



Rio de Janeiro, October 4, 2022

REX/INT/REEX 0005/2022

To Lieutenant-Colonel Teddy Brat
Chef de Etat-Major Interministériel la Zone de Défense et de Sécurité de
Guyane (EMIZ)
Rue Fiedmond, 97.300
Caiene – French Guiana

Subject: Meeting – Petrobras' Oil and Gas activities and Emergency
Response Plan in the Brazilian Equatorial Margin

Dear Mr.,

On Behalf of Petrobras, I would like to thank you and Commissaire Mr. Benjamin Potié - officer responsible for Maritime Authority at French Guiana - for our meeting last Friday, September 30th, when we presented the Petrobras Emergency Response Plan for oil spill in the exploratory Block FZA-M-59, located in the offshore of the Brazilian State of Amapá.

Please find attached the presentation we made during the meeting.

As we discussed, the proximity to the jurisdictional waters of French Guiana, of about 50 km, recommends maintaining a direct and functional emergency communication channel with the competent authorities in Cayenne, so that the cross-border response provided for in our Emergency Response Plan can be as effective as possible.

In this sense, we appreciated the confirmation of your name and of Mr. Potié as focal points for communication with Petrobras in an emergency situation. We also appreciated the opportunity to showcase our risk management and emergency response methodology, including technical and operational capability in terms of human resources, vessels, aircraft and equipment to control and minimize the impacts of any eventual incident.

In order to enhance the effectiveness of our emergency response, we would be delighted if you and other emergency teams from French Guiana could participate as observers in our exercise scheduled to take place in the 3rd or 4th week of next November.

We are also planning to visit Cayenne in the first week of November and therefore would appreciate if you can confirm your availability to hold a face-to-face meeting with our team on this occasion. The objective would be to

strengthen cooperation ties and anticipate the means to facilitate the entry of personnel, equipment, vessels, and aircraft involved in any emergency response.

Please let us know if you need any further information. We will be glad to hold another virtual meeting in the next days, should you deem convenient.

Respectfully,

Francisco Augusto Vervloet do Amaral

There are not enclosure(s)

**With copy benjamin.potie@intradef.gouv.fr;
to: olivier.fontan@diplomatie.gouv.fr**

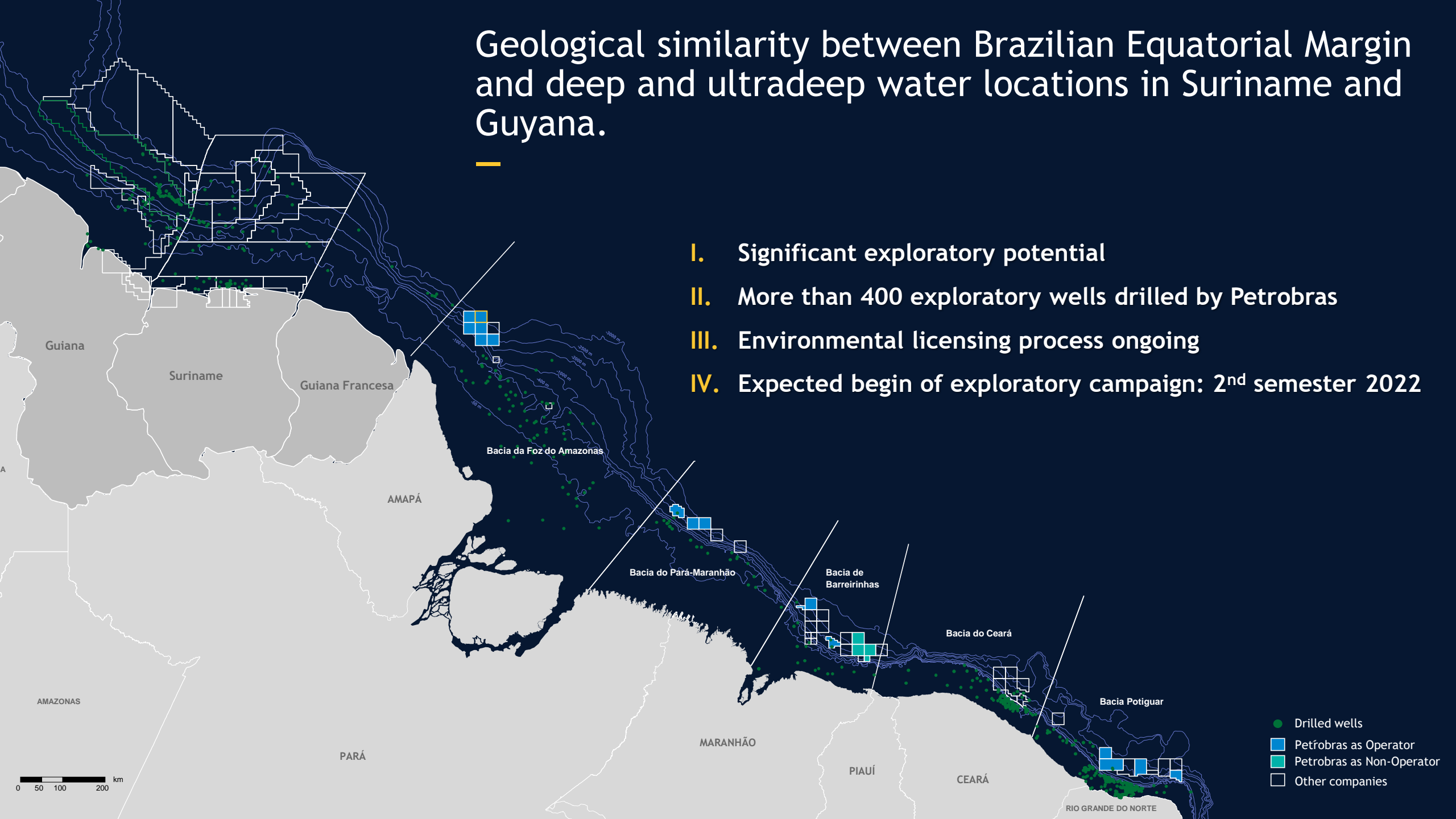
O&G Activities and Emergency Response in Brazilian Equatorial Margin

—
A perspective to French Guyana Authorities

The Drilling Project

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Geological similarity between Brazilian Equatorial Margin and deep and ultradeep water locations in Suriname and Guyana.



- I. Significant exploratory potential
- II. More than 400 exploratory wells drilled by Petrobras
- III. Environmental licensing process ongoing
- IV. Expected begin of exploratory campaign: 2nd semester 2022

AMAPÁ DEEP WATER BLOCKS

Exploratory Activities

06 blocks

*08 Committed
Wells*



THE PROJECT

Well ID: Morpho

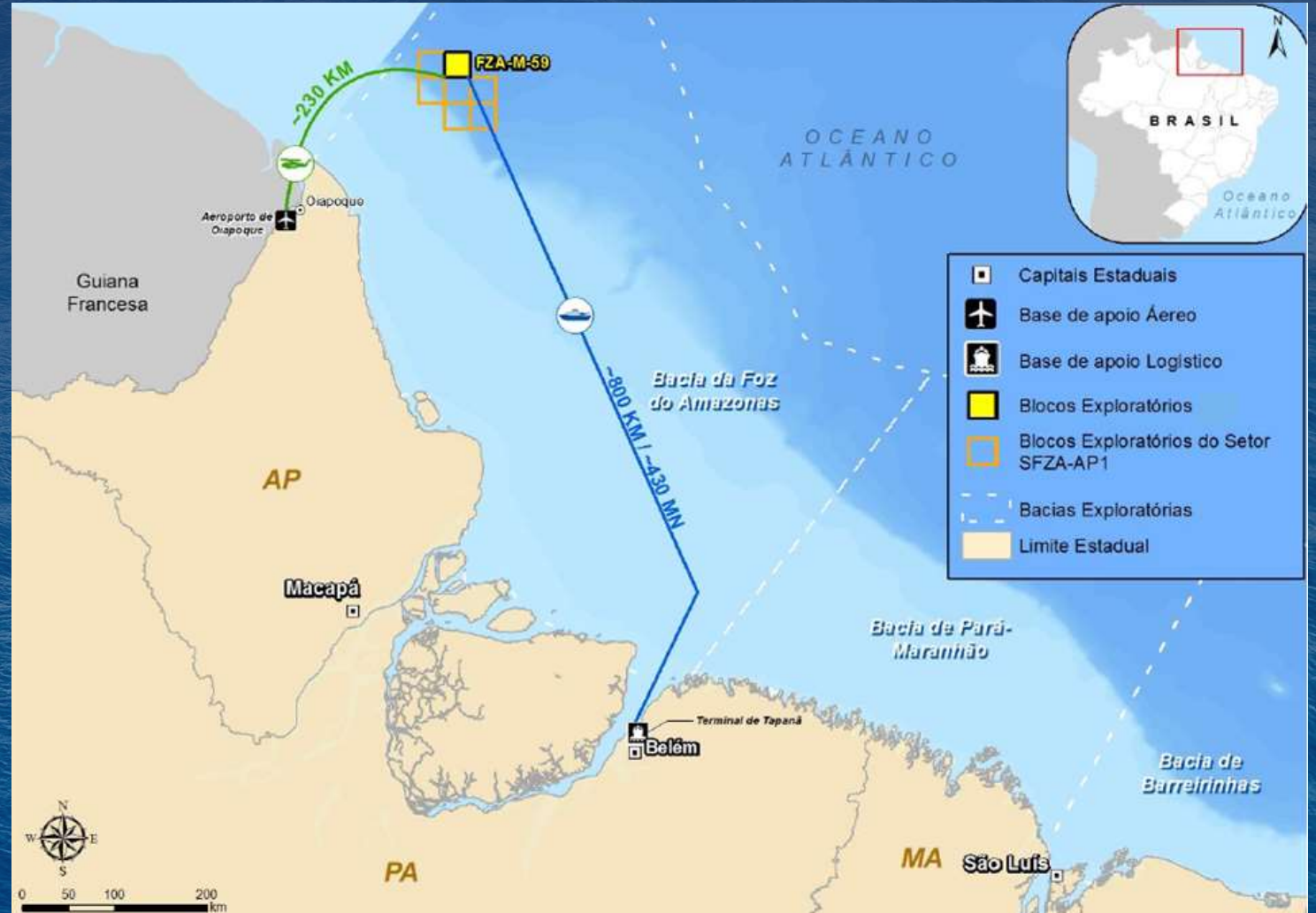
Block ID: FZA-M-59

Water depth: 2.980 m

Distance from coast: 179 km

Rig ID: NS-42

Expected beginning of operations = 2022 December



OPERATIONAL SAFETY

How we guarantee the safety of the operation



24-hour operational monitoring (on-site and remotely)



Periodic inspections of systems and equipments



Implementation of preventive and corrective maintenance programs



Accident report and investigation



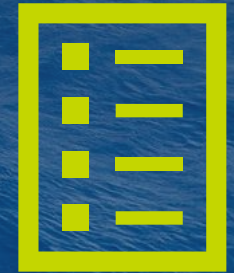
Technical capacity building and training



Execution of inspections and audits



RISK MANAGEMENT PROCESS



EMERGENCY RESPONSE

Potential Cooperation

*Communication (OPRC - Oil Pollution Preparedness, Response and Co-operation)
Brazilian Government & Petrobras to French Guyana Authorities*

Response (International Maritime Organization - Res. A983(24)/2005)

Authorizations

Continuity of response

Data Exchange

Logistical (Airports, Roads, Contractors, Visa, Working Permits)

Operational (Sensitivity Charts, Meteorological)

The Emergency Response Plan

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THE POTENTIAL SPILL SCENARIOS

Oil slick forecast studies developed for specific local conditions.

Conservative approach (does not consider any response effect over the oil trajectory).

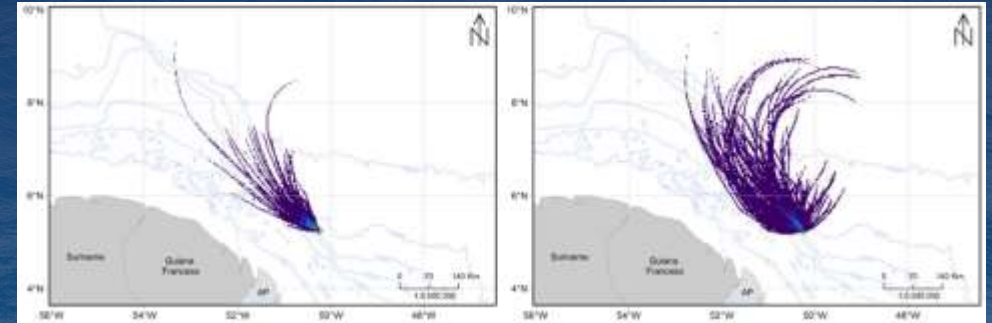
Indication of presence of oil at French Guyana water in less than 48h.

No indication of arrival of oil at French Guyana coast.

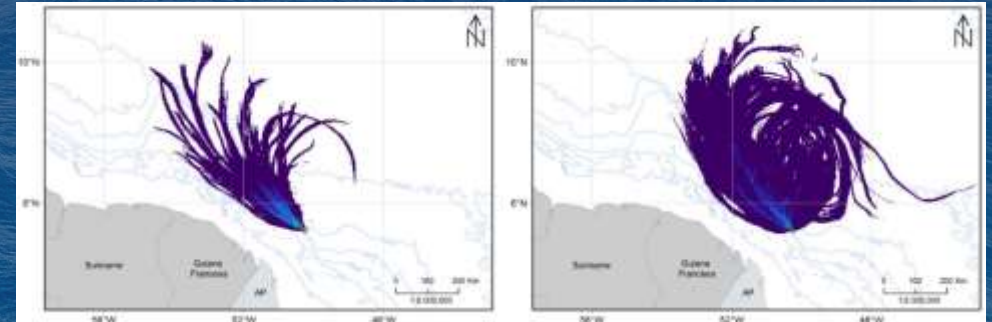
Summer

Winter

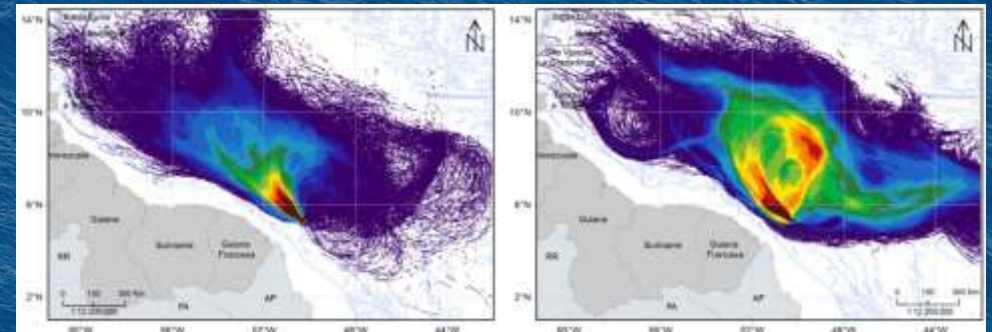
8m³



200m³



Worst Case Scenario for 60 days



Probability of presence of oil at sea surface (%)



EMERGENCY RESPONSE

Response Planning Premises

Logistics

International Response

- Source control team
- Capping & Containment
- OSRL

Regional Response

- Monitoring aircrafts
- Environmental Defense Centers
- Wildlife Management
- Local vessels of opportunity
- OSRV complementary fleet

Initial Response

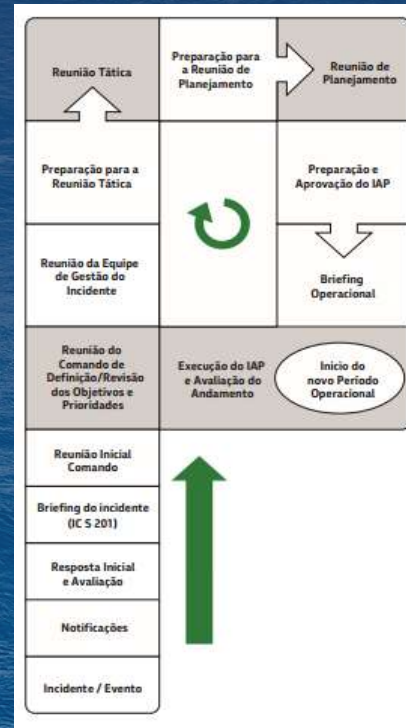
- SOPEP
- Specific OSRV fleet
- Remote sensing
- Dedicated monitoring aircraft
- Spill trajectory forecasting
- ICS

Tiered Response

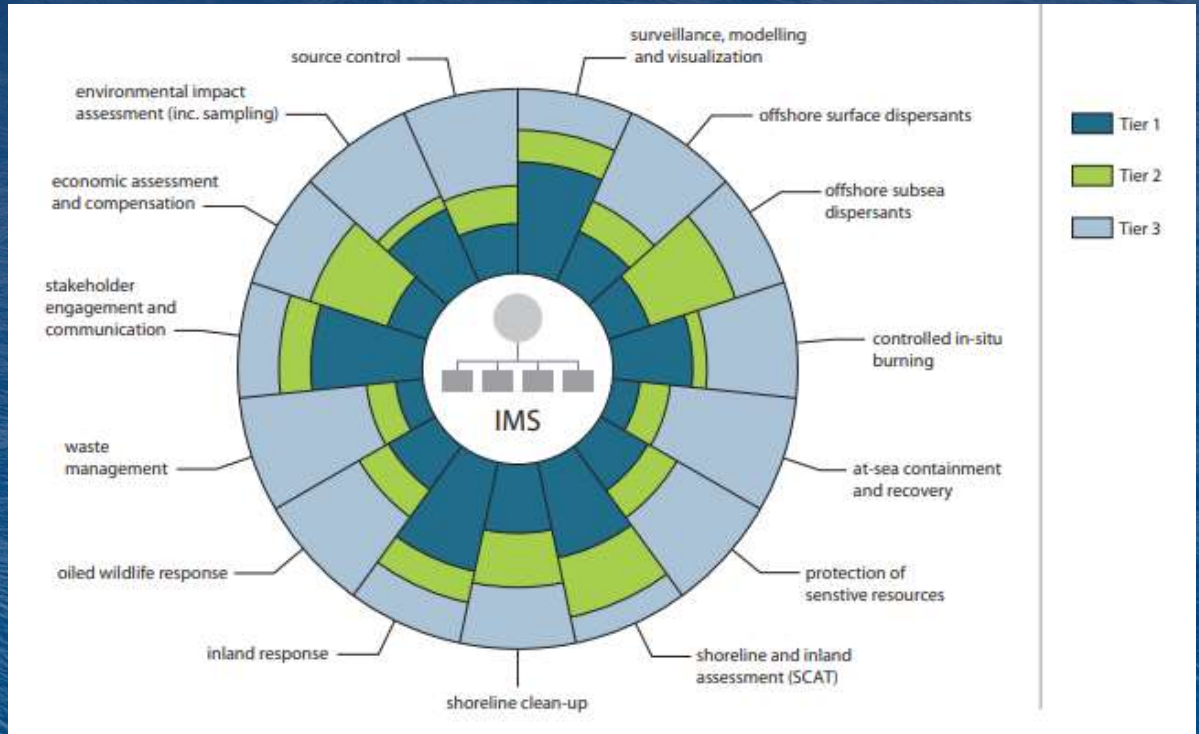


EMERGENCY RESPONSE

Response Capabilities



Emergency Management

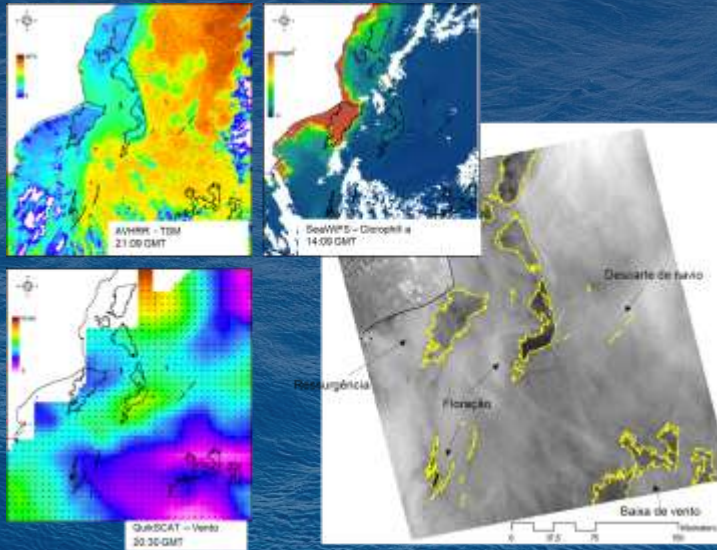
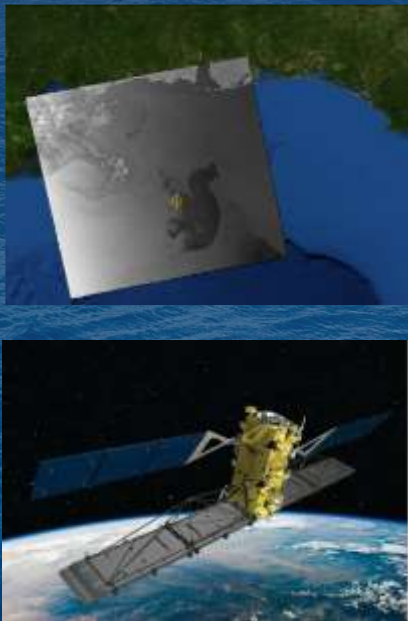


Toolbox

EMERGENCY RESPONSE

Response Capabilities

Monitoring



Large scales

Data process capability

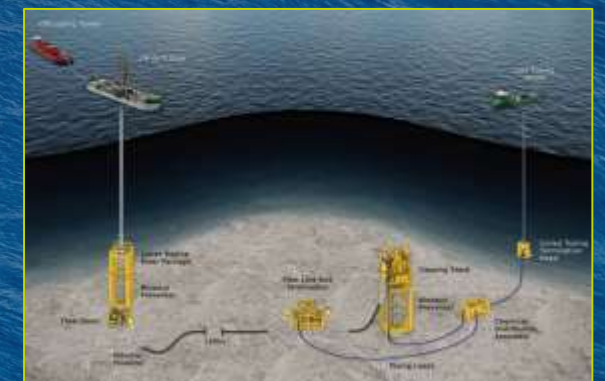
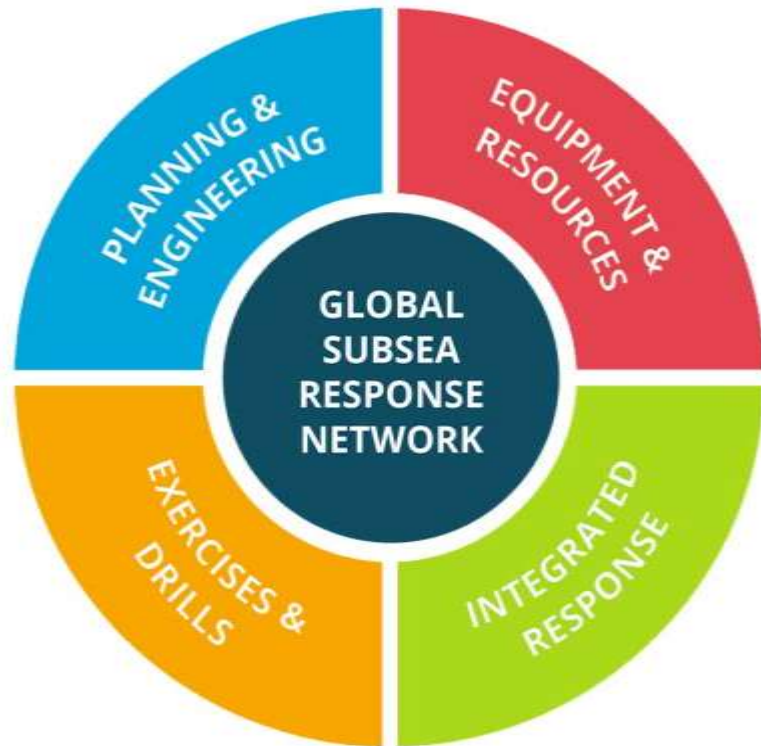
Large coverage

At-sea resolution

EMERGENCY RESPONSE

Response Capabilities

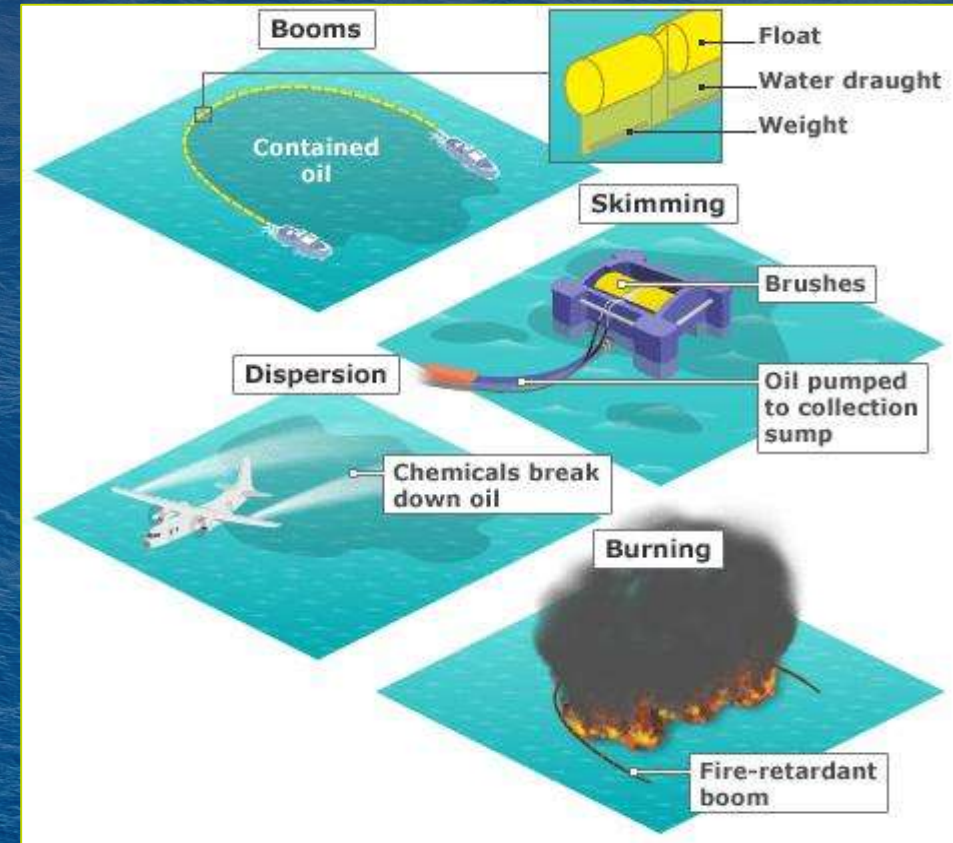
Well Control Capability



EMERGENCY RESPONSE

Response Capabilities

Key Response Strategies



EMERGENCY RESPONSE

Response Capabilities



EMERGENCY RESPONSE

Response Capabilities

Chemical Dispersion



Specification and locations

Type	Quantity (m³) / US Gal*	Location
Dasic Slickgone NS	500 / 132,500	Southampton, UK
	350 / 92,750	Singapore, Singapore
Finasol OSR 52	500 / 132,500	Southampton, UK
	350 / 92,750	Singapore, Singapore
	1,500 / 397,500	Vatry, France
	800 / 212,000	Cape Town, South Africa
Corexit EC9500A	500 / 132,500	Fort Lauderdale, USA
	500 / 132,500	Rio de Janeiro, Brazil

*Quantities at each location are provisional figures only and may be subject to change

Vessel Application

Aerial Application

Environmental Monitoring

EMERGENCY RESPONSE

Response Capabilities

In situ burning at sea



Safety evaluation



Post-burn residue collection



Air quality monitoring

EMERGENCY RESPONSE

Response Capabilities

Environmental Defense Centers



EMERGENCY RESPONSE

Response Capabilities

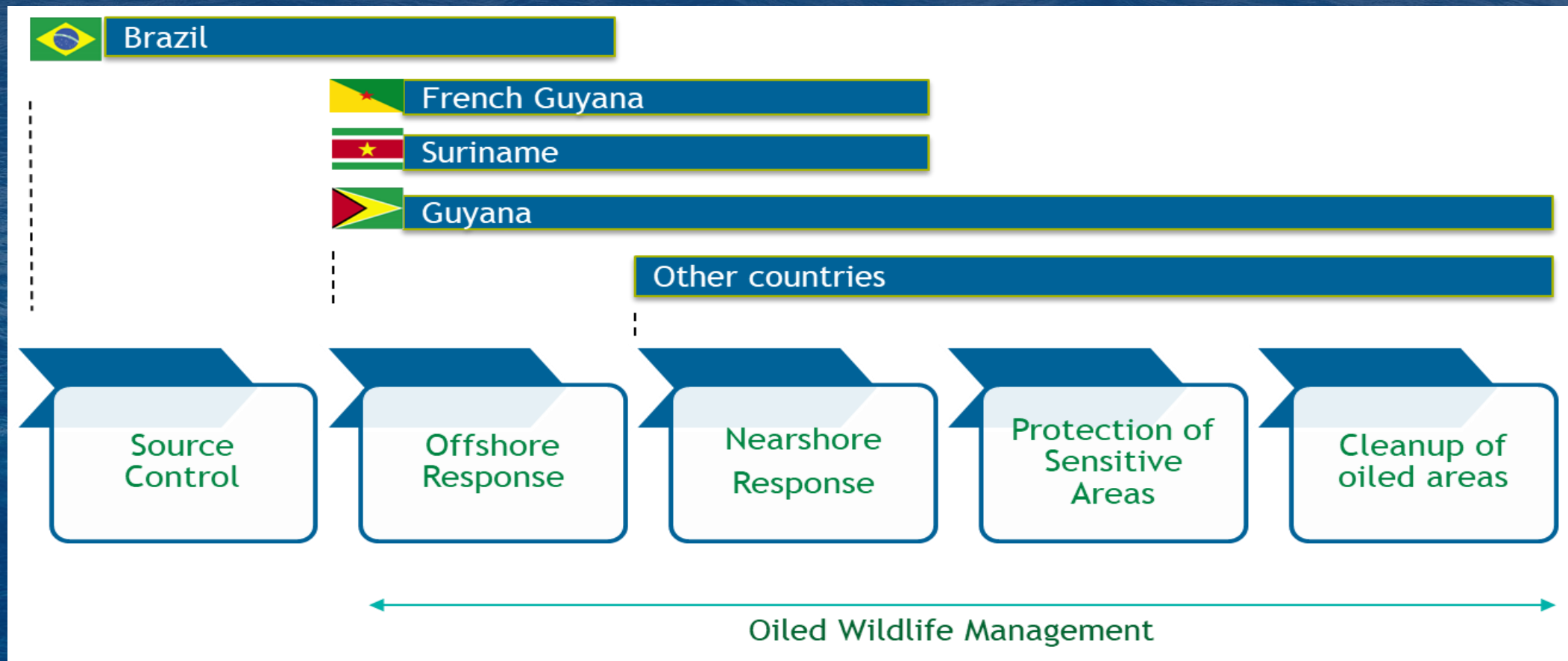
Wildlife Protection & Management



EMERGENCY RESPONSE

Response Capabilities

Internation Response Premises



Potential Cooperation with French Guyana

EMERGENCY RESPONSE

Support to Response Activities

Confirm Emergency Communication Flow in case of accident with authorities of French Guiana

Communication and coordination for access of vessels and aircrafts in French Guyana waters and air space to engage containment and recovery of oil.

Procedures to discharge of decanted water from OSRV fleet in French Guyana waters.

Procedures to chemical dispersion and in situ burning utilization at French Guyana waters.

Facilitation of customs and visa clearance of response equipment and personnel at Cayenne International Airport.

EMERGENCY RESPONSE

Future Perspectives - Short Term

Invitation to technical visit to Petrobras facilities and R&D Center in Rio de Janeiro, Brazil.

Invitation to participation of National Focal Points as observers in Petrobras' response exercise next November

- *Tabletop and Field Exercise aimed at demonstrating and verifying response capabilities to stakeholders*

EMERGENCY RESPONSE

Future Perspectives - Long Term

Technical cooperation between French Guyana Agencies and Petrobras.

- *Logistical cooperation to resource mobilization*
- *Exchange of technical information about oil spill planning, preparedness and response*
- *Participation in emergency response training and exercises*

THANK YOU

The background of the slide is a photograph of an offshore oil platform at night. The platform's complex network of pipes, railings, and structural elements is illuminated by warm, yellowish lights. A walkway with a green safety mat and white directional arrows leads into the distance. The platform is situated over a dark, calm sea, with a small, distant vessel visible on the horizon under a dark, cloudy sky.