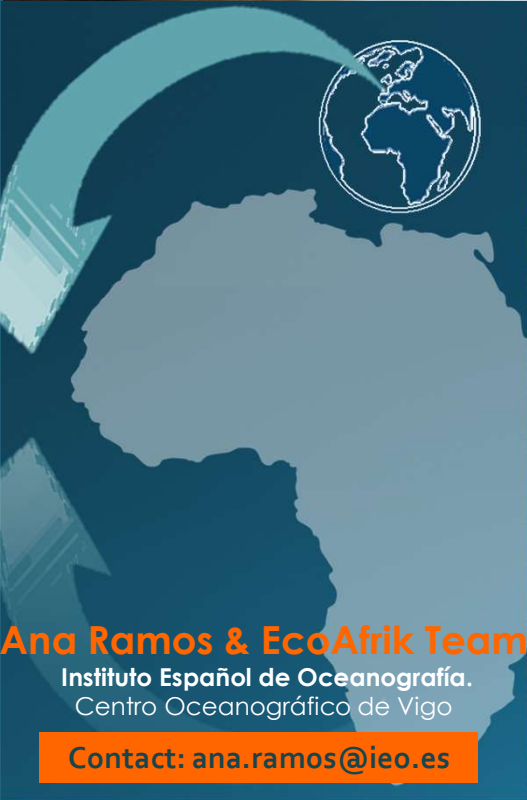




EcoAfrik

An unique opportunity for Capacity-building on Study and Conservation of Biodiversity and Marine Habitats in Africa

Universidad de Vigo
Spanish Institute of
Oceanography



Ana Ramos & EcoAfrik Team
Instituto Español de Oceanografía.
Centro Oceanográfico de Vigo

Contact: ana.ramos@ieo.es



Photo: Senckenberg

Reunión Anual de Coordinación LDAC – ATLAFCO/COMHAFAT
Bilbao, February 12, 2019



Context



The Spanish Institute of Oceanography, with a history of **more than 100 years** in marine research, has a specific program devoted to the study and evaluation of fishery resources from **African waters** of the Atlantic and Indian Oceans.





The African Program that the IEO has been developing for **40 years**, has a strong component of **cooperation** with the research institutes of the coastal countries, in Research Projects, Working Groups and Surveys at sea.



Despite having constituted traditional fishing grounds of the Spanish fleets, the African seas were among the most unknown in the world at faunistic level.

COMMERCIAL SPECIES

Fishes, decapods and cephalopods were better known

Biodiversity and benthic habitats
ALMOST UNKNOWN



Until 2002, the scientific activity of the IEO in Africa was based on the monitoring of the Spanish fisheries in African fishing grounds and on the study and evaluation of the main commercial stocks.



Information taken in
landing ports



In 2002

the R/V *Vizconde de Eza*
began a series of scientific
surveys in African countries in
the framework of bilateral
political agreements



*This fact allowed to
extend the objectives
of the IEO research*





Universidade de Vigo
Spanish Institute of
Oceanography

In 2004

within the framework of the
African program and thanks to
a Specific Agreement,
a team of researchers from
the IEO and the University of
Vigo, launched the
EcoAfrik Project



Scientific Objective



Study of the Biodiversity
and Ecosystems of the
African seabed



Location and Conservation
of vulnerable marine
habitats



EcoAfrik Team



- 16 researchers and technicians
- Spanish Institute of Oceanography and Faculty of Marine Sciences from University of Vigo
- Coordinated from Vigo

Universidade de Vigo

Vigo



Madrid



Cádiz



Málaga



Tenerife



More than gender parity!!

>80%
Women



Ana Ramos
IEO Vigo
Coordinadora
Proyecto EcoAfrik



Coordinadora
Pesquerías África



Lourdes Fernández
IEO Málaga



Paqui Salmerón
IEO Málaga



Sara Castillo
UVIGO-IEO



Belén Calero
UVIGO-IEO



Marta Gil
UVIGO-IEO



Eli Muñoz
IEO Cádiz



Carmen Presas
IEO Tenerife



Susana Soto
UVIGO-IEO

Well, we also have some fantastic **male specimen** in the team !!

Dr Fran Ramil,
coordinator of the
faunistic study and
the best professor of
Marine Zoology



Main pillars

Research

Capacity-
building

Advisory

Outreach



Stages of Research

FIRST STAGE

Surveys on sea



Collecting
samples & data



Stages of Research

SECOND STAGE

Study on labs



ID Collections
& data analysis



Surveys on sea

22 SPANISH Trawling Surveys 2002-2010



Surveys on sea

5 NORWEGIAN FAO Surveys

2011-2019

R/V Dr Fridtjof Nansen



CCLME Region
Cabo Verde

SEAFO Banks



An '*oportunisti*c' approach

Taking advantage of fishing surveys

Fantastic, not expensive methodology

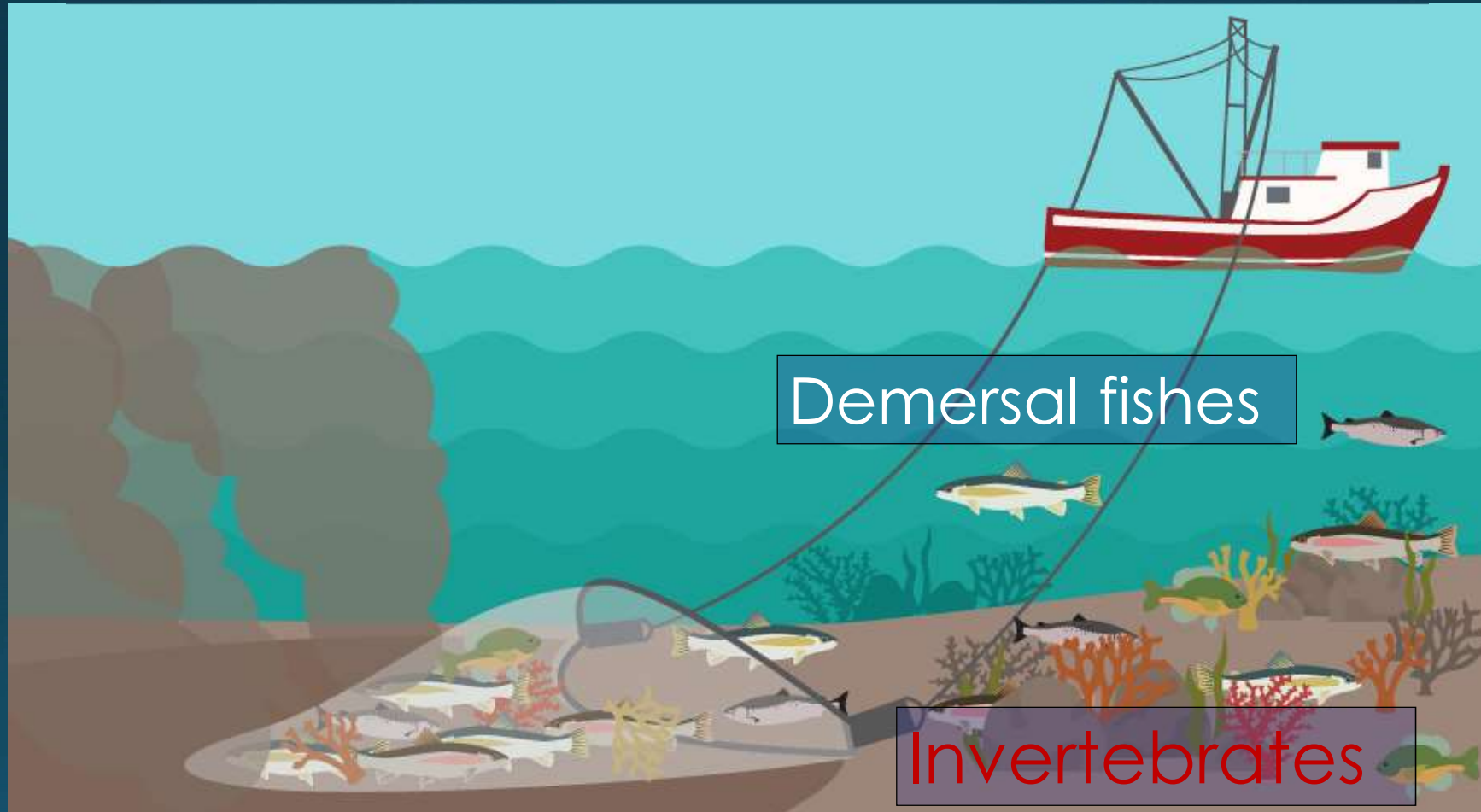
Source of data on biodiversity and habitats

Environmental information

- Seabed bathymetry
- Sediments
- Water column



Commercial bottom-trawl



Demersal fishes

Invertebrates







Bottom-trawl Surveys

Faunistic collections

Biological data

Pictures in fresh



Species Identification

**Basic work to know
biodiversity!**

Contamination
Habitats
Key-species

.....



Giving name to thousands specimens...

The main problem on biodiversity research!

Huge effort

Time-consuming task

Not immediate results

Tons of patience



Biodiversity..... very nice images.....



Biodiversity.....

A widely used
term by
managers and
politicians.....



But

A science of very difficult financing

Main goal

CCLME Region

2010 - 2019

11 Surveys

1350 stations

20-2000 m depth

IEO + UVIGO

500.000 € /year



Main achievements

Collections of benthic invertebrates

Databases
Faunistic quantitative + Environmental

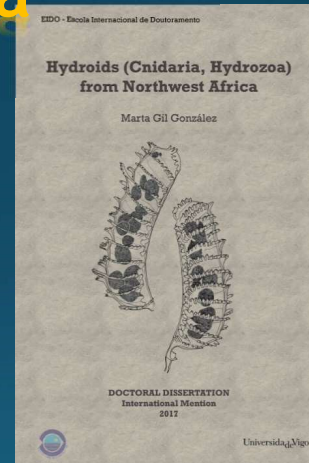
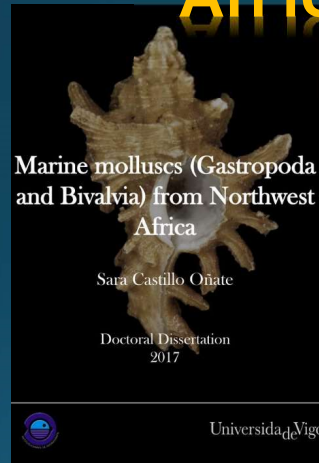
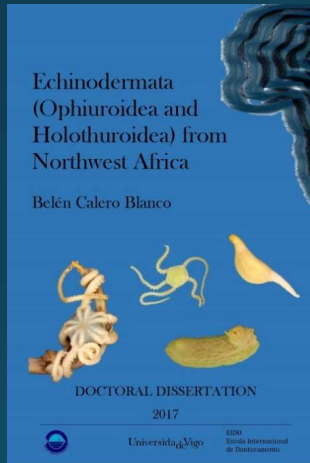
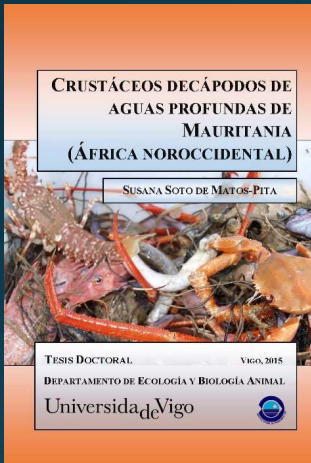
Bibliography (10,000 papers)

Collections of photographs

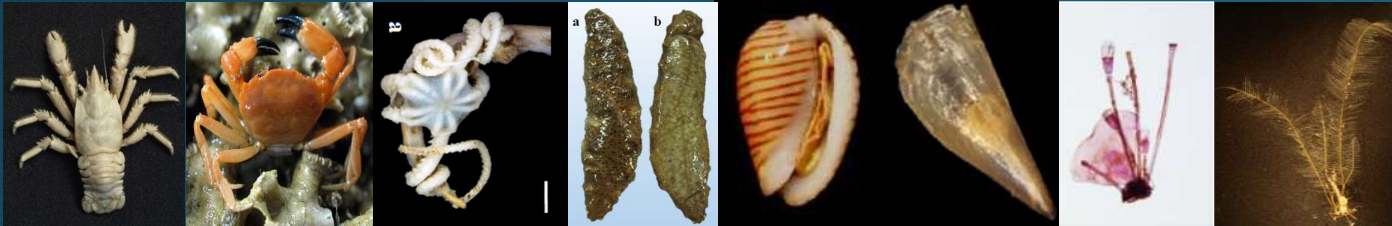
Major outcomes



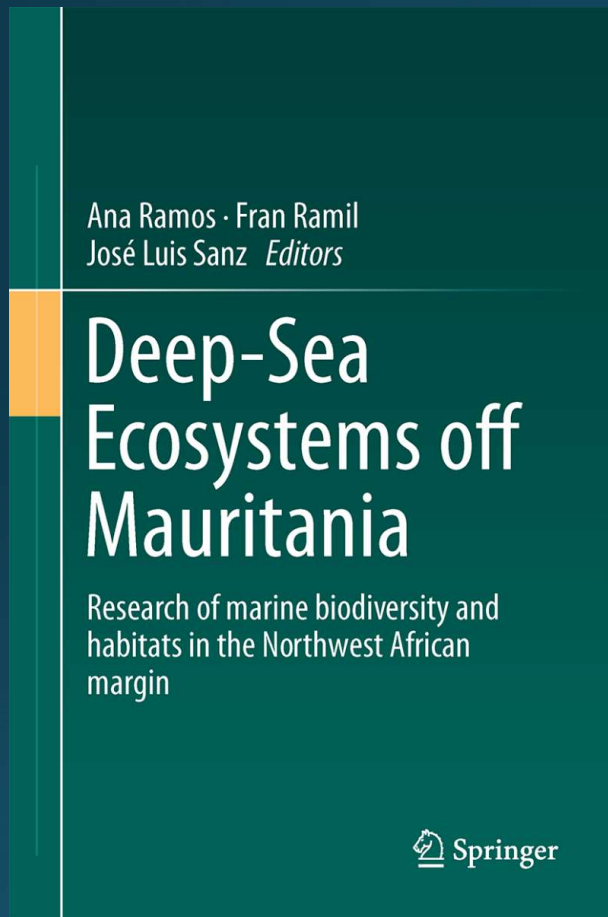
4 Doctoral Thesis Biodiversity of Northwest Africa



- 2 PhD developing
- 4 Master works
- 6 Degree works
- 30 papers
- 60 Communications Symposium & Conferences
- Support to Regional GIS



A monograph on deep-sea ecosystems off Mauritania (Ramos *et al.*, 2017)

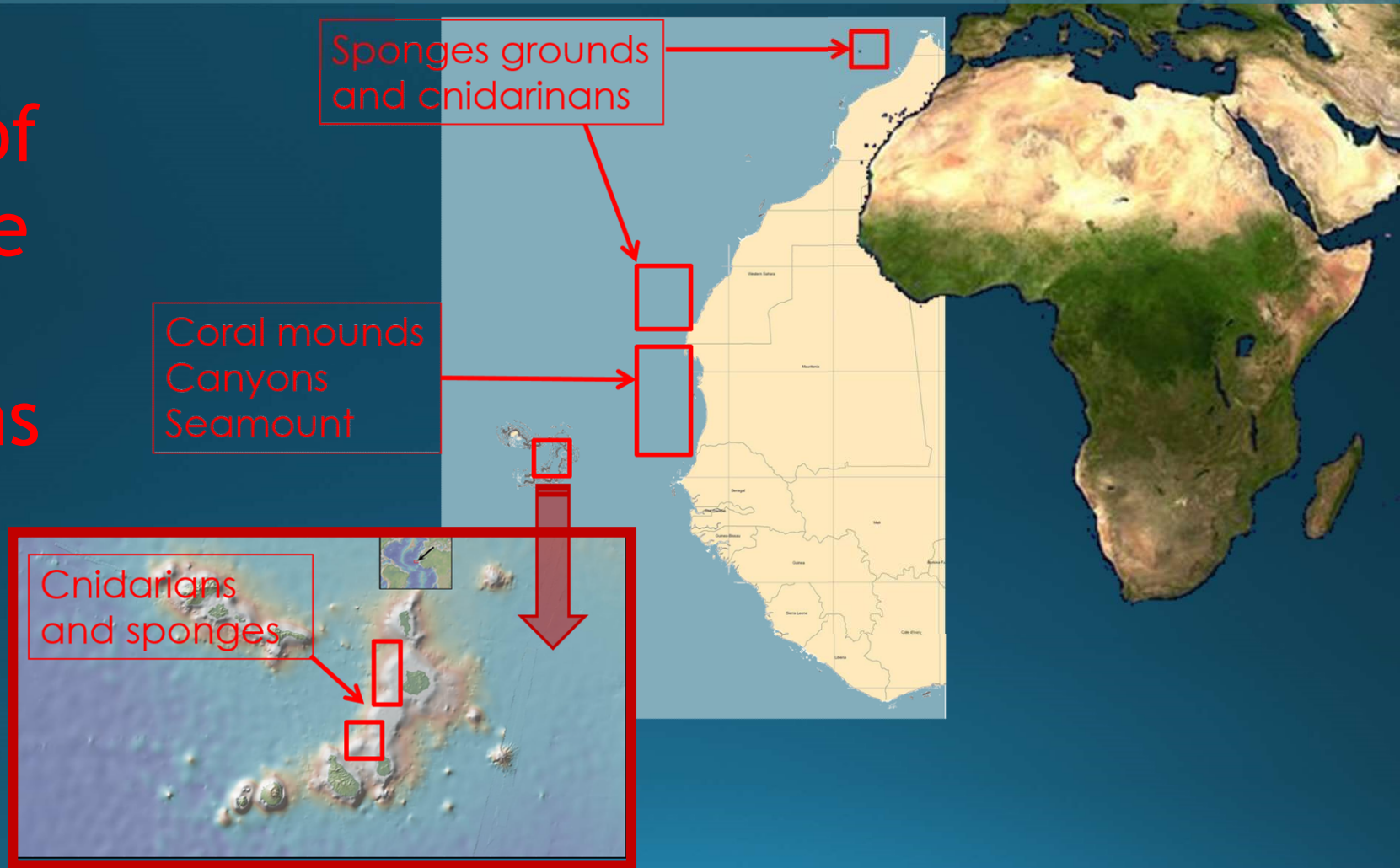


17 Chapters

- Geology
- Oceanography
- Biodiversity
- Assemblages
- VMEs
- Faunistic collections
- General overview

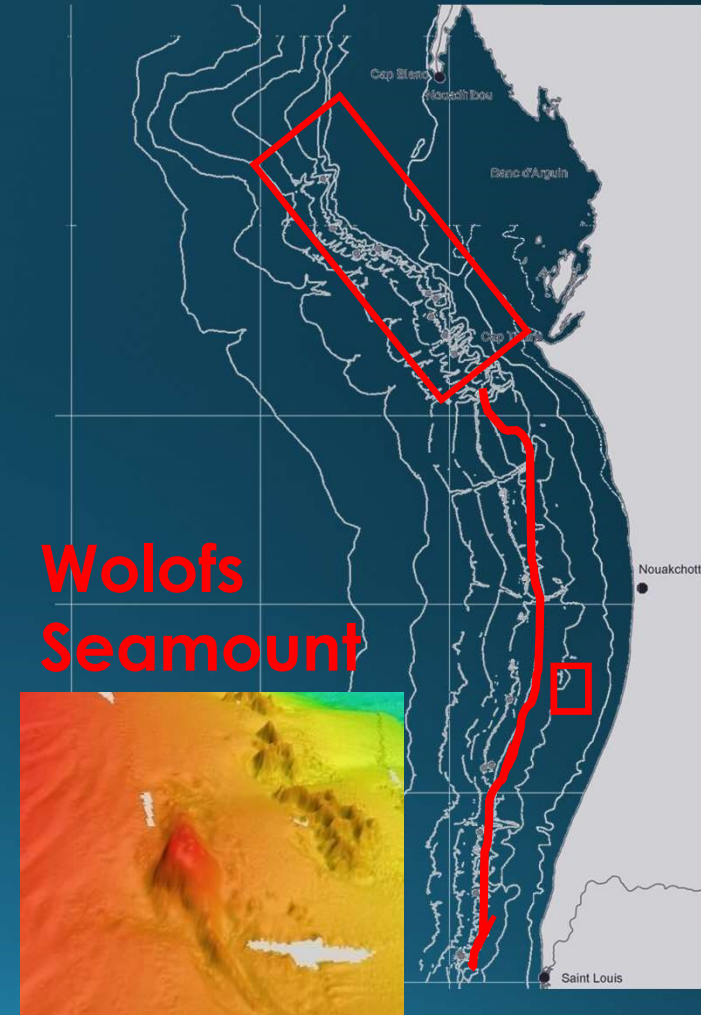
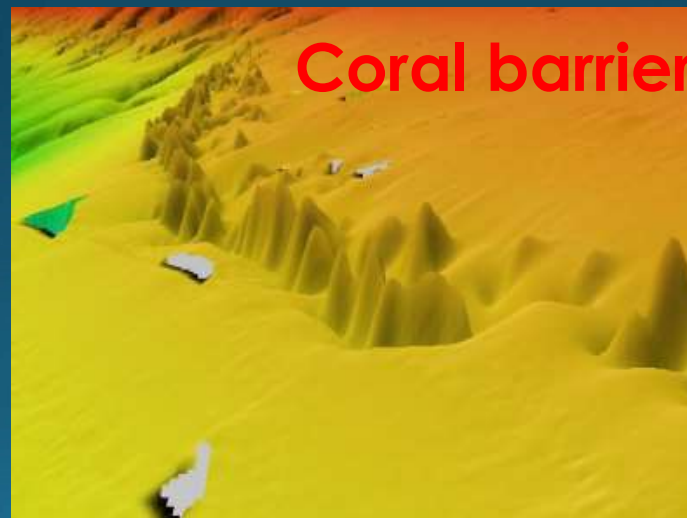
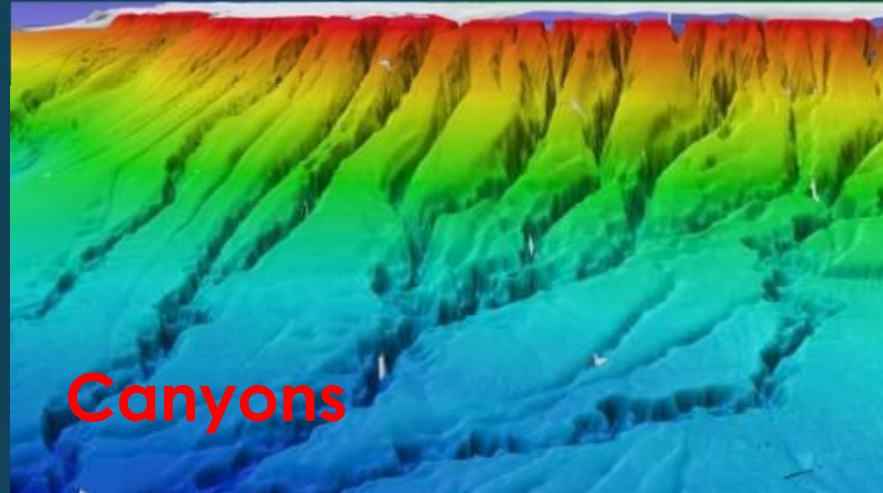
Major outcomes

Location of Vulnerable Marine Ecosystems



Mauritania: the best know area

Vulnerable
Marine
Ecosystems
in the slope
of
Mauritania

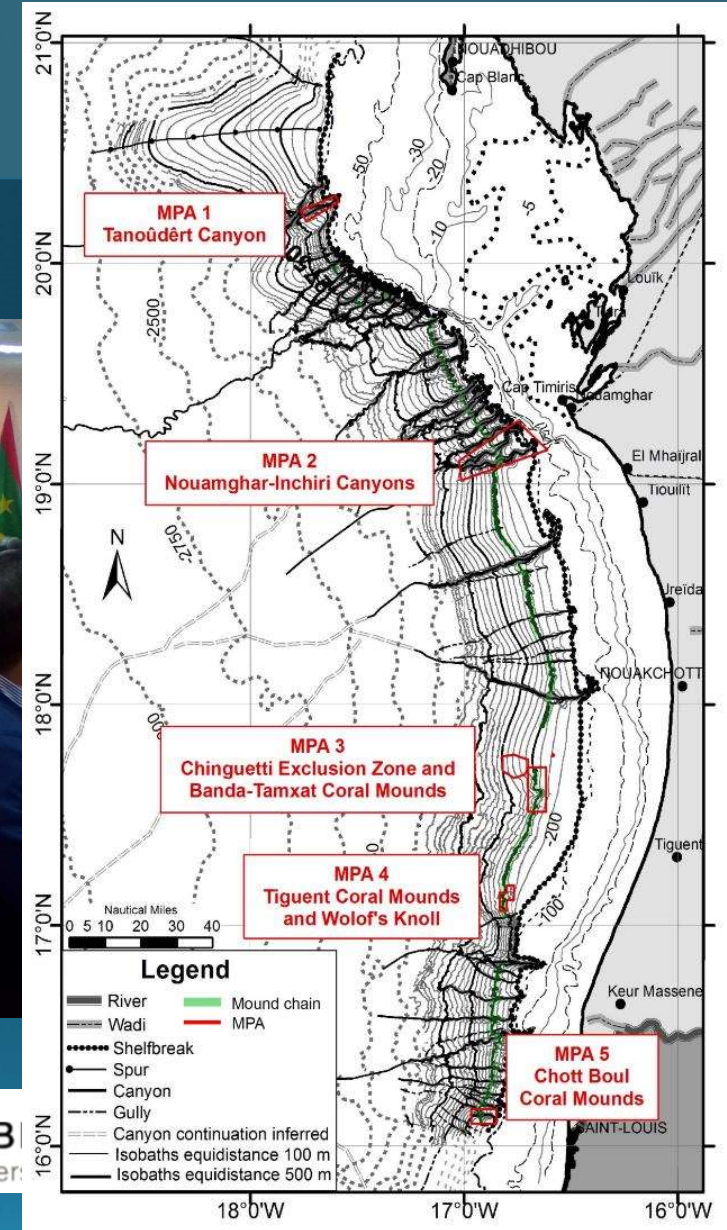


Major outcomes

In 2018

Commissioned by the Mauritanian Ministries
an International Experts Panel
prepared a proposal for the creation

A Marine Protected Area network on
the Mauritanian slope for prosperous
fisheries and improved understanding
of marine biodiversity



Our greatest strengths

- **Experts** on the study of biodiversity of coastal and deep-sea fauna from Africa
- **International leader** in marine research in West Africa.
- **Multidisciplinary** team with expertise in habitat's characterization.



More than a decade
exclusively devoted to the
study of benthic fauna in
Africa

**Unique research group
worldwide**



Intermacional Framework

FAO

PARTNERS

Two main current Projects in Africa

CCLME Project

Protection of Canary Current Large Marine Ecosystem



EAF-Nansen Project

Ecosystem Approach to Fisheries



Support to the FAO

- Experts in the preparation of the Nansen Scientific Program 2017-2021
- Participation as experts in Ecosystemic Surveys
- Specialized training courses for African researchers
- Organization of International Working Groups
- Preparation of visual guides for fauna identification
- Training programs in Third Countries.

Intermacional Framework

Development of geo-referenced database (GIS) of the CCLME (2014-2015)



Enhancing oceanographic capacities in Western Africa countries (2013-2017)



Catalog of species and benthic habitats in West Africa (2013-2018)



Joint International Research

Senckenberg am Meer (Germany)

2015-2019

VMEs Mauritania

Angola et Namibia

University Museum of Bergen

Marine Research Institute (Norway)

Musée National d'Histoire Naturel
de Paris (France)

Indian Ocean

SENCKENBERG
world of biodiversity



Our greatest strength

OPPORTUNITY

Transferring our
knowledge and
experience in
research and
management of
biodiversity to African
countries



In Africa?

Food security is the main priority

Fishing is a
basic
economic
activity



Research on biodiversity and
habitats



Is not a priority for
African Institutes



Lack of capacities



Improving Capacities

Filling the gap
..... Trying to
improve capacities
and fund activities
from 2010!!



Training activities

Cours sur benthos
ÈCOLE DOCTORALE DU CERESCOR

Professeur Ramil
Conakry, Juin 2013

Atelier étude du benthos
INDP de Cap Vert

Professeur Ramil et Belen Calero
Coordination: Vanda Monteiro
Mindelo, Mars 2014



Training activities

Séjours de formation Vigo

2012

- GUINEA

CERESCOR. Amadou O. Barry
2012 (2 mois)

- MAURITANIA

IMROP. Sidi Mohamed
2014, 2015, 2016, 2017 (4-5 mois)

- CABO VERDE

INDP. Keider Neves
2015, 2016(4-5 mois)
Master 2017-2019



Participation in Funding Calls

- Foundation Biodiversidad. **2010**
- MAE - AECID. **2011**
- Foundation Biodiversidad. **2011**
- Xunta de Galice. Prog. Coop eration. **2012**
- FAO - Proyecto CCLME. **2013**
- Agence Espagnole de Coop eration. **2014**
- Xunta de Galice. Prog. Coop eration. **2015**



Current Training activities

Capacitation program with Mauritanian and Cabo Verde Marine Institutes from 2014

- MAURITANIA
Sidi Mohamed
Thèse Doctoral
Benthos de la Mauritanie
2015-2020
- CABO VERDE
Keider Neves
Master 2017-2019
Thèse Doctoral
Benthos du Cabo Verde



Other countries are
interested in
training

Senegal, Guinea, Guinea-
Bissau,

Mozambique



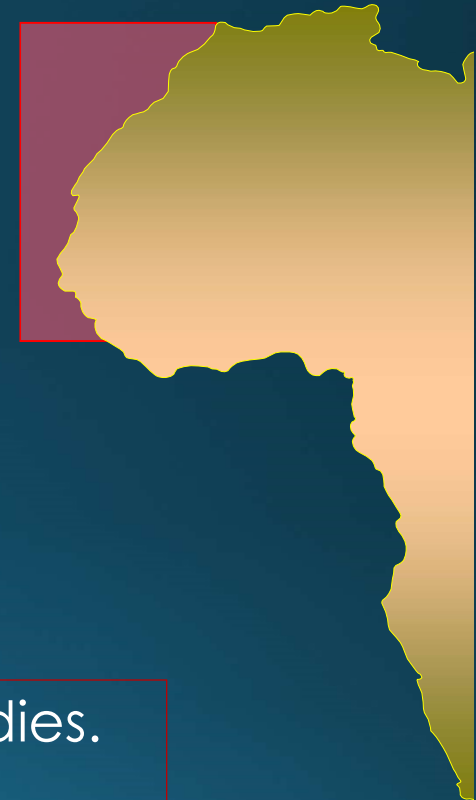
Improving Capacities: The Future

Nôtre Objective

Projet capacitation au niveau régional

*Building capacities for research,
conservation and management of
marine biodiversity and habitats in
Northwest Africa
(CCLME Region)*

- Creating a network of laboratories for biodiversity studies.
- Seven local institutes
- Long-term training program



- Improve skills in Identification of benthic invertebrates
 - Specific training workshops
- Equipment of local laboratories
- Telematic support and guidance of Spanish experts
 - Lectures, courses, masters degrees & PhDs
- On-board sampling methodology
- Training stays in Vigo
- Dissemination of research's results and outreach



Our objective

Set-up and fund a pioneer
Observatory on African Marine
Biodiversity

A Long-term Training Program for
young African marine researchers



Requirements

Flexible and autonomous management

Financing

Non-profit association
or Foundation

Sponsors are welcome!!!!

Thanks you very
much!!!!

