



MEERWISSEN

African-German Partners  
for Ocean Knowledge

On behalf of



Federal Ministry  
for Economic Cooperation  
and Development

**giz** Deutsche Gesellschaft  
für Internationale  
Zusammenarbeit (GIZ) GmbH

# WASP

## West-African Biodiversity under Pressure



SENCKENBERG  
world of biodiversity

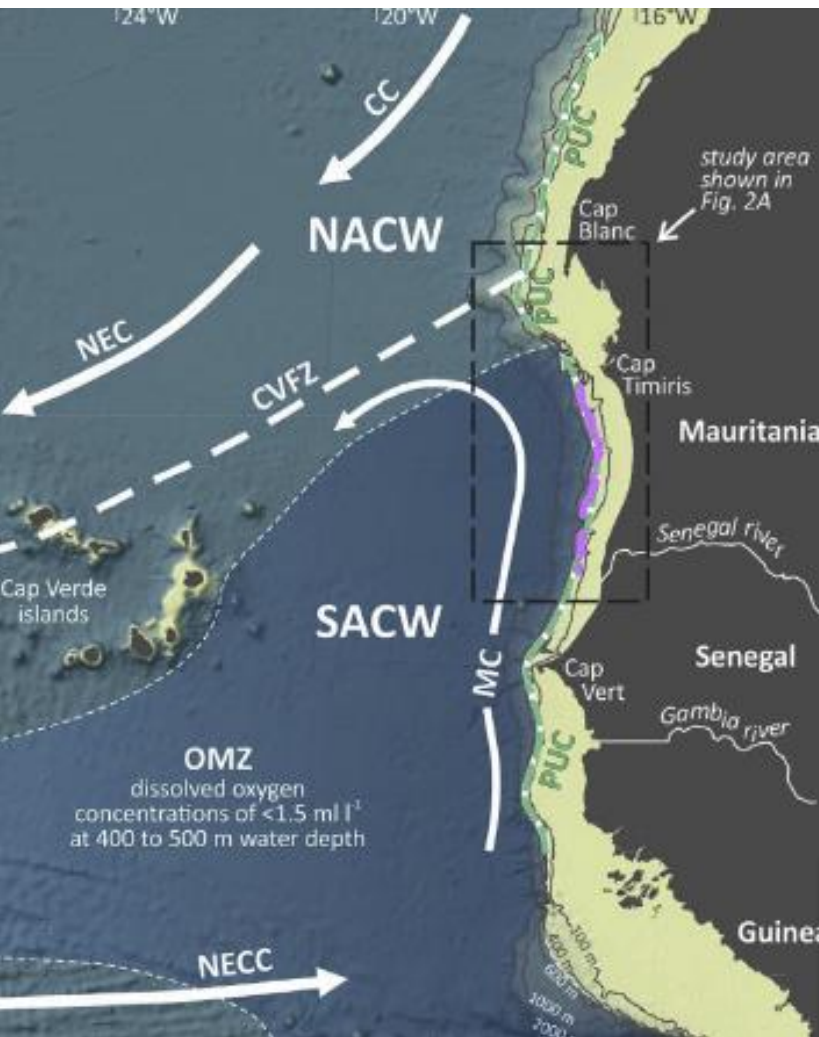
26.02.2021



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# MAURITANIA in a Nutshell



45% Not agglomerated iron ore

12% Copper

16% Fresh, chilled, frozen or salted crustaceans & molluscs

**Export economy**

**53 % taken from the Marine environment**

15% Agglomerated iron ore

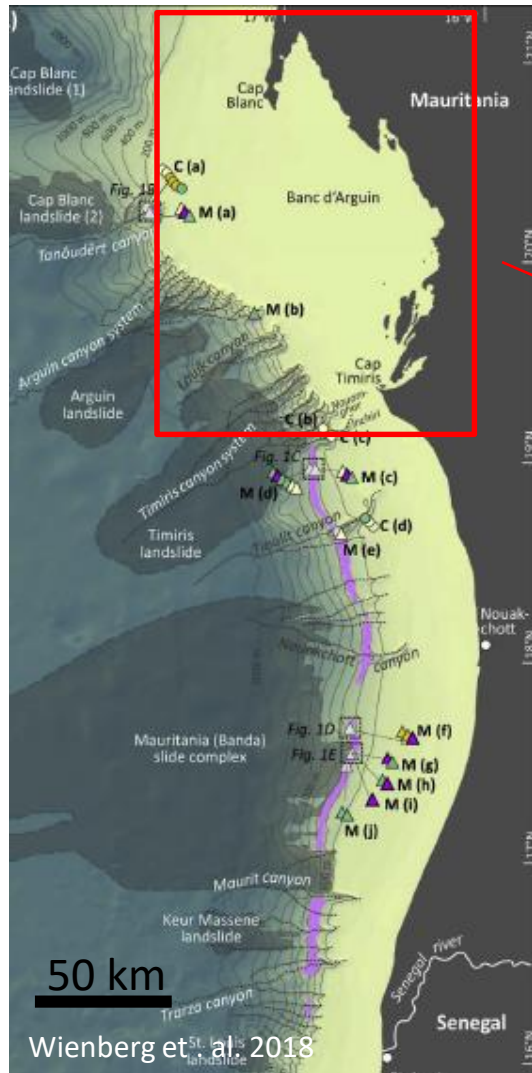
8.2% Frozen fish, excluding fillets

13% Crude petroleum

1.6% Fresh or chilled fish, excluding fillets

1.3% Mustard/other crop byproducts

**Hausmann et al. (2014) The Atlas of economic complexity**  
<https://atlas.cid.harvard.edu/countries/148/export-basket>



**Continental Slope component**

03.03.2021

**CARTE DU PARC NATIONAL DU BANC D'ARGUIN**



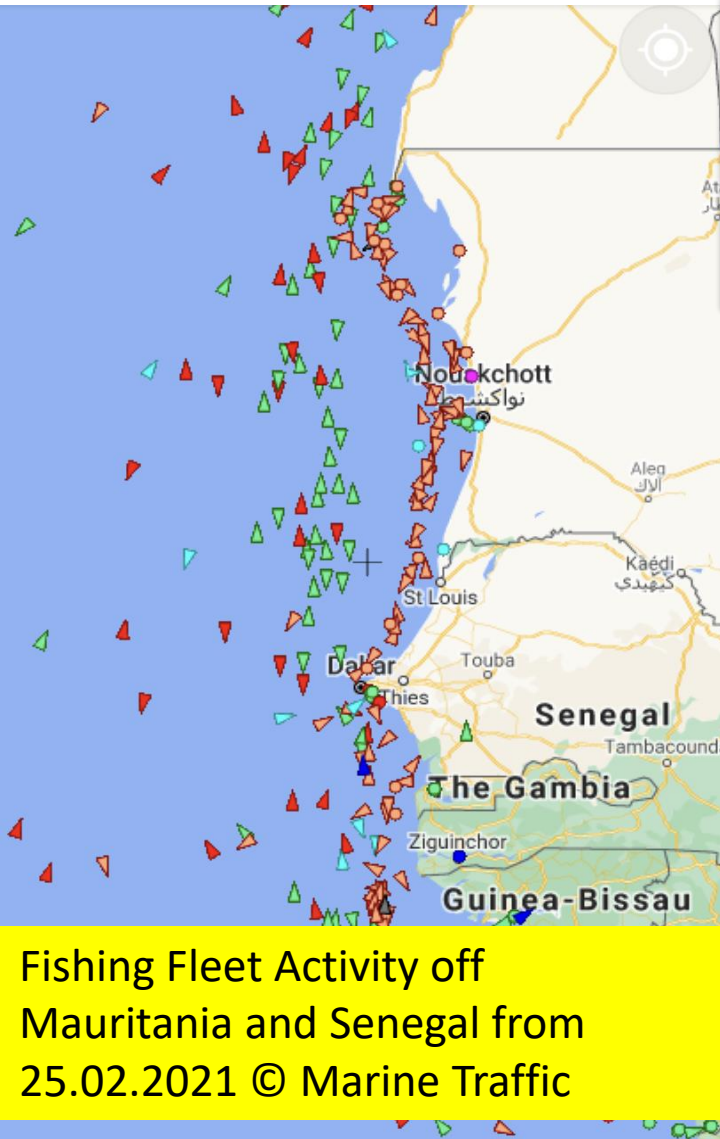
**Wadden Sea & Shelf component**

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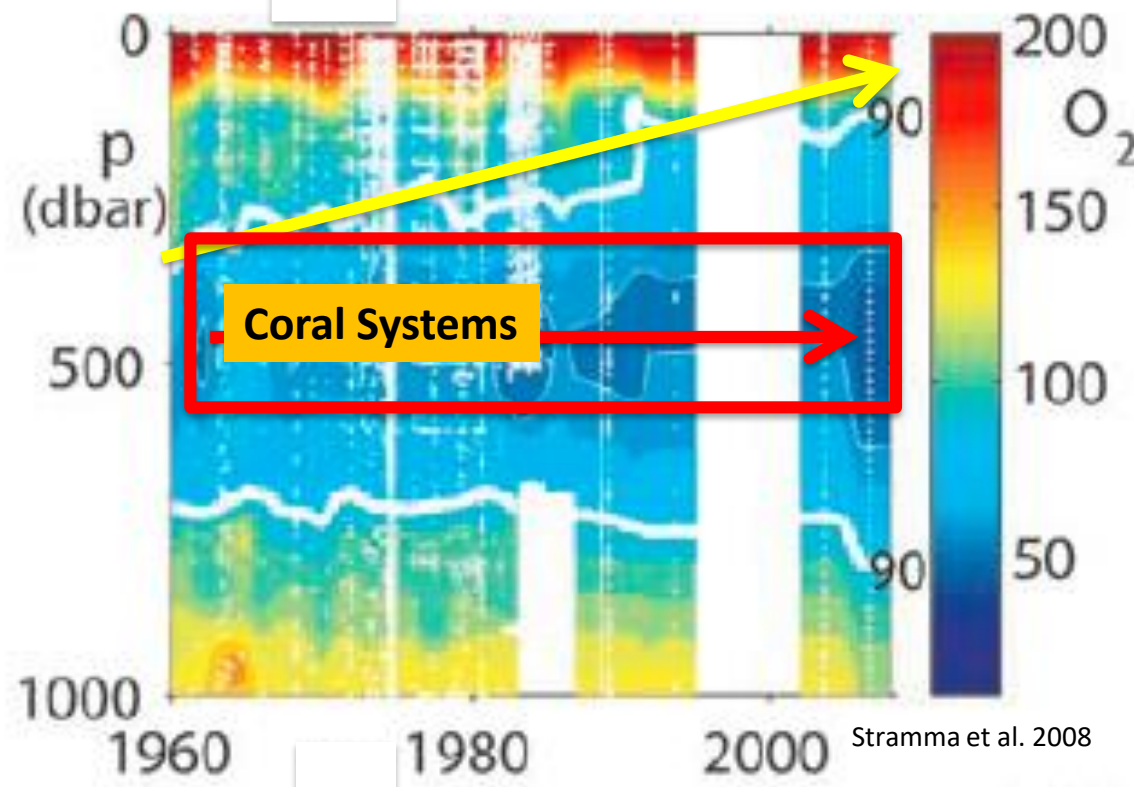
# The Mauritanian Deep Coral Barrier

Shoaling of the OMZ => Reduction of the pelagic habitat

**Deoxygenation => From Hypoxia to Anoxia?  
=> Reduction of the coral habitat**



Fishing Fleet Activity off Mauritania and Senegal from 25.02.2021 © Marine Traffic



Stramma et al. 2008

## The Banc d'Arguin National Parc

**However...**

Plastic Pollution  
Toxic Algal Blooms  
Jellification  
Pirate Fishing

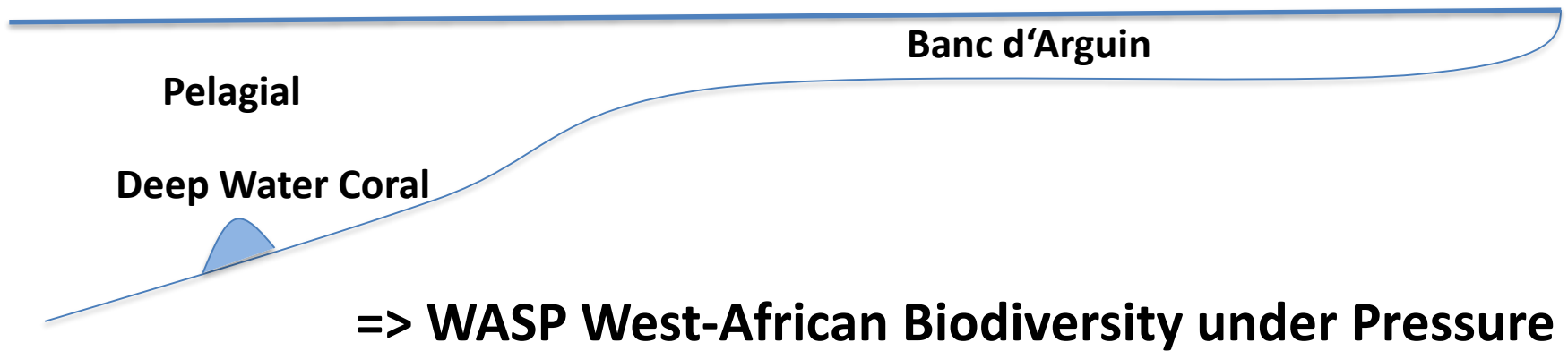
**...and sea-level rise will drown low-land coast lines**



**Largest wadden sea & largest bird resort and large seagrass meadows  
in Africa (UNESCO World Heritage)**

## Problems and Knowledge gaps

- No national marine GIS portal exists for stakeholder, the public and science.
- No DNA barcoded - and voucher collection documenting biodiversity and changes exists.
- Fish resources are evaluated mostly economically (stock assessment, landing tonnage...) and not ecologically nor biologically.
- Open Sea and Coastal Sea systems are so far studied separately but connections are evident and highly needed.



## WASP Measures

- 1 Setting up an open marine GIS for decision-making**  
**1 Mise en place d'un SIG marin ouvert pour la prise de décision**
- 2 Initiating the establishment of a national coastal and marine biodiversity reference collection**  
**2 Initier la création d'un réseau côtier et marin national collection de référence sur la biodiversité**
- 3 DNA barcoding of marine species; initiating the establishment of a national barcode library**  
**3 Code-barres ADN des espèces marines; initier la création de une bibliothèque nationale de codes à barres**
- 4 Developing a long-term marine research strategy**  
**4 Élaboration d'une stratégie de recherche marine à long terme**
- 5 Developing communication materials and strategies for outreach**  
**5 Élaborer du matériel de communication et des stratégies de sensibilisation**

# WASP measure 5: A journey into the world of Kafkaesque policy making

*Protecting marine biodiversity off  
the Mauritanian coast*

Sandra Kloff



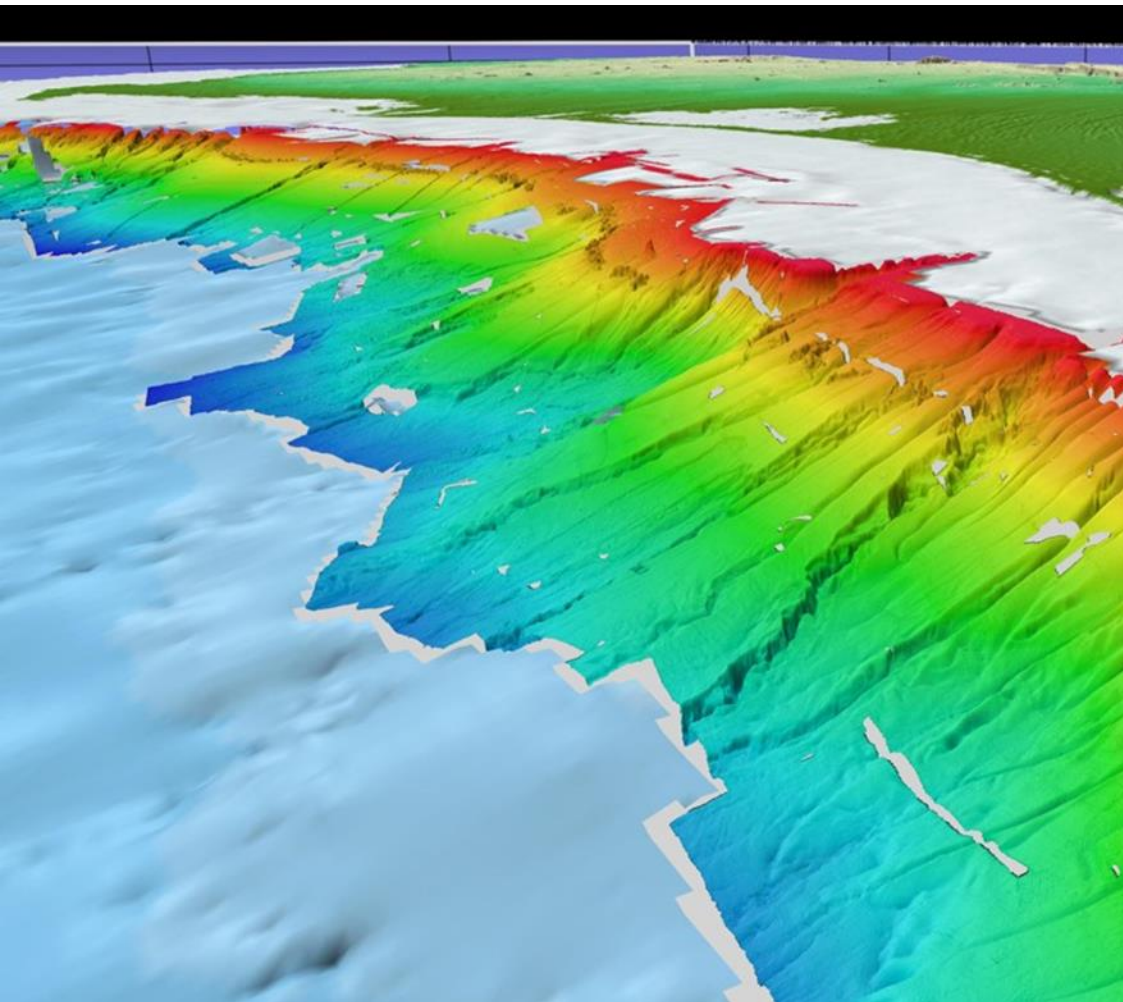
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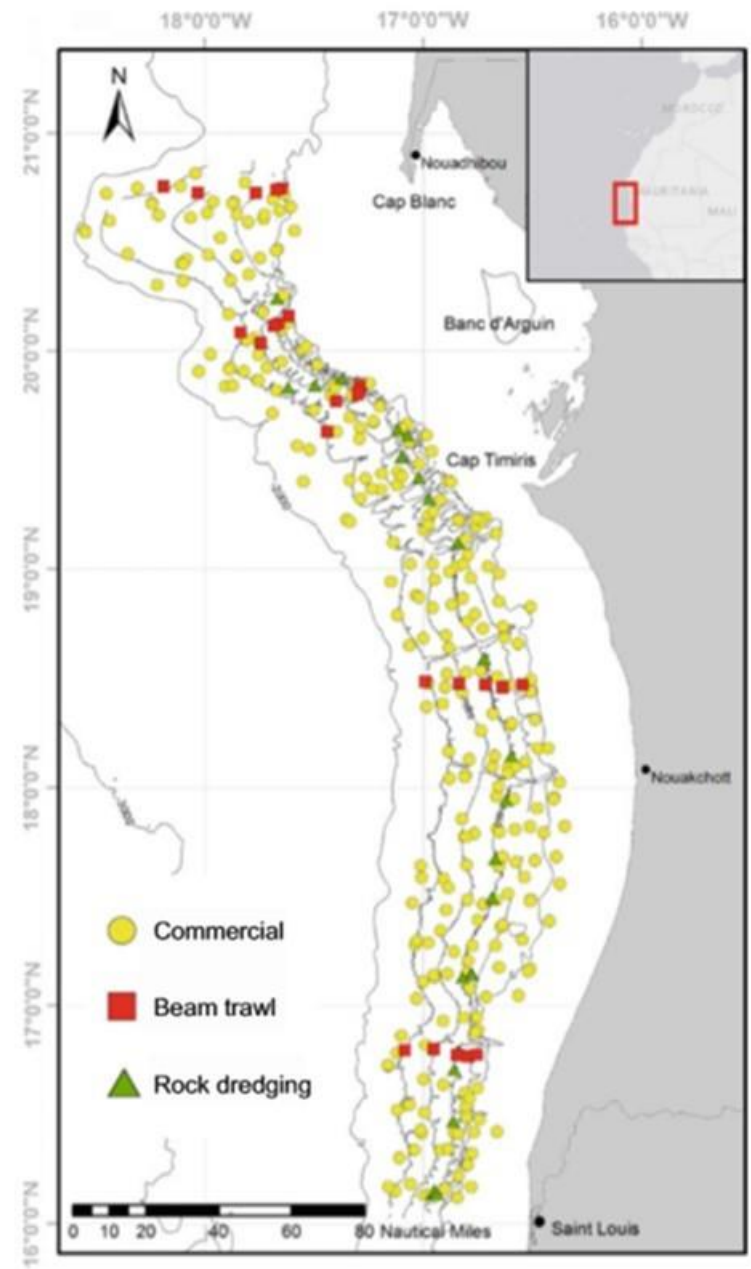
# The scenery (I)

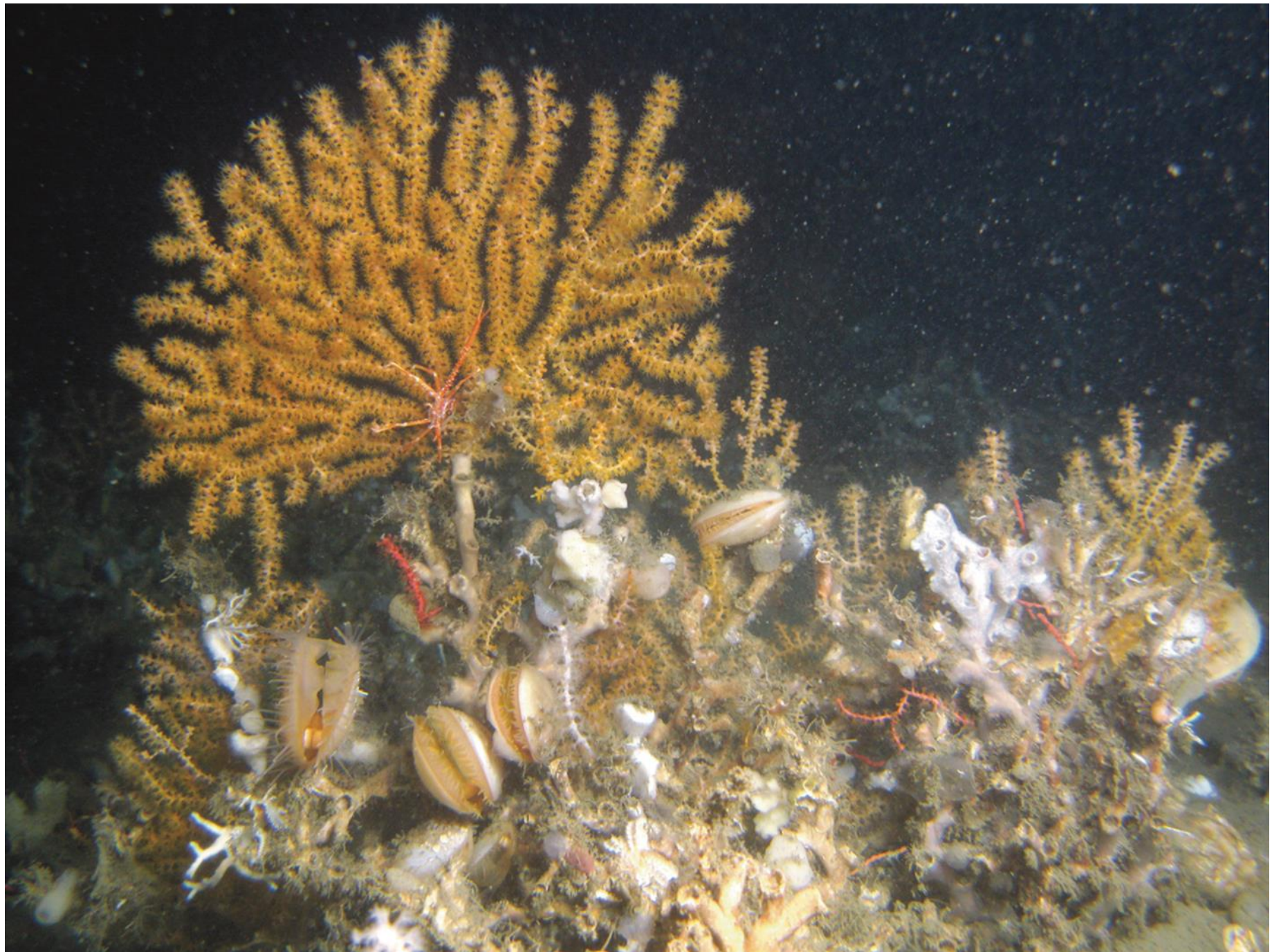
- Ecosystems of exceptional and international importance were discovered off the Mauritanian coast (2005-2015) IMROP, IEO, Senckenberg, NIOZ etc...
- Today, offshore Mauritania belongs to one of the best studied deep-sea areas of the world
- Important biodiversity hotspots lie around the continental slope
  - ✓ Cold-water coral reef (largest in the world), Canyon systems acting as refuges for benthic biodiversity of the slope area)
  - ✓ Clearly defined pelagic hotspots (in space and time): plankton, small pelagic fish, tuna, dolphins, seabirds, whales

Entire slope under the multibeam IEO



# 342 sampling stations



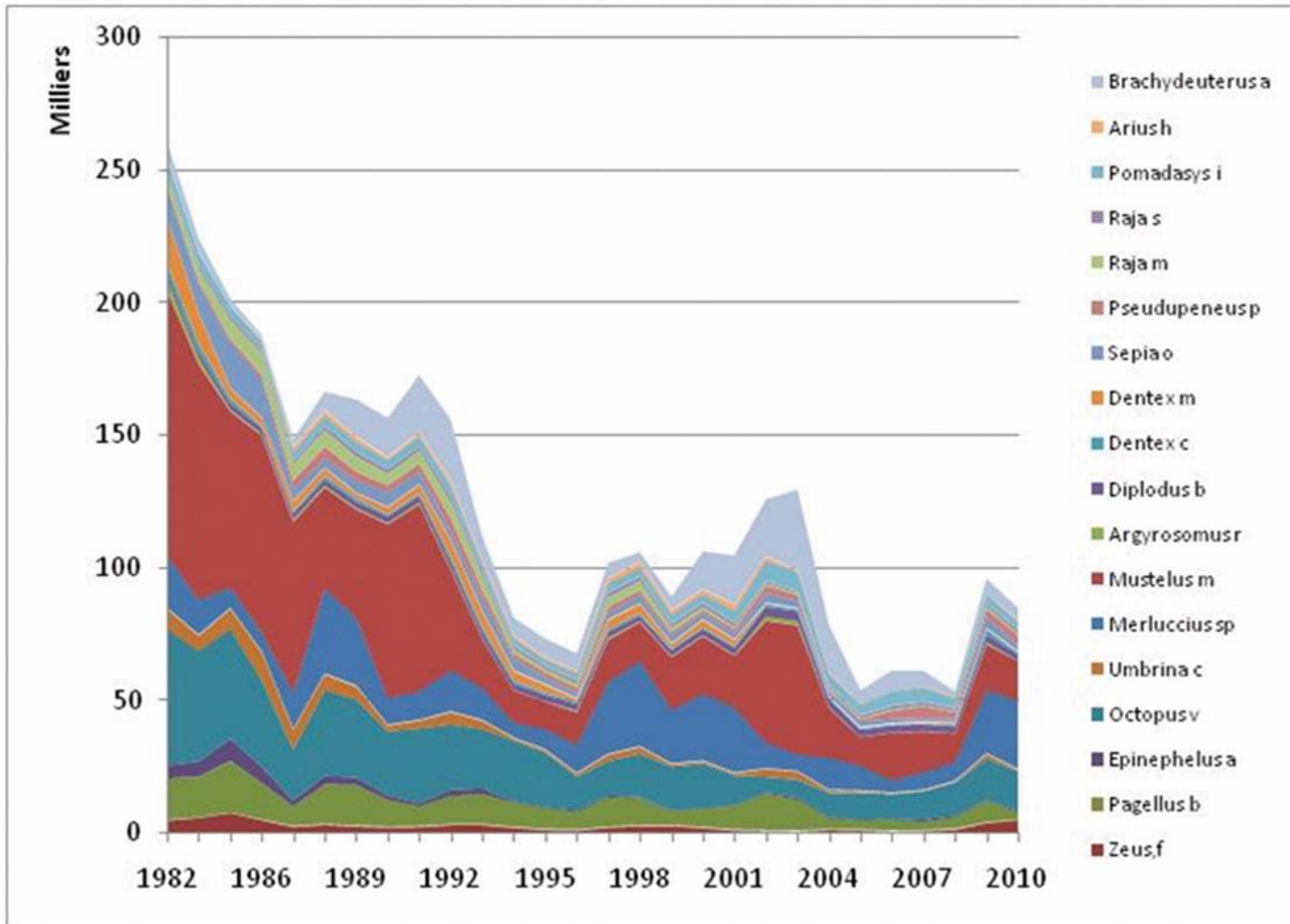




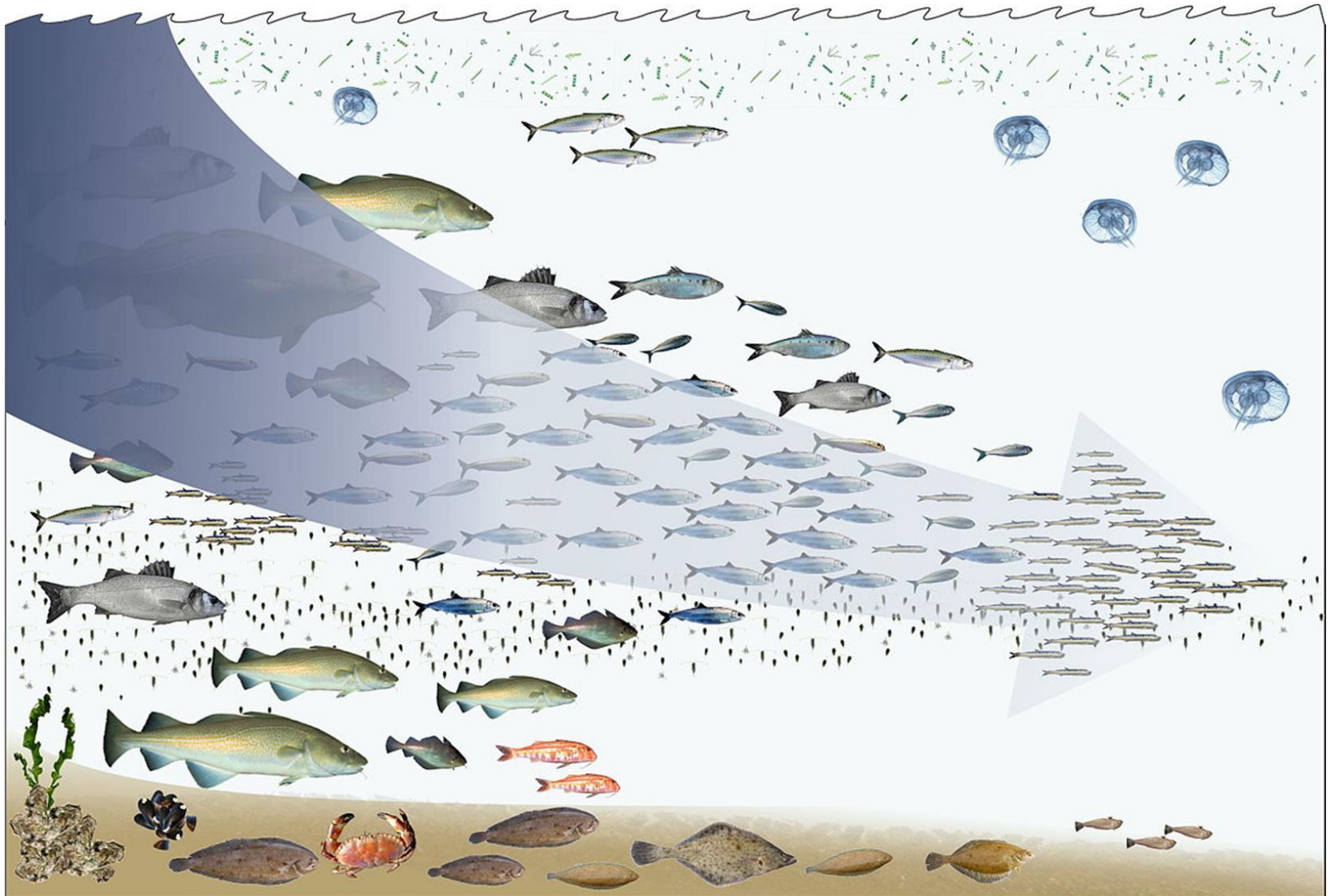
# The scenery (2)

- These hotspots coincide with prime fishing zone of the industrial fleets (Mauritanian, EU, Russia, China, Turkey...), expanding fishing area of the artisanal sector and emerging Oil & Gas development,
- Each having a direct and specific impact on this biodiversity .

# Overall decline by factor 3 of high value table fish compared to 1982



# Ongoing regime shifts: from high to low trophic levels (jellification)





Overfishing resources

but also due to collateral damage!

barely taken into account by policies made to manage fisheries ...





Dead coral rubble and fishing trawl/dredge track  
(e.g Spanish black hake and crustacean fisheries)





Unsustainable bycatch rates pelagic  
mega-fauna killed by freezer trawler  
fleet EU

(e.g. Dutch fleet virtually abandoned  
the zone ...for now.. But severe  
damage was documented)



Void... filled rapidly by Turkish and Chinese fleet now transforming small pelagic fish to fish meal

For

... amongst others... salmon farming



# Marine “bush meat” caught by the artisanal fleet sometimes within the protected Banc d’Arguin consumed locally or exported

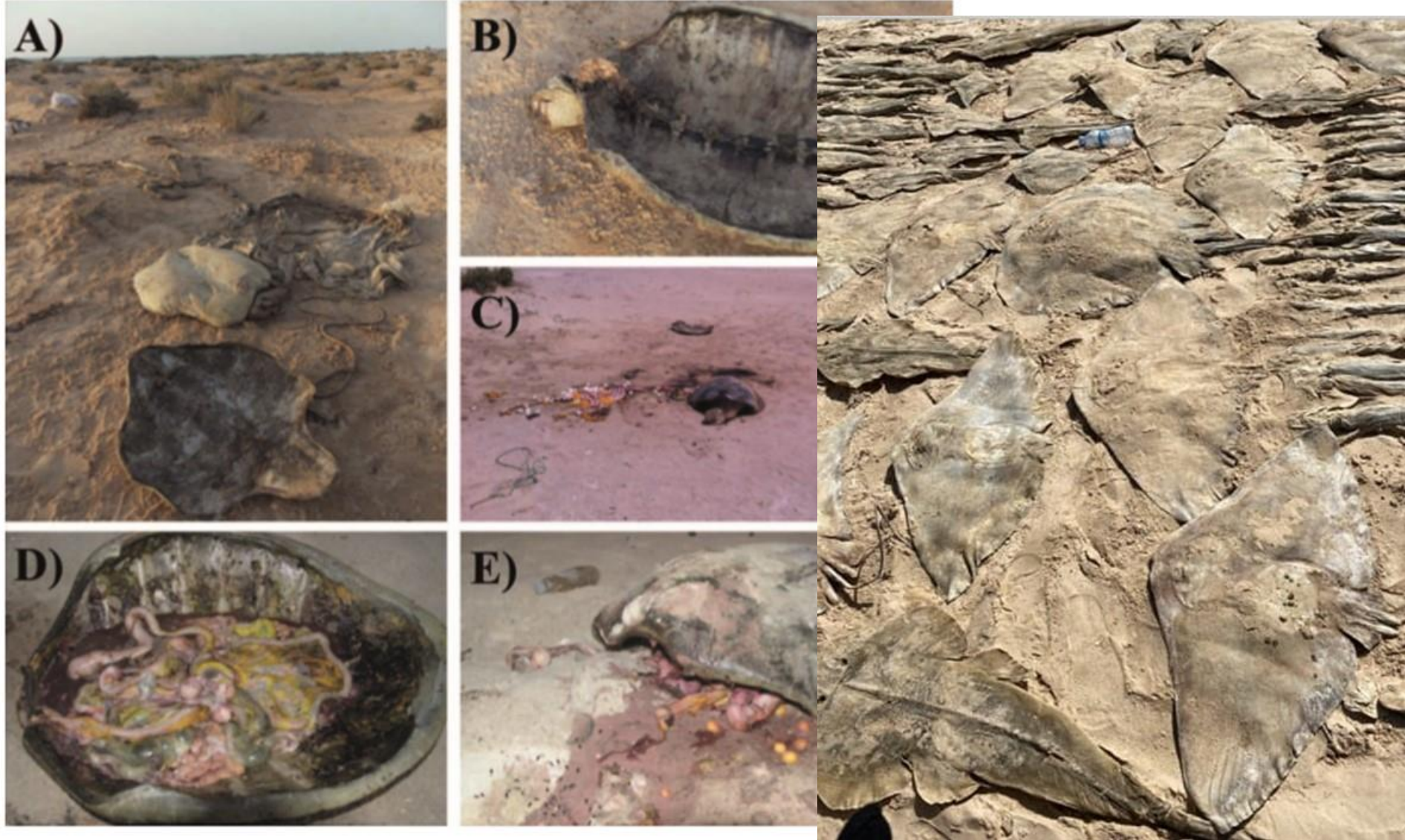


Figure 6. Frames marking remains of adult *Chelonia mydas* individuals slaughtered in different Imraguen villages within (A and B; northern Mauritanian coast) and outside the Banc d’Arguin National Park (C, D and E; southern Mauritanian coast). A) and B) depict remains found in Iwik village, C) at village PK 65, and D) and E) in village PK 28. (Photos: JACQUES FRETEY, MOULAYE WAGNE and FEITOU MATT LEMATT HAMA).



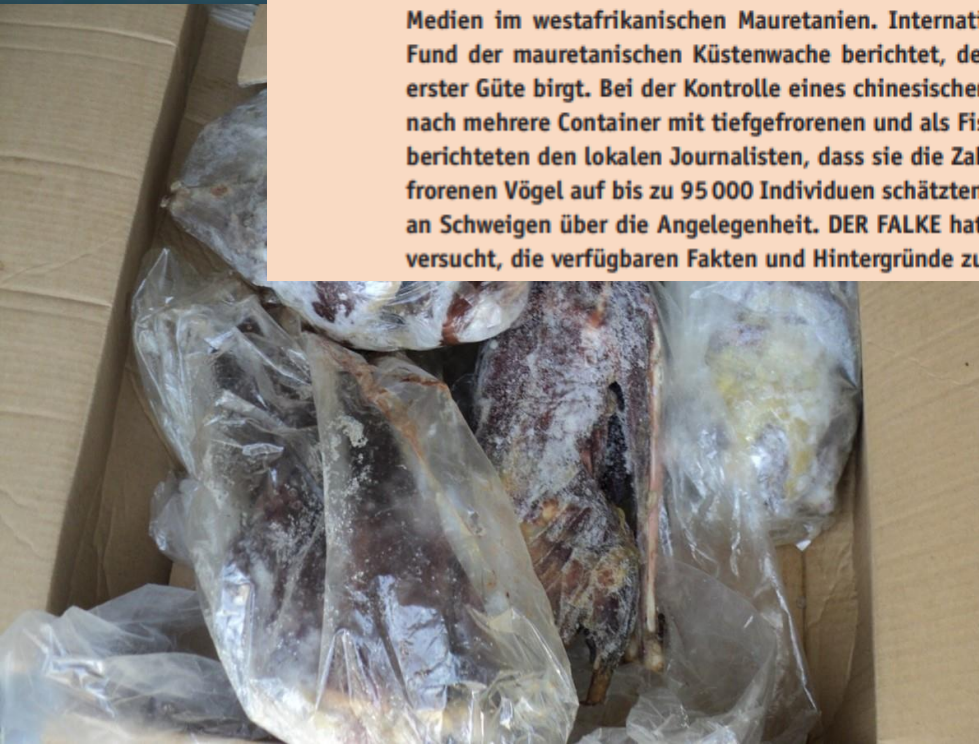
Frozen gannets prepared for consumption, confiscated by Mauritanian customs

Vogelschutz

Spurensuche vor Mauretanien:

## Fang von Basstölpeln durch Fischtrawler?

Vor etwas mehr als einem Jahr erschien eine kleine Meldung in den Nachrichtenspalten der Medien im westafrikanischen Mauretanien. International unbeachtet wurde darin von einem Fund der mauretanischen Küstenwache berichtet, der das Potenzial für einen Umweltskandal erster Güte birgt. Bei der Kontrolle eines chinesischen Fischtrawlers fanden die Behörden demnach mehrere Container mit tiefgefrorenen und als Fisch deklarierten Basstölpeln. Informanten berichteten den lokalen Journalisten, dass sie die Zahl der insgesamt beschlagnahmten tiefgefrorenen Vögel auf bis zu 95 000 Individuen schätzten. Offiziell herrschte von der ersten Minute an Schweigen über die Angelegenheit. DER FALKE hat mit Informanten vor Ort gesprochen und versucht, die verfügbaren Fakten und Hintergründe zusammenzutragen.



containers)



# The scenery (3)

Climate change is making these waters:

- warmer,
- less oxygenated and
- more acidic

**Marine biodiversity can**

- either mitigate these effects (if better protected and managed)

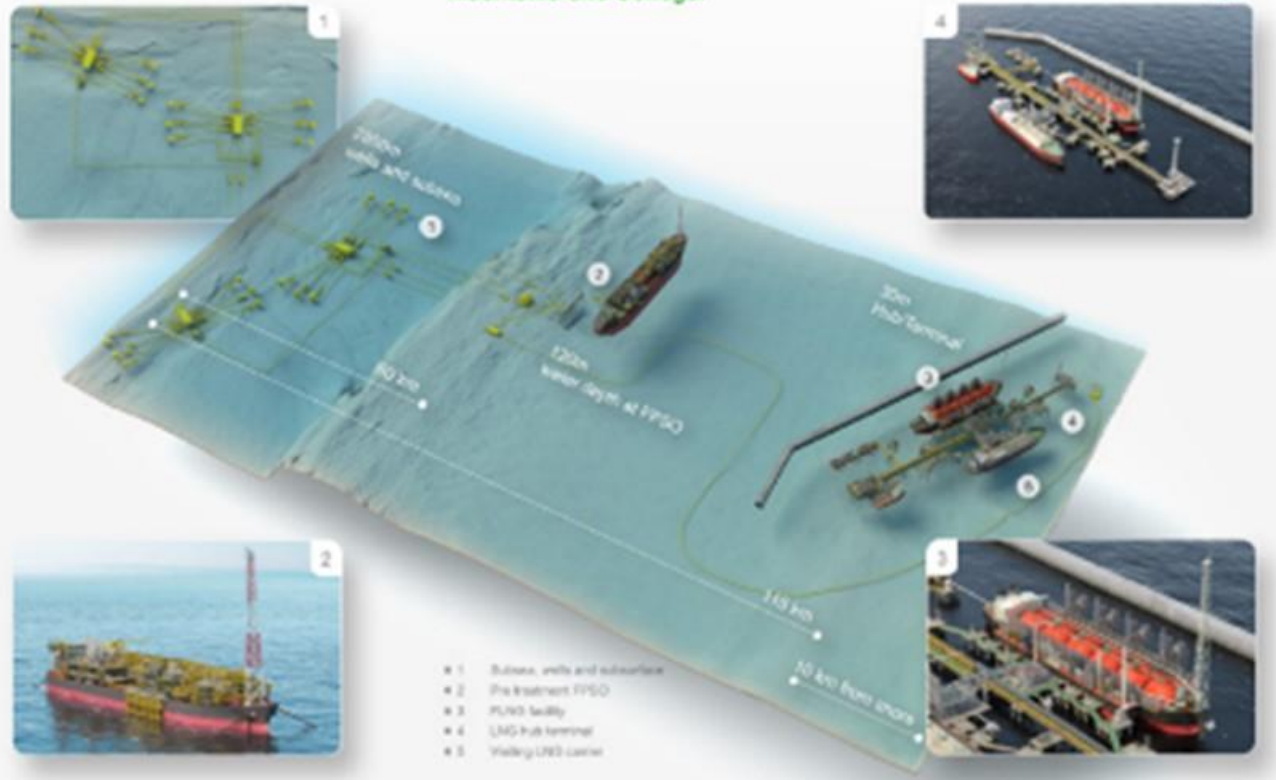
or,

- aggravate these effects (if regime shifts are allowed to continue).

Leading to quicker jellification and overall mortification of the marine and coastal ecosystems.

# The scenery (4)

## Greater Tortue Ahmeyim Project Mauritania and Senegal



One of the world's largest gas field about to be exploited in the maritime border with Senegal by BP

Installations will affect all sections from deep water, to slope area to coastal waters

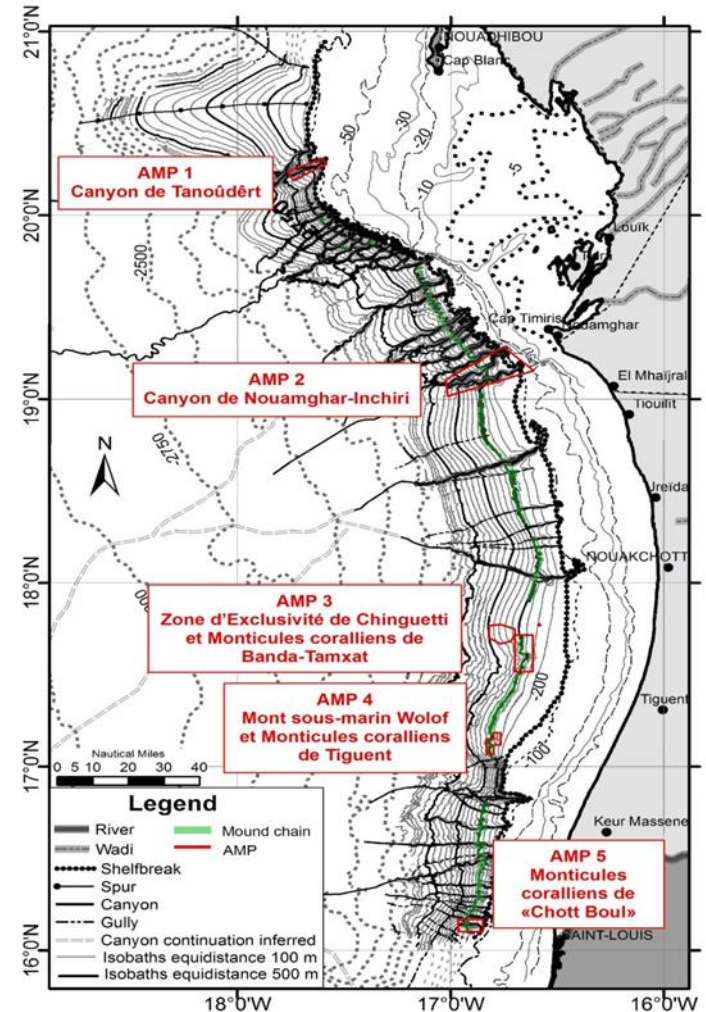
This marine eco-region could be compared to the proverbial *camel's back*





# Preparing for action...

- Scientific community developed management plans to protect slope biodiversity while allowing for further economic development
  - IEO + Senckenberg with MAVA foundation: proposal to protect large areas of the slope (plan dismissed...maybe too ambitious ?!....)
  - IMROP + IEO + Senckenberg, a voluntary initiative: drafting a less ambitious proposal protecting a small but representative selection of vulnerable benthic habitats equiv. of 0,72% EEZ



# Preparing for further action... (II)

- Project BGP (UNDP, GIZ) spearheaded by the Ministry of Environment also organised activities to promote marine biodiversity protection offshore :
  - face-to-face meetings with Ministers (Environment, Oil & Gas, Fisheries)
  - Regular dialogues with national authorities, private sector, civil society
  - Talks/presentations at COP Abidjan convention,
  - Tailoring of communication material on new discoveries offshore biodiversity (brochures, posters, films, animations, social media....)
- +
  - Further research on biodiversity coast and pelagic hotspots slope area and baseline studies on marine micro-contamination (in the frame of O&G development)

# Results so far ?!

- Mauritanian state proposed newly discovered hotspots off the coast for EBSA nomination in the frame of the CBD (proposal in need to be peer reviewed and corrected/amended). No legal teeth but a call for attention ...
- However, plans to protect a representative selection of habitats along the slope still not adopted or assimilated by national policies with the necessary legal teeth (MPA's, fishery code, clear guidelines for EIA's etc.)
- Protection of offshore vulnerable marine areas still not mentioned in EU-Mauritania fishing agreement, or in advise by its scientific committee (marine biodiversity of international importance is labelled as "*bycatch*")
- Environmental Impact studies for the Oil and Gas sector are based on very shaky science drafted by private consultancy firms are approved by Ministry of Environment
  - ✓ A part from scientists, local fishery federations, journalists, aware national NGOs nobody complains ....not even international conservation organisations...

# Meerwissen, the sequel *taking marine science to the policy level !*

- Our strategy is based on investing in the most hopeful actors:
  - National oceanographic research institute IMROP (userfriendly GIS adapted to policy makers, marine resource users and the public)
  - Working with local NGOs, fishery federations and the press
  - Working with the young on a better future (creating three blue classes along the coast. Talks about their natural marine heritage)
    - Making whiteboard explainer videos on marine biodiversity and climate change (also broadcasted on social media, two test videos completed, one made with blue classes)
  - Reaching out to Oil and Gas companies (remember them of SER policies, sharing scientific papers on host environment).
  - Denouncing substandard EIAs (via direct communication and via the press)
- “*Aggressive*” strategy bearing fruit: Agreement reached with BP to rewrite their Environmental Management Plan, based on sound science, elaborated with the scientific community and not consultants! *Should become the new standard for marine resource management.*

# A few key questions

1. Is the EU's blind eye for Mauritania's marine biodiversity, thriving within their main fishing area, fed by a believe that its protection might hurt their short term interests ?

*(coral habitat and the pelagic biodiversity around the slope do coincide exactly with main fishing zones on black hake, crustaceans and small pelagics)?*

1. Is the EU's blind eye for biodiversity offshore Mauritania feeding a reluctance with national regulating authorities to enforce conservation measures on the foreign fishing fleet on which they depend financially?
2. Are international conservation organisation too much "engaged" financially in partnerships with extractive industries, withholding them from denouncing malpractice ?
3. Will BP turn the tide with a brand new and science-based management plan for the GTA field? or will they be that final straw?
4. How do the scientists, now engaging with BP, keep their independence and focus on biodiversity protection (and not just doing science)?



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# Thanks for your attention

## WASP

Wilhelmshaven and Algeciras, 26.02.2021

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