

ECOFORUM : *la résilience des forêts en question*

Quels climats et quelles forêts au 22ème siècle?

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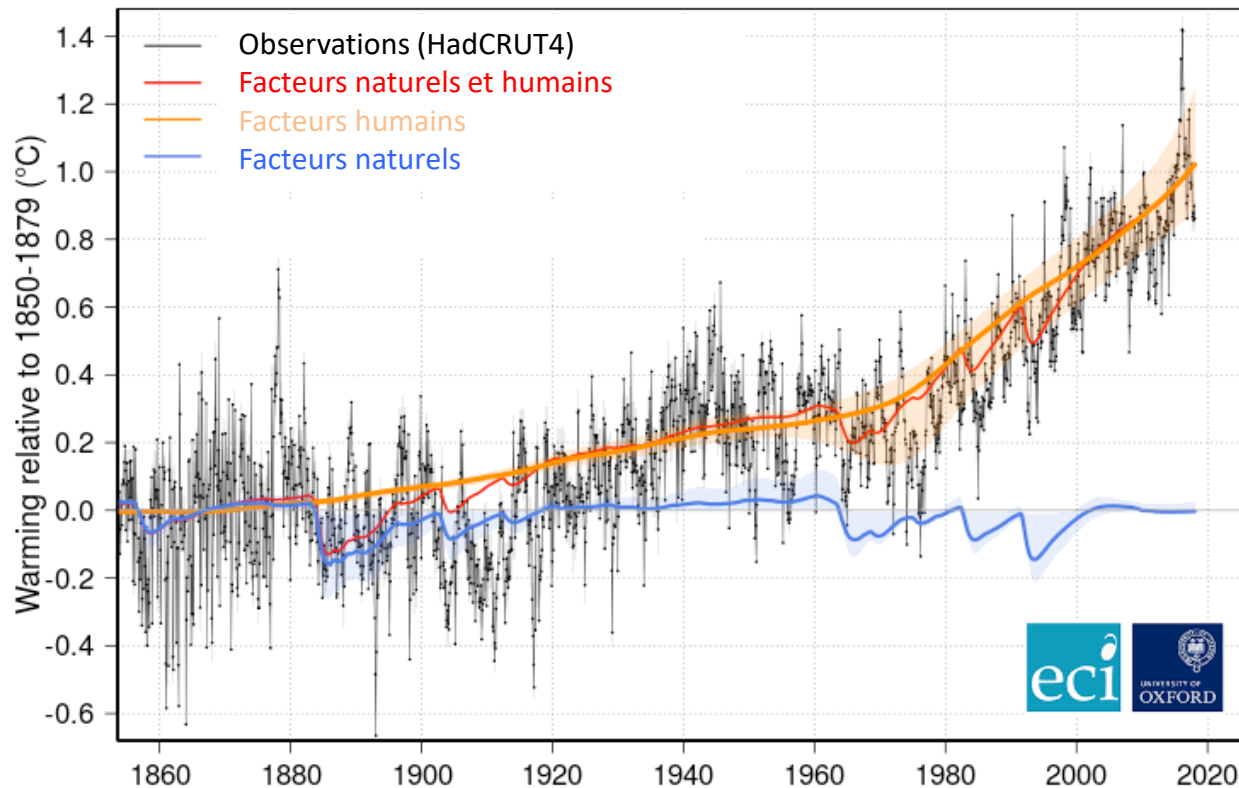
Co-présidente, groupe de travail I du GIEC



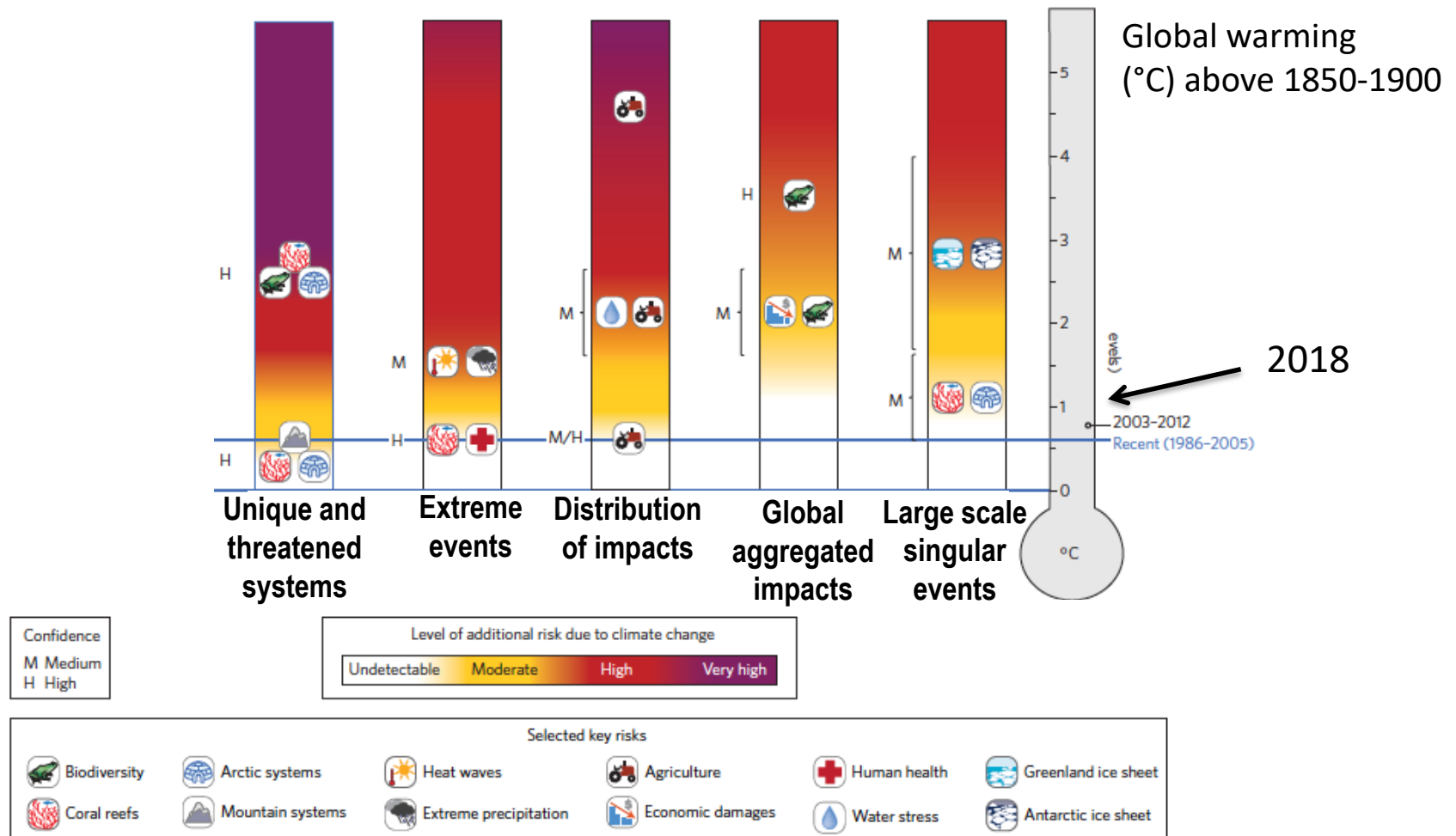
valmasdel

www.ipcc.ch

La plupart du réchauffement planétaire est dû à l'influence humaine



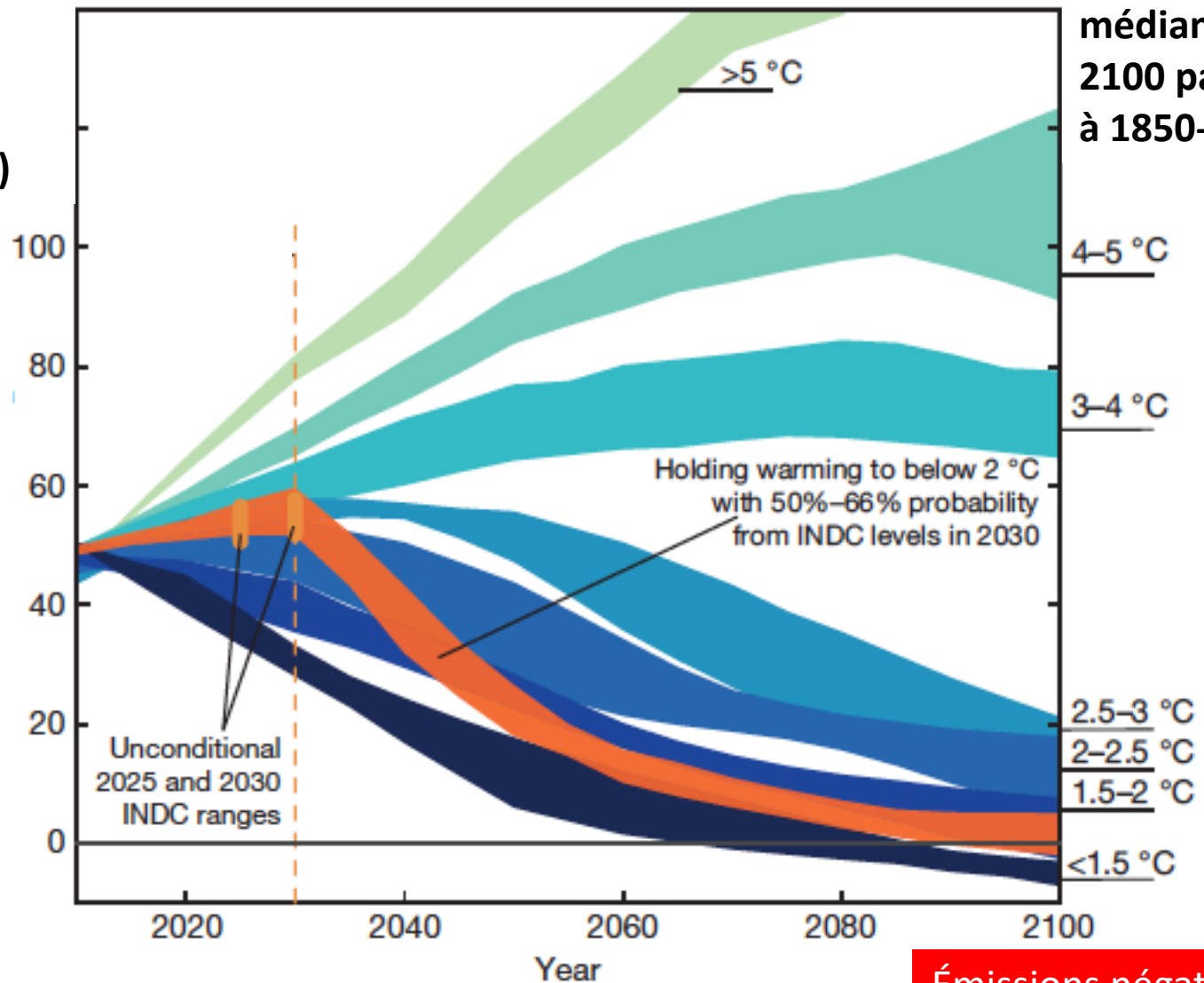
Les risques climatiques augmentent avec le niveau de réchauffement planétaire



Contributions nationales (NDC) et trajectoires

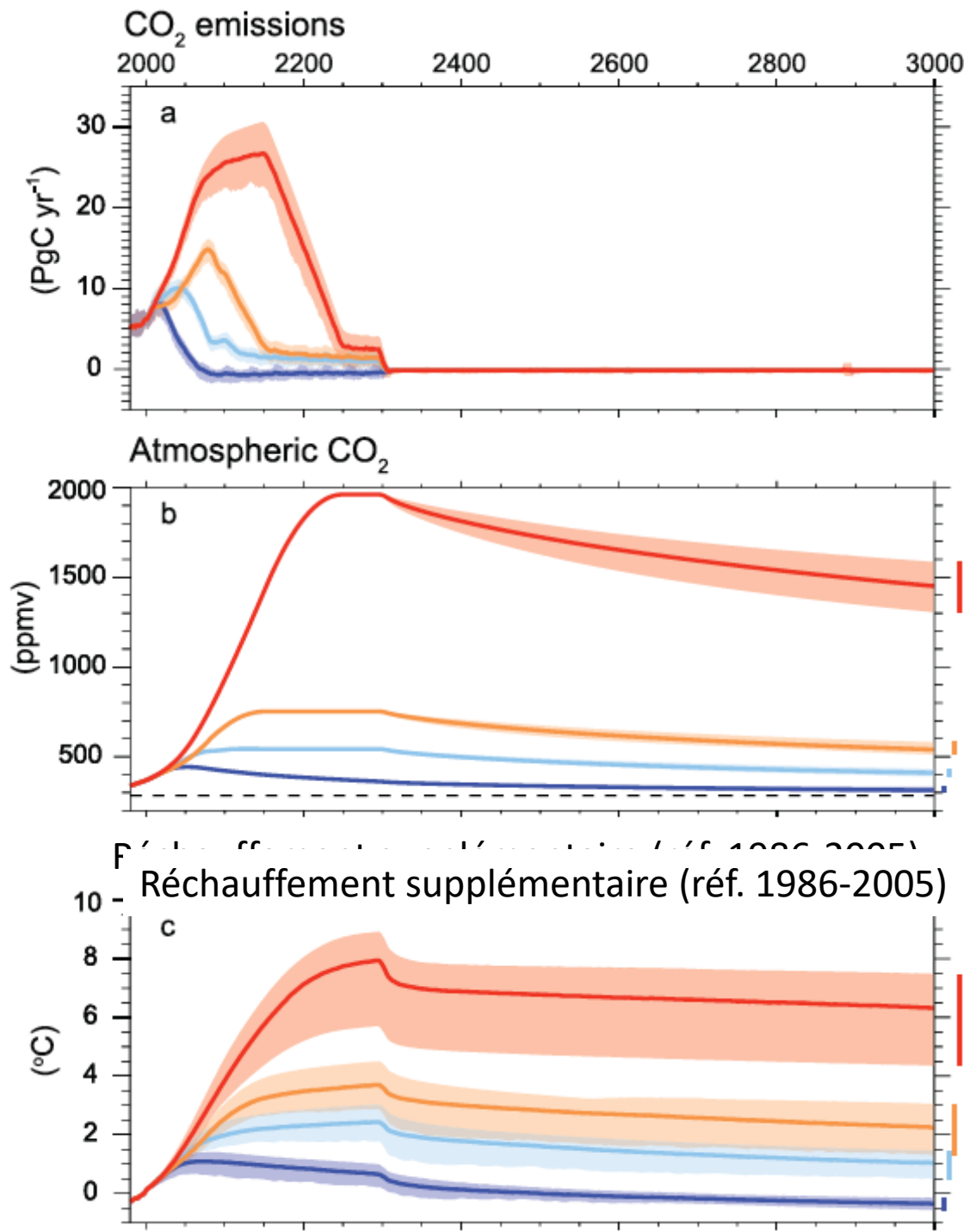
Emissions
mondiales
annuelles
(Gt CO₂-eq. yr⁻¹)

Projection
médiane (°C) en
2100 par rapport
à 1850-1900



Émissions négatives

Projections à long terme

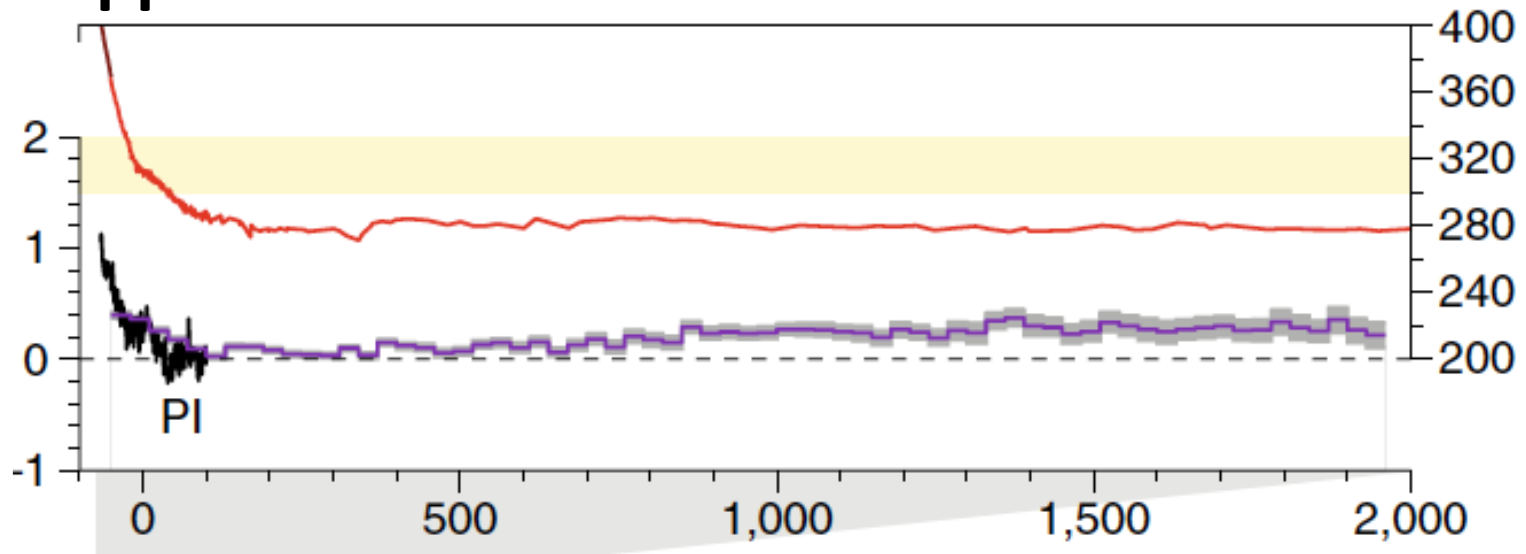


Rétrospective



Changement de température (°C) par rapport à 1850-1900

CO₂ (ppm)



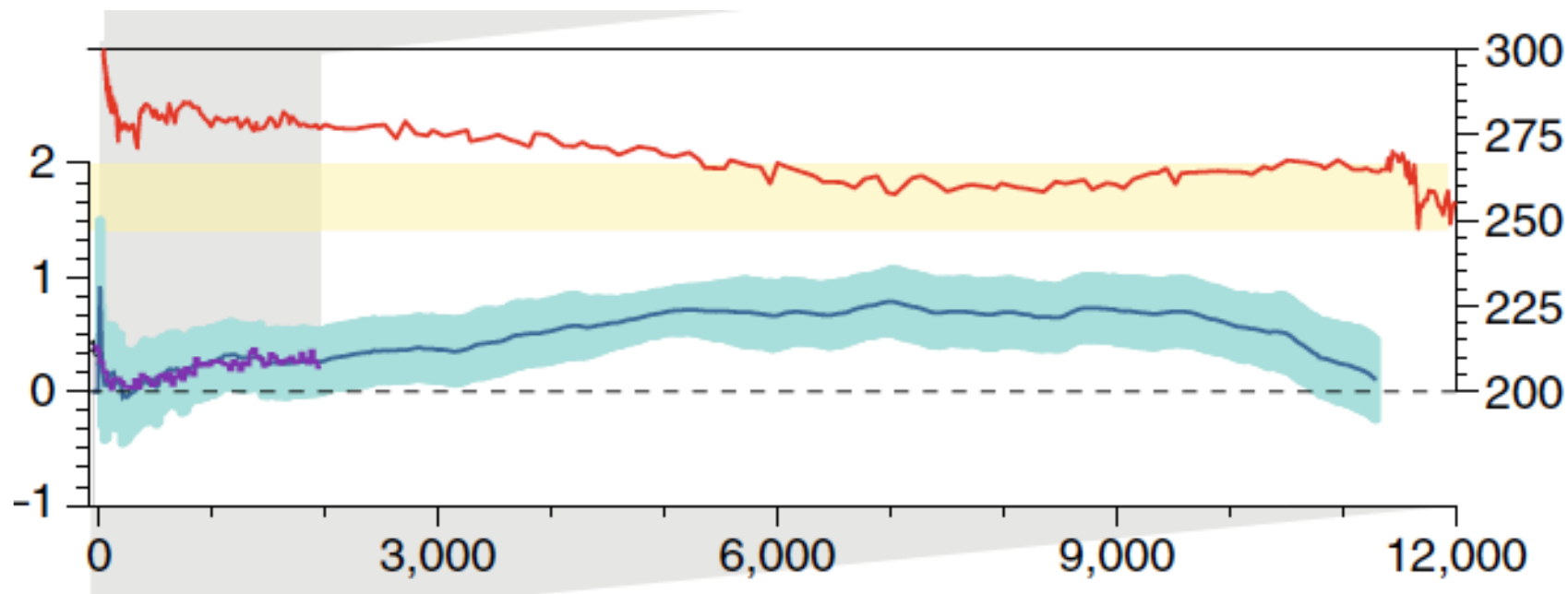
Aujourd'hui

Passé

Années

Température (°C)

CO₂ (ppm)



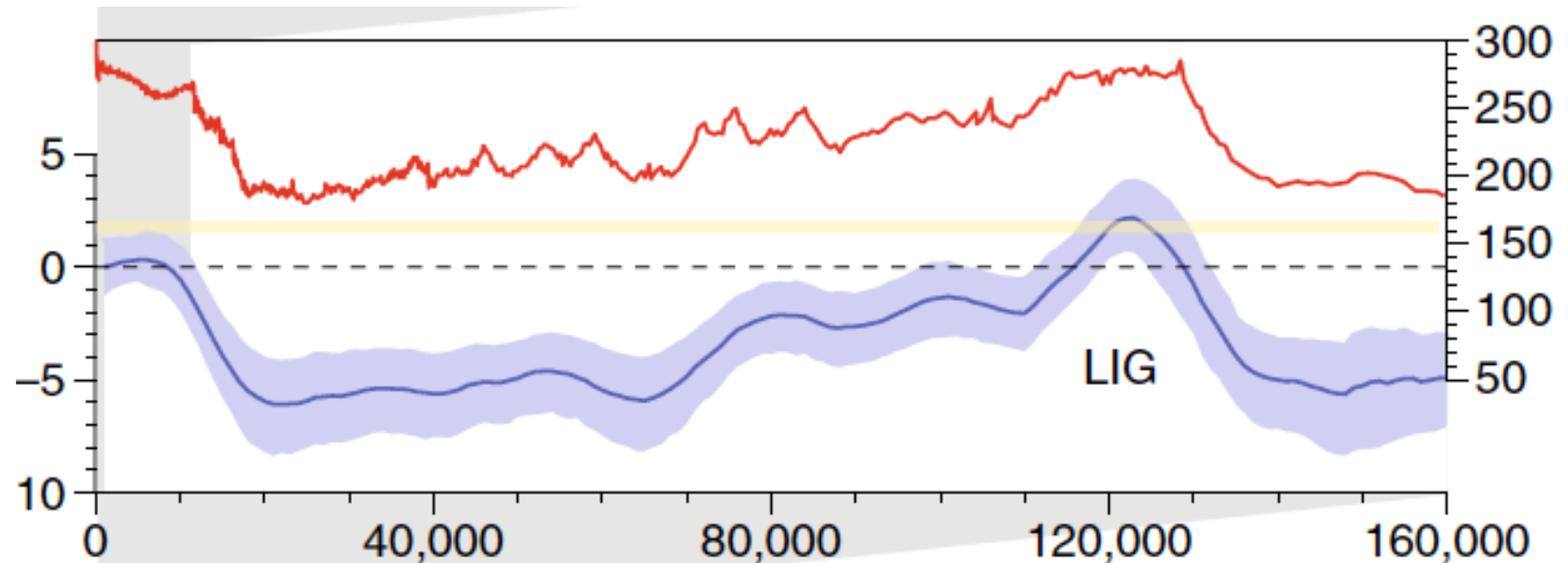
Aujourd'hui

Passé

Années

Température (°C)

CO₂ (ppm)



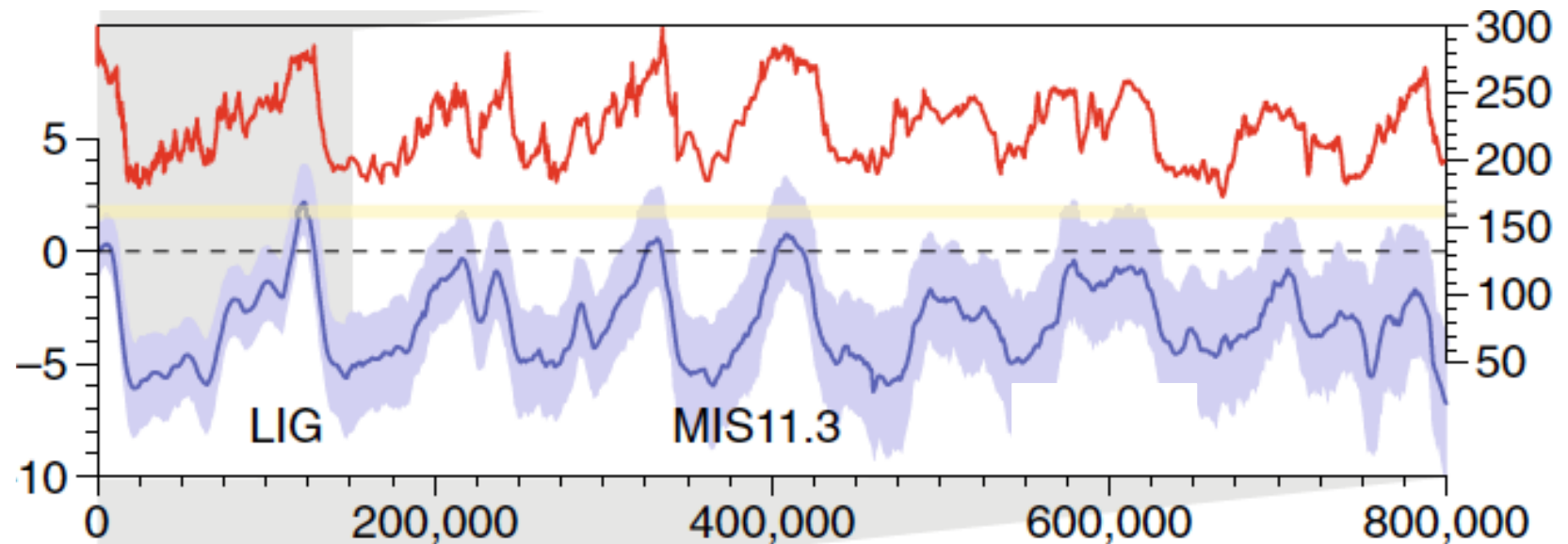
Aujourd'hui

Passé

Années

Température (°C)

CO₂ (ppm)



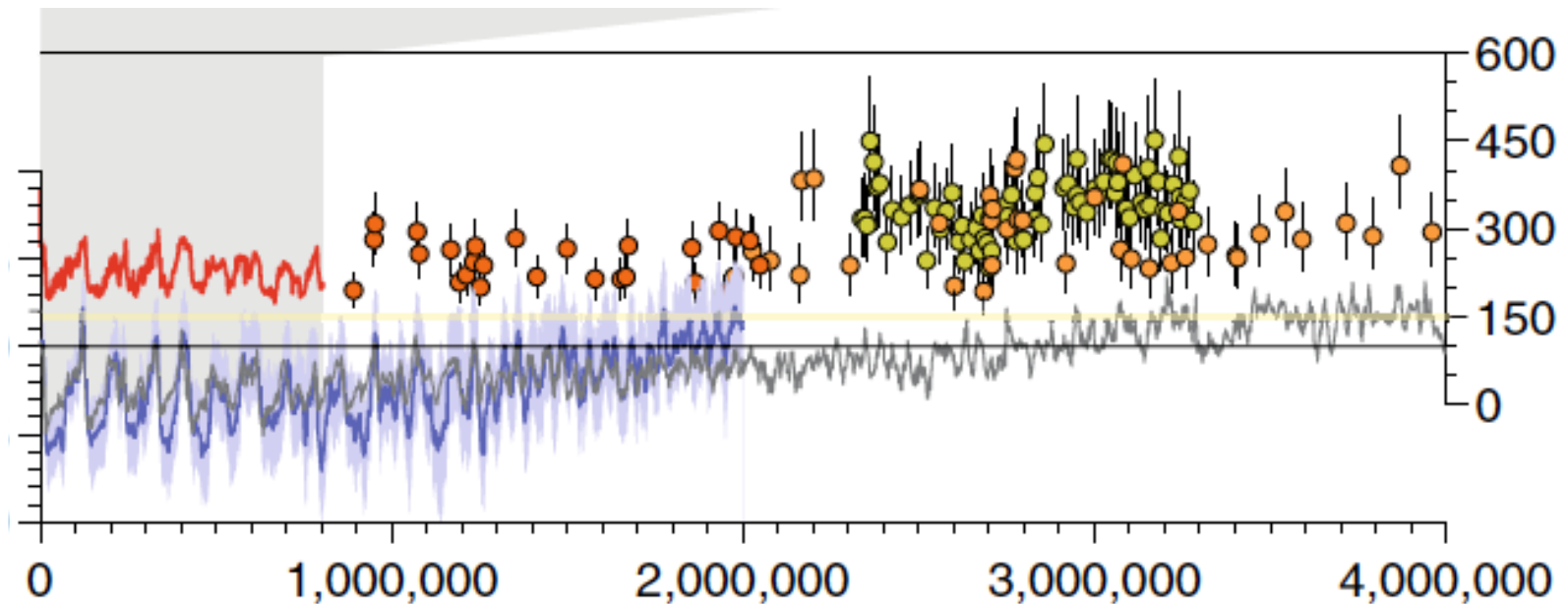
Aujourd'hui

Passé

Années

Température (°C)

CO₂ (ppm)



Aujourd'hui

Passé

Années

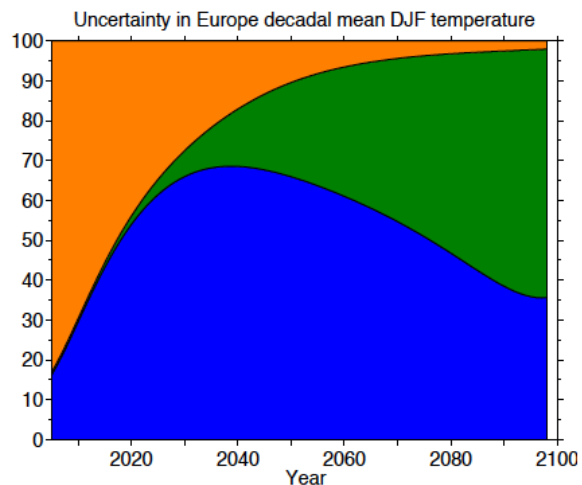
Enjeux spécifiques aux forêts

- Echelle de temps
- Pressions multiples sur l'usage des forêts
- Changement climatique ET biodiversité
- Qualité de l'air
- Interactions entre gestion des terres et climat local/régional

Sources d'incertitude sur l'évolution régionale du climat

**Pour le changement
de température en
Europe et en hiver**

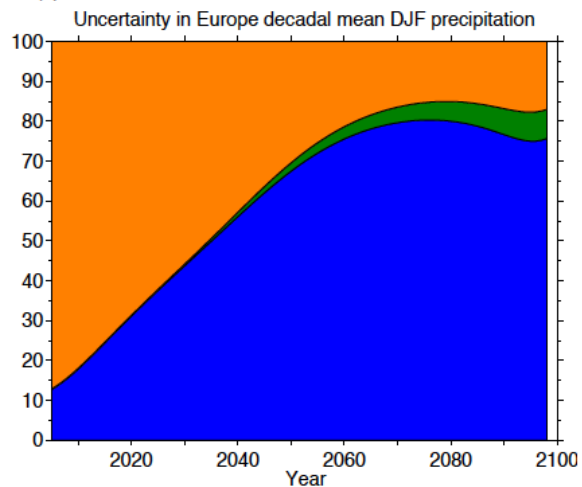
*Fraction de la
variance
totale (%)*



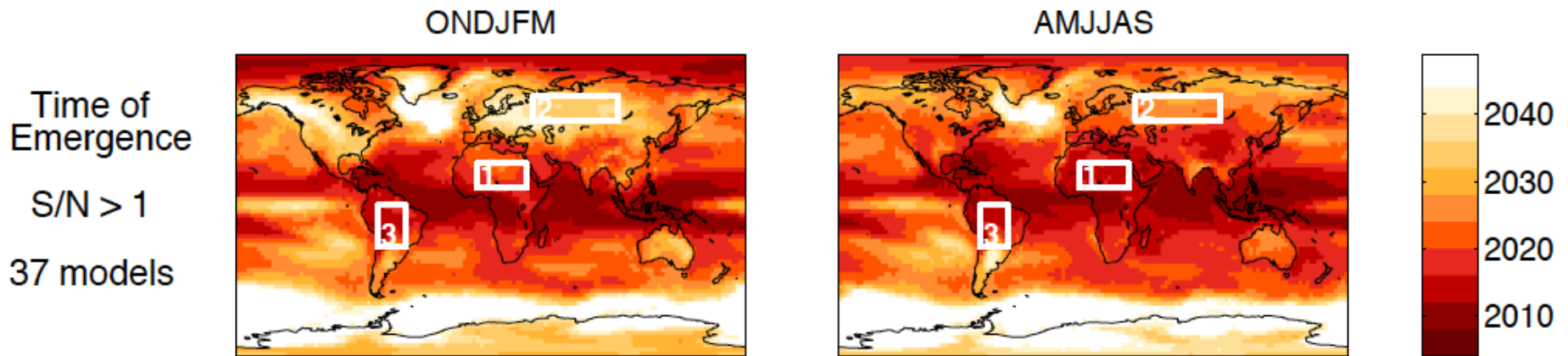
■ Variabilité interne
■ Réponse des modèles
■ Scénario

(f)

**Pour le changement
de précipitations en
Europe et en hiver**



Notion de « temps d'émergence »



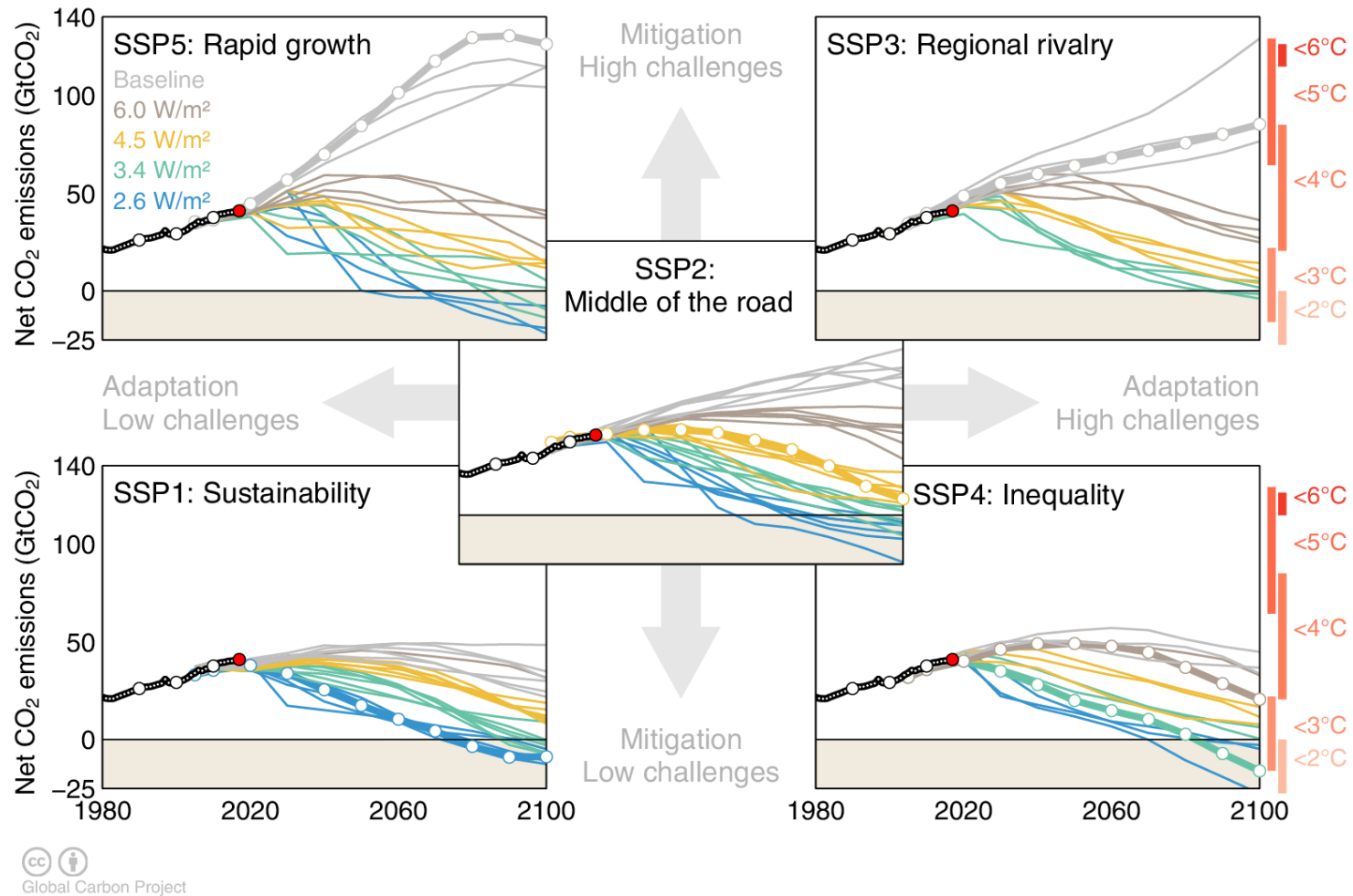
Résilience : face à de nouvelles conditions climatiques?

- Connaître toute la gamme de la variabilité naturelle passée des derniers siècles (à l'échelle régionale) y compris la réponse aux éruptions volcaniques majeures
- Identifier le temps d'émergence du signal associé au changement climatique d'origine humaine dans les tendances à long terme régionales (« nouveau climat »)
- Explorer les changements d'aléas : événements extrêmes et événements composites, nouveaux extrêmes possibles

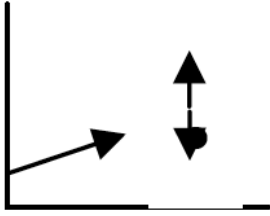
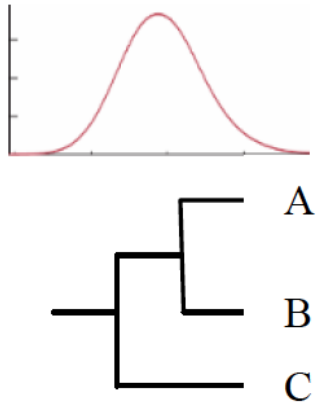
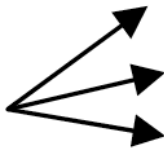
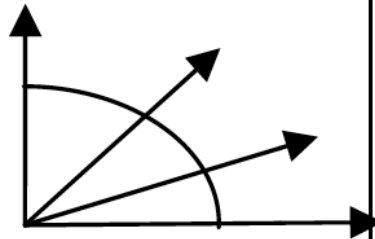
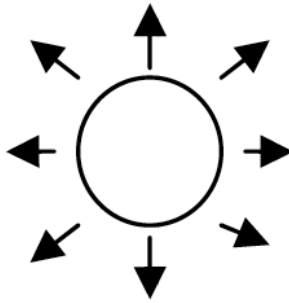
Résilience : face à de nouvelles conditions climatiques?

- Identifier les variables climatiques pertinentes pour les risques directs (hydro-climatiques) et indirects (e.g. micro-organismes, insectes, oiseaux...) pour les forêts
- Explorer les événements à faible probabilité d'occurrence mais potentiellement fort impact, dans la gamme « physiquement plausible »
- Connaître le mieux possible toute la plage d'incertitude pour le moyen et long terme

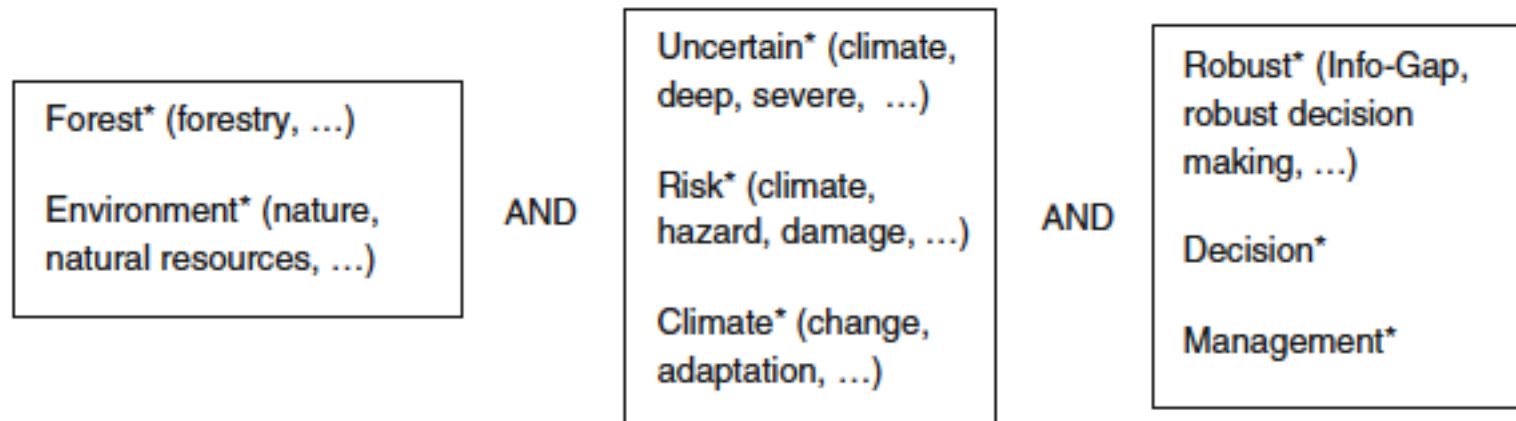
Scénarios: trajectoires socio-économiques



Processus de décision dans un contexte d'incertitude profonde (« deep uncertainty »)

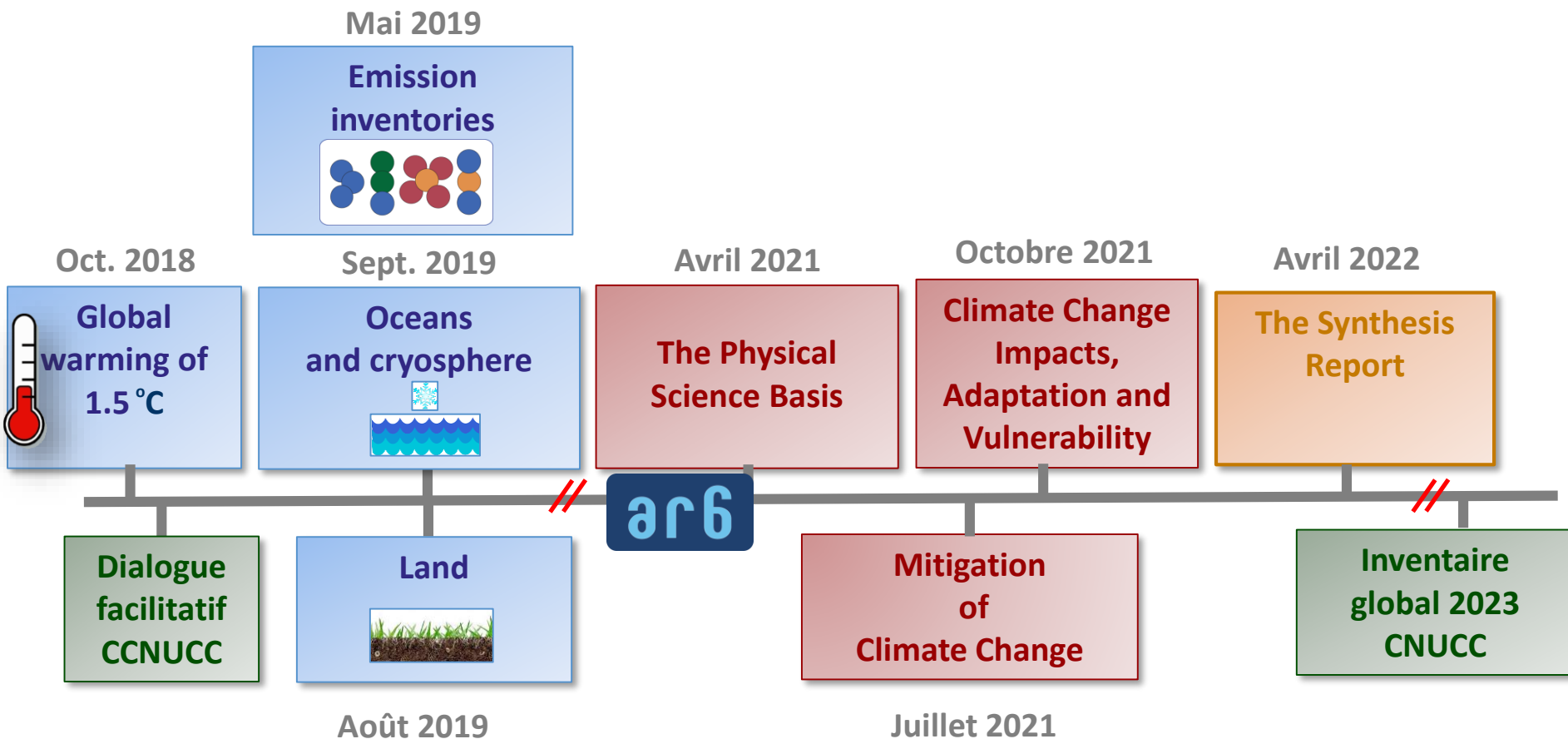
Level 1	Level 2	Level 3	Level 4	Level 5
A clear enough future (with sensitivity) 	Alternate futures (with probabilities) 	Alternate futures (with ranking) 	A multiplicity of plausible futures (unranked) 	Unknown future 

Formalisation d'un processus de décision robuste dans un contexte d'incertitude profonde (« deep uncertainty »)



- Résistance (stratégie / pire scénario)
- Résilience (capacité de récupération / futur incertain)
- Robustesse statique (politique statique)
- Robustesse adaptative (politique dynamique)

Quel est le calendrier du 6ème cycle du GIEC?



Working Group I

Large-scale climate change

Chapter 1: Framing, context, methods

Chapter 2: Changing state of the climate system

Chapter 3: Human influence on the climate system

Chapter 4: Future global climate: scenario-based projections and near-term information

Chapter 5: Global carbon and other biogeochemical cycles and feedbacks

Chapter 6: Short-lived climate forcers

Chapter 7: The Earth's energy budget, climate feedbacks, and climate sensitivity

Chapter 8: Water cycle changes

Chapter 9: Ocean, cryosphere, and sea level change

Chapter 10: Linking global to regional climate change

Chapter 11: Weather and climate extreme events in a changing climate

Chapter 12: Climate change information for regional impact and for risk assessment

Atlas of Regional Climate Information

Annexes

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Climate processes

Chapter 1: Framing, context, methods

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Annexes

Dates limites

Articles soumis avant 30 Déc 2019

Articles acceptés pour publication avant 30 Sept 2020

Working Group II

Chapter 1: Point of departure and key concepts

SECTION 1: Risks, adaptation and sustainability for systems impacted by climate change

Chapter 2: Terrestrial and freshwater ecosystems and their services

Chapter 3: Ocean and coastal ecosystems and their services

Chapter 4: Water

Chapter 5: Food, fibre, and other ecosystem products

Chapter 6: Cities, settlements and key infrastructure

Chapter 7: Health, wellbeing and the changing structure of communities

Chapter 8: Poverty, livelihoods and sustainable development

SECTION 2: Regions

Chapter 9: Africa

Chapter 10: Asia

Chapter 11: Australasia

Chapter 12: Central and South America

Chapter 13: Europe

Chapter 14: North America

Chapter 15: Small Islands

CROSS-CHAPTER PAPERS

- Biodiversity hotspots (land, coasts and oceans)
- Cities and settlements by the sea
- Deserts, semi-arid areas, and desertification
- Mediterranean region
- Mountains
- Polar regions
- Tropical forests

SECTION 3: Sustainable development pathways: integrating adaptation and mitigation

Chapter 16: Key risks across sectors and regions

Chapter 17: Decision-making options for managing risk

Chapter 18: Climate resilient development pathways* **connection to WG III*

Working Group III on mitigation

Framing (1 chapter)

1. Introduction and framing

Set up sustainable development as key framing concept

High-level assessment of emission trends, drivers and pathways (3 chapters)

2. Emissions trends and drivers

3. Mitigation pathways compatible with long-term goals

4. Mitigation and development pathways in the near- to mid-term

Balancing sources and sinks/warming levels

NDCs, emissions peaking, mid-century long-term low greenhouse gas emission development strategies

Sectoral chapters (8 chapters)

5: Demand, services and social aspects of mitigation

Orients sectors to human needs

6: Energy systems

9. Buildings

7. Agriculture, Forestry, and Other Land Uses

10. Transport

8. Urban systems and other settlements

11. Industry

The sectoral core: maps on to inventories

12. Cross sectoral perspectives

Responses not captured by sectoral framing

Institutional drivers (2 chapters)

13. National and sub-national policies and institutions

14. International cooperation

Institutions, policies and cooperation

Financial and technological drivers (2 chapters)

15. Investment and finance

16. Innovation, technology development and transfer

Financial flows + technological innovation

Synthesis (1 chapter)

17. Accelerating the transition in the context of sustainable development

Synthesis sustainable development in different geographical scales