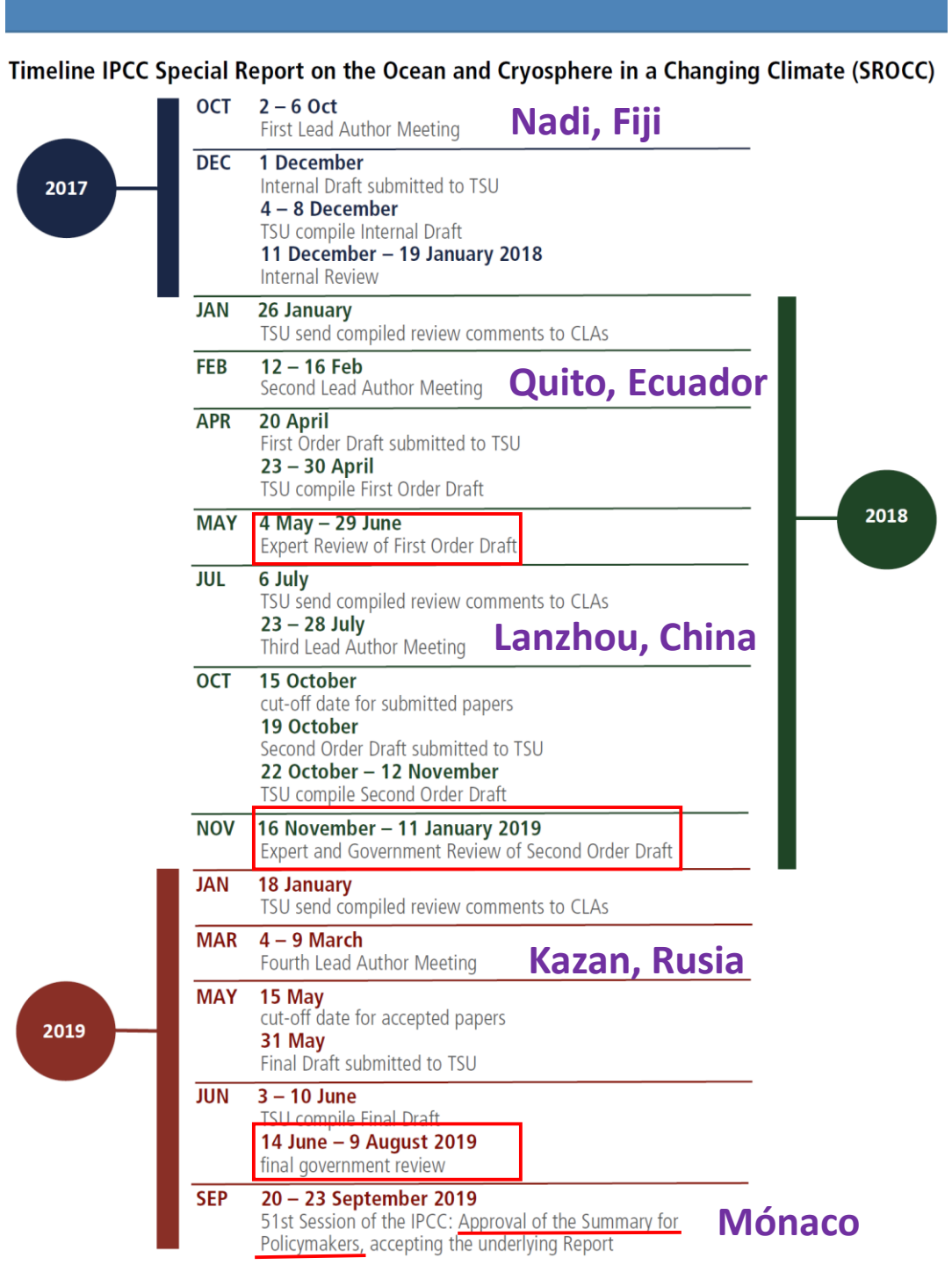
Reunión del IPCC, Mónaco, Septiembre 2019

(Grupo Intergubernamental de Expertos sobre el Cambio Climático)

Calendario


Timeline IPCC Special Report on the Ocean and Cryosphere in a Changing Climate (SROCC)
2017
OCT 2 – 6 Oct
First Lead Author Meeting
Nadi, Fiji
DEC 1 December
Internal Draft submitted to TSU
4 – 8 December
TSU compile Internal Draft
11 December – 19 January 2018
Internal Review
2018
JAN 26 January
TSU send compiled review comments to CLAs
FEB 12 – 16 Feb
Second Lead Author Meeting
Quito, Ecuador
APR 20 April
First Order Draft submitted to TSU
23 – 30 April
TSU compile First Order Draft
MAY 4 May – 29 June
Expert Review of First Order Draft
JUL 6 July
TSU send compiled review comments to CLAs
23 – 28 July
Third Lead Author Meeting
Lanzhou, China
OCT 15 October
cut-off date for submitted papers
19 October
Second Order Draft submitted to TSU
22 October – 12 November
TSU compile Second Order Draft
NOV 16 November – 11 January 2019
Expert and Government Review of Second Order Draft
2019
JAN 18 January
TSU send compiled review comments to CLAs
MAR 4 – 9 March
Fourth Lead Author Meeting
Kazan, Rusia
MAY 15 May
cut-off date for accepted papers
31 May
Final Draft submitted to TSU
JUN 3 – 10 June
TSU compile Final Draft
14 June – 9 August 2019
final government review
SEP 20 – 23 September 2019
51st Session of the IPCC: Approval of the Summary for Policymakers, accepting the underlying Report
Mónaco


Debra Roberts
Sudáfrica
Hans-Otto Pörtner
Alemania
Panmao Zhai
China
Valérie Masson-
Delmotte, Francia
D. ROBERTS
CO-CHAIR WG II
H.-O. PÖRTNER
CO-CHAIR WG II
P. ZHAI
CO-CHAIR WG I
Second Joint Session

Código de color para resaltar el texto, leerlo en voz alta, debatirlo y aprobar el resumen para los tomadores de decisiones línea por línea

- Blanco: texto aún no considerado para aprobación
- Amarillo : texto actualmente bajo consideración
- Verde : texto aprobado
- Rosa : texto no aprobado => Grupo de contacto o *apiñamiento*

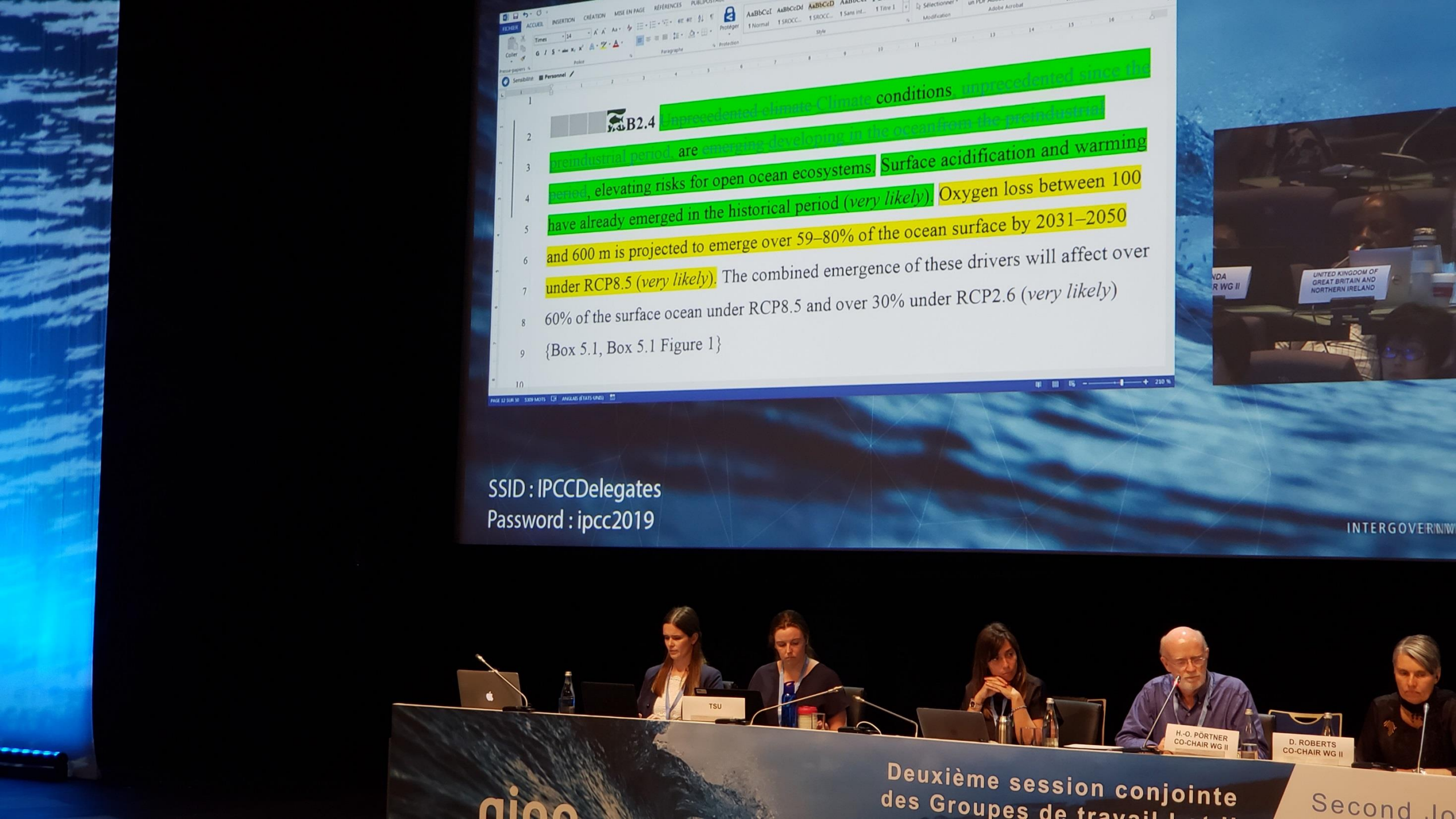

B2.4 Unprecedented climate Climate conditions, unprecedented since the preindustrial period, are emerging developing in the oceanfrom the preindustrial period, elevating risks for open ocean ecosystems. Surface acidification and warming have already emerged in the historical period (very likely). Oxygen loss between 100 and 600 m is projected to emerge over 59–80% of the ocean surface by 2031–2050 under RCP8.5 (very likely). The combined emergence of these drivers will affect over 60% of the surface ocean under RCP8.5 and over 30% under RCP2.6 (very likely) {Box 5.1, Box 5.1 Figure 1}
SSID : IPCCDelegates
Password : ipcc2019
UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND
TSU
H.-O. PÖRTNER CO-CHAIR WG II
D. ROBERTS CO-CHAIR WG II
Deuxième session conjointe des Groupes de travail
Second Jo

Photo by IISD/ENB | Mike Muzurakis

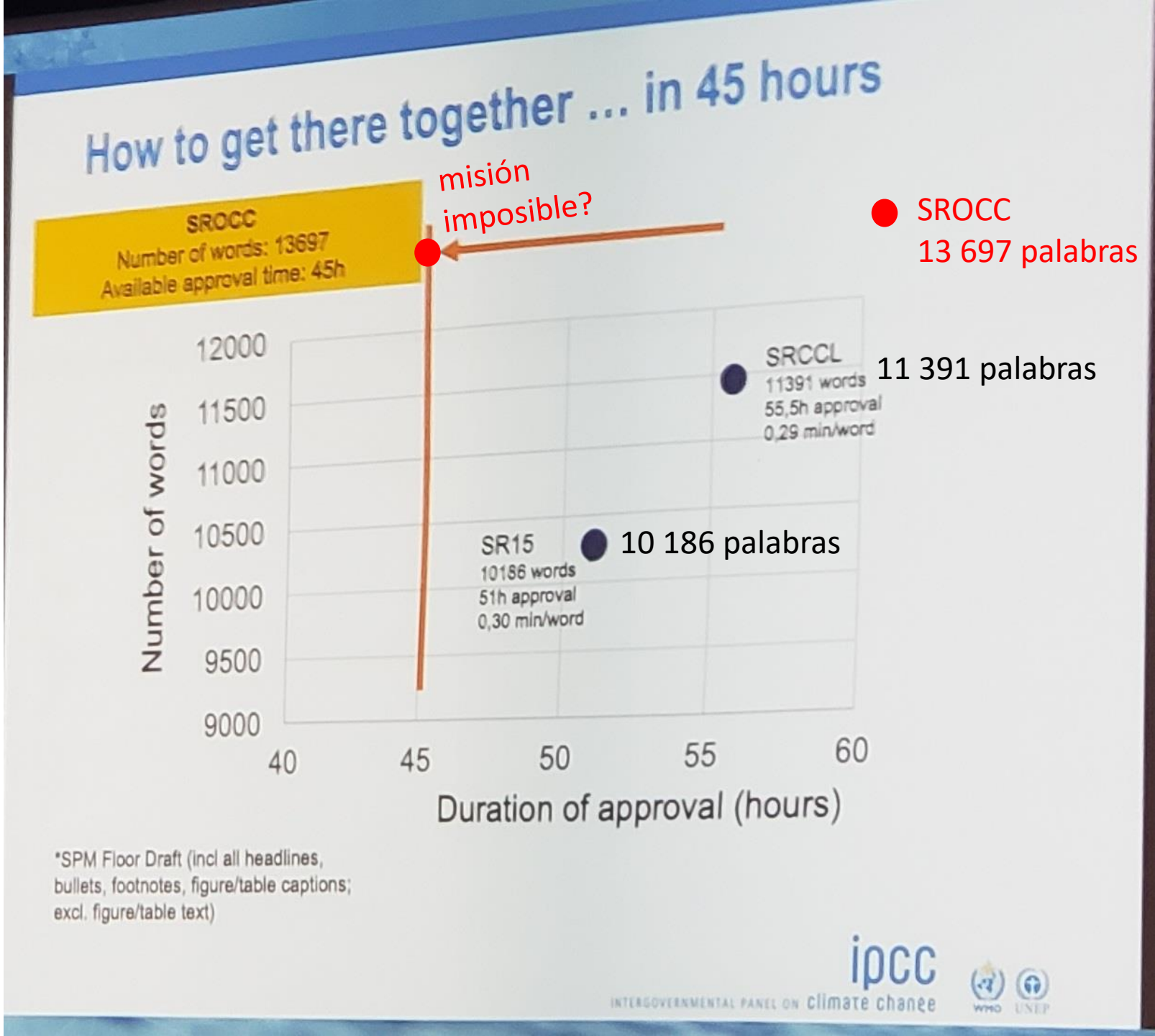
Mecanismos de resolución de conflictos.

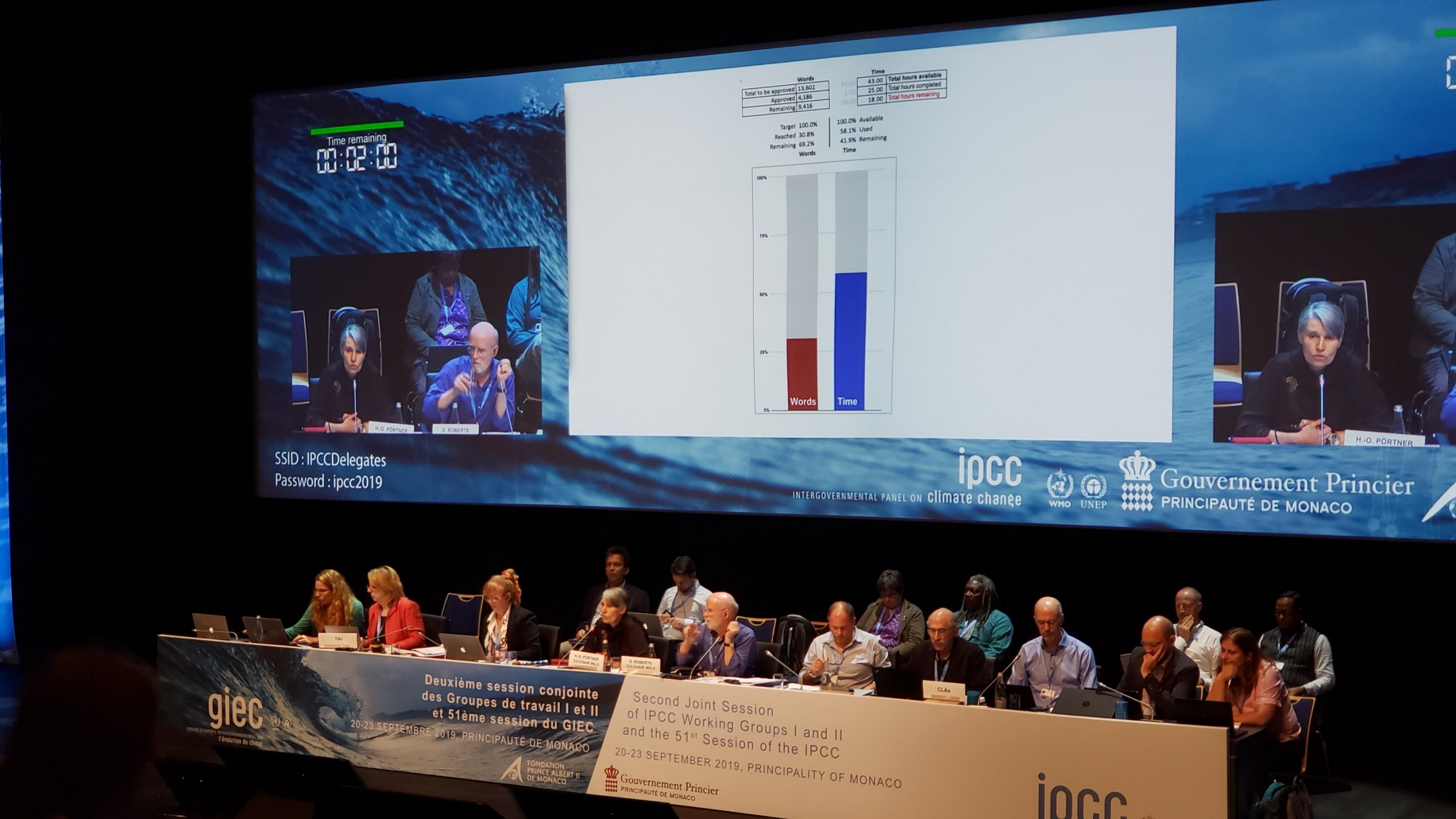
- **Apiñamiento** = grupo responsable de examinar una oración, tabla o figura problemática, bajo la supervisión de un miembro de la oficina del IPCC
- **Grupo de contacto** = grupo responsable de examinar una oración, tabla o figura problemática, bajo el liderazgo conjunto de un delegado de un país desarrollado y un delegado de un país en desarrollo

Photo by IISD/ENB | Mike Muzurakis

Laird Shutt, ECCC
Jefe de la delegación canadiense

Falta de tiempo predecible




Time remaining
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H.-O. PÖRTNER
D. ROBERTS
Words
Total to be approved 13,602
Approved 4,186
Remaining 9,416
Time
43.00 Total hours available
25.00 Total hours completed
18.00 Total hours remaining
Target 100.0%
Reached 30.8%
Remaining 69.2%
Words
100.0% Available
58.1% Used
41.9% Remaining
Time
100%
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Words
Time
H.-O. PÖRTNER
SSID : IPCCDelegates
Password : ipcc2019
ipcc
INTERGOVERNMENTAL PANEL ON climate change
WMO
UNEP
Gouvernement Princier
PRINCIPAUTÉ DE MONACO
TSU
H.-O. PÖRTNER CO-CHAIR WG II
D. ROBERTS CO-CHAIR WG II
CLAs
giec
Deuxième session conjointe
des Groupes de travail I et II
et 51ème session du GIEC
20-23 SEPTEMBRE 2019, PRINCIPAUTÉ DE MONACO
FONDATION PRINCE ALBERT II DE MONACO
Second Joint Session
of IPCC Working Groups I and II
and the 51st Session of the IPCC
20-23 SEPTEMBER 2019, PRINCIPALITY OF MONACO
Gouvernement Princier
PRINCIPAUTÉ DE MONACO
ipcc

Time remaining
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Words	
Total to be approved	13,602
Approved	5,644
Remaining	7,958

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43.00	Total hours available
37.00	Total hours completed
6.00	Total hours remaining

	Words	Time
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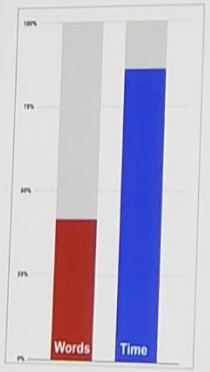
Reached	41.5%	86.0% Used
Remaining	58.5%	14.0% Remaining



Day	Session	Outstanding
		•
Day 4 (23rd)	1230-1530	• Report Back only: Contact Gp B3+SPM4, SPM3, SPM1, Box SPM1, SPM2, SPM5, C2.2 • C1, C2, C3, C4
Day 4 (23rd)	1600-1900	• B1, B2 • B9, A9, B3, • SPM2
Day 4 (23rd)	2030-2330	• B4-8, A8

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INTERGOVERNMENTAL PANEL ON climate change

WMO UNEP

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FOUNDATION

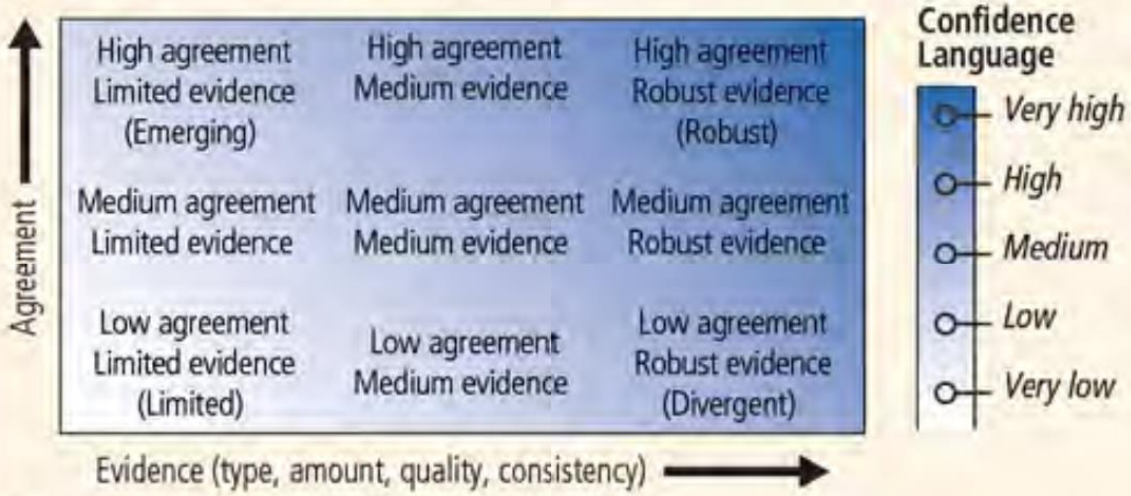
Lenguaje calibrado del IPCC

Step 1: Evaluate evidence and agreement

Observations	Theory	Statistics	Models	Experiments	Process
✔	✔	✔	✔	✔	✔

Sufficient evidence and agreement to evaluate confidence?

Step 2: Evaluate confidence



Examples

- Glacier retreat and permafrost thaw have decreased the stability of mountain slopes and the integrity of infrastructure (***high confidence***) {2.3}
- There is currently ***low confidence*** in appraising past open ocean productivity trends, including those determined by satellites, due to newly identified region-specific drivers of microbial growth and the lack of corroborating in situ time series datasets. {5.2.2}

Sufficient confidence and quantitative/probabilistic evidence to evaluate likelihood?

Step 3: Evaluate statistical likelihood

Likelihood Language	Statistical Level (assessing change)	Statistical Range (assessing range)
Virtually certain	greater than 99%	
Extremely likely	greater than 95%	
Very likely	greater than 90%	5-95% range
Likely	greater than 66%	17-83% range
More likely than not	greater than 50%	25-75% range
About as likely as not	33-66%	
Unlikely	less than 33%	<17% and >83% (both tails)
Very unlikely	less than 10%	<5% and >95% (both tails)
Extremely unlikely	less than 5%	
Exceptionally unlikely	less than 1%	

Figura SPM.1

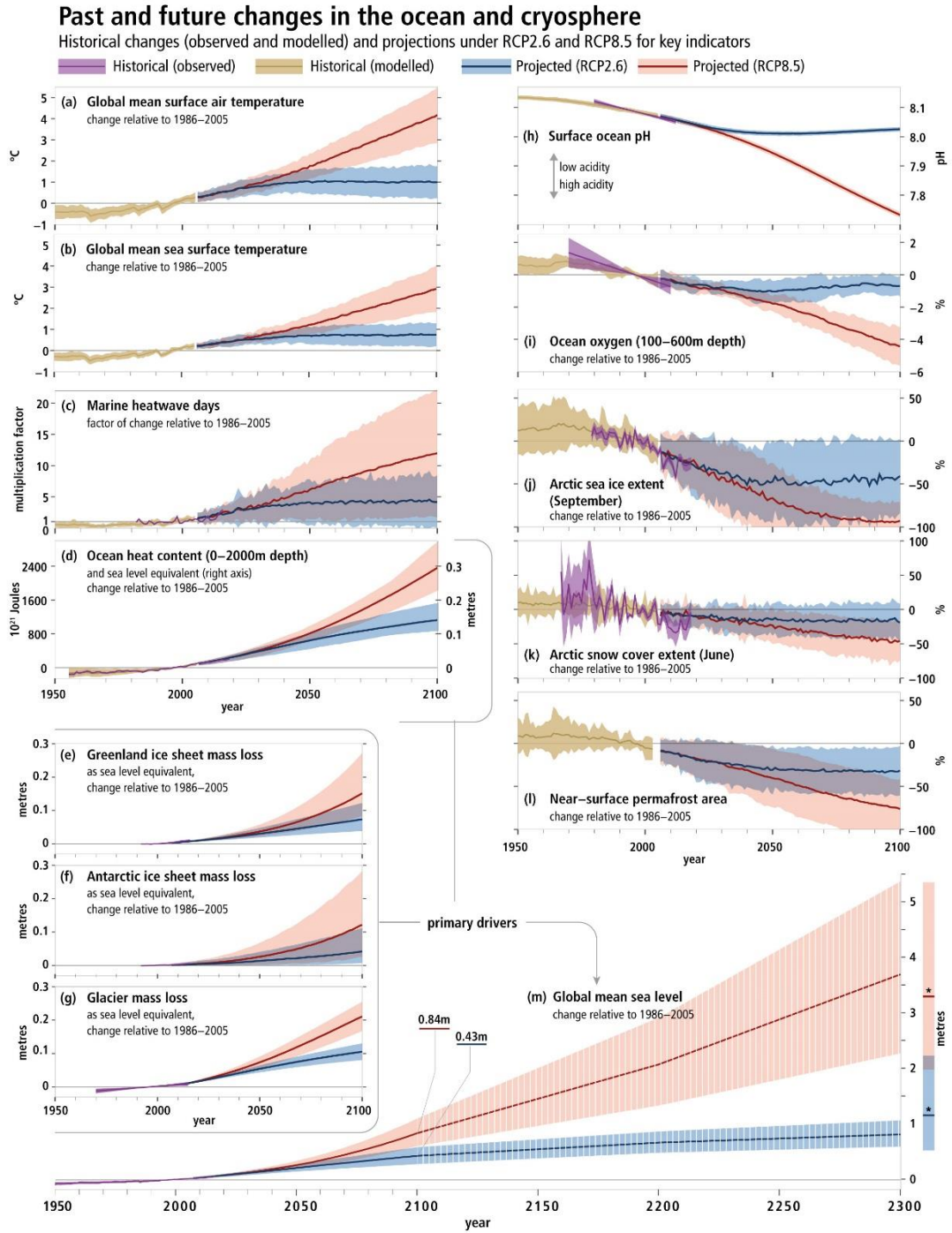
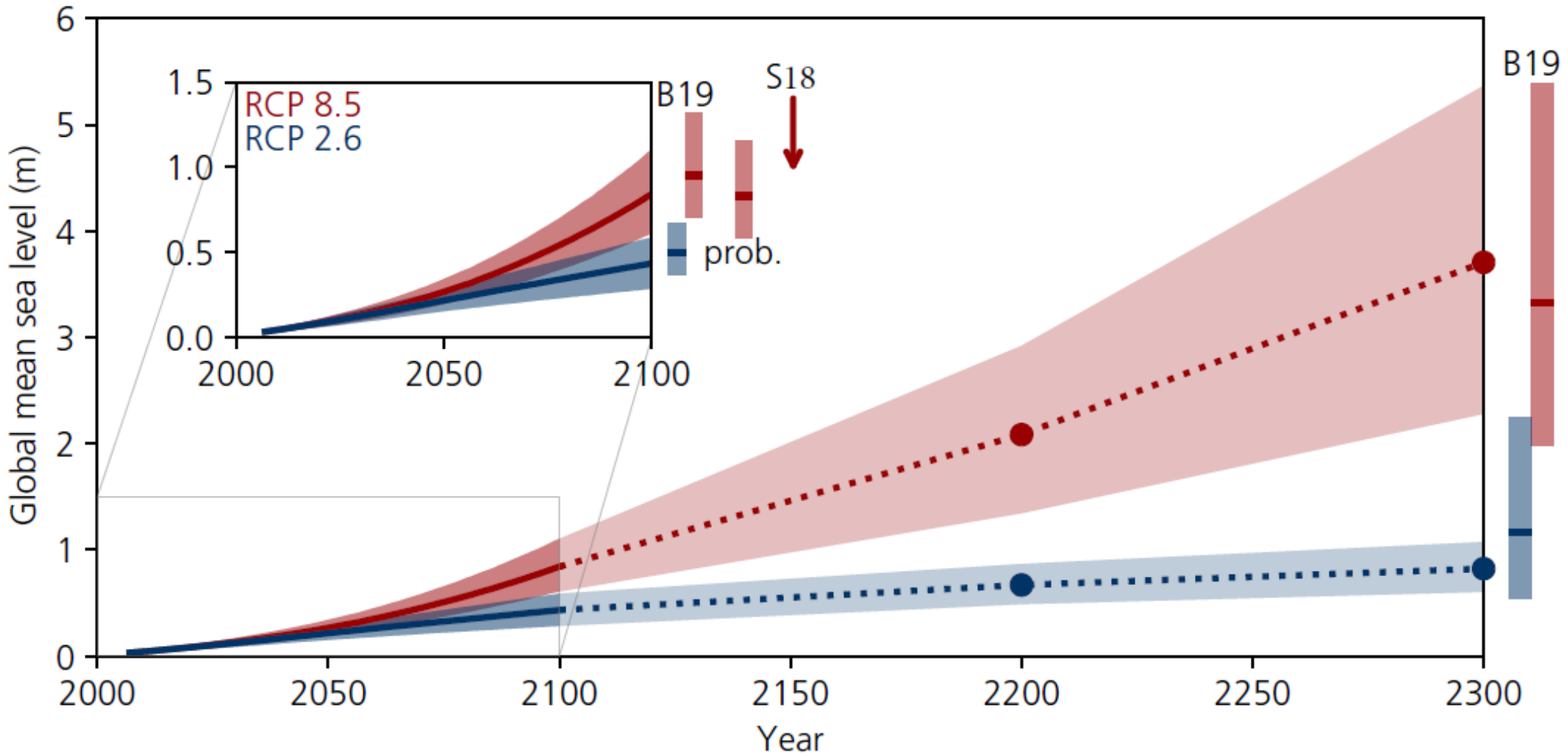

Past and future changes in the ocean and cryosphere
Historical changes (observed and modelled) and projections under RCP2.6 and RCP8.5 for key indicators
Historical (observed)
Historical (modelled)
Projected (RCP2.6)
Projected (RCP8.5)
(a) Global mean surface air temperature
change relative to 1986–2005
°C
(b) Global mean sea surface temperature
change relative to 1986–2005
°C
(c) Marine heatwave days
factor of change relative to 1986–2005
multiplication factor
(d) Ocean heat content (0–2000m depth)
and sea level equivalent (right axis)
change relative to 1986–2005
10²¹ Joules
metres
year
(e) Greenland ice sheet mass loss
as sea level equivalent,
change relative to 1986–2005
(f) Antarctic ice sheet mass loss
as sea level equivalent,
change relative to 1986–2005
(g) Glacier mass loss
as sea level equivalent,
change relative to 1986–2005
metres
year
(h) Surface ocean pH
low acidity
high acidity
pH
(i) Ocean oxygen (100–600m depth)
change relative to 1986–2005
%
(j) Arctic sea ice extent
(September)
change relative to 1986–2005
%
(k) Arctic snow cover extent (June)
change relative to 1986–2005
%
(l) Near–surface permafrost area
change relative to 1986–2005
%
year
primary drivers
(m) Global mean sea level
change relative to 1986–2005
0.84m
0.43m
metres
year

Figura 4.2



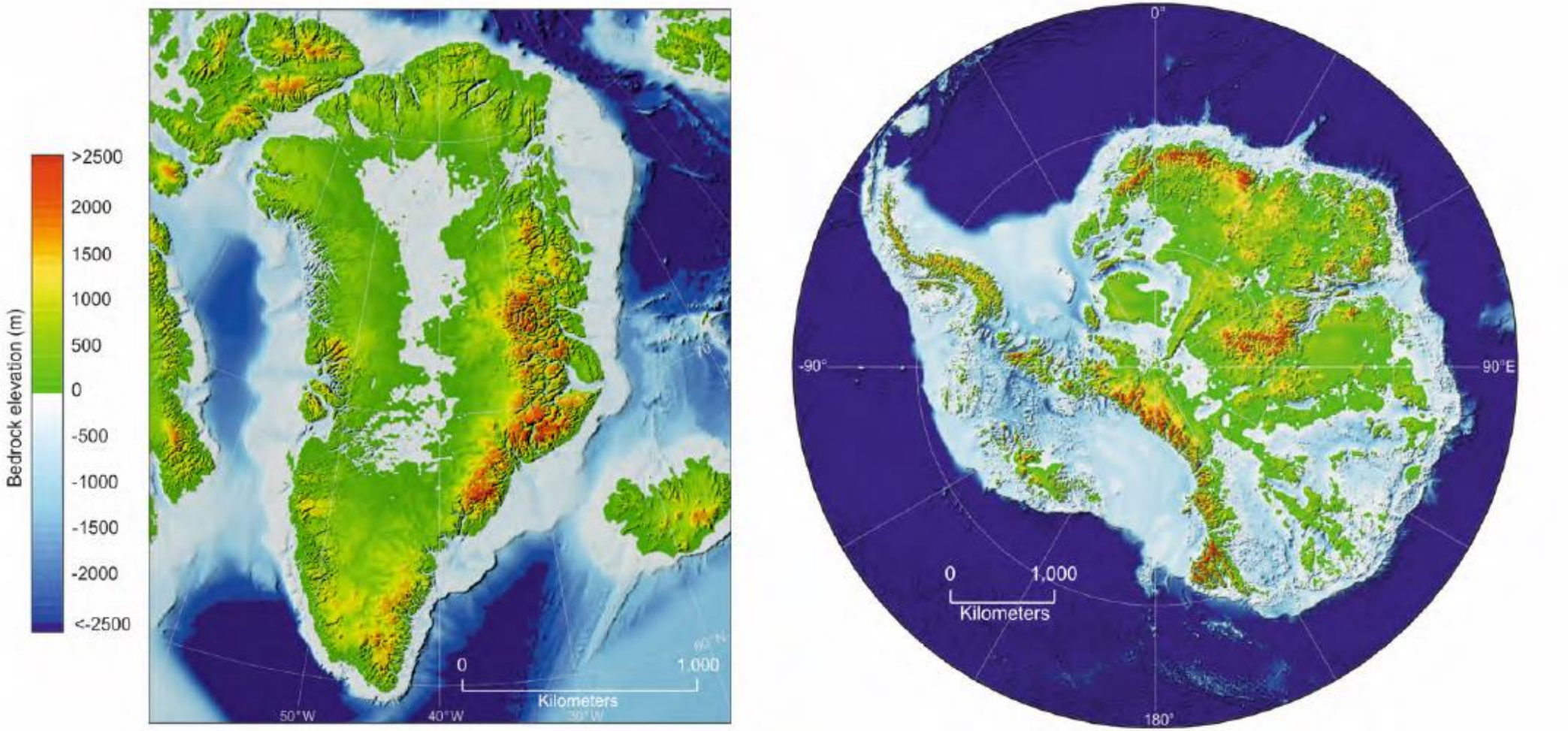


Figure 4.7: Bedrock topography below the existing ice sheets in Greenland (Morlighem et al., 2017) and Antarctica (right) (Fretwell et al., 2013). Horizontal scales are not the same in both panels. Note the deep subglacial basins in West Antarctica and the East Antarctic margin. The ice above floatation in these areas is equivalent to >20m of GMSL.

Cambio de masa de los casquetes polares

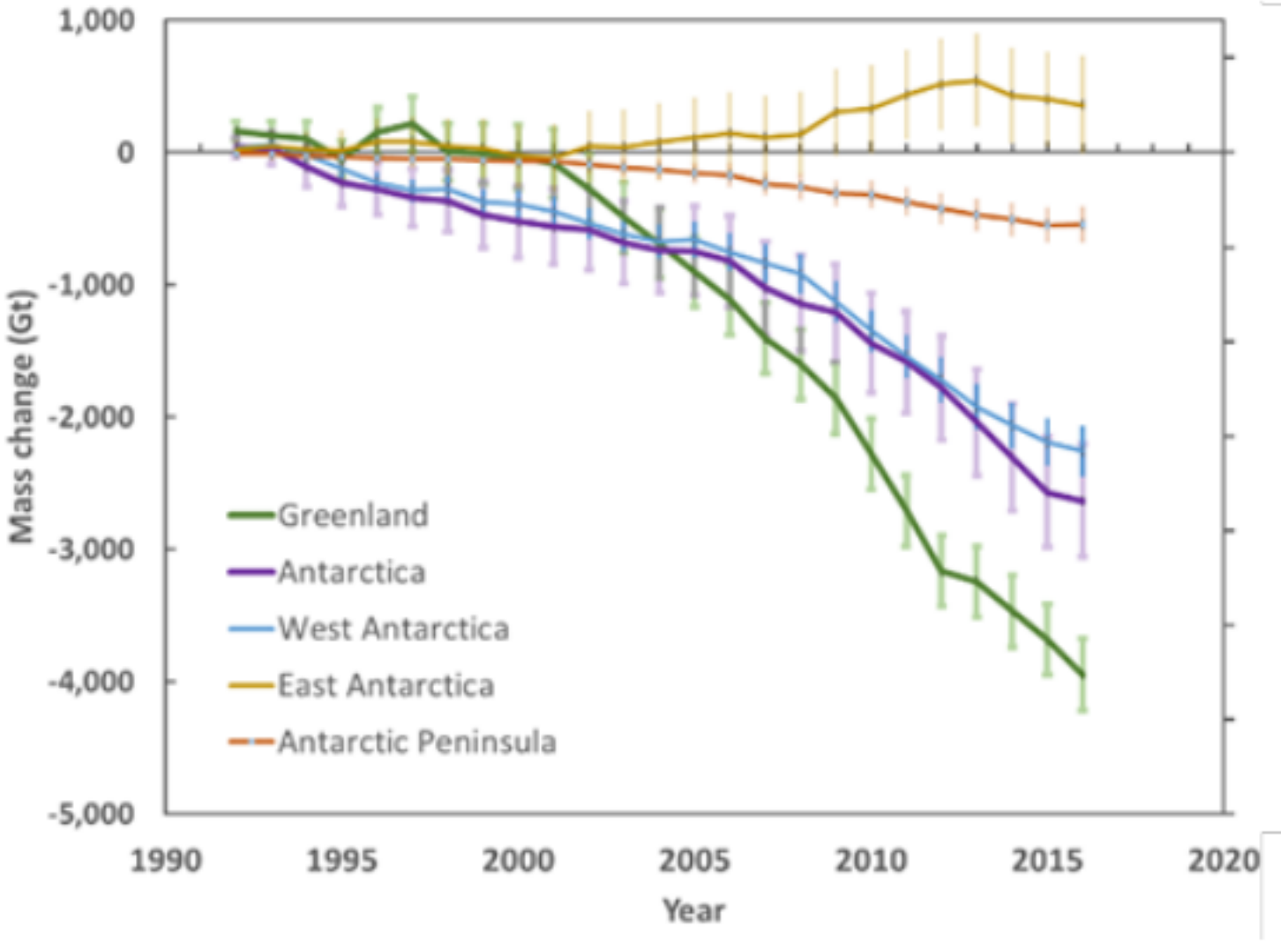


Figura 3.7a

Glaciar Thwaites, Antártida occidental

“Teniendo en cuenta las consecuencias sobre el aumento del nivel del mar que conlleva el colapso de ciertas partes de la capa de hielo antártica, este riesgo de gran impacto merece nuestra atención”

Aumento del nivel medio mundial del mar

- 1,4 mm/año para el período 1901-1990
- 3.6 mm/año para el período 2006-2015
- 15 mm/año proyectado en 2100 para el escenario RCP8.5
- Varios cm/año durante el siglo 22 (baja confianza)

Cambio en el nivel del mar con respecto a 1986-2005

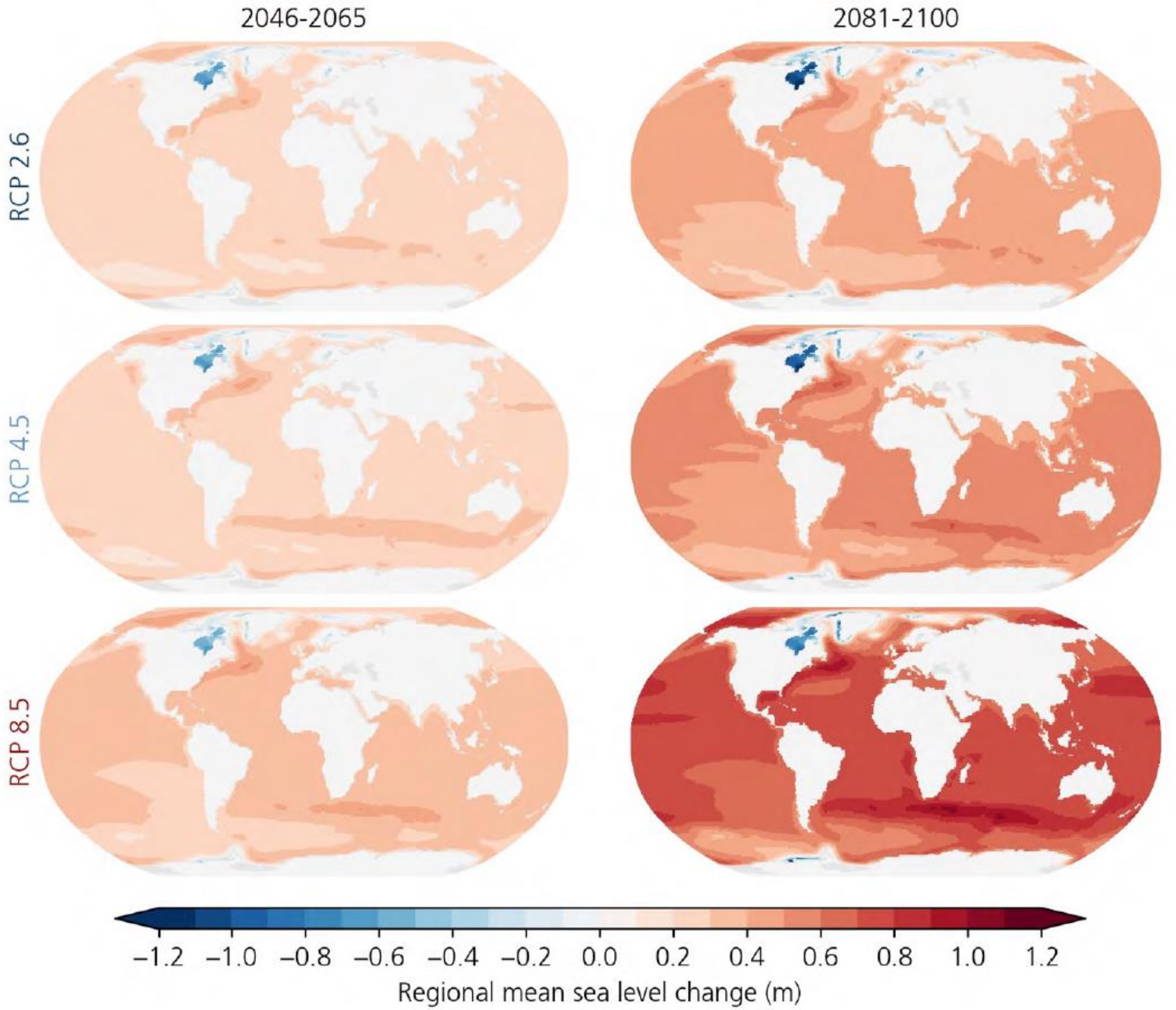
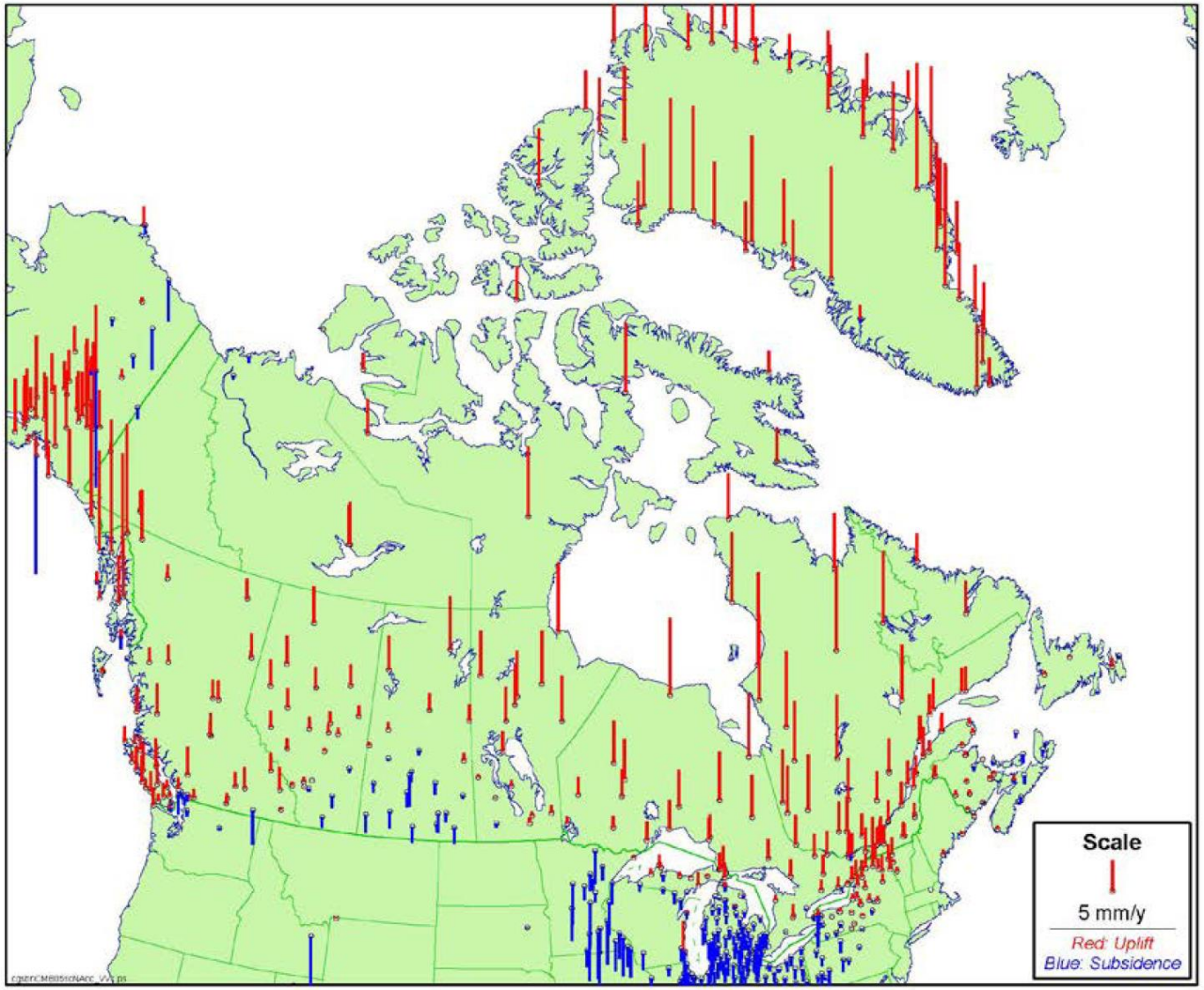


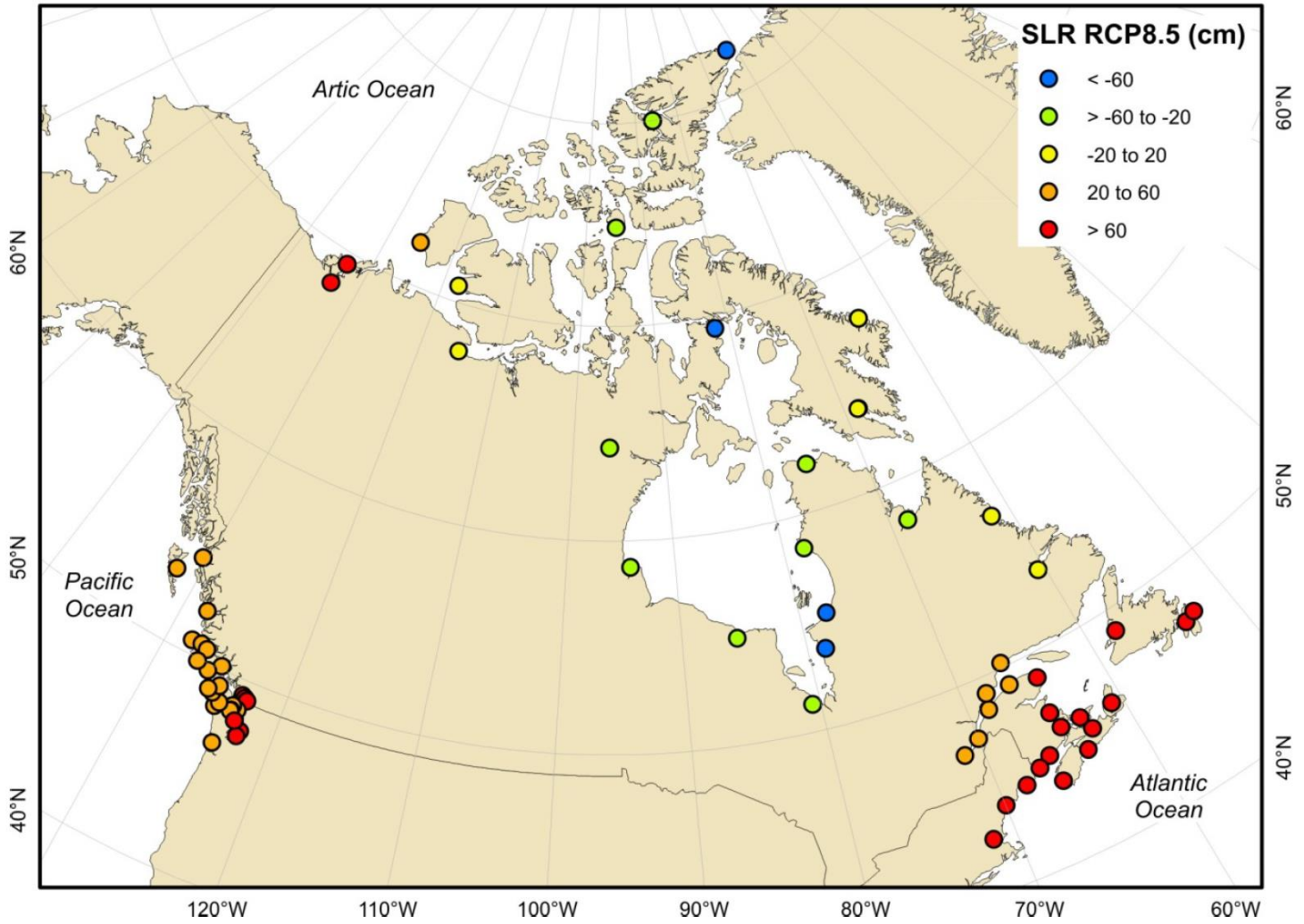
Figura 4.10

Movimiento vertical de la corteza terrestre



James et al. 2014, Geological Survey of Canada, Open file 7737

Aumento proyectado en el nivel relativo del mar en 2100



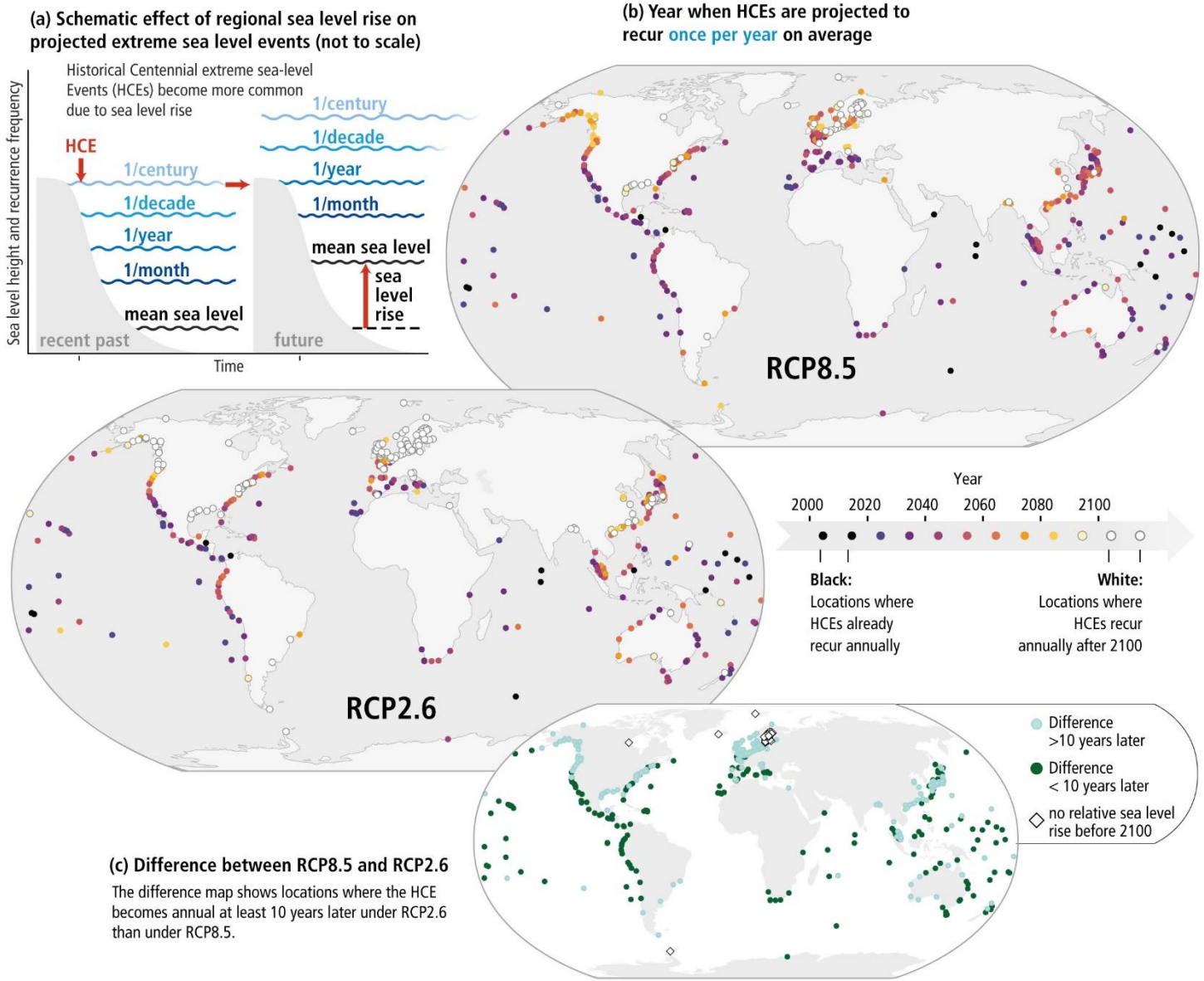
- Basado en RCP8.5 del AR5
- SROCC ≈ AR5 + 10 cm

James et al. 2014, Geological Survey of Canada, Open file 7737
James et al. 2015, Geological Survey of Canada, Open file 7942

Figura SPM.4

Extreme sea level events

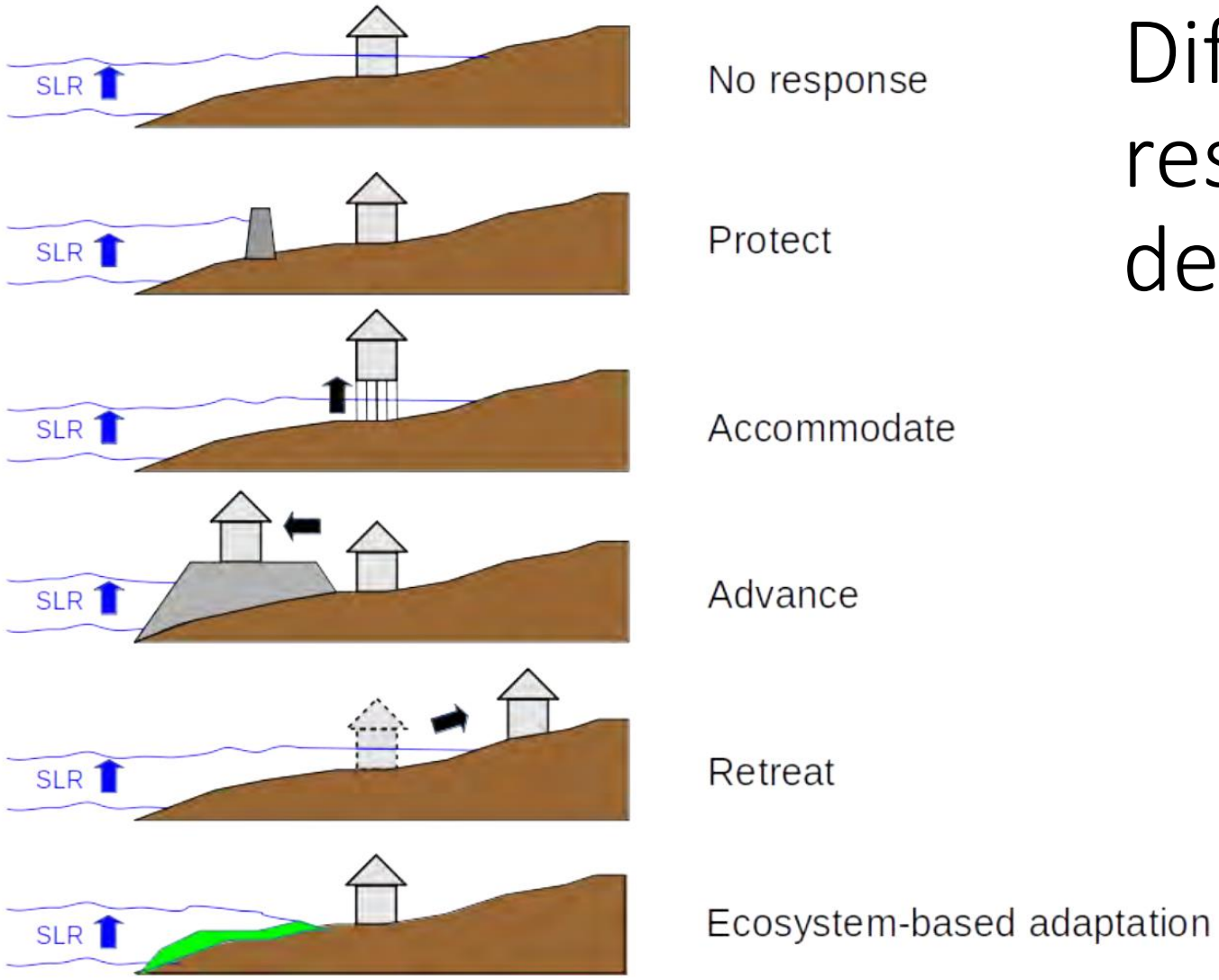
Due to projected global mean sea level (GMSL) rise, local sea levels that historically occurred once per century (historical centennial events, HCEs) are projected to become at least annual events at most locations during the 21st century. The height of a HCE varies widely, and depending on the level of exposure can already cause severe impacts. Impacts can continue to increase with rising frequency of HCEs.



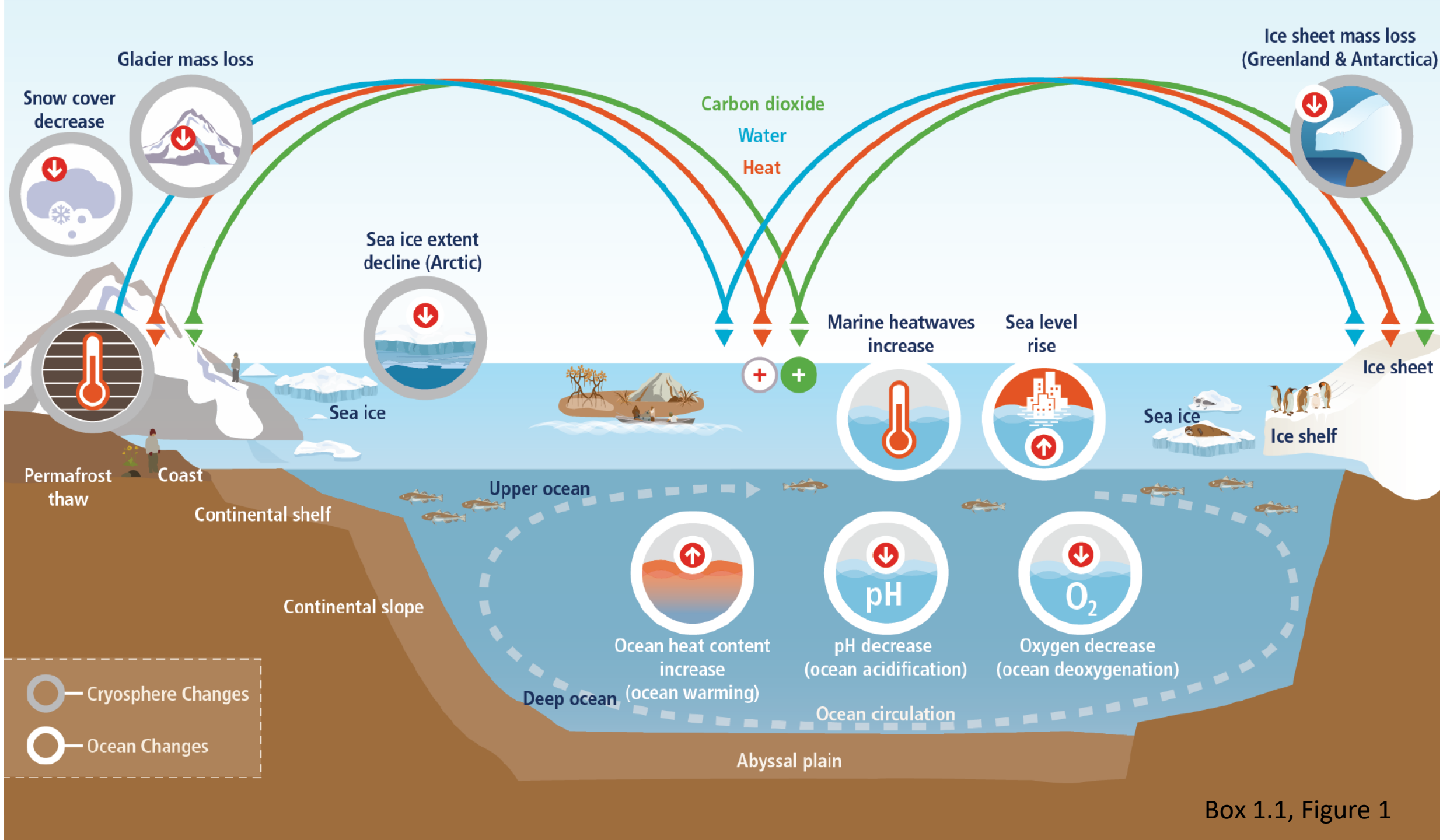
(c) Difference between RCP8.5 and RCP2.6

The difference map shows locations where the HCE becomes annual at least 10 years later under RCP2.6 than under RCP8.5.

Diferentes tipos de respuestas al aumento del nivel relativo del mar

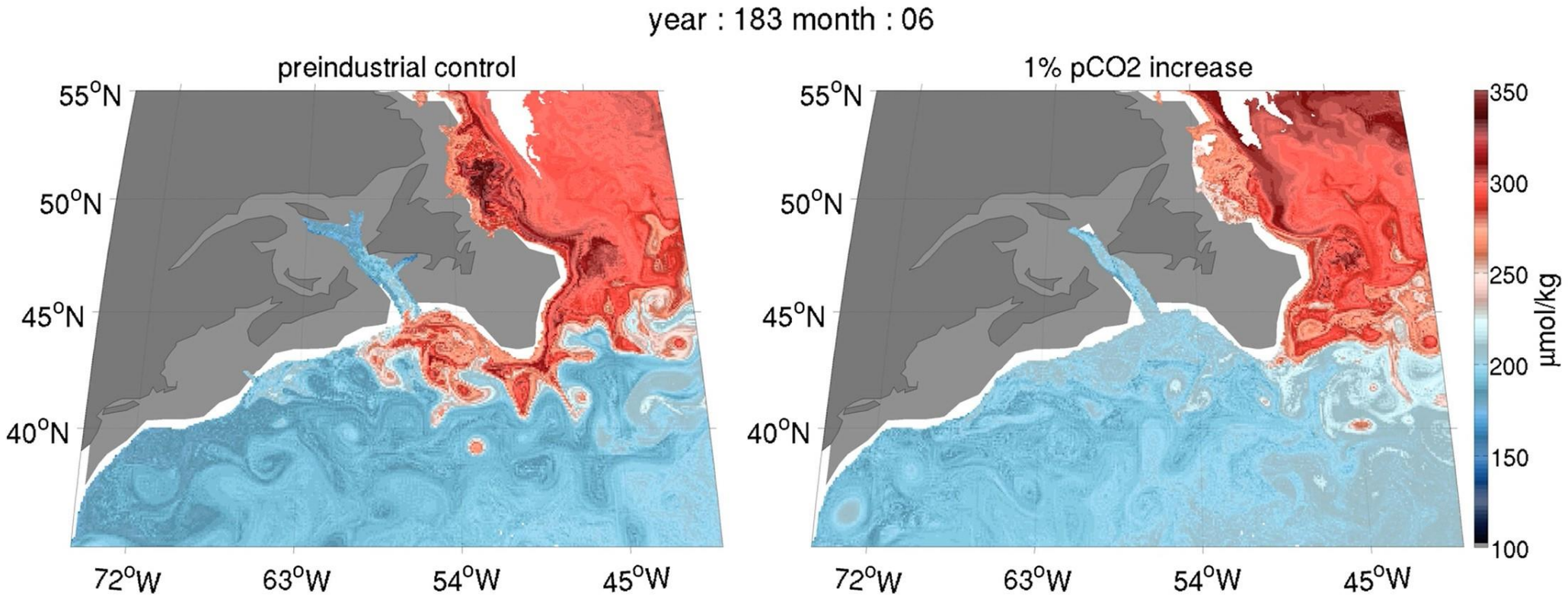


Box 4.3, Figure 1: Different types of responses to coastal risk and SLR



Box 1.1, Figure 1

Oxígeno disuelto: preindustrial versus 2 x CO2

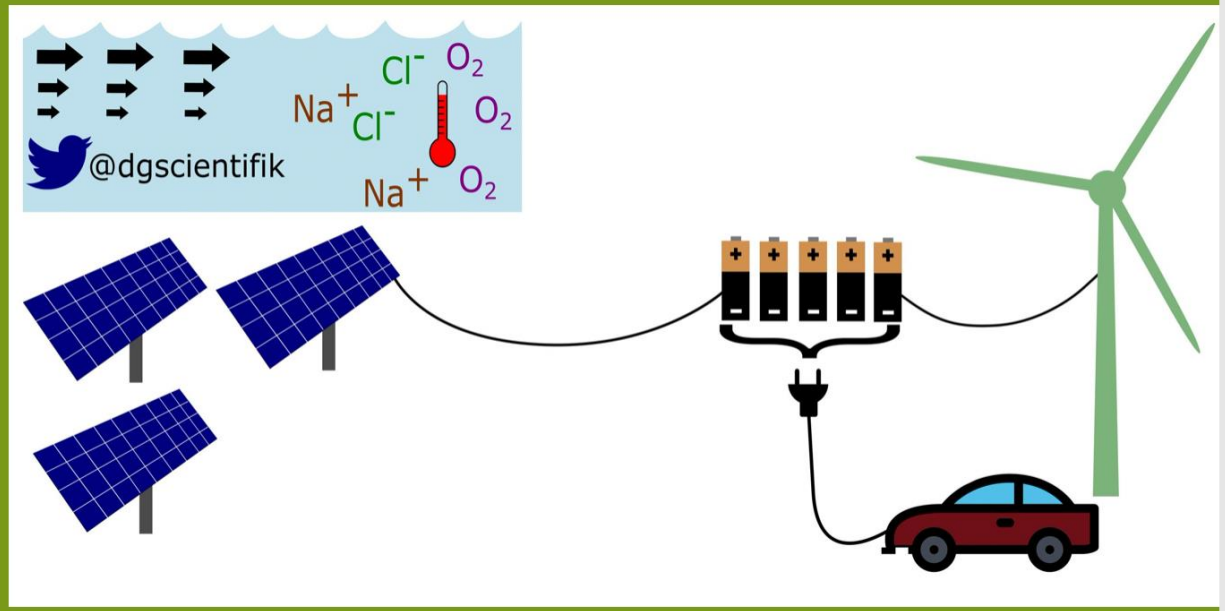


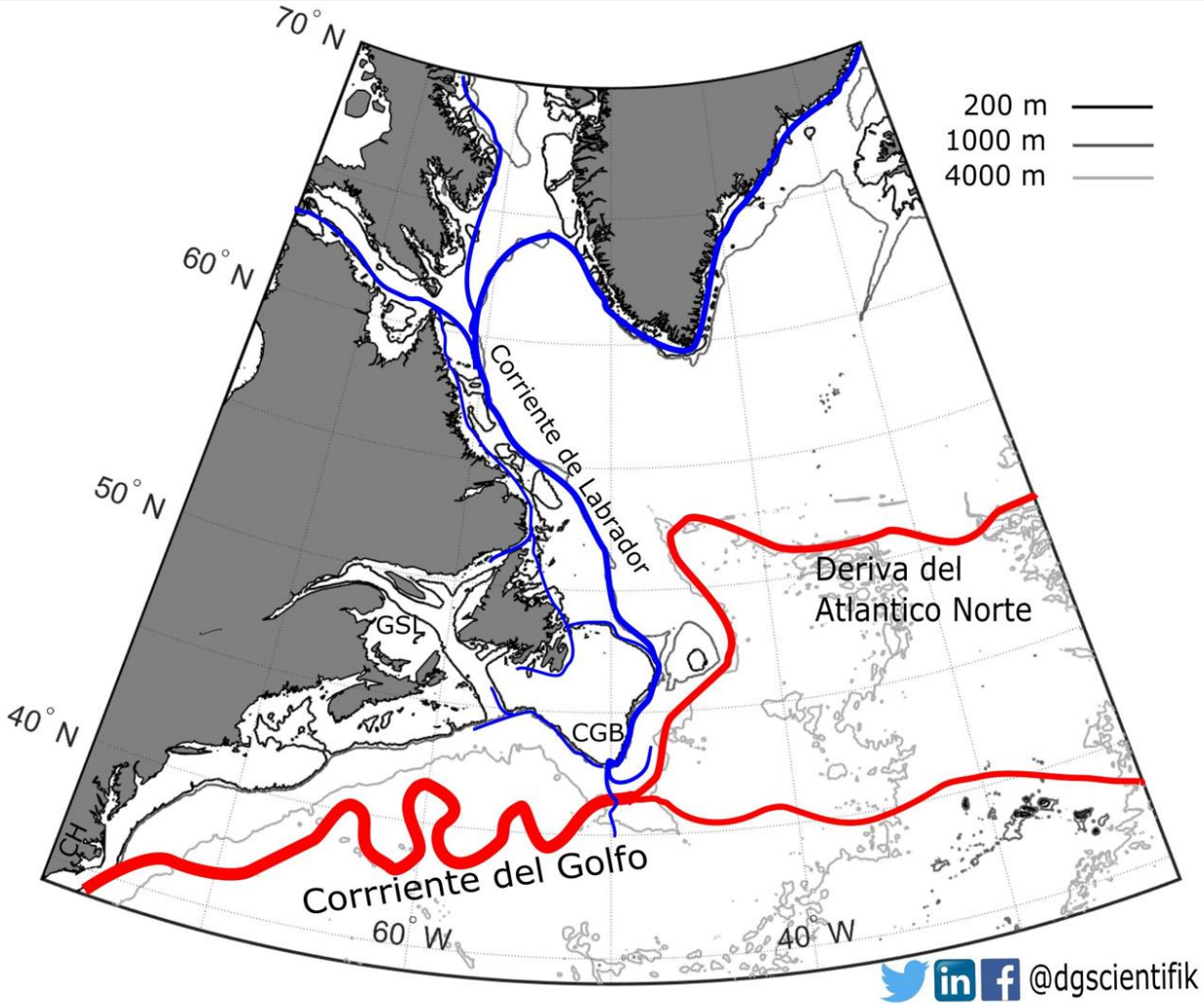
Claret et al. 2018, Nature Climate Change, 8: 868-872

DENIS GILBERT SCIENTIFIK - SCIENCE, PHYSICS, ELECTRIC VEHICLES

Physicist specialized in ocean climate research

Physicien *spécialisé en recherche sur le climat des océans*





OCEANOGRAFÍA

Entrevista con Ángel Rodríguez Lozano a propósito de mi trabajo de investigador en física, oceanografía y clima. En este episodio de "Hablando con científicos", charlamos de corrientes oceánicas, de boyas Argo, y de los cambios de temperatura, salinidad, oxigeno y acidez del océano. Hablamos también del Informe especial sobre el océano y la criosfera en un clima cambiante del IPCC.

Dans le cadre de la Semaine Rimouskoise de l'Environnement

CONFÉRENCE

19 FEV 19h00

CHANGEMENTS CLIMATIQUES
LES RAPPORTS DU GIEC: CE QU'ILS DISENT ET NE DISENT PAS

Par M. Denis Gilbert,
Physique et Climat Océanique, Pêches et Océans Canada
Patrice Cineus,
Étudiant d'origine haïtienne à l'UQAR et participant à la dernière COP

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