



Protection of National Assets via the Brazilian Navy: Strategic Programs

Admiral EDGAR, General Director of Brazilian Navy Materiel

Summary



- ✓ **Contextualization**
- ✓ ***Tamandaré* Class Frigates Program**
- ✓ **Blue Amazon Management System (SisGAAz)**
- ✓ **Submarine Development Program (PROSUB)**

Political-Strategic Alignment



Brazilian Navy Mission

“Prepare and deploy Naval Power in order to contribute to:

- ✓ Homeland Defence;
- ✓ guarantee the Constitutional Powers;
- ✓ fulfillment of Subsidiary Duties; and
- ✓ Support Foreign Policy.”



National
Defense Policy



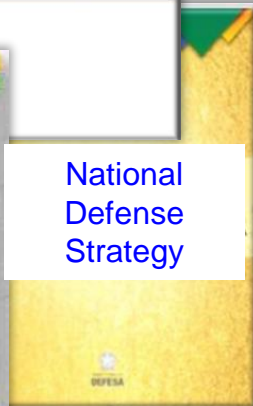
Defense
White Paper



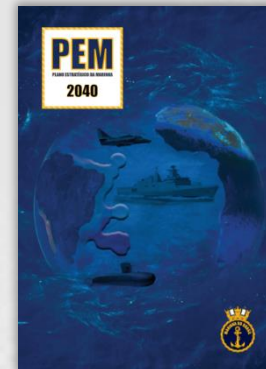
SENADO FEDERAL
CONSTITUIÇÃO
da República Federativa do Brasil



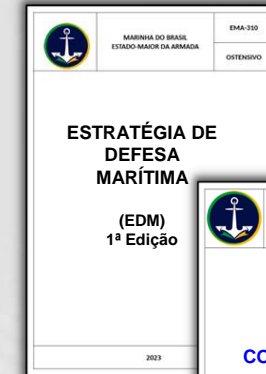
Lei Complementar nº 97
de 09 de junho de 1999



National
Defense
Strategy



PEM
2040



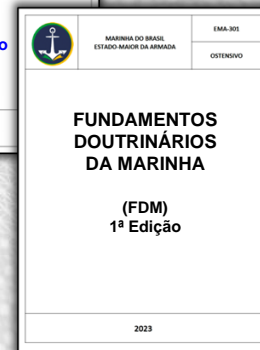
ESTRAT\u00c9GIA DE
DEFESA
MAR\u00cdTIMA

(EDM)
1\u00b0 Edi\u00e7\u00e3o



NAVY
CONFIGURATION
PLAN

(PCF)
1\u00b0 Edi\u00e7\u00e3o



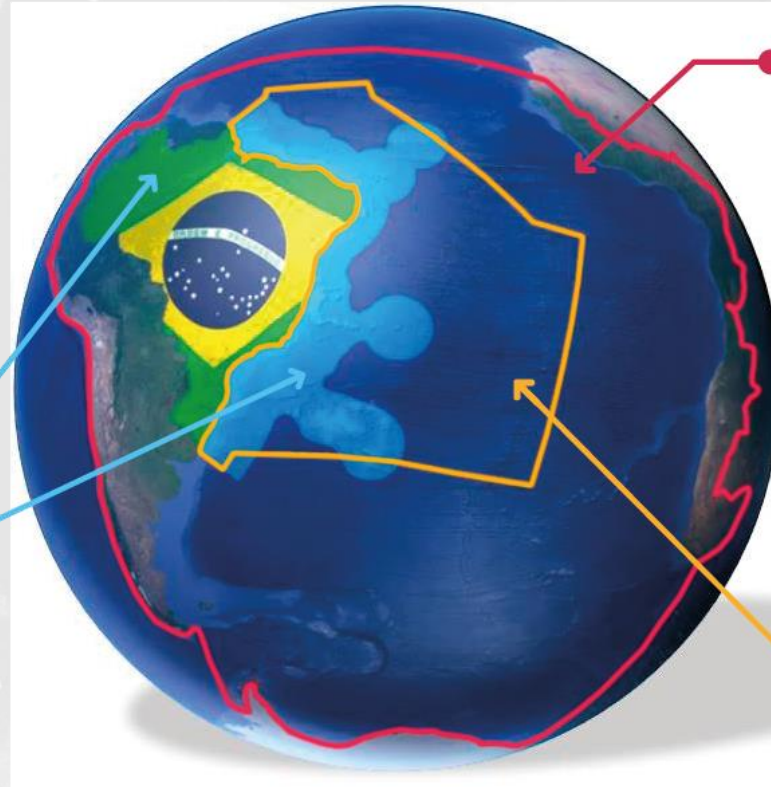
FUNDAMENTOS
DOCTRIN\u00c1RIOS
DA MARINHA

(FDM)
1\u00b0 Edi\u00e7\u00e3o

Operational Environment




BRAZILIAN
JURISDICTIONAL WATERS
60.000 km of Waterways
3,5 Mi NM²




STRATEGIC SURROUNDING

34,2 Mi NM²


SAR AREA
9,0 Mi NM²

Dichotomy?



Current Threats



Illegal, Unreported and Unregulated Fishing



Smuggling



Drug Trafficking and Organized Crime



Piracy



Disaster Relief



Accidents and Facts of Navigation



Water Pollution



Illegal Mining



Deforestation

Latent Threats



Red Sea?



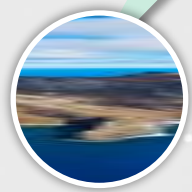
Lobster War



2ª WW



1ª WW



Trindade Island

Current Geopolitical Situation?

Tamandaré Class Frigates Program (MEKO A-100 MB)



Tamandaré Class Frigates

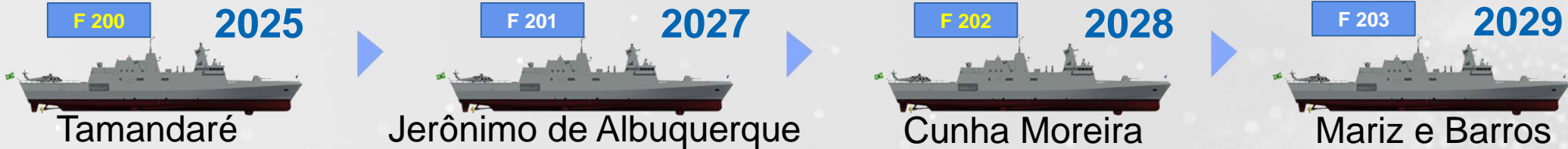


EMGEPRON

LENGTH	107,20 m
BREADTH	15,95 m
DRAFT	5,2 m
DISPLACEMENT	3.455 ton
PROPULSION	CODAD
ECON SPEED	14 knots
MAX SPEED	26 knots
RANGE	5.500 NM @14 knots
COMPLEMENT	136



Tamandaré Class Frigates Program



Remarks

TCF1 -> Keel laying (MAR2023) ✓

TCF2 -> 1st plate cut (NOV2023) ✓

TCF2 -> Keel laying (06JUN2024)

TCF1 -> Launching (05AUG2024)

TCF3 -> 1st plate cut (DEC2024)

Capacity Building

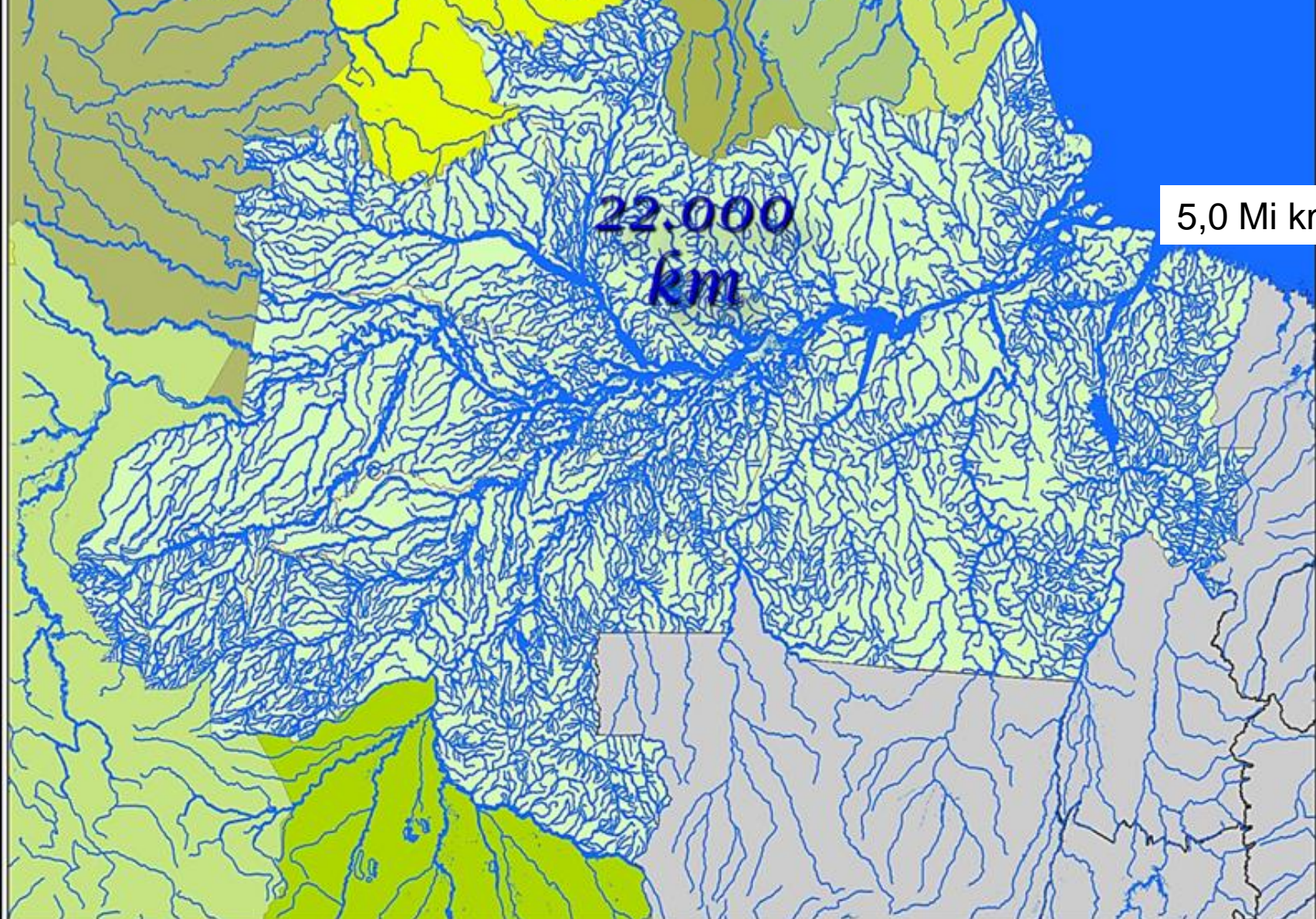
Maintenance Business Model

Nationalize Items

Frigate *Tamandaré*



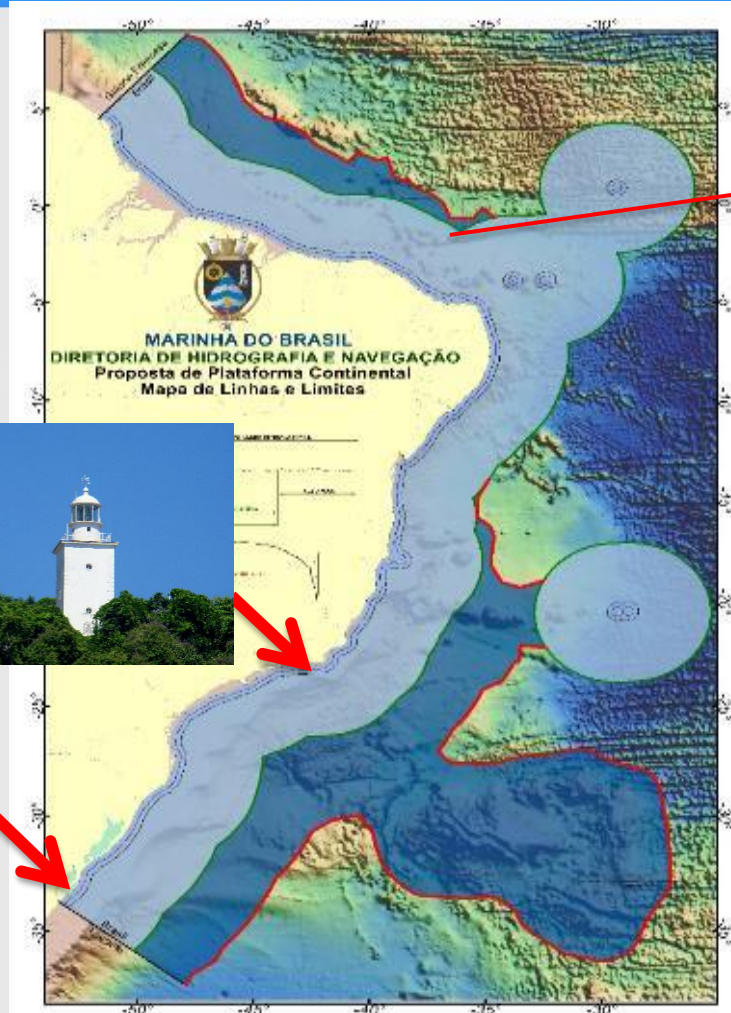
**Tamandaré Frigate
tkms Shipyard (Itajaí),
09MAY2024**



22.000
km

5,0 Mi km²

Blue Amazon Management System (SisGAAz)



5,7 Mi km²

Surveillance Unit in Castelhanos Lighthouse



OTH Radar in Albardão Lighthouse



Hybrid Solution:
Surveillance Unit
OTH Radar
UAV
Satellite

PROSUB (Submarine Development Program)



PROSUB STATE PROGRAM



Brazil and France State Agreement

Contract Signatures

Start of Civil Works (Itaguaí)

Start Construction of Submarines (NUCLEP)

1st plate cut of the qualification section of SNCA

Delivery of the CANS



Start Transfer of Knowledge (ToK)

Delivery of 1st Conventional Submarine "SRIachuelo"

Delivery of the 2nd Conventional Submarine "SHumaitá"



Delivery forecast for the 3rd and 4th Conventional Submarines

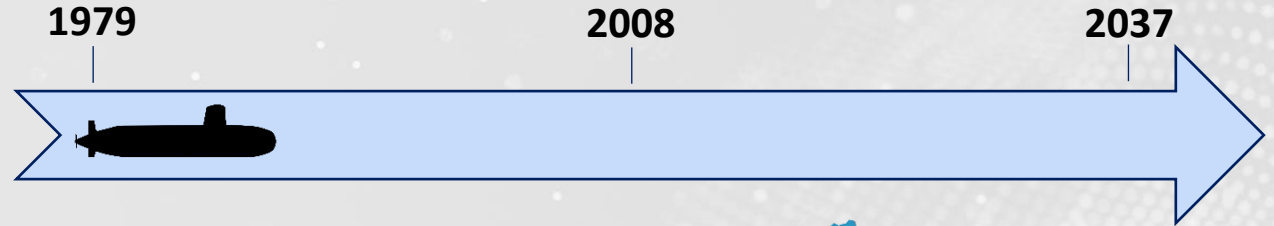
PROSUB



PROSUB STATE PROGRAM

Three Basic Premises: ToT (except nuclear area); nationalization of equipment and systems; and personnel training.

➤ LONG TERM OF EXECUTION



➤ TRANSFER OF TECHNOLOGY



➤ NATIONALIZATION PROGRAM



PROSUB



PROSUB STATE PROGRAM

Industrial Infrastructure
(Naval Base, Shipyards and Nuclear Island)

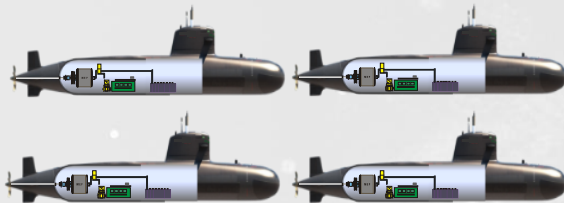


Primary Object



*Conventionally Armed
Nuclear Submarine (CANS)*

4 Conventional Submarines



Conventional Submarines (S-BR)



2018	2019	2020	2021	2022	2023	2024	2025	2026
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S. RIACHUELO



S. HUMAITÁ



S. TONELERO



S. ANGOSTURA



Launch of Submarine *Tonelero*

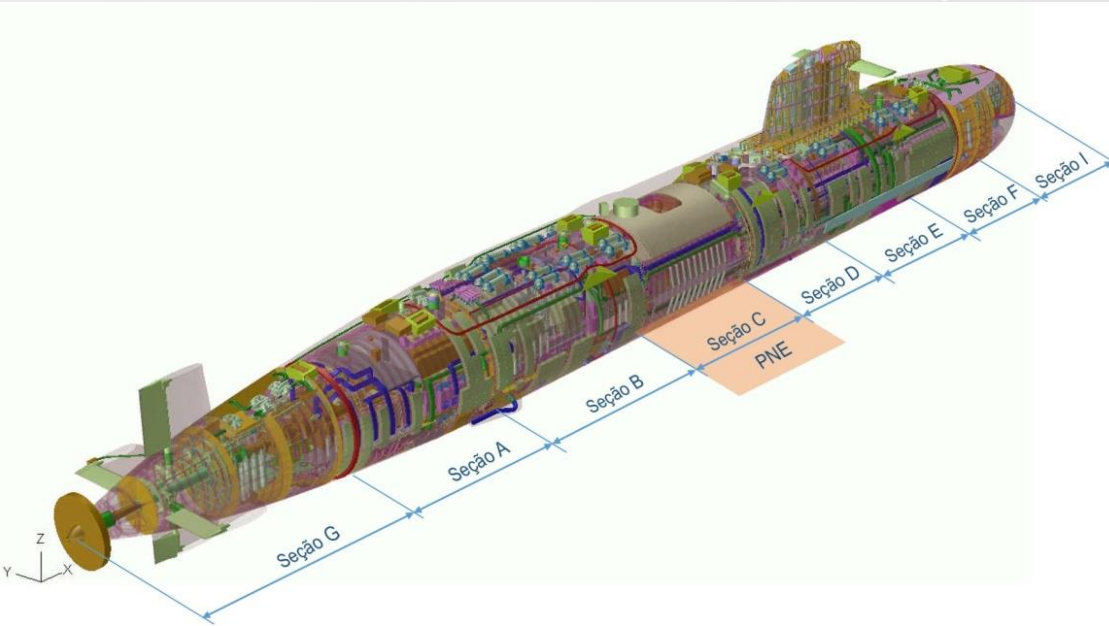


March 27th

Conventionally Armed Nuclear Submarine (CANS)



PROSUB
STATE PROGRAM



- Nuclear Plant is an Autochthone Project (100% Brazilian)
- NOV2020: Approval of the Preliminary Project. In NOV2021, obtained the 1st partial construction license.
- APR2022: completed the design phase, with the detailing phase beginning in AUG2022.
- Some components of LABGENE (prototype) have been designed and delivered.
- OCT2023: Cut of the 1st Plate of Qualification Section.



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