



A local perspective: Marine Protected Area in Pernambuco

APA MAR RECIFES SERRAMBI

Brazilian Oceanic Territory

Coastal Zone

ON SHORE: Coastal municipalities

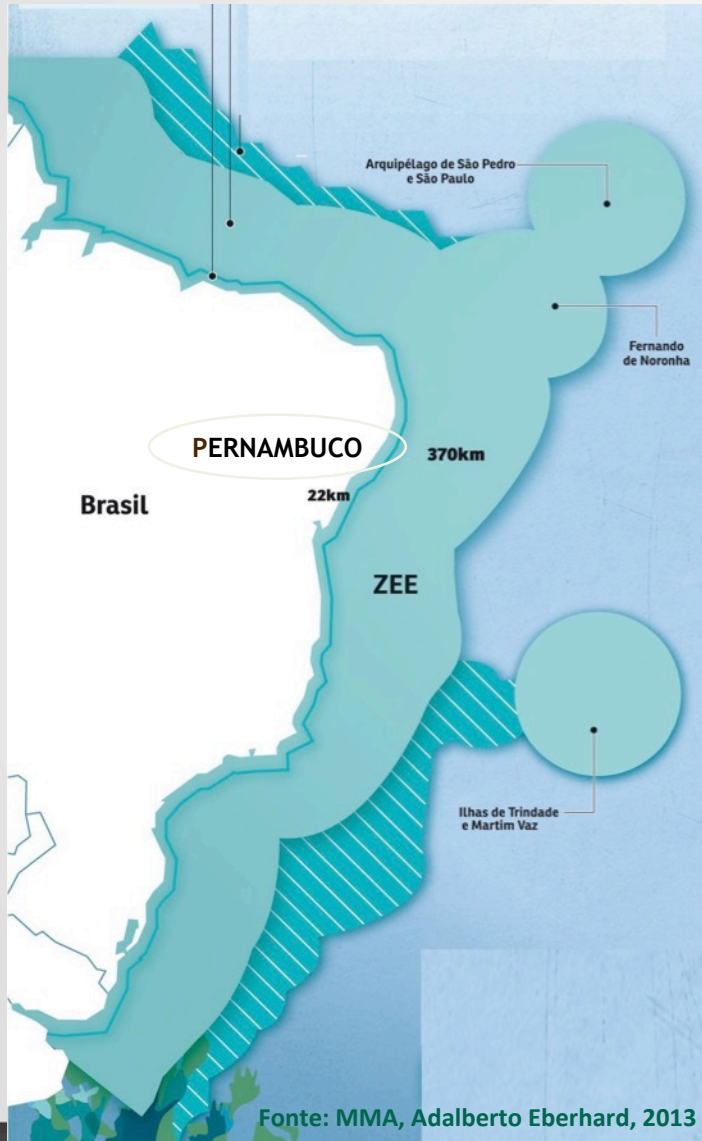
OFFSHORE: Territorial Sea
(12 nautical miles / 22 km)

Economic Exclusive Zone

200 nautical miles

Extended Continental Shelf
Revision of Continental Shelf
outer limit EEZ

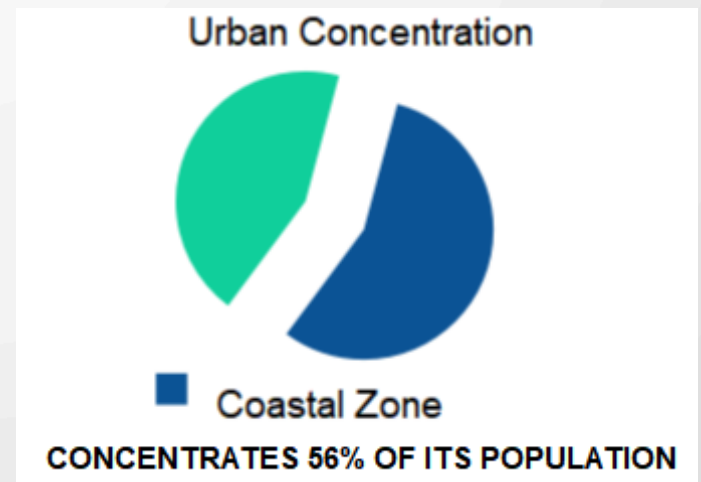
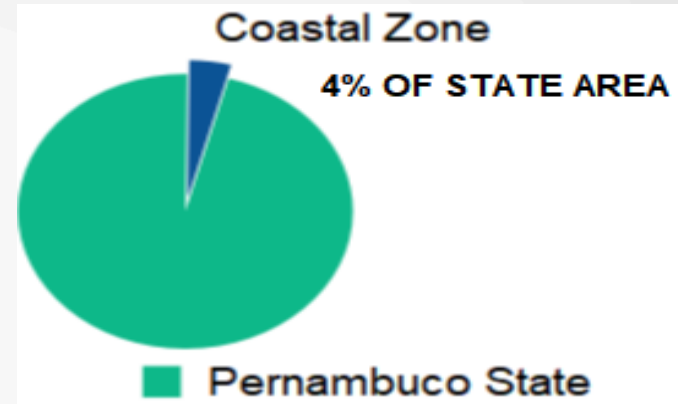
**Half of the Brazilian
continental territory!!**



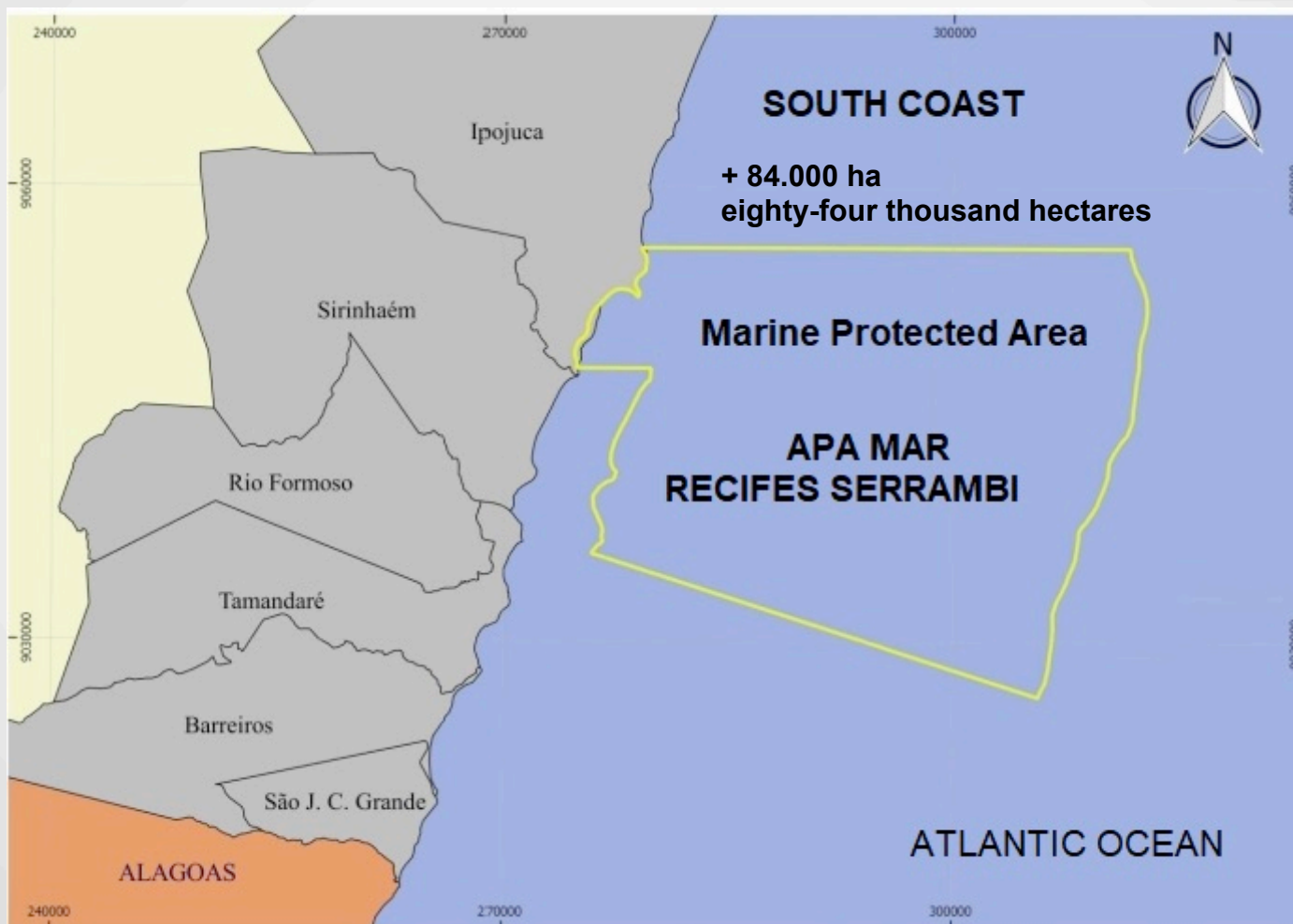
PERNAMBUCO COASTAL ZONE



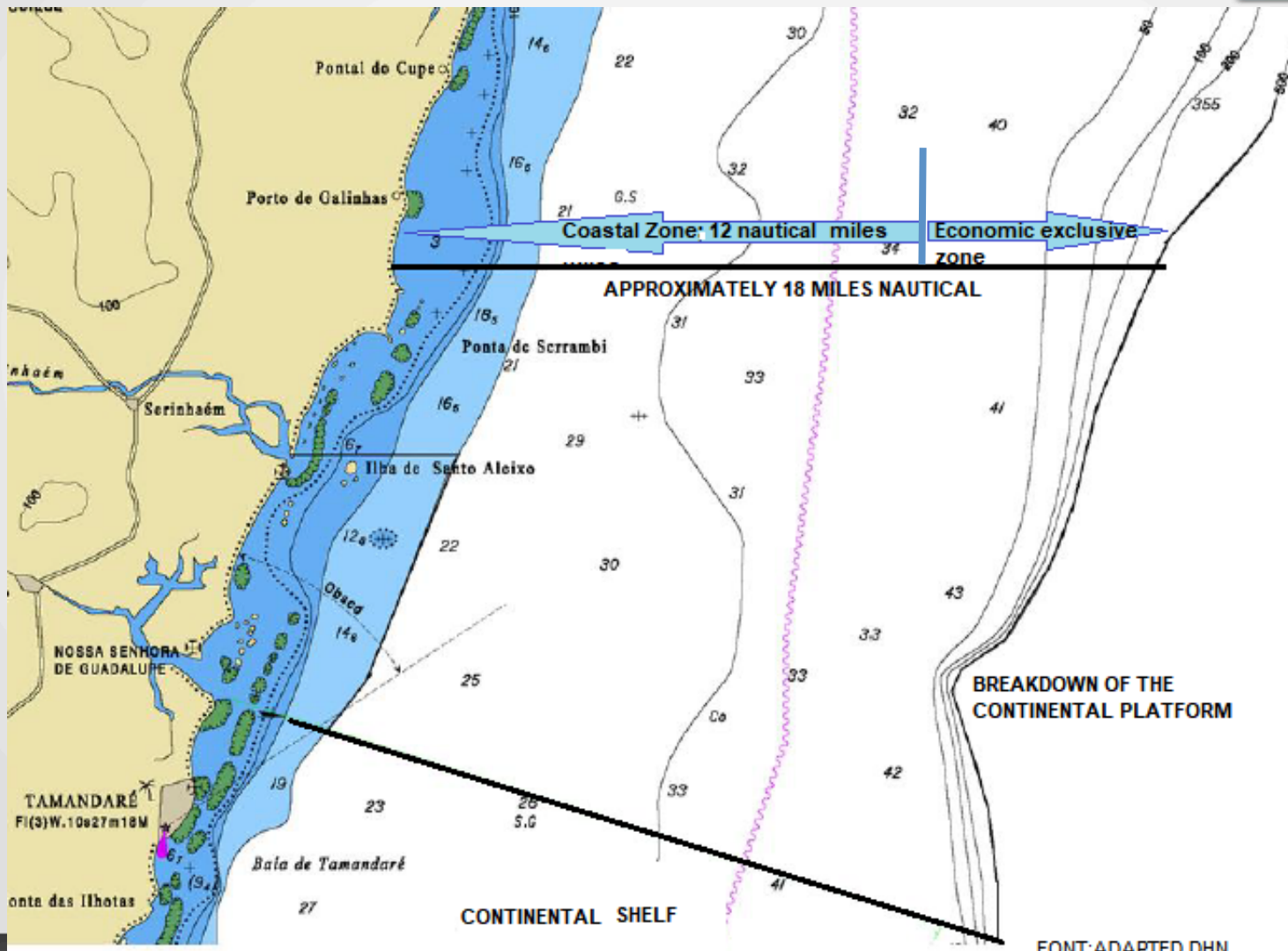
Extension of Pernambuco Coast: 187 Km



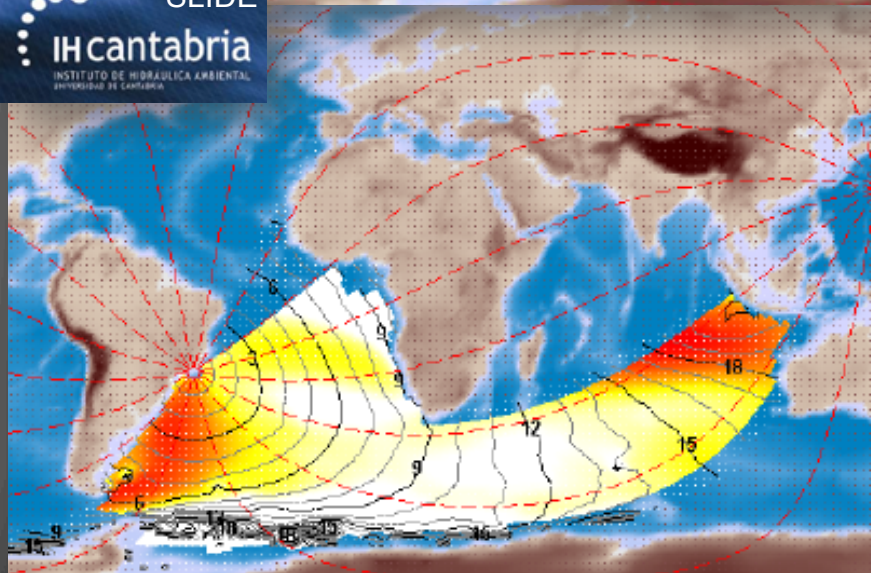
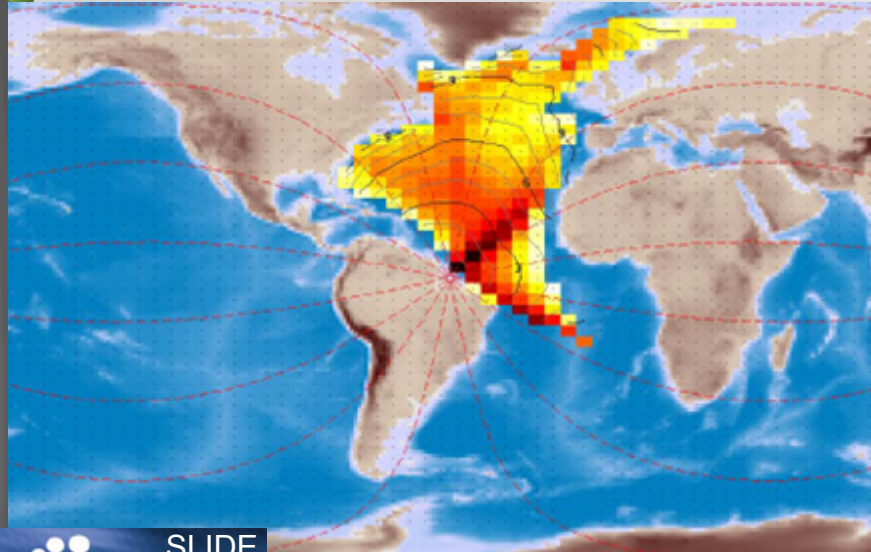
Marine Protected Area: APA MAR RECIFES SERRAMBI
Decree n.º 46.052- 2018 **NEIGHBORING MUNICIPALITIES**



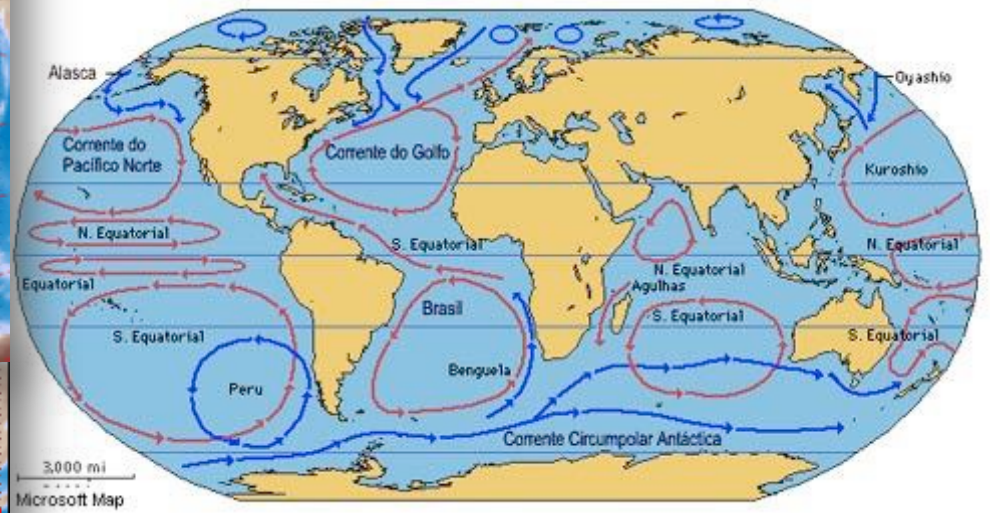
Marine Protected Area: APA MAR RECIFES SERRAMBI MARINE TERRITORY



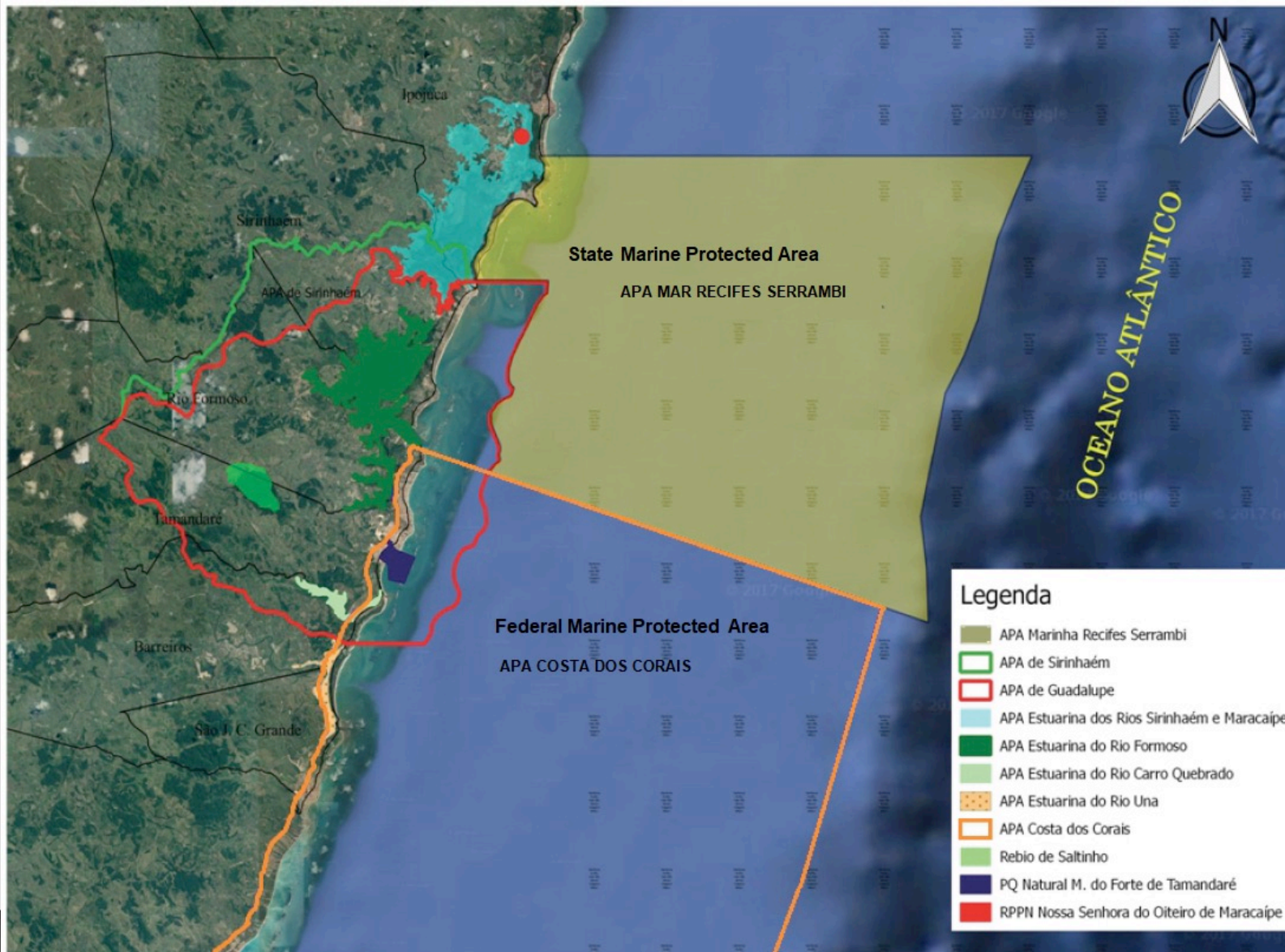
GLOBAL CONNECTIVITY



SLIDE
IHcantabria
INSTITUTO DE HIDRAULICA AMBIENTAL
UNIVERSIDAD DE CANTABRIA



Connection with other Conservation Units



Marine and Coastal Zone Features



Coastal Zone: Diversity of the occupation



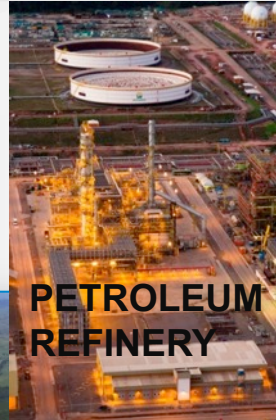
SOUTH COAST
Traditional villages
Subsistency economy
Summer residence

Low density



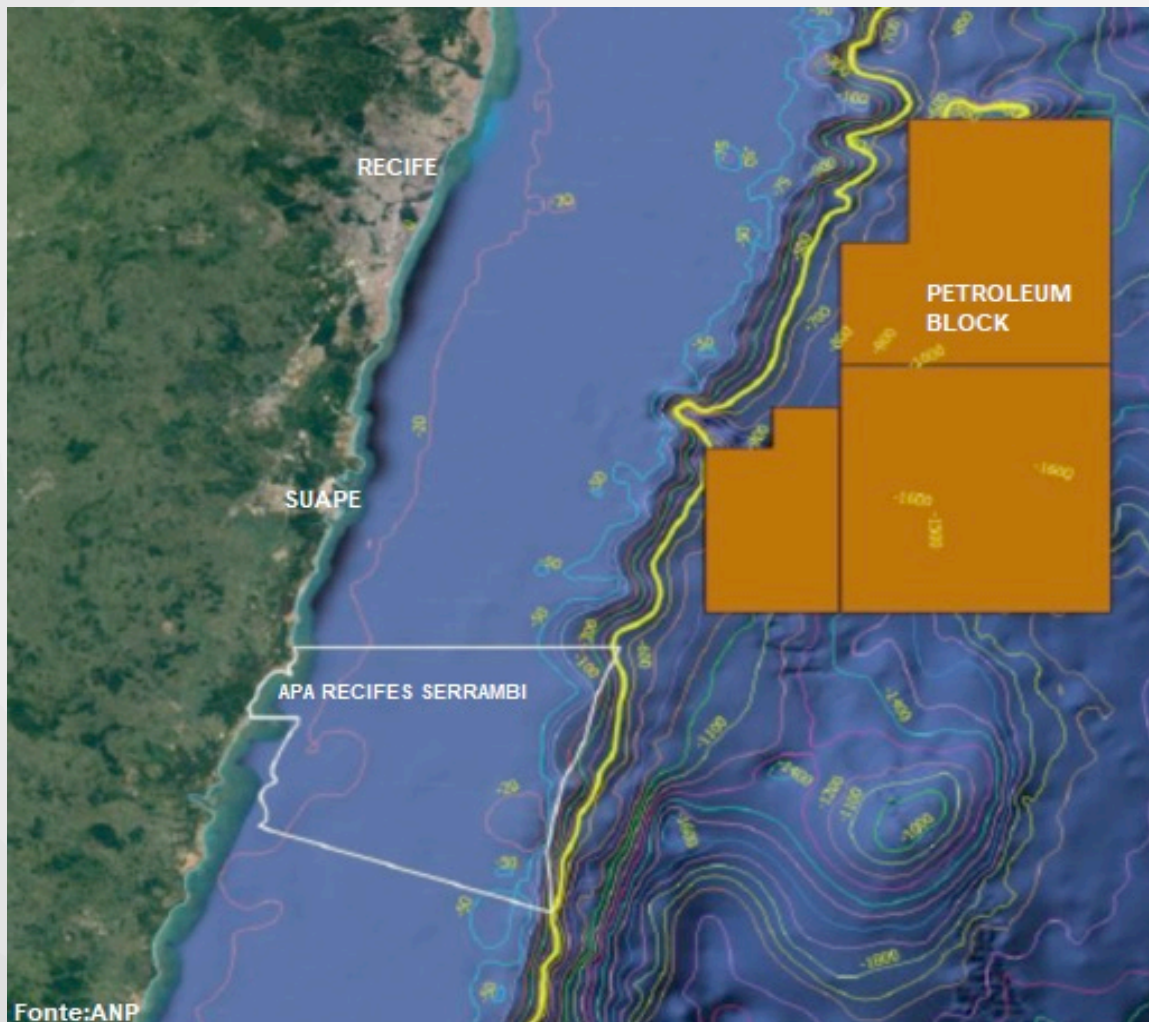
Development and Pressure Vectors

INDUSTRIAL PORT COMPLEX OF SUAPE



Development and Pressure Vectors: MINING

Oil and gas



Fonte:ANP

Development and Pressure Vectors

Touristic and real state exploration

Hotel, Guesthouses and allotments



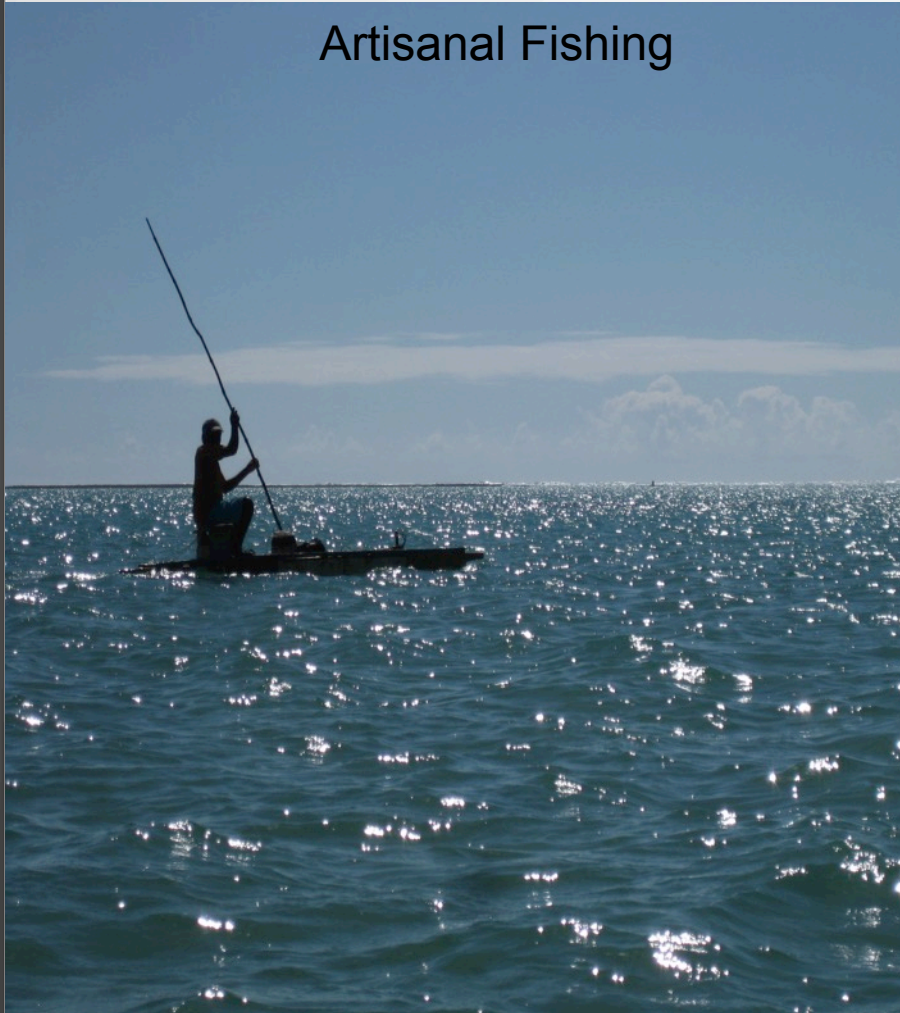
Big touristic enterprises

MASTERPLAN
Guadalupe Beach Condominium



Development and Pressure Vectors: Aquaculture and Fisheries

Artisanal Fishing



POTENTIALITIES AND BIODIVERSITY



SHIPWRECK

Shipwreck Galeão Serrambi

35m Deep
9km from Serrambi Beach



Fonte: Carvalho, 2017

POTENTIALITIES AND BIODIVERSITY

Sensible Areas



Fotos: Sidney Vieira

Main Objectives of the APA Recifes Serrambi

PROTECTION OF THE BIODIVERSITY OF THE COASTAL AND MARINE ENVIRONMENT



Fonte: Pedro H Pereira - PCR



Fonte: ICMBio

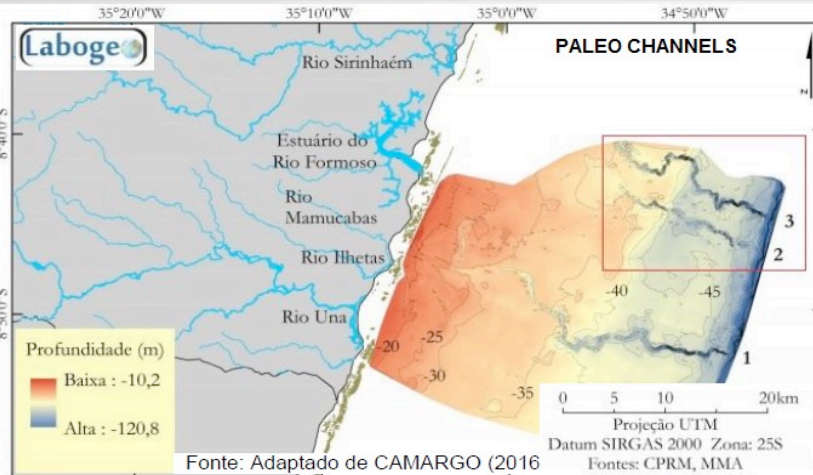


Sidney Vieira

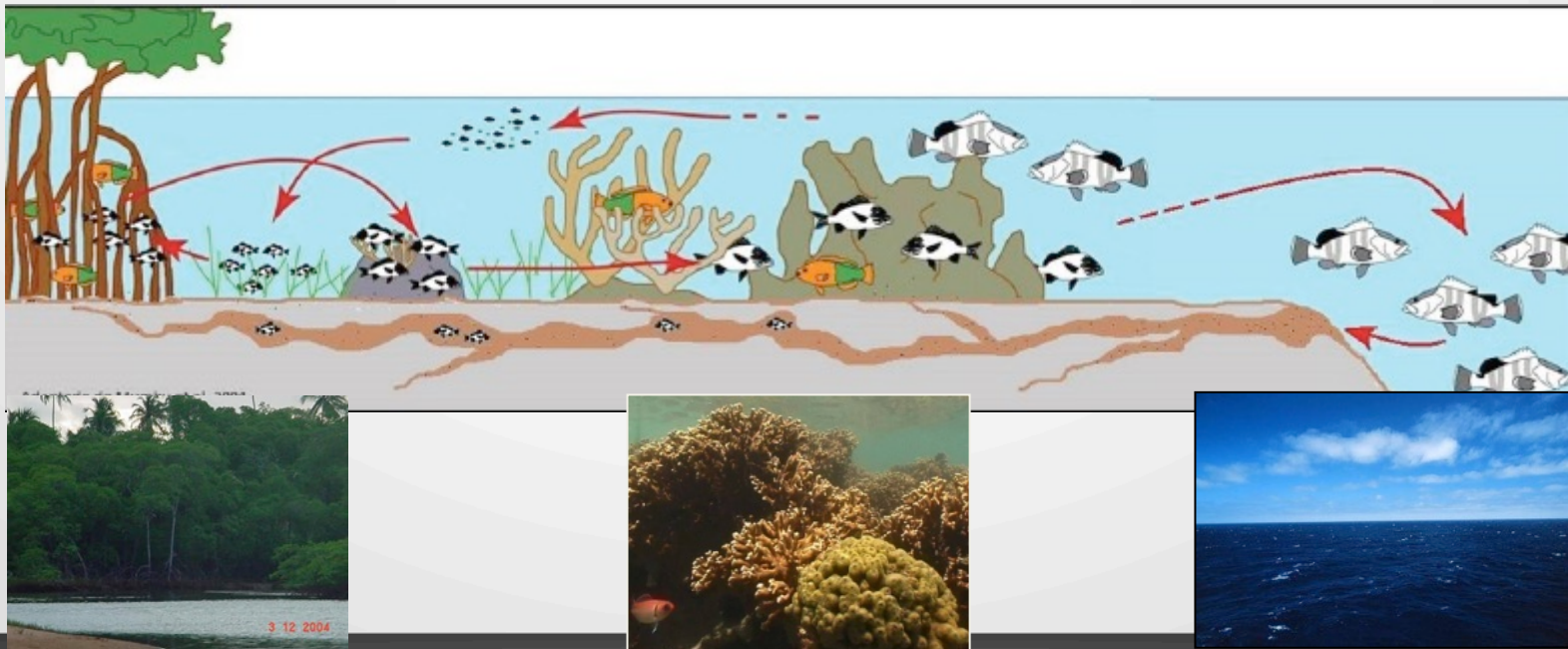


Main Objectives of the APA Recifes Serrambi

MAINTAINING BIOCONNECTIVITY



Marine species connectivity with estuaries, Adult fish comes to reproduce on the continental shelf and By the paleocannals larvae go to the estuary, the free flow of organisms during their life cycle.



Main Objectives of the APA Recifes Serrambi

Fortify Artisanal Fishing



Main Objectives of the APA Recifes Serrambi

COORDINATION OF THE DIVERSE USES OF THE COASTAL AND MARINE ENVIRONMENT



Fotos: Simone Marques



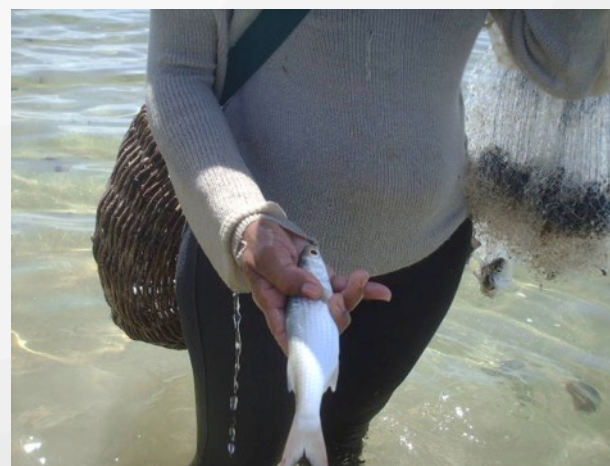
Sidney Vieira



Hugo Monteiro



Fonte: YouTube Pocinho summer! #serrambi #todomundotemshineray



Main Objectives of the APA Recifes Serrambi



Support Research, Production and Systematization of Knowledge

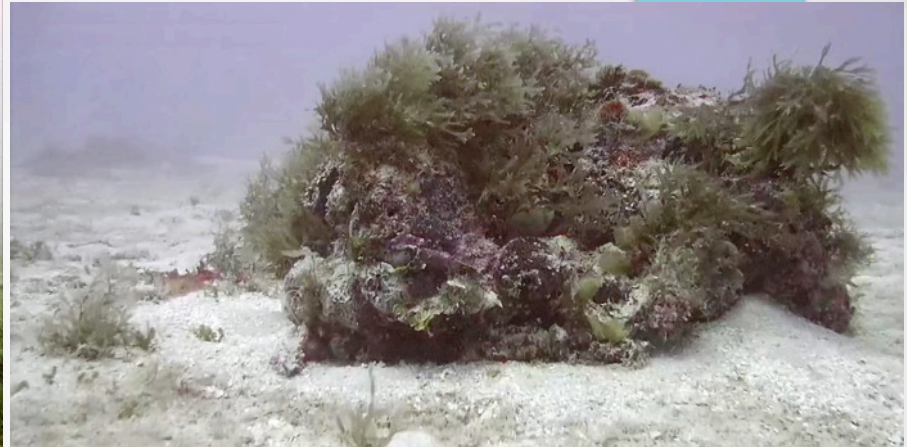


Fotos: Projeto Recifes Costeiros

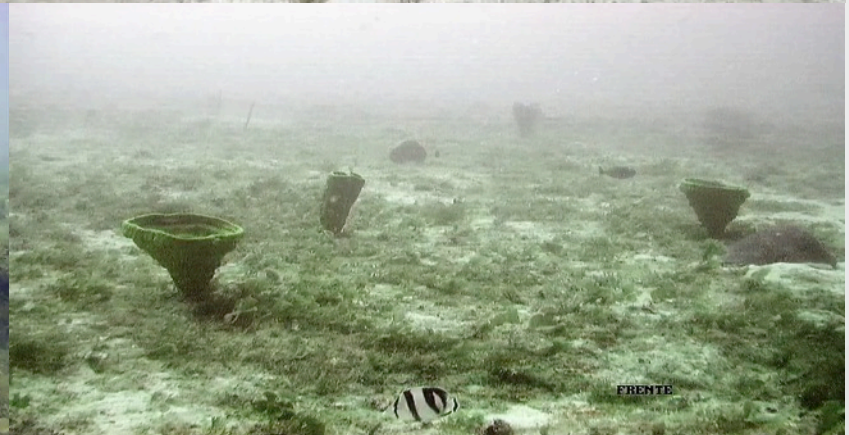
POTENTIALITIES AND BIODIVERSITY

First PELDS Expedition - December of 2018

12-10-2018 Seg 15:47:52



Fonte: Mauro Maida



POTENTIALITIES AND BIODIVERSITY

Second PELDS Expedition ?



Fonte: Mauro Maida

**Support is essential
to carry out
the 2nd Expedition**



INTEGRATED PROJECTS AND RESULTS



Ministério Federal
do Meio Ambiente, Proteção da Natureza,
Construção e Segurança Nuclear

da República Federal da Alemanha



MINISTÉRIO DO
MEIO AMBIENTE

The Challenge:

Implementing actions that favoring connectivity, considering the integration between environmental conditions the continent and the marine environment.

ZONING OF NAUTICAL ACTIVITIES - ZATAN

Rio Formoso Estuary

16

PROJETO
TERRAMAR

Setembro, 2018



To order the multiple uses of the area, considering fishing, nautical, tourist and other socioeconomic practices, compatible with environmental conservation



2018 – APA DE GUADALUPE

Foto: Fabiana Cava / GIZ



Implementation of Protected Marine and Coastal Areas - APA of Guadalupe

(MMA- World Bank- SEMAS-PE)





Great Opportunity to support the implementation
of the MSP in the first State Marine Conservation Unit.
APA Recifes Serrambi !!!!!

ATLAS FROM THE VULNERABILITY OF PERNAMBUCO COASTAL EROSION AND CLIMATE CHANGE



Identification and mapping of vulnerable
areas of the coastal zone

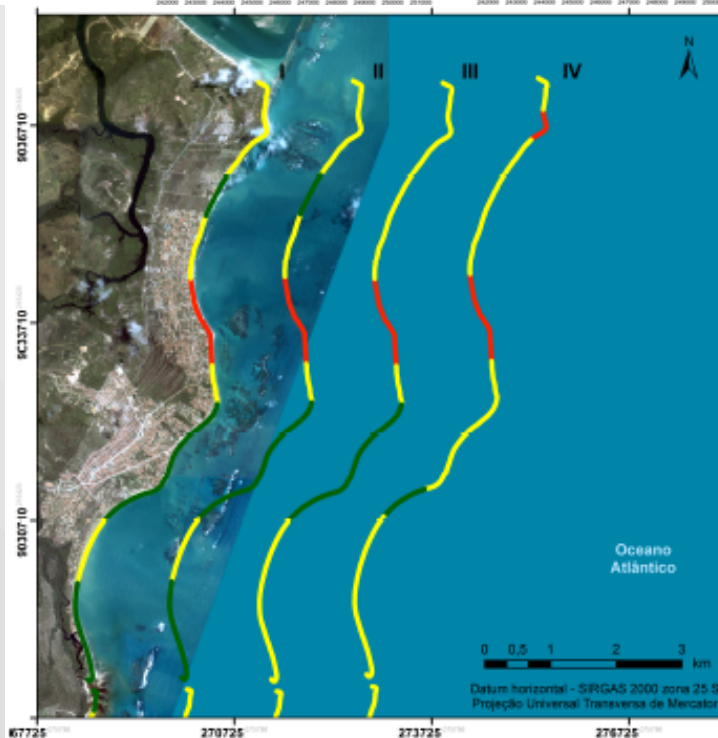
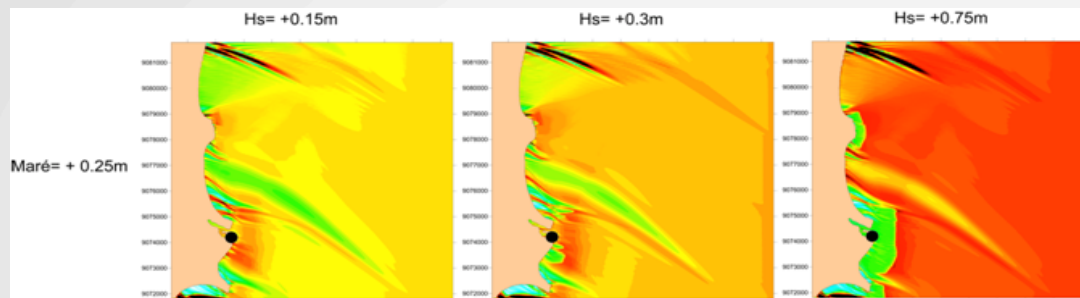
Atlas de Vulnerabilidade

à Erosão Costeira e Mudanças Climáticas

em Pernambuco



ATLAS DA VULNERABILIDADE DE PERNAMBUCO



VULNERABILIDADE COSTEIRA ÀS MUDANÇAS CLIMÁTICAS - TAMANDARÉ -

Legenda
Grau de vulnerabilidade

- Nula ou Baixa
- Moderada
- Alta

Projeções:
I* - $H_s = 1,50$ m ARNMM = 0,00 m
II - $H_s = 1,65$ m ARNMM = 0,25 m
III - $H_s = 1,90$ m ARNMM = 0,50 m
IV - $H_s = 2,25$ m ARNMM = 1,00 m
*Situação atual

Imagem Quick Bird - Agência CONDEPE/IDEM
Dados vetoriais: EDGE
Autor: Karoline A. Martins (2015)

Pernambuco Recife Oceano Atlântico
Tamandaré

0 25 50 km

INDICADORES

INDICADOR	Intensidade de vulnerabilidade		
	Baixa	Moderada	Alta
Exposição relativa às ondas	Abrigado	Semi-abrigado	Exposto
Nível do mar	< 0,5 m	0,5 – 0,9 m	> 0,9 m
Altura das ondas incidentes	< 0,5 m	0,5 – 1,25 m	> 1,25 m
Distância da urbanização à linha de costa	> 30 m	15 – 30 m	< 15 m
Densidade populacional	Baixa	Média	Alta
Tipo de urbanização	Quiosques	Casas	Prédios
Tipo de substrato	Consolidado	-	Inconsolidado
Conservação das dunas	Duna vegetada	Duna não vegetada	Ausência de dunas
Variação da linha de costa	Acreção ou estável	Erosão média	Erosão alta
Indicadores visuais de erosão	Baixo	Moderado	Alto

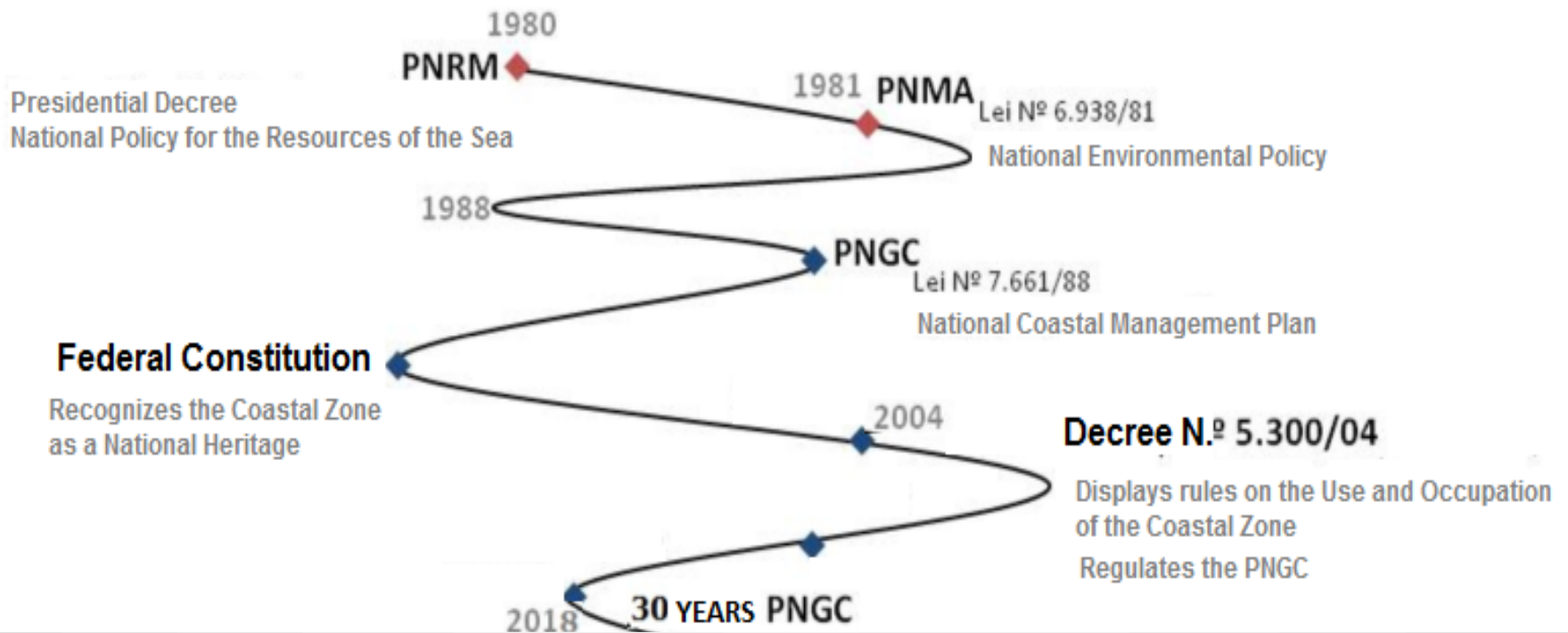
LEGAL AND INSTITUCIONAL BASIS



Photo: Sidney Vieira

LEGAL INSTRUMENTS

Coastal Management in Brasil



National Policy for the Resources of the Sea

PNRM

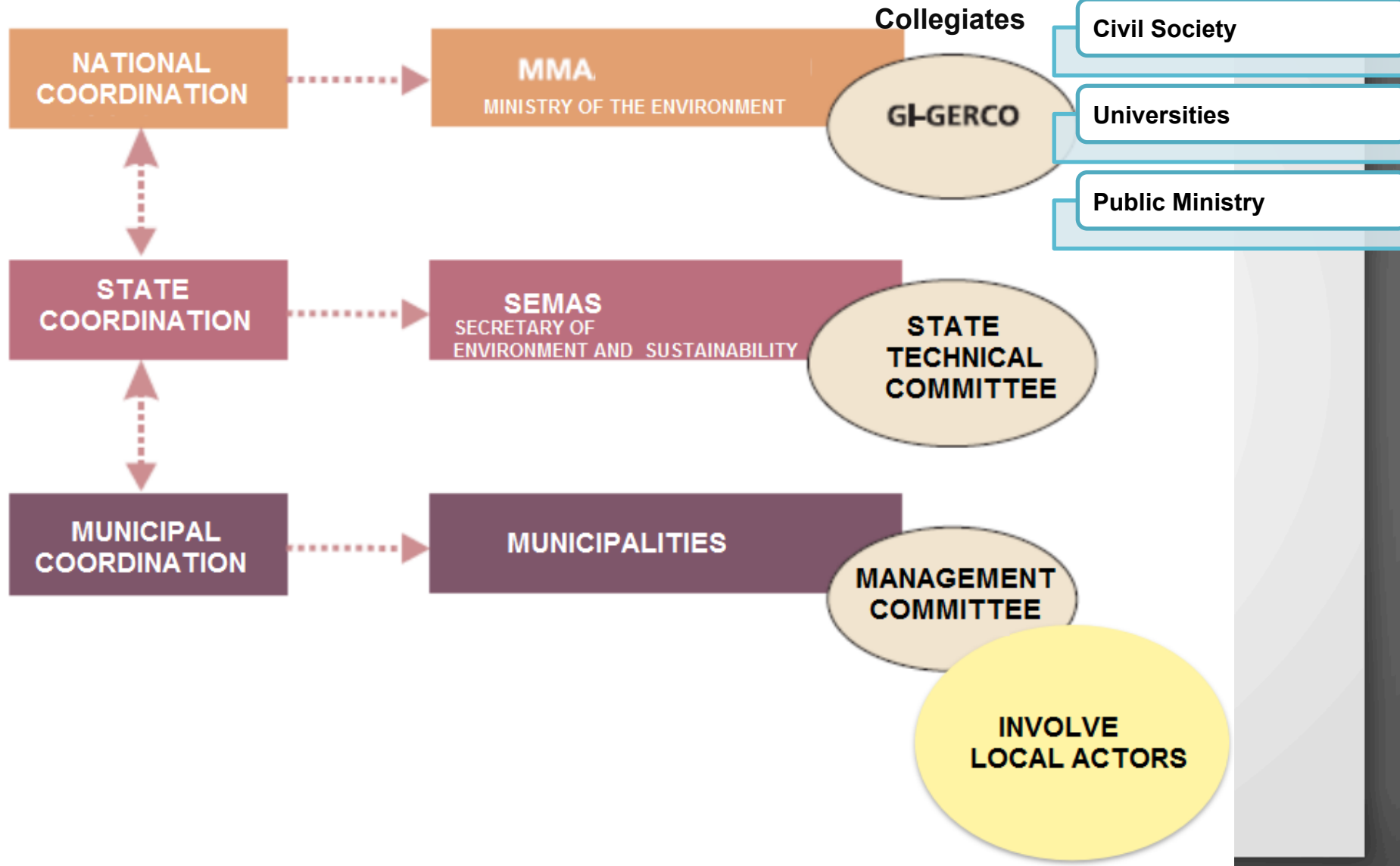


Interministerial Commission Resources of the Sea

- Established by Decree 74.557 / 74
- Coordinated by Brazilian Navy
- Composed by federal institutions
- Responsible by the National Policy for the Resources of the Sea

INSTITUTIONAL ARRANGEMENT

ICZM - Integrated Coastal Zone Management



STATE ENVIRONMENTAL SYSTEM

STATE ENVIRONMENTAL SYSTEM

FEDERAL

CONAMA

MMA

IBAMA

ICMBio

SERVIÇO
FLORESTAL
BRASILEIRO

STATE

CONSEMA

SEMAS

CPRH

CIPOMA
E
DELAGACIA DE
MEIO AMBIENTE

MUNICIPAL

CONDEMA

MUNICIPALITIES

Secretaria de
Meio Ambiente e
Sustentabilidade





Foto: Pedro H. Pereira PCR

SECRETARIA
DE MEIO AMBIENTE E
SUSTENTABILIDADE



GOVERNO DO ESTADO
Pernambuco

PRESEÇA QUE FAZ A DIFERENÇA



ANTÔNIO BERTOTTI

Secretário

INAMARA MÉLO

secretária executiva

Equipe de Gerenciamento Costeiro

ANDREA OLINTO

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LUIZ COSTA

SIDNEY VIEIRA

WIALLA FARIAS

Apoio Luana Ferreira