

# Klimakrise – die Bedeutung der Ozeane für das Weltklima

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Picture by Boris Herrmann / TEAM MALIZIA

# GMT und ihre Mitglieder unterstützen die Ocean Change 2022 Expedition von Arved Fuchs zu den Auswirkungen des Klimawandels in der Arktis



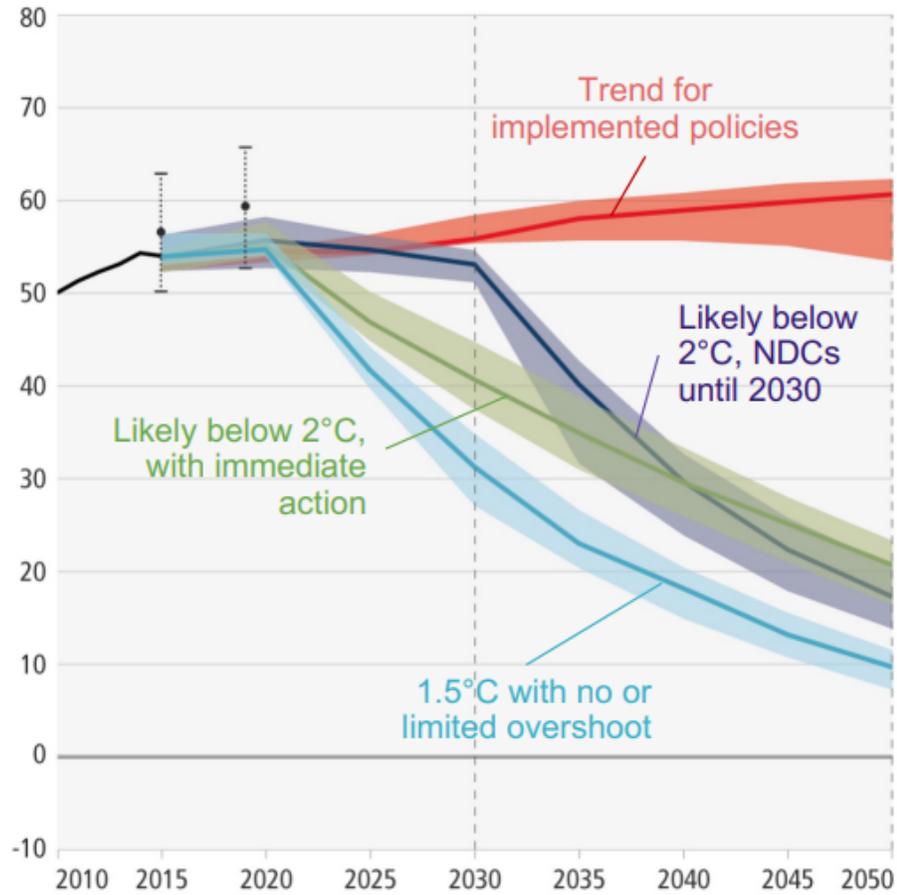
Picture by ARVED FUCHS EXPEDITIONEN

# Auswirkungen des Klimawandels im Ozean am Beispiel Korallenriffe



**Sixth Assessment Report**  
WORKING GROUP III – MITIGATION OF CLIMATE CHANGE

ipcc 



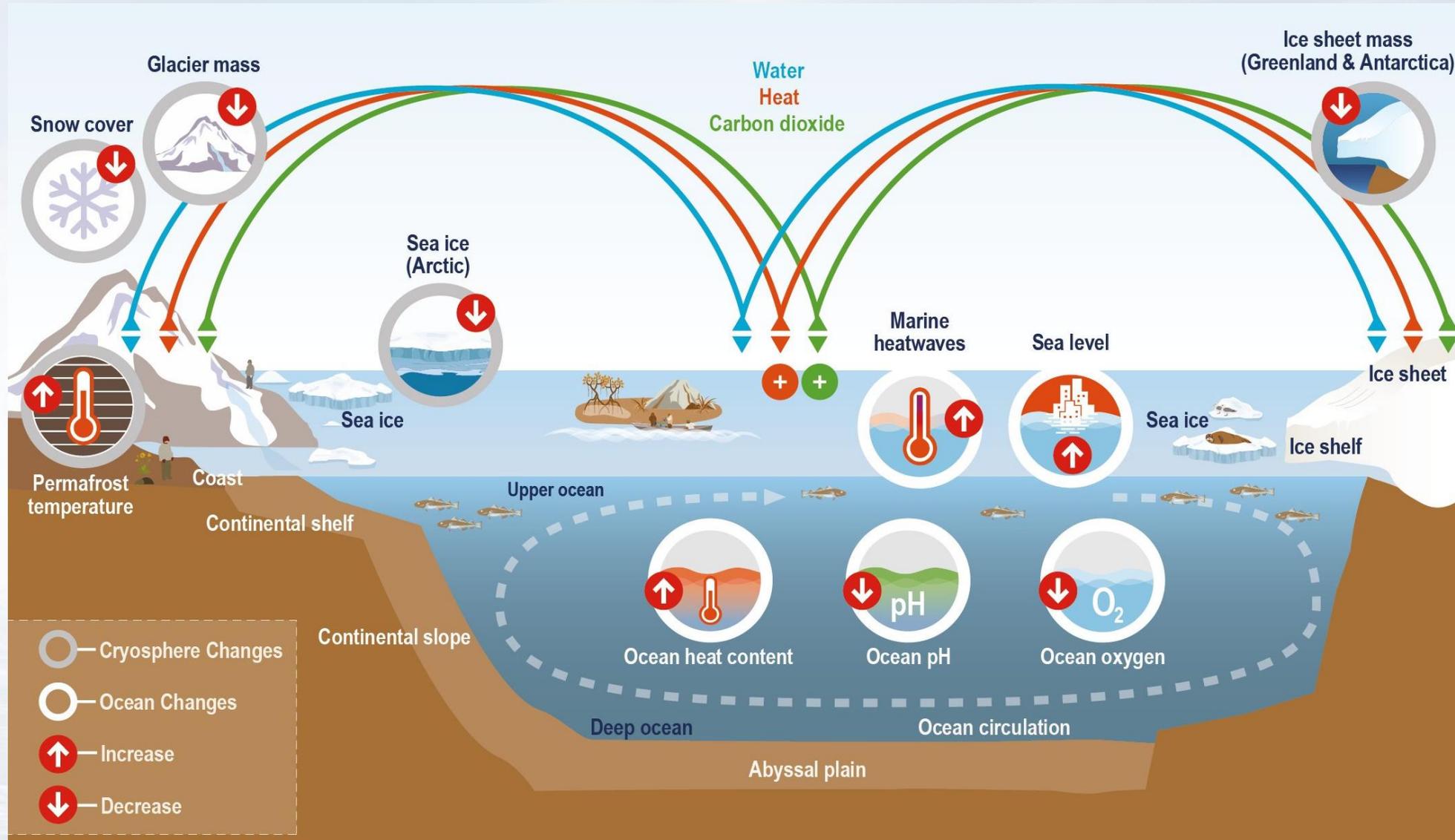
## Limiting warming to 1.5 °C

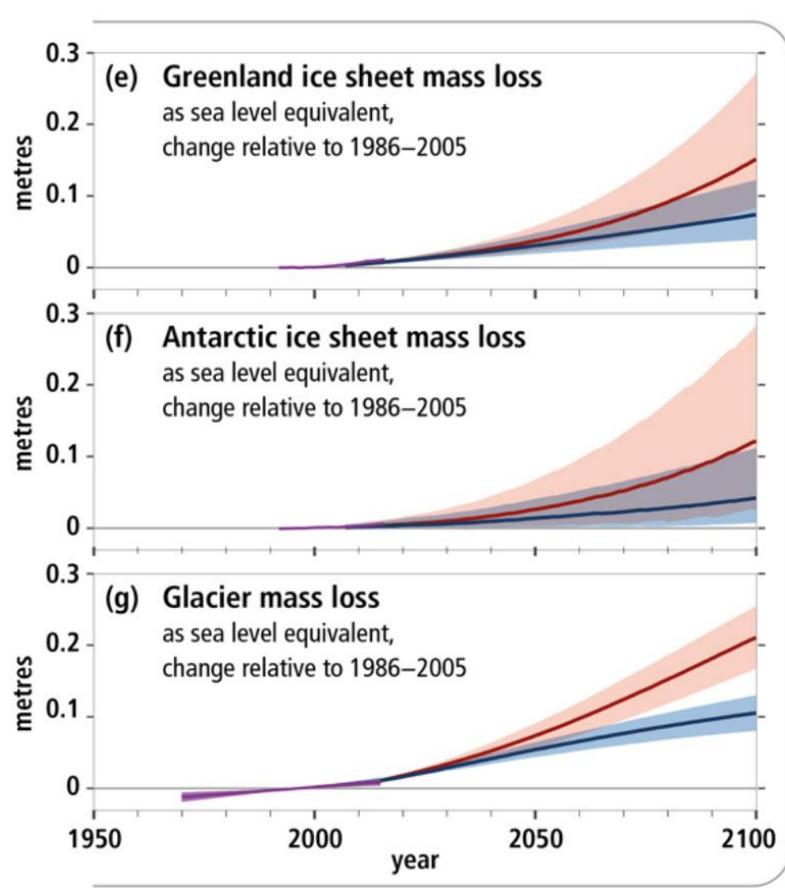
- Global GHG emissions peak before 2025, reduced by 43% by 2030.
- Methane reduced by 34% by 2030

## Limiting warming to around 2°C

- Global GHG emissions peak before 2025, reduced by 27% by 2030.

*(based on IPCC-assessed scenarios)*





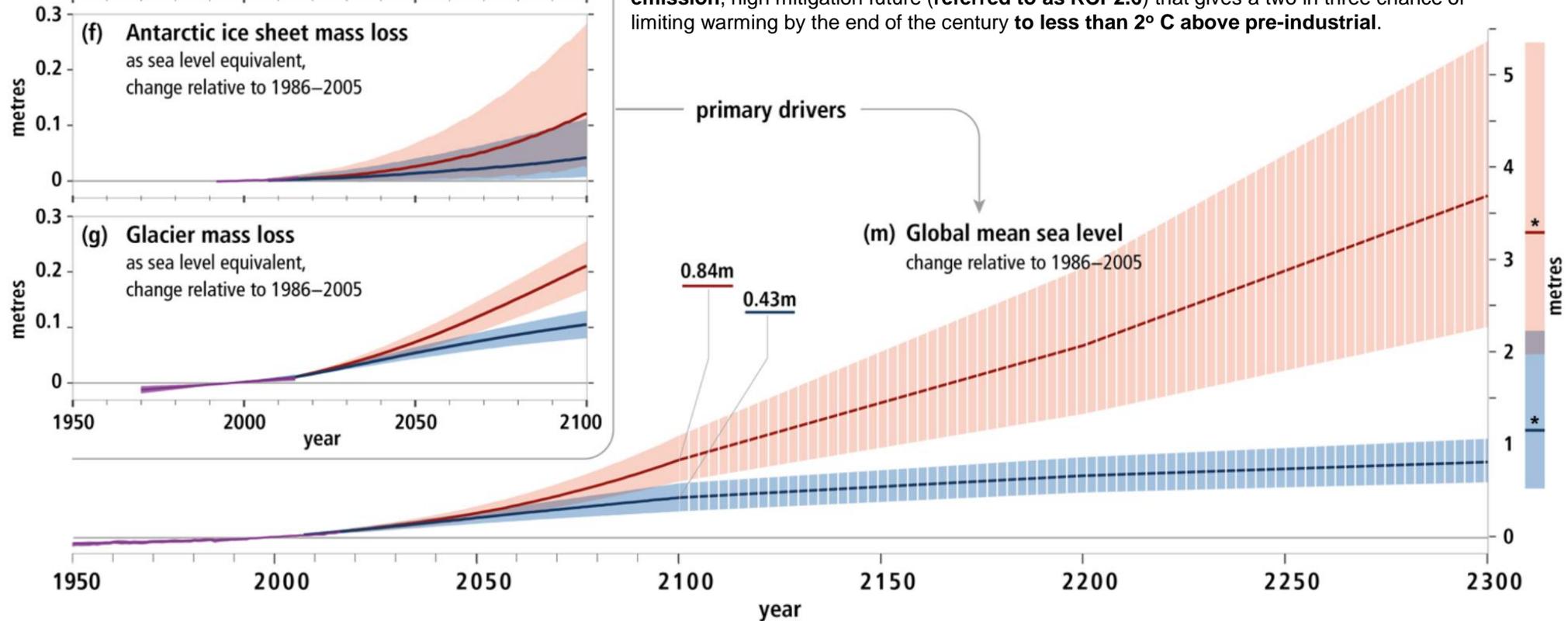
## Past and future changes in the ocean and cryosphere

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)

Current emissions continue to grow at a rate consistent with a **high emission future** without effective climate change mitigation policies (**referred to as RCP8.5**)

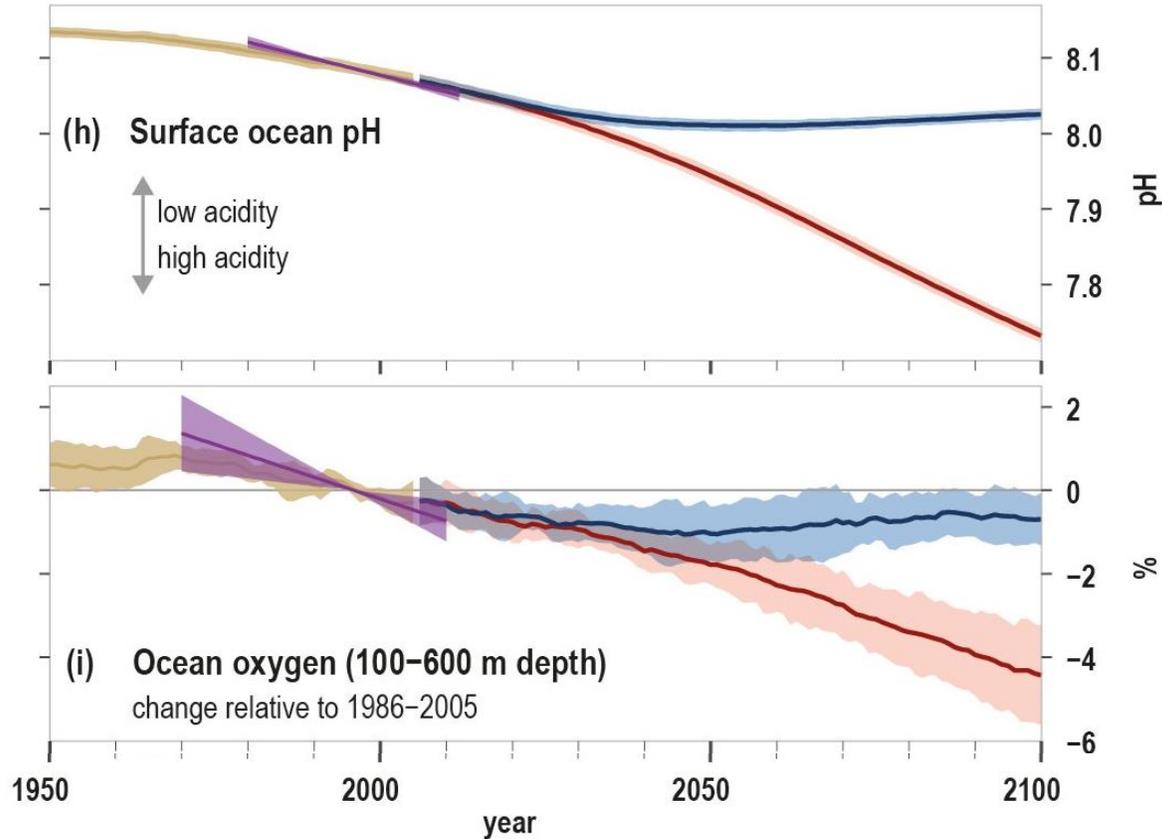
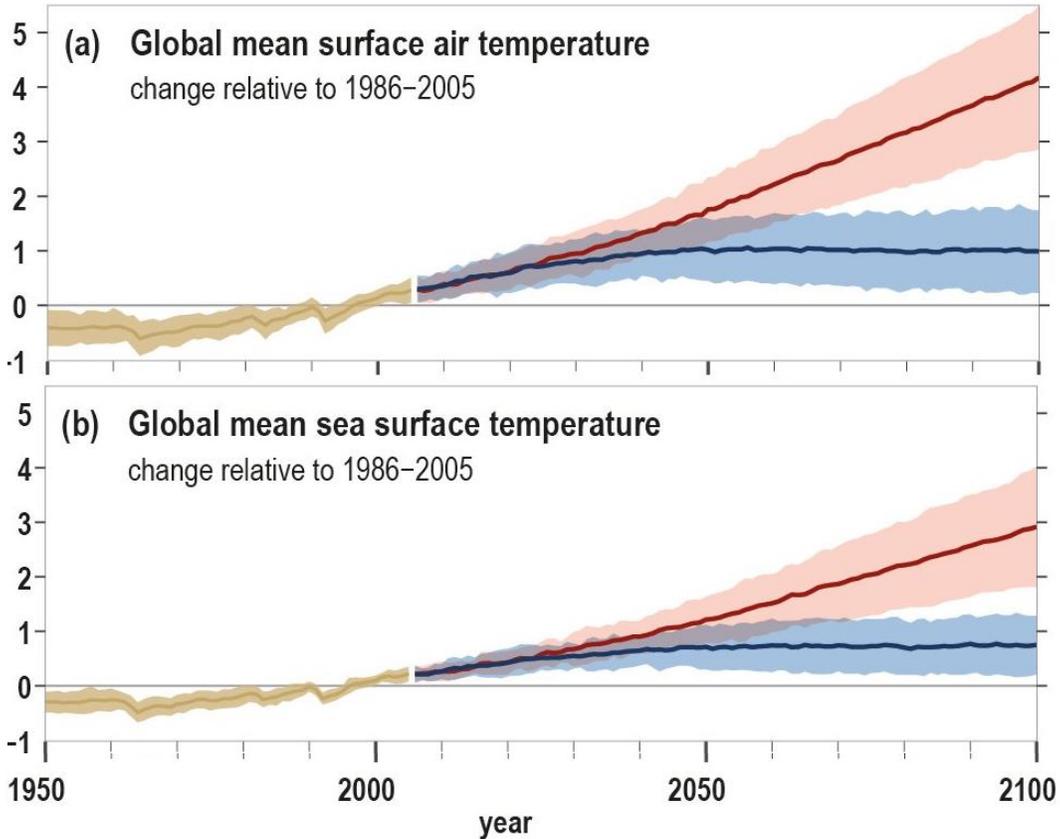
The assessment contrasts this high greenhouse gas emission future with a **low greenhouse gas emission**, high mitigation future (**referred to as RCP2.6**) that gives a two in three chance of limiting warming by the end of the century to **less than 2° C above pre-industrial**.



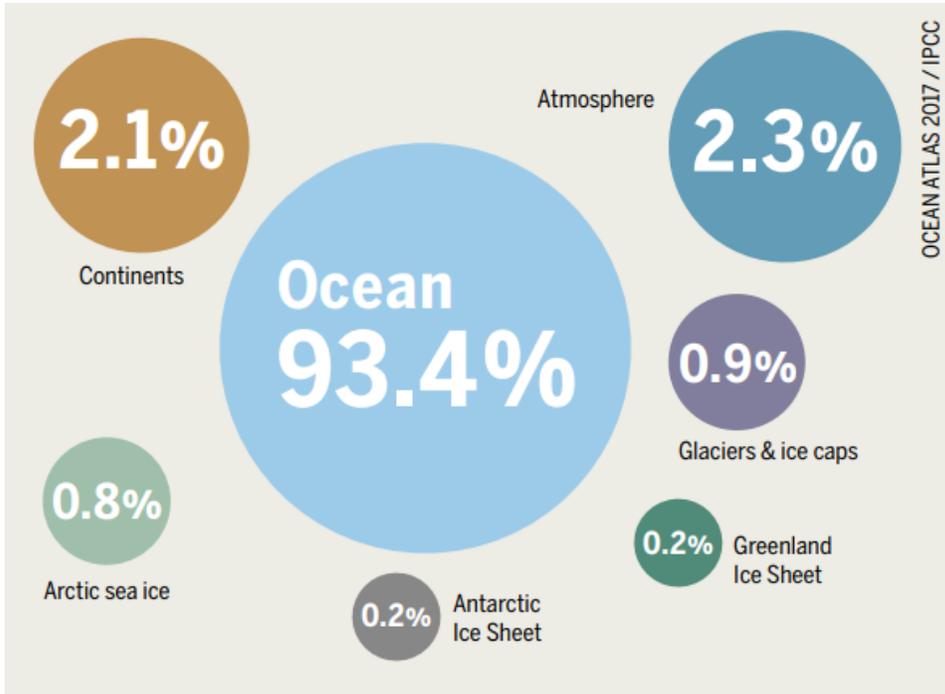
## Past and future changes in the ocean and cryosphere

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Historical (observed) Historical (modelled) Projected (RCP2.6) Projected (RCP8.5)

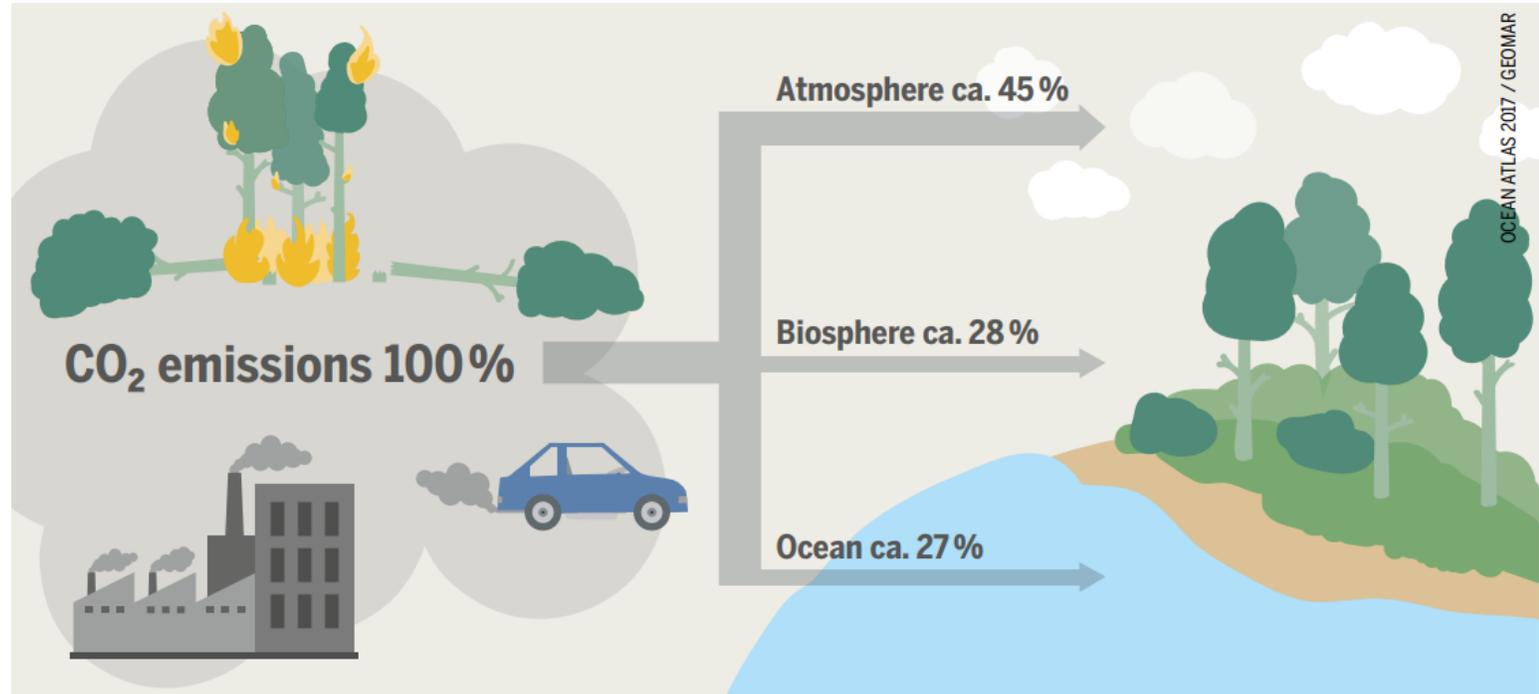


## Where Does the Warmth Go?



The ocean absorbs the lion's share of the additional warmth resulting from human CO<sub>2</sub> emissions, which supplements the natural greenhouse effect.

## Where Does the CO<sub>2</sub> Go?



The CO<sub>2</sub> produced by people (i.e., in addition to natural emissions) is distributed as shown.

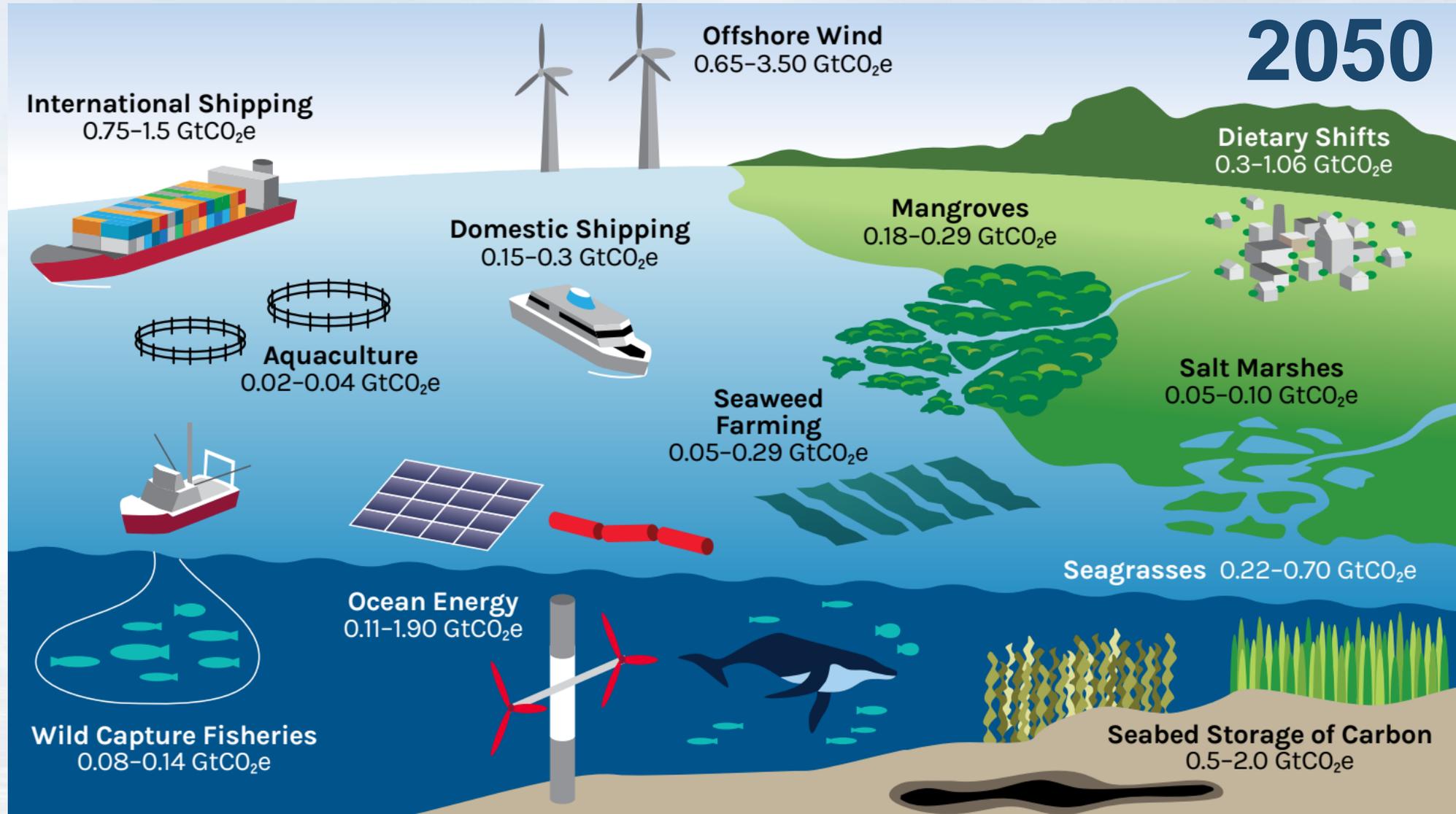
# COP26: Ozeane erstmals bei dem Klimaabkommen berücksichtigt



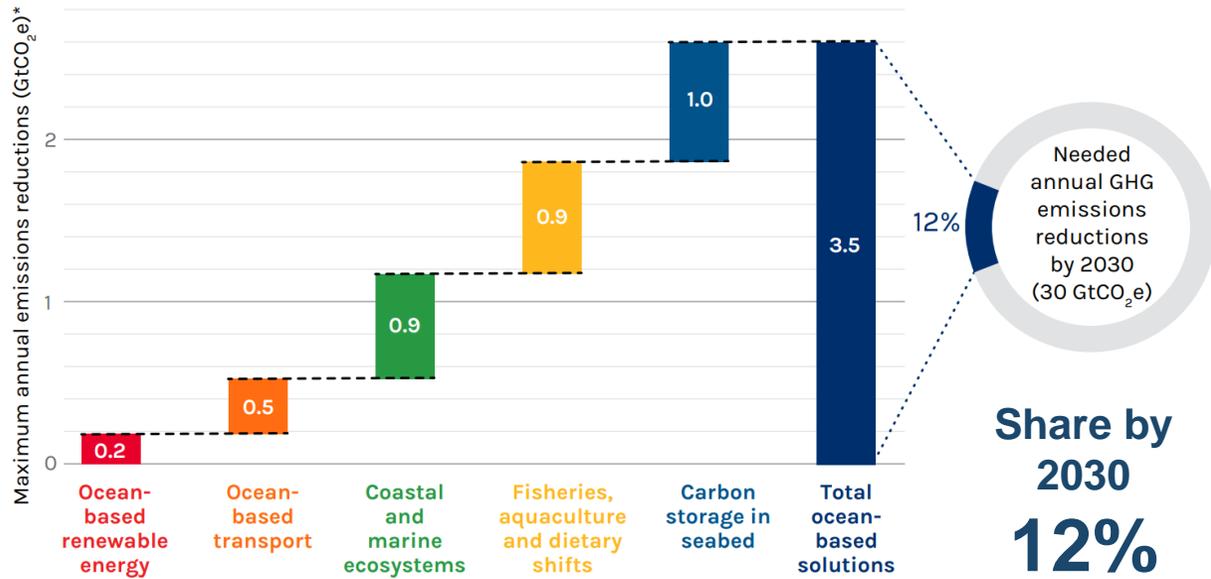
Tavalu foreign minister Simon Kofe @ COP26

Picture by Tuvalu Foreign Ministry / Reuters

# Die Klimakrise kann nur mit Hilfe der Ozeane bewältigt werden

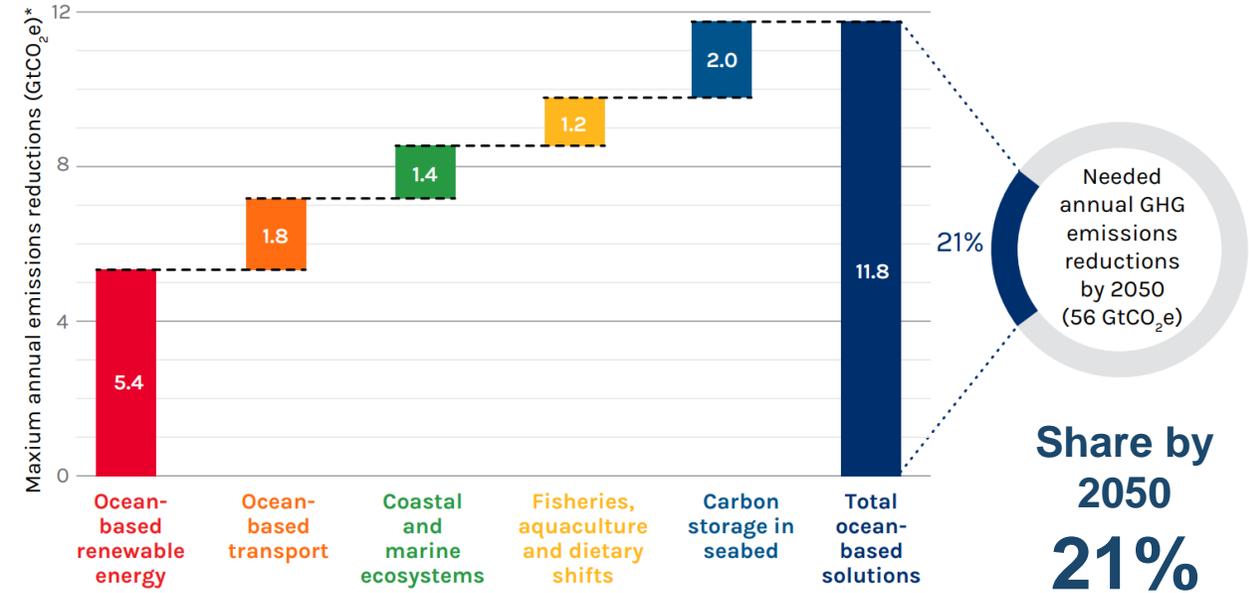


### Total ocean based solutions $\Sigma$ 3,5 GtCO<sub>2</sub>e

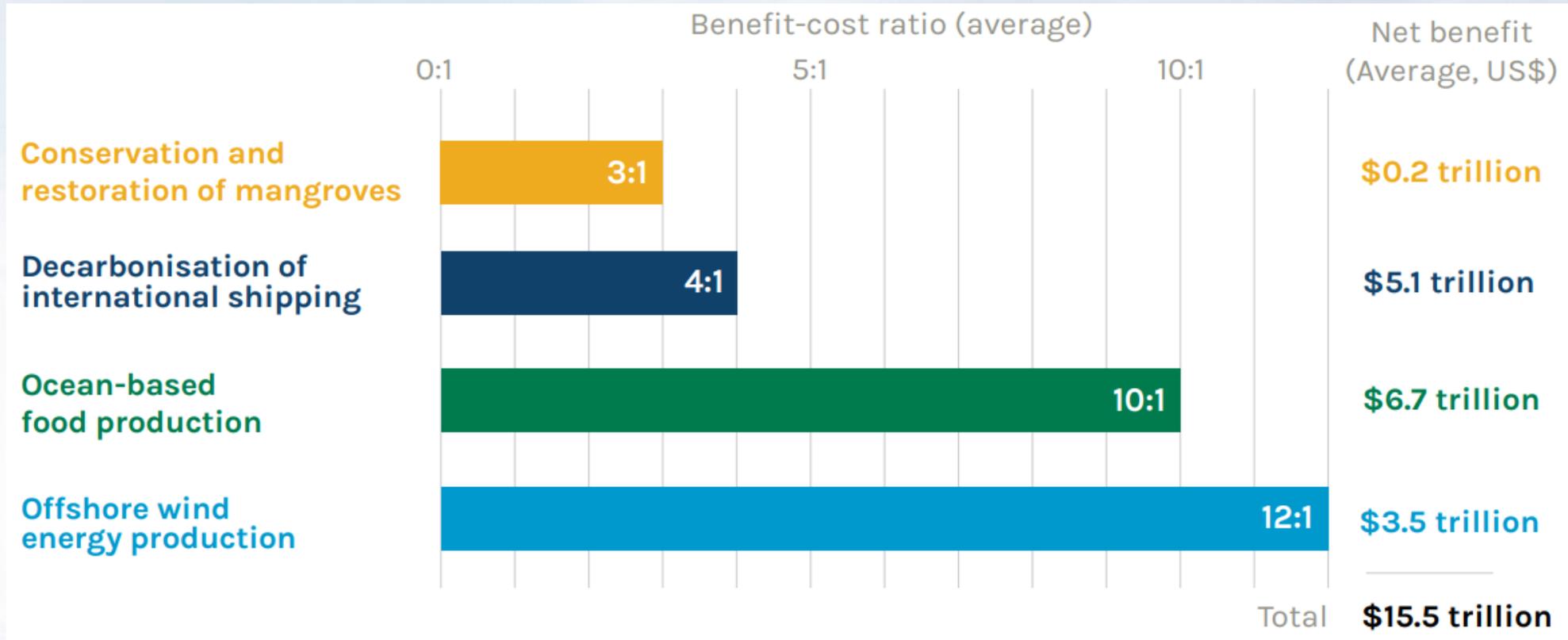


Notes: \* To stay under a 1.5°C change relative to pre-industrial levels

### Total ocean based solutions $\Sigma$ 11,8 GtCO<sub>2</sub>e



Notes: \* To stay under a 1.5°C change relative to pre-industrial levels



*Note: Average benefit-cost (B-C) ratios have been rounded to the nearest integer and the net benefits value to the first decimal place. The B-C ratio for mangroves is the combined ratio for both conservation- and restoration-based interventions. The average net benefits represent the average net present value for investments and are calculated over a 30-year horizon (2020–50).*

*Source: Konar, M., and H. Ding. 2020. "A Sustainable Ocean Economy for 2050: Approximating Its Benefits and Costs." Washington, DC: World Resources Institute. <https://www.oceanpanel.org/Economicanalysis>.*

#BeGreenGoBlue



"We have an opportunity to start afresh, and we want to make sure that the recovery shifts the focus from mere exploitation to sustainability and resilience. Thus to be truly green, we must also think blue."

Virginijus Sinkevičius,  
European Commissioner for Environment, Oceans and Fisheries

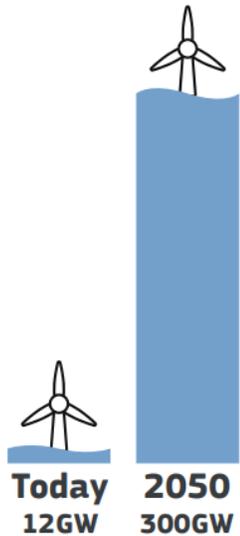
## The European blue economy

All industries and sectors related to oceans, seas and coasts

**4.5 million**  
jobs

**€650 billion**  
turnover

## Decarbonisation



## Circular economy

**27,000 tonnes**  
of plastics in  
European seas  
each year



## Biodiversity

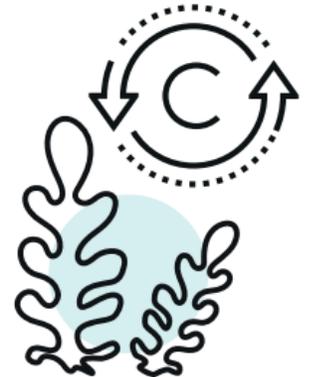
**30%**  
marine  
protected  
areas  
by 2030



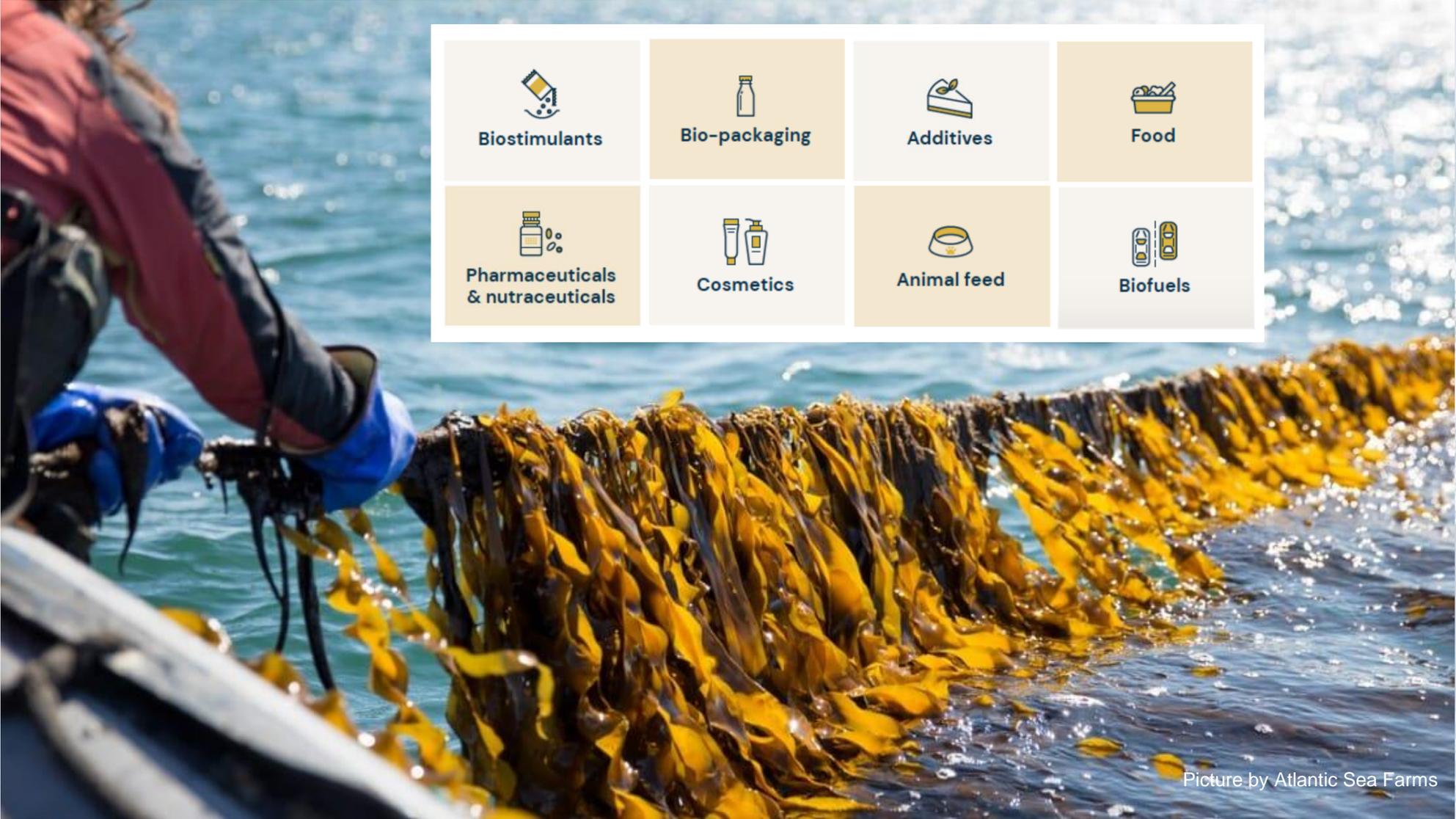
## Climate adaptation

cost of inaction:  
**€350 billion**  
per year

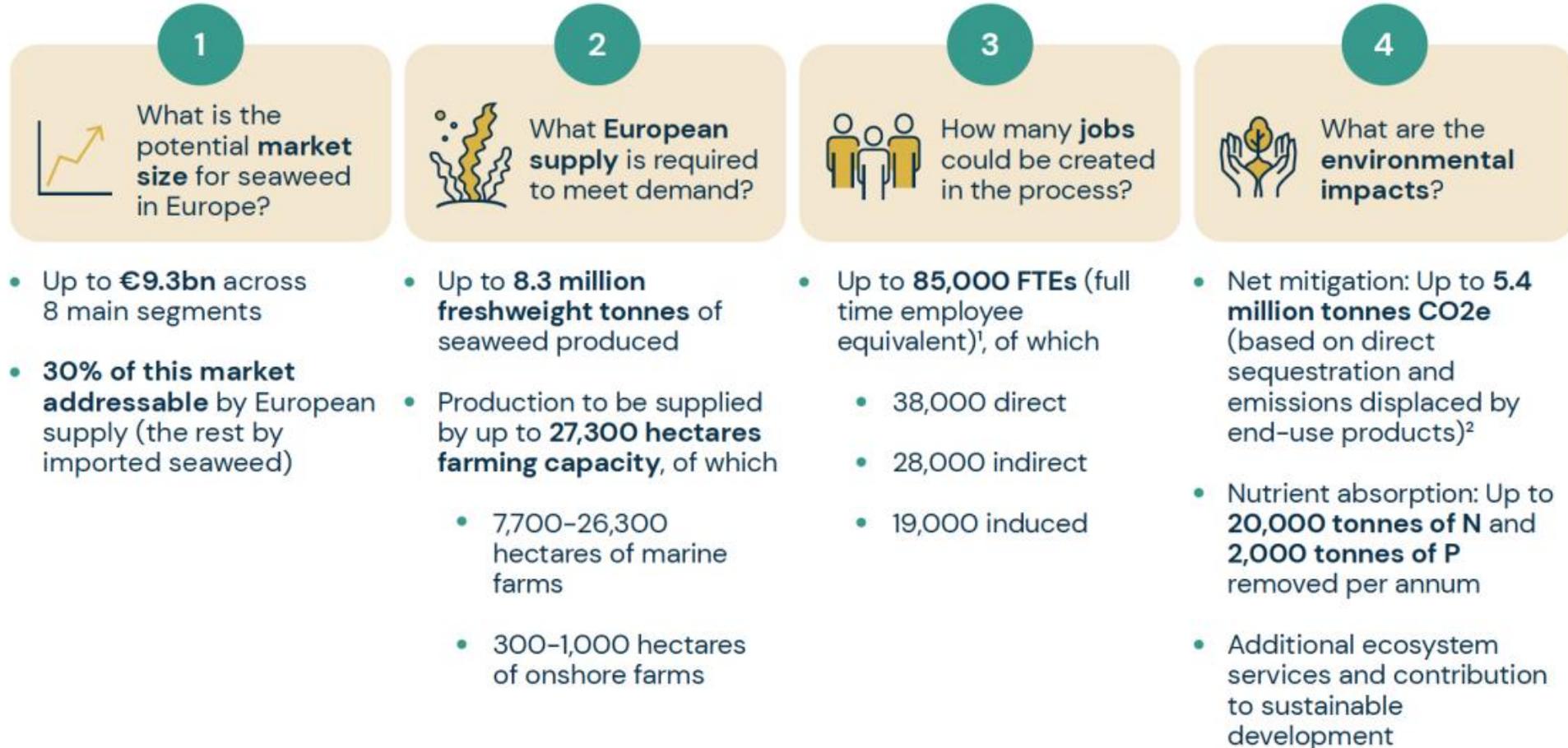
## Sustainable food



# Makroalgen (Seaweed / Kelp) als Beispiel für die Blue Economy



Picture by Atlantic Sea Farms



1. Equivalent to 115,000 discrete jobs when full time and temporary roles are counted individually. 2. With potential for further avoidance from additional segments, pending research. Note: Values are for high ambition level – see Appendix for low and moderate ambition level outcomes.

Note: Sourced from Seaweed for Europe, October 2020 report: "A hidden champion of the ocean: Seaweed as a growth engine for a sustainable European future"



## Guidelines für die folgenden Bereiche:

- Oil & Gas
- Ocean Renewable Energy
- Fisheries
- Aquaculture
- Seaweed
- Shipping
- Shipbuilding

## Sustainable Ocean Principles

### OCEAN HEALTH AND PRODUCTIVITY

**Principle 1:** Assess the short and long-term impact of their activities on ocean health and incorporate such impacts into their strategy and policies.

**Principle 2:** Consider sustainable business opportunities that promote or contribute to restoring, protecting or maintaining ocean health and productivity and livelihoods dependent on the ocean.

**Principle 3:** Take action to prevent pollution affecting the ocean, reduce greenhouse gas emissions in their operations to prevent ocean warming and acidification, and work towards a circular economy.

**Principle 4:** Plan and manage their use of and impact on marine resources and space in a manner that ensures long-term sustainability and take precautionary measures where their activities may impact vulnerable marine and coastal areas and the communities that are dependent upon them.

### GOVERNANCE AND ENGAGEMENT

**Principle 5:** Engage responsibly with relevant regulatory or enforcement bodies on ocean-related laws, regulations and other frameworks.

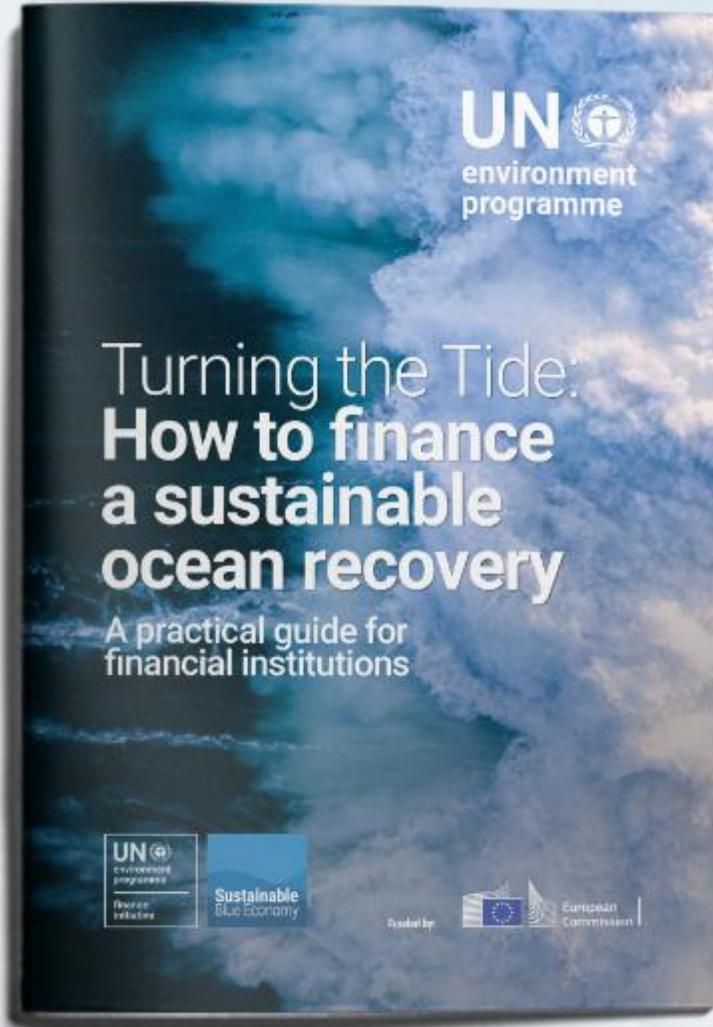
**Principle 6:** Follow and support the development of standards and best practices that are recognized in the relevant sector or market contributing to a healthy and productive ocean and secure livelihoods.

**Principle 7:** Respect human-, labour- and indigenous peoples' rights in the company's ocean-related activities, including exercise appropriate due diligence in their supply-chain, consult and engage with relevant stakeholders and communities in a timely, transparent and inclusive manner, and address identified impacts.

### DATA AND TRANSPARENCY

**Principle 8:** Where appropriate, share relevant scientific data to support research on and mapping of relevance to the ocean.

**Principle 9:** Be transparent about their ocean-related activities, impacts and dependencies in line with relevant reporting frameworks.



„Turning the Tide“: ein wissenschaftlich fundiertes und umsetzbares Instrument mit einfach zu befolgenden Empfehlungen für den Umgang mit finanziellen Aktivitäten in folgenden Bereichen:

- Meeresfrüchte, einschließlich Fischerei und Aquakultur sowie deren Lieferketten;
- Häfen; Maritimer Transport;
- Küsten- und Meerestourismus, einschließlich Kreuzfahrten; und
- erneuerbare Offshore-Energie, insbesondere Offshore-Windenergie

Der Leitfaden baut auf den Sustainable Blue Economy Finance Principles auf, dem Fundament für die nachhaltige Finanzierung von Aktivitäten in der Blue Economy

„We need to respect the oceans  
and take care of them as our lives  
depend on it. Because they do.“

*Sylvia Earle – Oceanographer*



Picture by Kip Evans / Mission Blue

Vielen Dank für Ihre Aufmerksamkeit!

GMT

