

Brazilian and Argentine Nuclear Submarine Projects: How far are they and what does AUKUS mean for them?



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GRIPS-SIPS/SSP Online Seminar

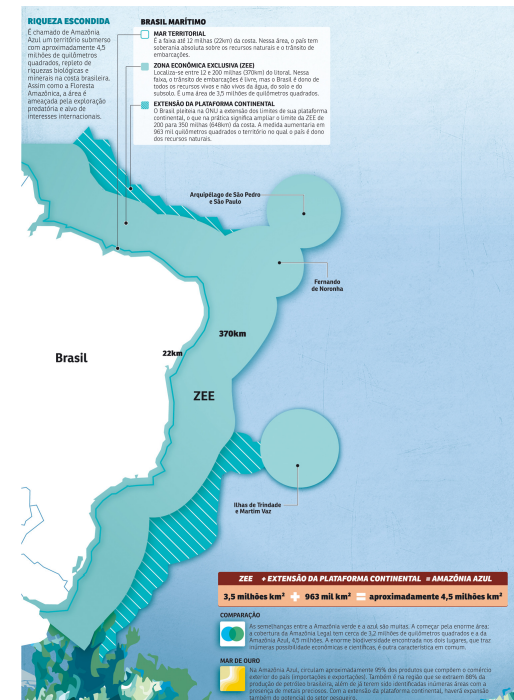
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Outline

- Argentine and Brazilian nuclear submarine projects: motivation and historical paths
- Argentine and Brazilian nuclear submarines as possible threats to the nuclear nonproliferation regimes?
- Possible solutions?
- The relationship with AUKUS

Argentine and Brazilian nuclear submarine projects: motivations

- External threats (Falklands/Malvinas war and absence of external guarantees)
- International prestige
- Defense of the undersea resources (Brazil's *Blue Amazon* and *Maritime Argentina*)
- Acquisition of key nuclear technologies (Brazil's military nuclear projects)



Argentine and Brazilian nuclear submarine projects: historical path of the nuclear programs

Argentina

Nuclear projects since 1950

Coherence of the nuclear program

Research reactors since 1957

3 Nuclear power plants (HWR from Germany, Canada) from 1971

Mastery of the nuclear fuel cycle (uranium enrichment lab)

Existing nuclear industry

Capability to build and export research reactors

Brazil

Nuclear projects since 1951

Coherence of the nuclear program

Research reactors since 1958

2 Nuclear power plants (LWR from US, Germany) from 1974

Mastery of the nuclear fuel cycle (uranium enrichment)

Existing nuclear industry

Strong military research projects (submarine nuclear project)

Argentine and Brazilian nuclear submarine projects: historical path

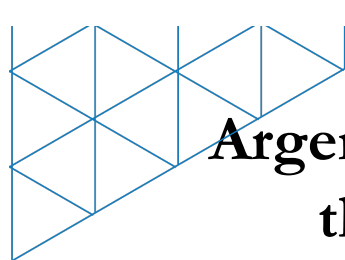
- First Argentine nuclear plan (early 1970s and possible Italian cooperation)
- Brazil's ambition as a possible reaction to Argentina
- Brazil's Navy/civilian project as a part of the secret autonomous nuclear program (1979-1990): uranium enrichment, submarine design, reactor miniaturization
- Low profile Navy project (1990-2003)
- Resumption of the submarine project (2003 -)
- Inclusion of the submarine project in 2008 Brazil's National Defense Strategy
- 2008 Brazil – France Agreement
- Possible resumption of Argentine projects, but financial limitations since 2009

Argentine and Brazilian nuclear submarine projects: current state

Advanced state of the PROSUB Brazilian program (two first conventional submarine built)

Brazil's problem: construction of the nuclear reactor

Possible Argentine – Brazilian cooperation?
(historical example and Argentine capability)



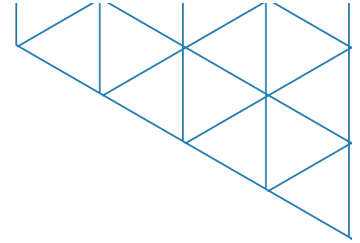
Argentine and Brazilian nuclear submarines as possible threats to the nuclear nonproliferation regimes?

- NPT loopholes over naval nuclear propulsion (Argentine consciousness of the issue since the early 1970s)
- Possible use and diversion of HEU as fuel for naval nuclear propulsion
- Possible exclusion of military facilities from the international safeguards

Argentine and Brazilian nuclear submarines as possible threats to the nuclear nonproliferation regimes?

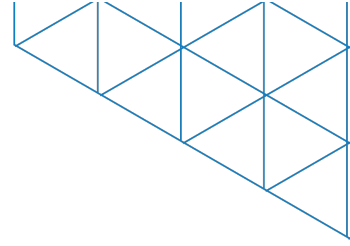
- 1986 establishment of the Peace and Cooperation South Atlantic Zone
- Brazil's and Argentina's creation of ABACC mutual safeguards and control regime and system (from 1991)
- Quadripartite Safeguards Agreement (Br-Arg-ABACC-IAEA)
- Full participation in the Tlatelolco Treaty for Latin America NWFZ from 1994
- Participation in the NPT from 1994 (Arg) / 1998 (Brazil)
- Refusal to accept the Additional Program

Possible solution?



- Brazil's use of LEU for naval propulsion (difference from AUKUS)
- Discussion over special inspection procedures since 2015 and especially from 2022
- (Brazil's decision not to include special safeguards in the TNPW)

Relations with AUKUS



- Different security contexts
- Brazil's willingness to build nuclear submarines indigenously
- Brazil's precedent for reaching a safeguards agreement
- Lack of NWS commitment for providing nuclear submarines

Thank you very much!

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