RICCAR
Regional Initiative for the Assessment of Climate Change Impacts on Water Resources and Socio-Economic Vulnerability in the Arab Region

Engaging in the IPCC processes

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WGI ➔ Physical scientific basis

Aims at : assessing the physical scientific basis of the climate system and climate change.

Its main topics include:

- changes in greenhouse gases and aerosols in the atmosphere;
- observed changes in air, land and ocean temperatures, rainfall, glaciers and ice sheets, oceans and sea level;
- historical and paleoclimatic perspective on climate change;
- biogeochemistry, carbon cycle, gases and aerosols;
- satellite data and other data;
- climate models;
- climate projections,
- causes and attribution of climate change

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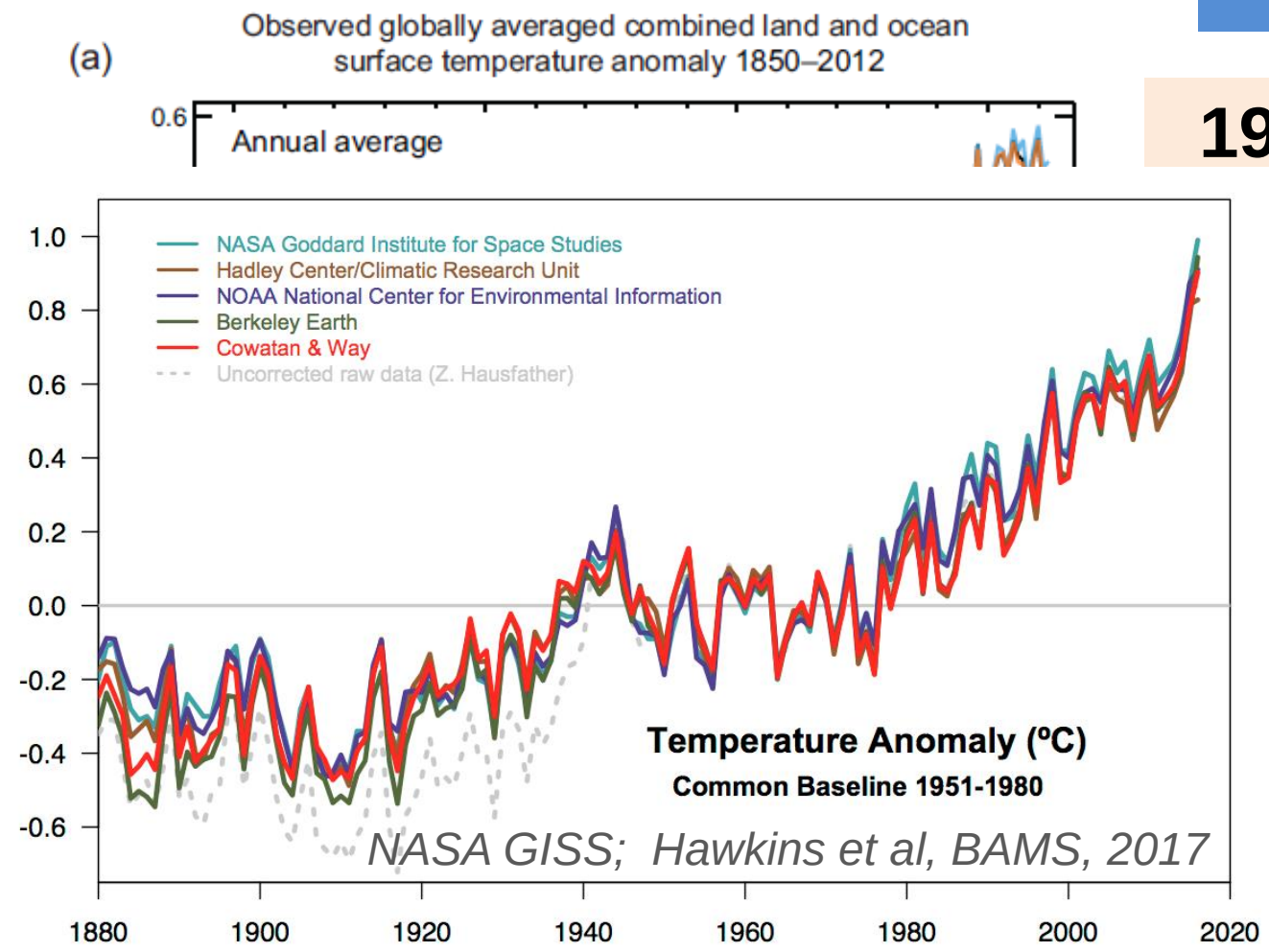
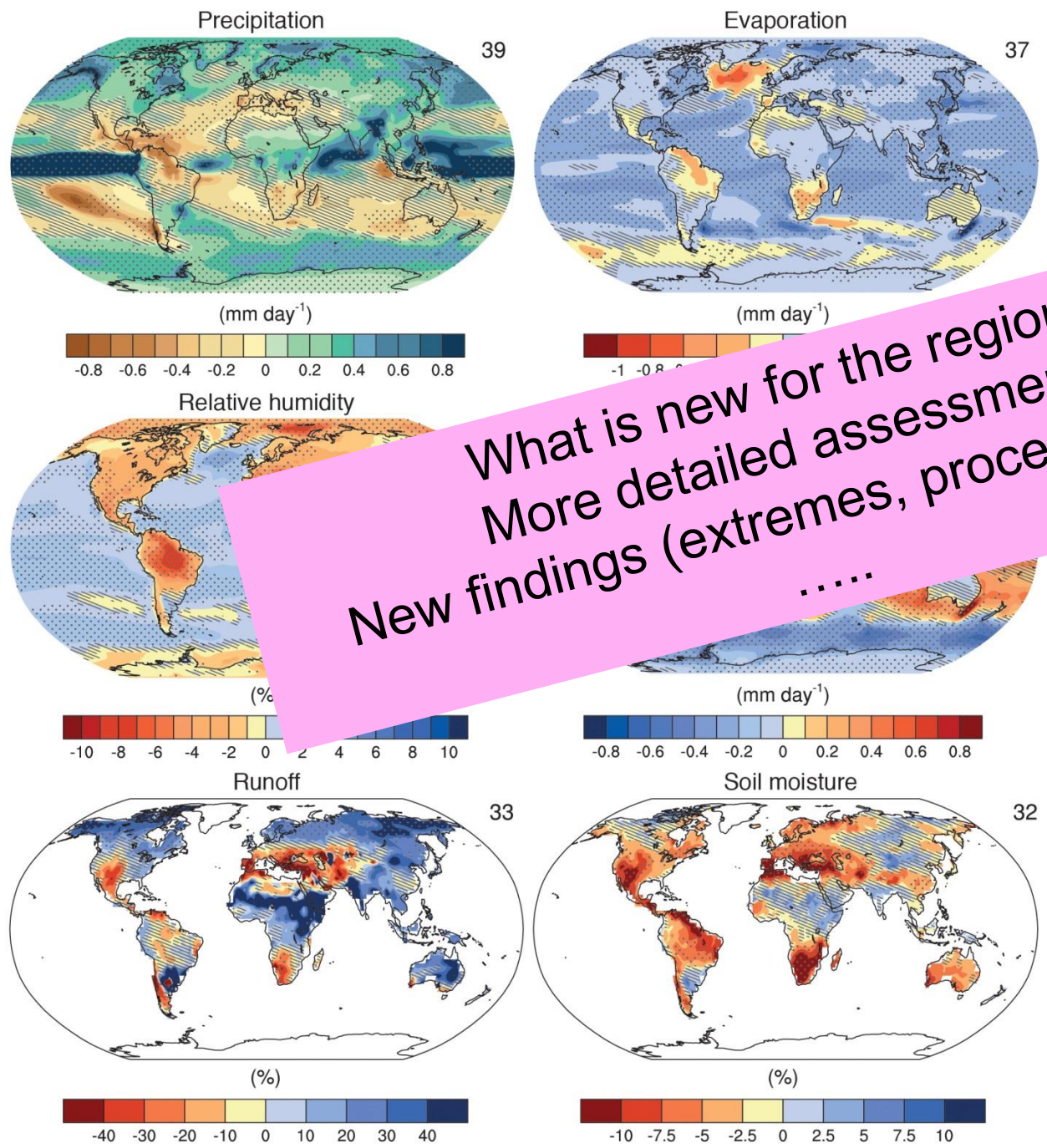
19 Key messages



+ 0,18°C per decade
2015 and 2016 : >1°C above preindustrial level

The warming of the climate system is unequivocal and since the 1950s many changes have been unprecedented for decades or even millennia.



What is new for the region?
More detailed assessment?
New findings (extremes, processes, …)?
…..

Additional greenhouse gas emissions will imply warming and affecting all the

Reducing climate change will require significant and sustainable reductions in greenhouse gas emissions.

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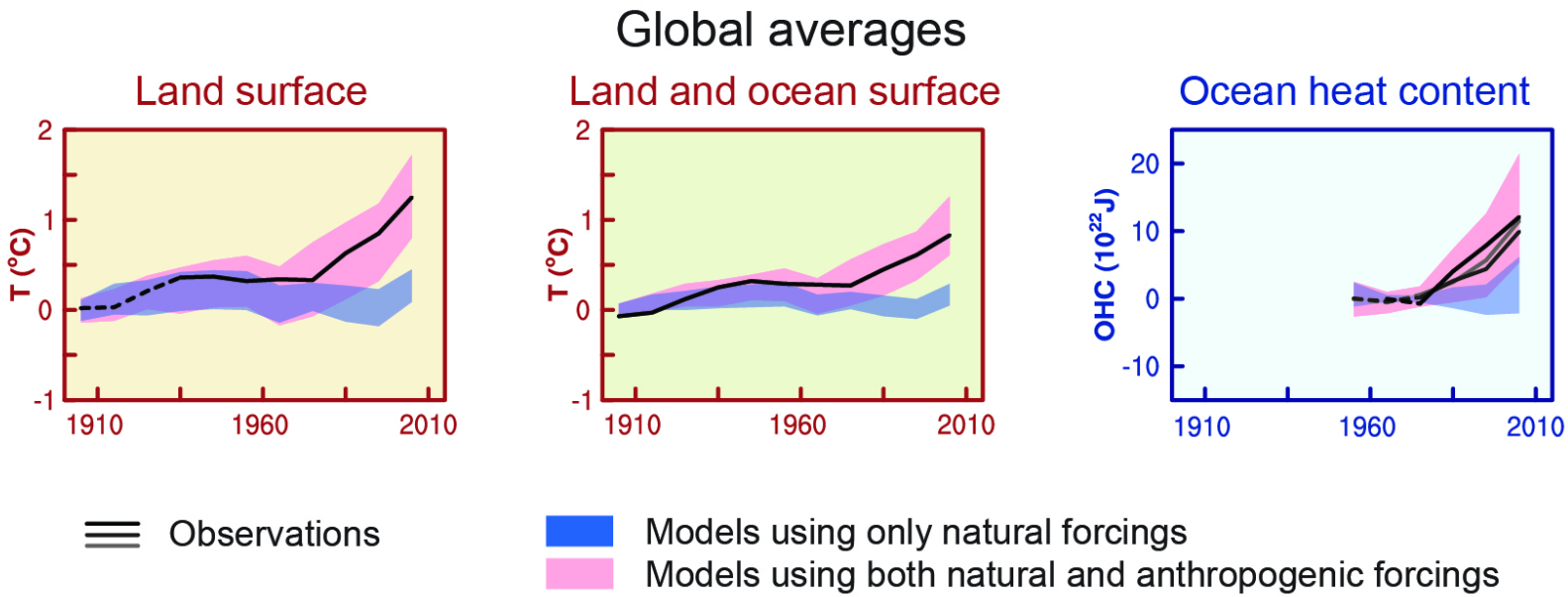


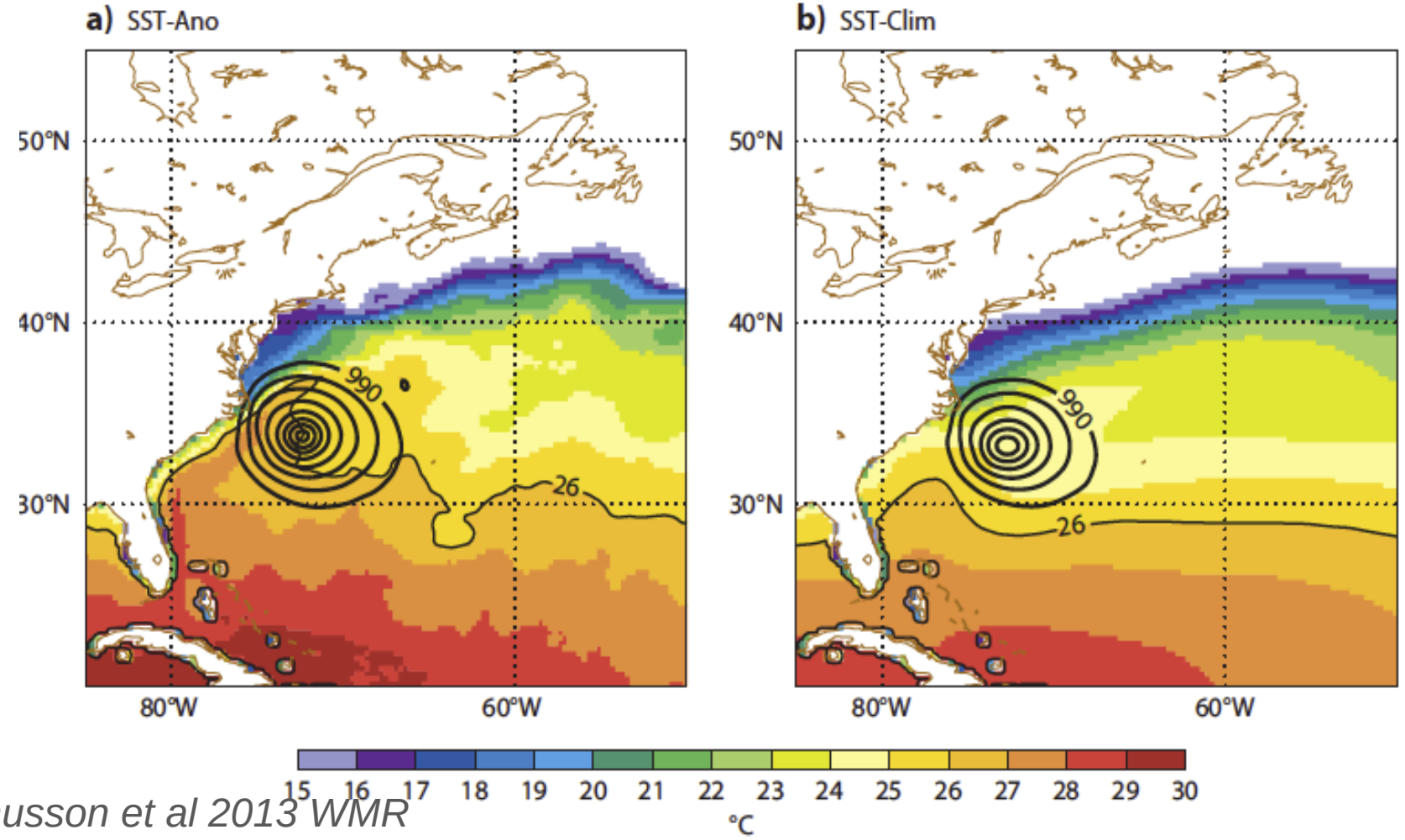
Human influence has been detected in warming of the atmosphere and the ocean, in changes in the global water cycle, in reductions in snow and ice, in global mean sea level rise, and in changes in some climate extremes. This evidence for human influence has grown since AR4. It is extremely likely that human influence has been the dominant cause of the observed warming since the mid-20th century.

Ouragan Sandy (30 oct. 2012)

$ 70 billion damage around New York: winds, rains and submersion

Forecast (with actual SST)

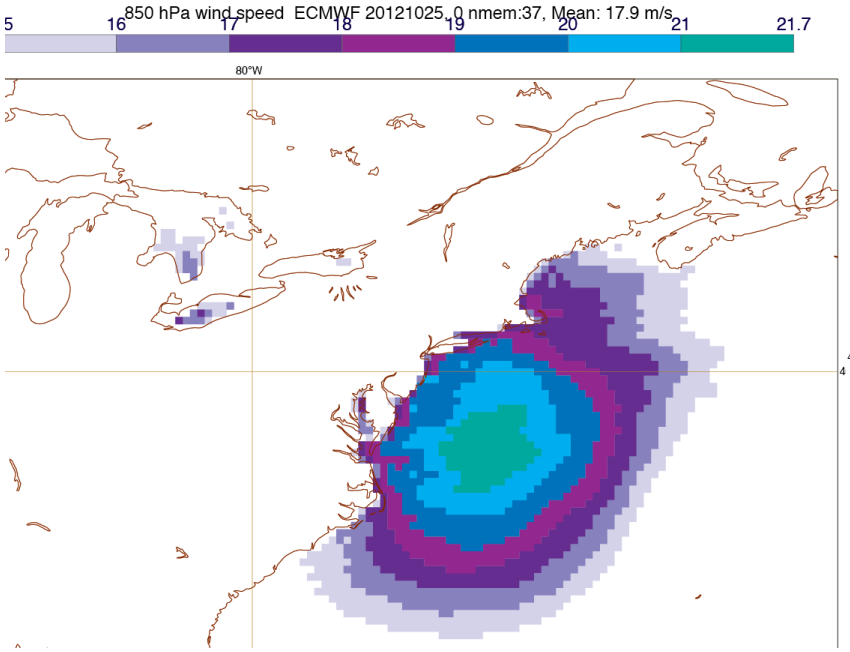
Forecast (with “normal” SST)



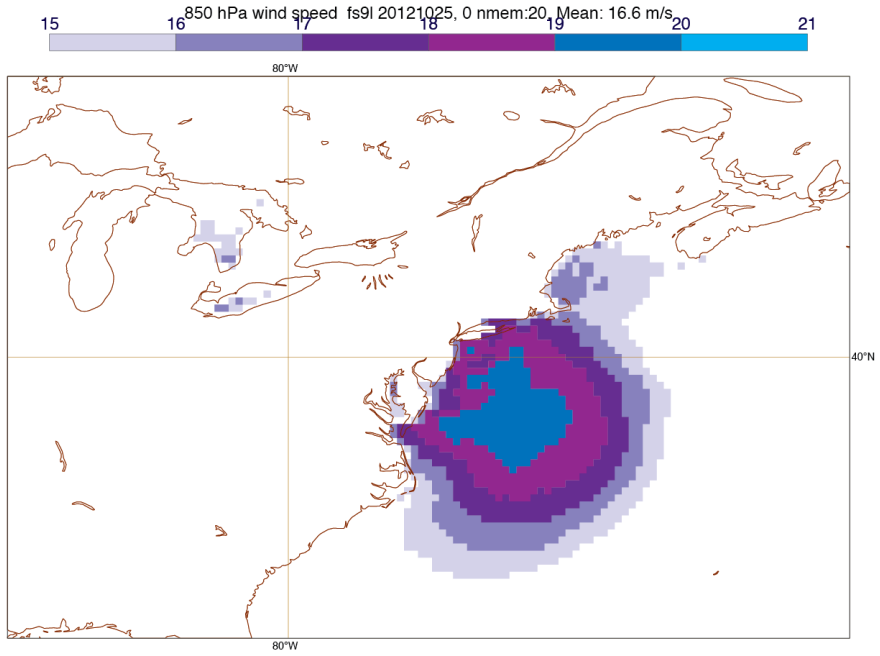
Magnusson et al 2013 WMR

Présent : études d'attribution

Vents (avec température mer réelle)



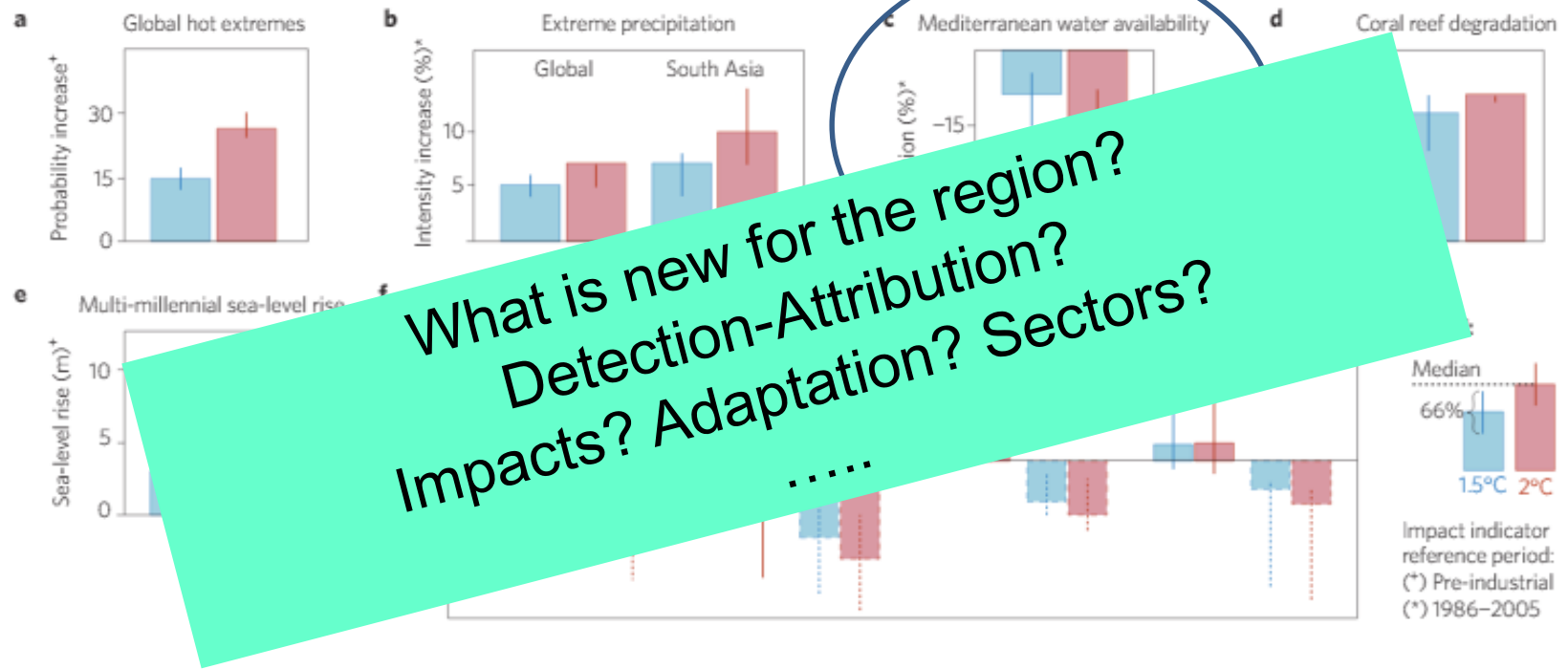
Vents (température mer «normale »)



Température mer plus élevée: vents +3.6 m/s, pluies +35%
Niveau mer +19 cm

Magnusson et al 2013 WMR

Implications de 1.5 et 2° de réchauffement global



What is new for the region?
Detection-Attribution?
Impacts? Adaptation? Sectors?
…..

Figure 1 | Projected impacts at 1.5 °C and 2 °C GMT increase above pre-industrial levels for a selection of indicators and regions. a, Increase in global occurrence probability of pre-industrial 1-in-a-1000 day global land area below 66° N/S and South Asia[21]. **c**, Red risk of long-term degradation[37]. **e**, Global sea-level rise yields for present-day tropical agricultural areas[21] (belo increase in CO_2 fertilization (No CO_2). Panels **b**, **c** and **f**

Schleussner et al (2016a, 2016b)

Regional reduction in median water availability for the Mediterranean is found to nearly double from 9% to 17% between 1.5◦C and 2◦C.

Projected lengthening of regional dry spells increases from 7 to 11%.

WGI Outline

Summary for Policy Makers

Technical Summary

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

Annexes incl. options for a Regional Atlas and Technical Annexes

Glossary, Index

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WGII Outline

Summary for Policymakers
Technical Summary
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 [40 pages]
Chapter 14: North America
Chapter 15: Small Islands

SECTION 3: Sustainable development pathways: integrating adaptation and mitigation

Chapter 16: Key risks across sectors and regions [40 pages]
Chapter 17: Decision-making options for managing risk [40 pages]
Chapter 18: Climate resilient development pathways* [40 pages]

ANNEX I: Regional Atlas
ANNEX II: Glossary
ANNEX III: List of Acronyms
ANNEX IV: List of Contributors
ANNEX V: List of Reviewers
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How can we/you be involved in IPCC reports

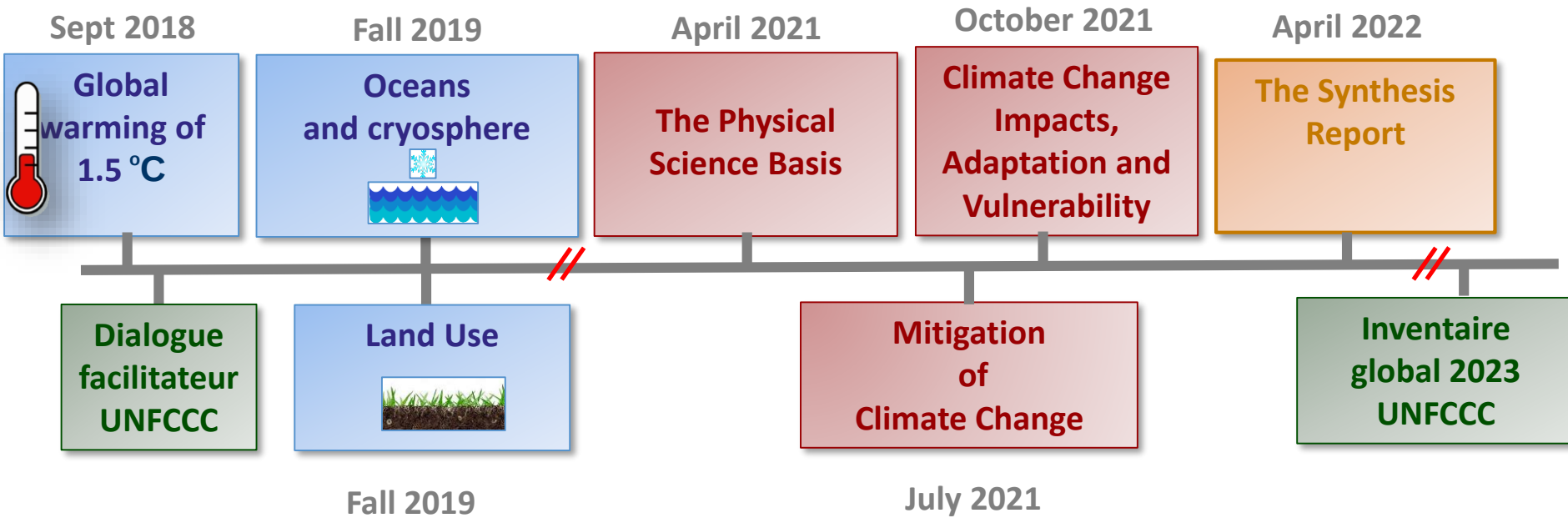
➔Contribution though several ways:

Lead Authors, Coordinating Lead Authors, Review Editors,

Contributing Authors, Expert Reviewer

➔**Publishing**

➔Focal points role



What is expected from you as LA?

- Assessment of scientific literature

➔ careful and critical

- Writing Synthesis

➔ Read and discuss several papers

➔ Consensus building process

➔ Importance of the rigor

➔ Example: chapter 9 of WGI AR5 report over 1200 published scientific paper

FOD ➔ 1725 review comments

SOD ➔ 2464 review comments

➔ Written responses to each

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Evaluation of Climate Models

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This can allow you :

- Getting more experience
- Participate to a high profile and robust assessment of climate change sciences
- Contribute in providing scientific information for decision making and policy development
- Country/region (more) involved

شكرا على الاهتمام

Thank you for your attention