indicate regions with robust changes

Hatching to indicate regions where changes are non-significant

(Knutti and Sedlacek, NatCC, 2012)

Treatment of uncertainties

Information under uncertainty

How to formulate uncertainty?

Qualitative:

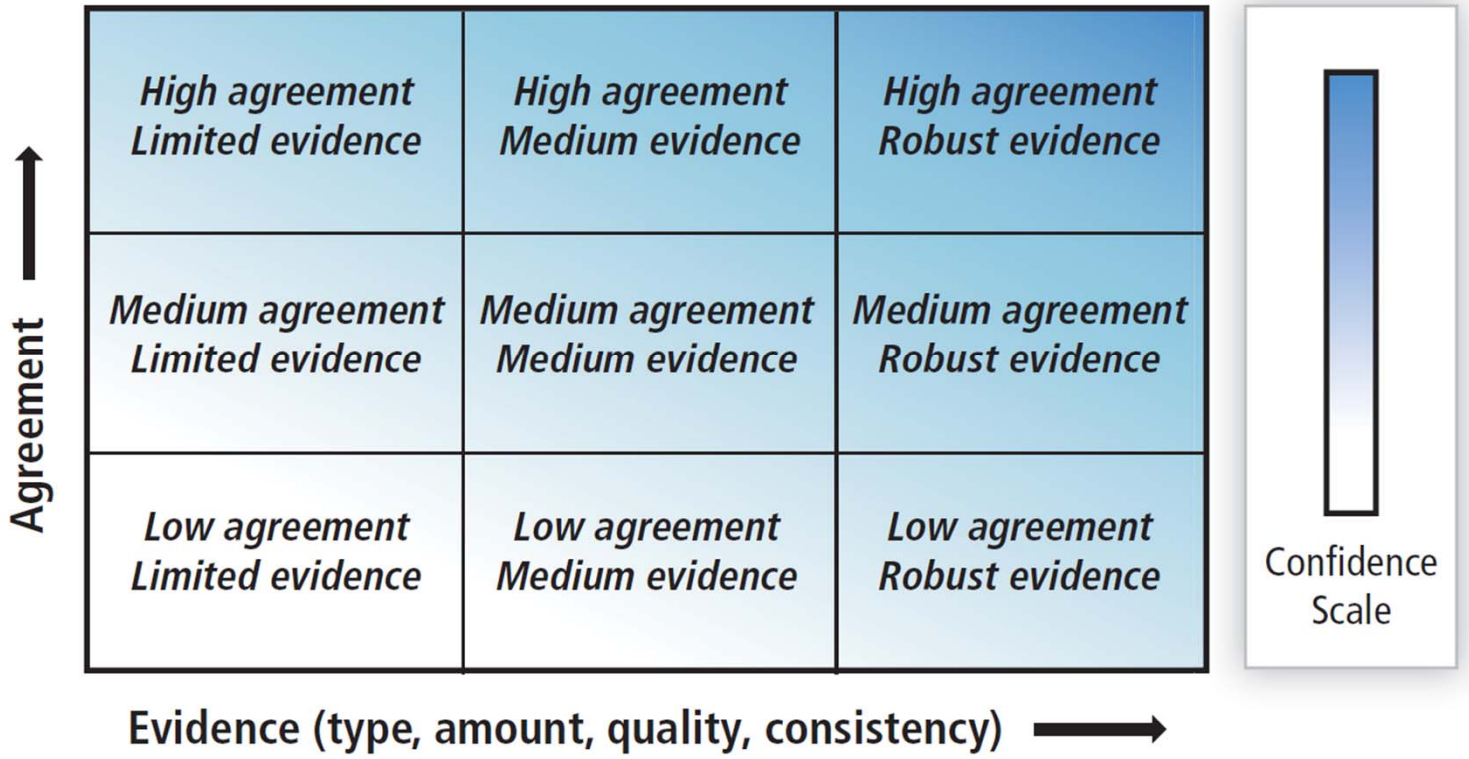
level of ***agreement***
amount and quality of ***evidence***

} ***confidence***

Treatment of uncertainties

Information under uncertainty

How to formulate uncertainty?



(Mastrandrea et al., 2011)

Treatment of uncertainties

Information under uncertainty

How to formulate uncertainty?

Qualitative:

level of ***agreement***
amount and quality of ***evidence*** } ***confidence***

Quantitative:

quantified likelihood

virtually certain	≥ 99%
very likely	≥ 90%
likely	≥ 66%
unlikely	< 33%
...	

Statements of fact: «Warming of the climate system is unequivocal» (SPM, WGI AR4)

Use of literature sources

- IPCC assesses all available scientific-technical literature
- priority is given to peer-reviewed literature
- emphasis is placed on the assurance of the quality of all literature cited
- other sources may provide essential information, esp. for adaptation and mitigation (WGs II & III)
- extra responsibility for author teams to ensure quality and validity of such sources

Handling of errors

IPCC has clear procedures for investigating, and if necessary, correcting alleged errors in published reports

- "Error Protocol" used to correct errors of fact or accuracy that could have been avoided with information available at the time
- not to make changes that reflect new knowledge or information that became available later
- not to add new literature or assessments
- errata are published on the IPCC web site

Some challenges

- IPCC authors and review editors volunteer their time and expertise
- IPCC assessments must be comprehensive but scientific information is growing at a great rate
- reviews of IPCC drafts are open to all self-declared experts but comments number in the many thousands
- IPCC does not perform research but needs research results
- IPCC does not develop its own scenarios for model runs


Climate Change 2013: The Physical Science Basis
Working Group I contribution to the IPCC Fifth Assessment Report
Further Information
www.climatechange2013.org
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