



Environmental Licensing Directorate - DILIC
Oil and Gas Licensing Office - CGPEG

Security in Environmental Licensing of Oil & Gas Offshore Exploration Activities in Brazil

"SECURITY AS A PRIORITY IN OFFSHORE OIL EXPLORATIONS"



Vanessa Horta da Silva

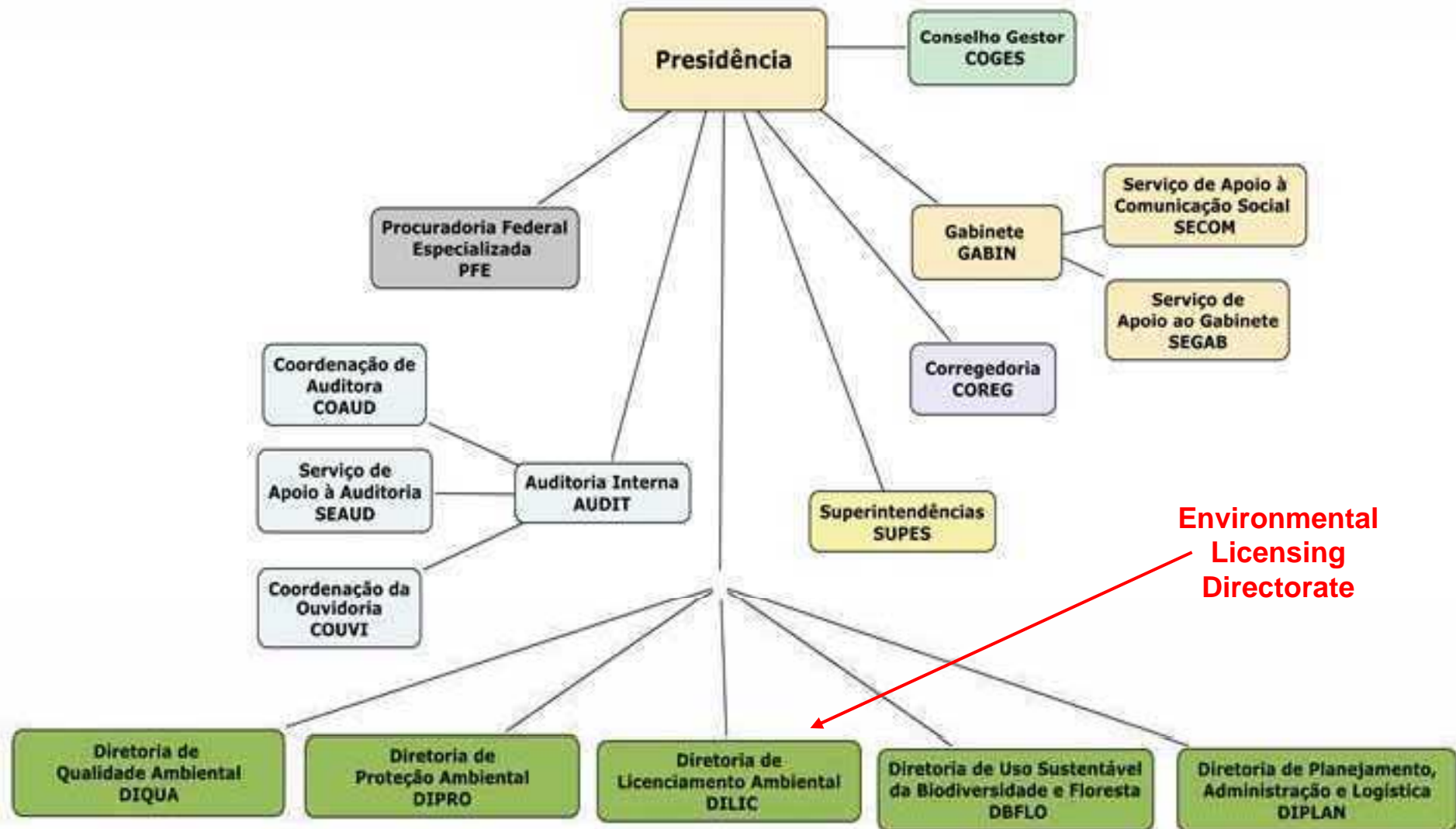
June 13th, 2013



Summary

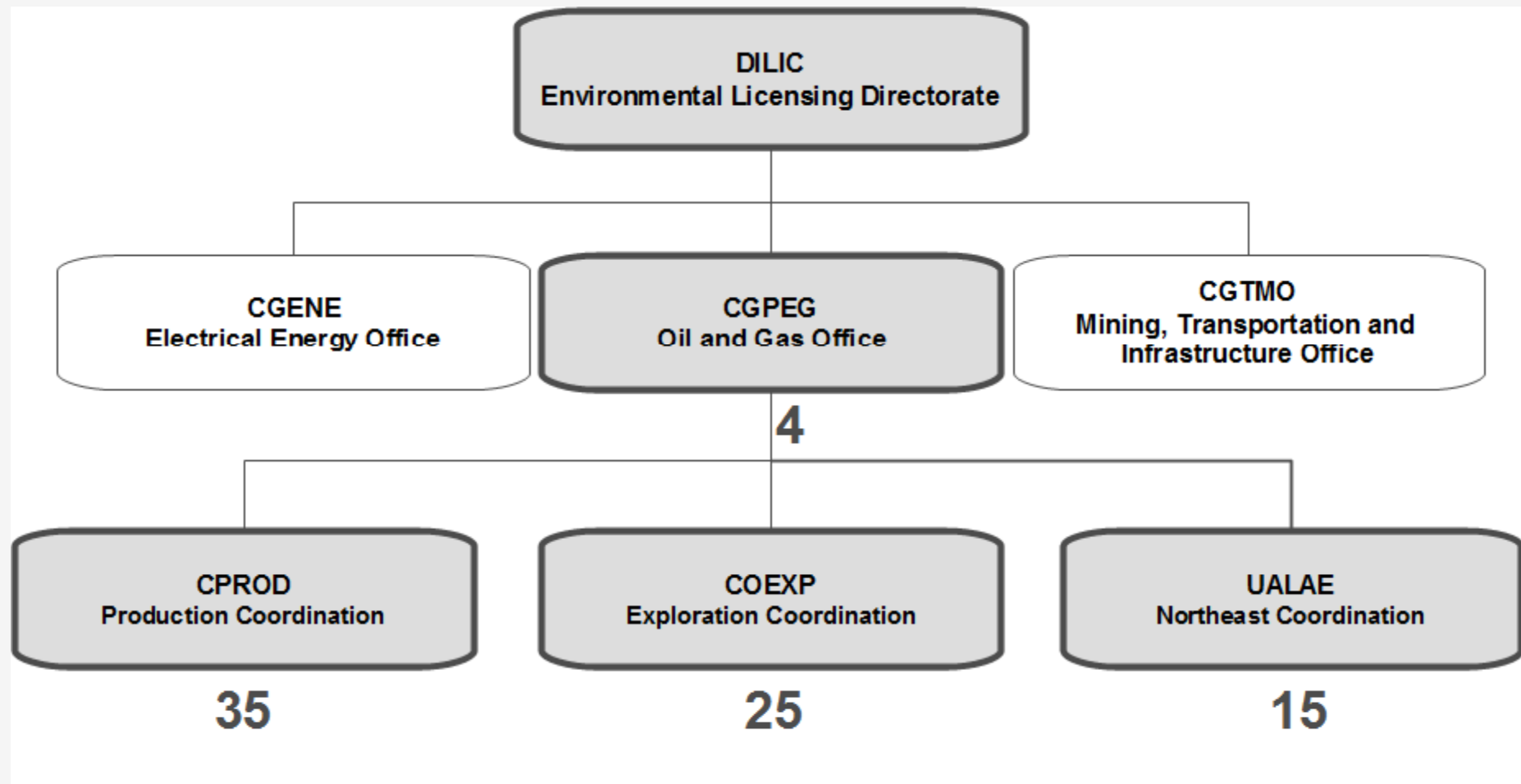
- **Overview of IBAMA's Framework**
- **Present Regulatory Framework - Oil and Gas Offshore**
- **Overview of Federal Environmental Licensing - oil and Gas Offshore**
- **Security in Federal Environmental Licensing - oil and Gas – Offshore**
- **Final Remarks**

IBAMA – Federal Environmental Agency



IBAMA's Framework

Oil and Gas



Oil and Gas Office today: 79 dedicated environmental analysts



Present Regulatory Framework

Oil and Gas - Offshore

Very recent regulation

–Up to 1997

- State monopoly – Petrobras

–1997

- National Petroleum Agency – ANP

–1998

- IBAMA's Oil and Gas Office Creation (CGPEG)

Present Regulatory Framework

Oil and Gas - Offshore



Navy

- Shipping control, safety of navigation, oil pollution prevention...



IBAMA

- Environmental Impact Assessment, environmental licensing, impact and risk mitigation, environmental standards, controlled substances ...



ANP

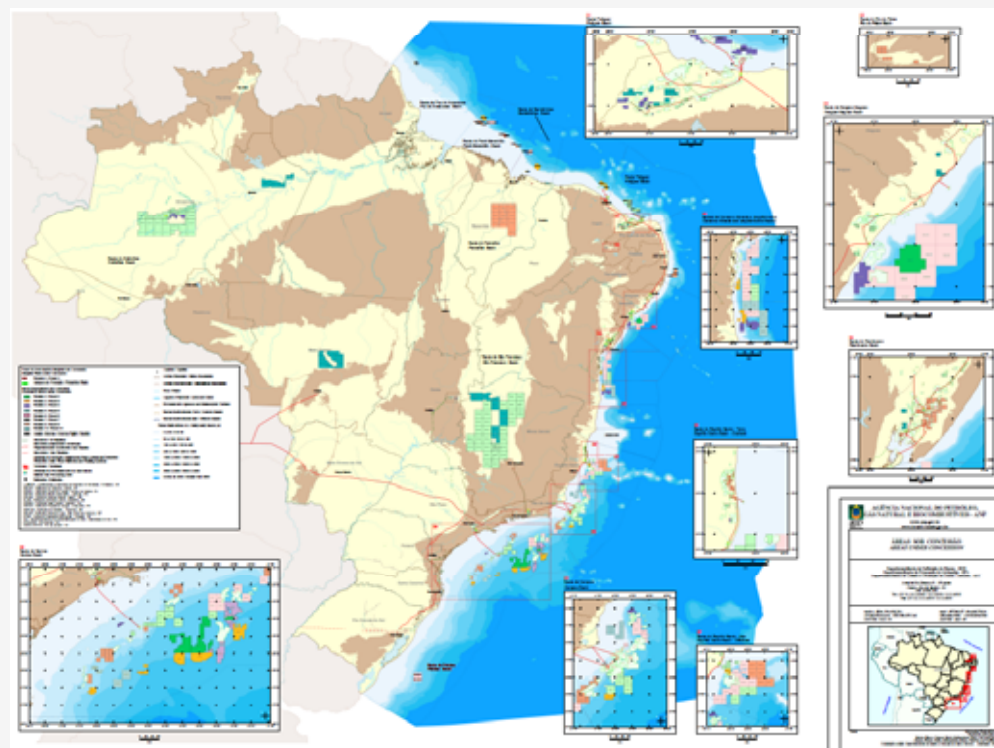
- Concessions, bidding rounds, operational safety, operational permits...

Present Regulatory Framework

Oil and Gas - Offshore

Regulatory Jurisdiction for Environmental Licensing

- IBAMA (Federal Environmental Agency) – Offshore Activities
- State Environmental Agencies – Onshore Activities

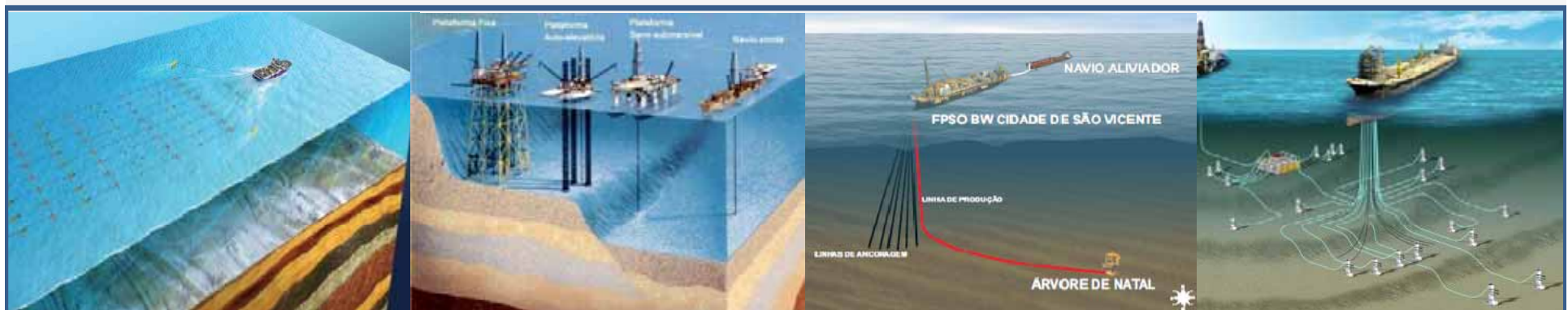


Federal Environmental Licensing

Oil and Gas - Offshore

What requires environmental licenses:

- Seismic surveys
- Well drilling
- Extended Well Tests
- Production systems





Security in Federal Environmental Licensing - Oil and Gas - Offshore

Before environmental license – Analysis

- Environmental Studies
 - **Geological Risks** – Best Practices (ANP)
 - **Environmental Risk Assessment**
 - Management Risk Program – Best Practices (ANP)
 - **Individual Emergency Plan (PEI)**
 - Federal Law 9,966/2000
 - Mandatory for Ports, Terminals and Platforms
 - Approved by environmental authority (Offshore - IBAMA)



Security in Federal Environmental Licensing - Oil and Gas - Offshore

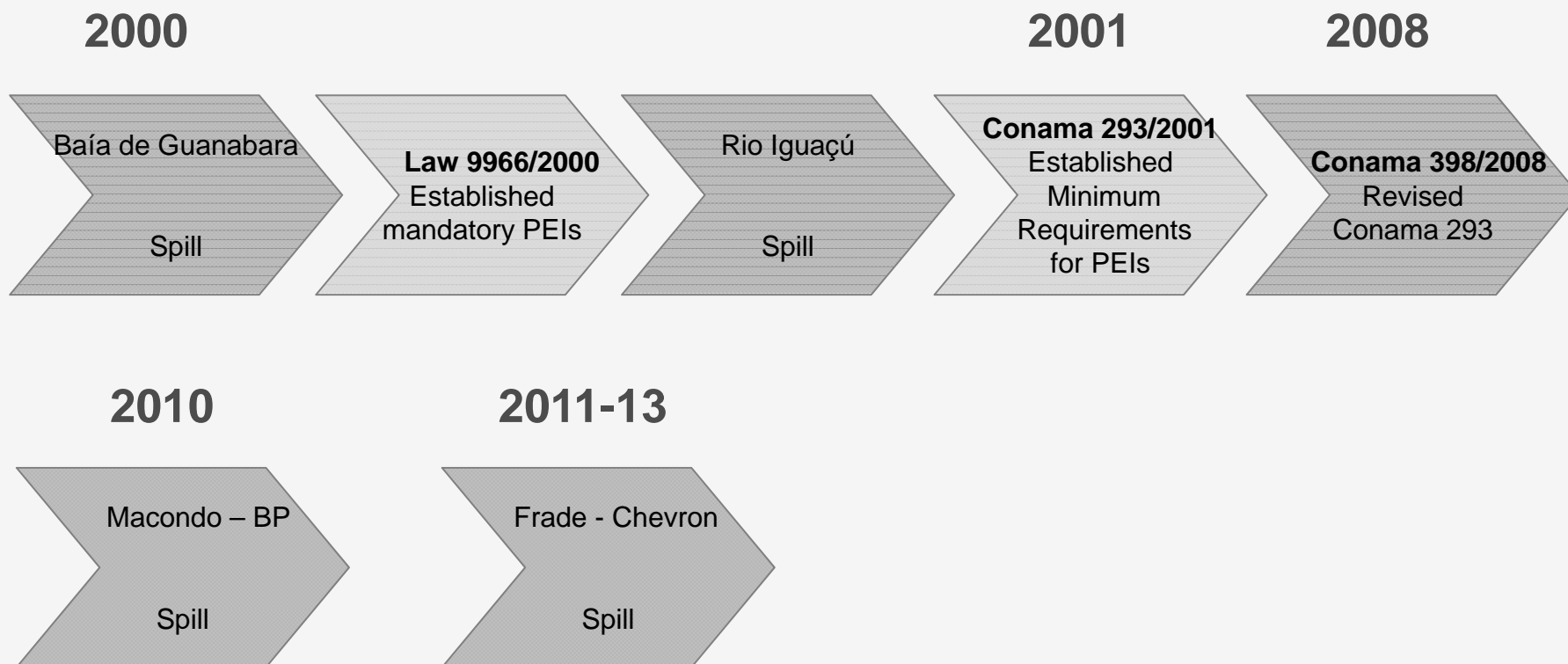
After environmental license - Operation

- Sismic Surveys
 - Permanent Biota Observers - interruption of activities in case of positive observation
 - 500m mammals and turtles
- Drilling and Production Activities
 - Previous ROV analysis
 - Deepwater Corals and Algae
 - Management Risk Program – ANP's Follow up
 - PEI - IBAMA's Follow up



Security in Federal Environmental Licensing - Oil and Gas - Offshore

Brief Historic Information



REDUC/PETROBRAS oil refinery

Pipeline spill – 1,300 m³ of oil

- Fishery,
- Tourism,
- Mangrove,
- Protected areas affected



Refinaria Presidente Getúlio Vargas – PETROBRAS oil refinery

Pipeline spill
4,000 m³ of oil
More than 20km



Frade – Chevron

More than 600m³ of crude oil





Security in Federal Environmental Licensing - Oil and Gas - Offshore

- **Individual Emergency Plan - PEI**
 - Main Tool for Security/Mitigation Actions
 - CONAMA Resolution 398/2008
 - Minimum requirements
 - Focus on Containment and Recovery



→ Permanent Working Group for Emergency and Risk



Security in Federal Environmental Licensing - Oil and Gas - Offshore

Permanent Working Group for Emergency and Risk

- Analysis and approval of emergency plans and environmental risk assessments
- Permanent discussion and revision of criteria and exigences
- Active participation on Exercise Drills, including planning and evaluation
- Inspection of platforms and rigs
- Inspection of all vessels and equipments related to oil spill response



Security in Federal Environmental Licensing - Oil and Gas - Offshore

Permanent Working Group for Emergency and Risk

Analysis

- More than **350** PEIs and ARA approved between 2002 – 2013

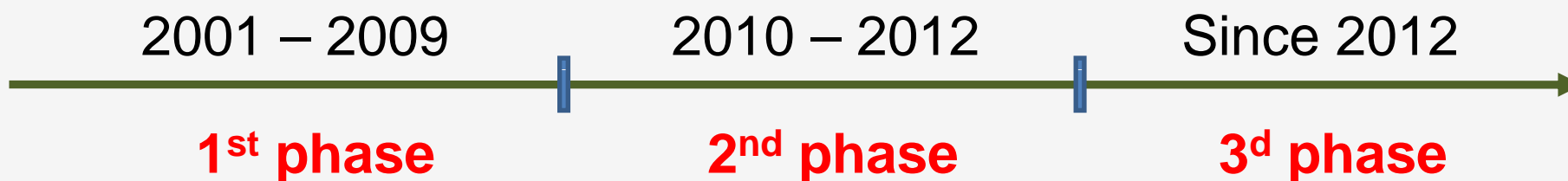
Follow up

- **567** technical inspections between 2005-2013
- **82** exercise drills between 2004-2013
- 1 BP big exercise drill in 2012
- Prediction of 2 big exercises drill for 2013 (Petrobras, BP) and in 2014 (Shell)



Security in Federal Environmental Licensing - Oil and Gas - Offshore

Evolution of PEI in Environmental Licensing



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1st phase - Critical analysis of observed deficiencies

- **Equipment/operation failures**
 - ✓ sinking barriers, lazy skimmers, unpowered powerpacks, non-steerable vessels...
- **Response failures**
 - ✓ non-trained personnel, communication issues, movement delays, insufficient register of operations...





Security in Federal Environmental Licensing - Oil and Gas - Offshore

1st phase - Critical analysis of observed deficiencies

Main problems observed

- Response Time
- Equipments maintenance
- Training

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2nd phase - Technical Guideline: new set of approval criteria

- Offshore response improvement
- Equipment upgrade
- Vessels upgrade
- Communications improvement
- Monitoring upgrade



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2nd phase - Technical Guideline: new set of approval criteria

New Concept - Pre-Operational Assessment (APO)

- Testing if PEI is operational before risk exposure only for sensitive environments or new frontier areas
- Complete exercise, equipment deployment, drill ship/rig in place





Security in Federal Environmental Licensing - Oil and Gas - Offshore

3^d phase - New Challenges

- Shore protection and clean-up
- Fauna Management (establishment of guidelines)
 - ✓ *Share response agreements/Founds/Area Plans*
- Sustained response (30 days minimum)
- Dispersant – registry and use (surface and subsea)
- In situ burning use
- Capping requirements
- Institutional Governance (National Contingency Plan)



Security in Federal Environmental Licensing - Oil and Gas - Offshore

“...without effective government oversight, the offshore oil and gas industry will not adequately reduce the risk of accidents, nor prepare effectively to respond in emergencies. However, government oversight, alone, cannot reduce those risks to the full extent possible.

Government oversight must be accompanied by the oil and gas industry’s internal reinvention: sweeping reforms that accomplish no less than a fundamental transformation of its safety culture.”

Report to the President – National Commission on the BP Deepwater Horizon Oil Spill and Offshore Drilling



Security in Federal Environmental Licensing - Oil and Gas - Offshore

Lessons Learned

National Forum

- New Guidelines for Risk Analysis
- New Guidelines for Emergency Response
- Integrated Actions IBAMA+ANP+NAVY

International Forum

- Development of new and best equipments and practices
 - Prevention
 - Response
- Integrated Vision and New Guidelines



Final Remarks

- Brazil has a very recent, but rapidly evolving regulatory framework
- Security in Federal Environmental Licensing has Emergency Plans and Risk Analysis as the main focus
- IBAMA aims for establish guidelines at least as rigorous as international best practice
- Integrated Actions IBAMA+ANP+NAVY
- It is IBAMA's vision to become recognized in the future as an international reference in oil and gas emergency regulation



Thank you!

Vanessa Horta da Silva

Coordenadora de Exploração
Coordenação Geral de Petróleo e Gás
CGPEG/DILIC/IBAMA

vanessa.ibama@gov.br

Tel: +5521 3077-4272 /+5521 3077-4274