

## *Oceans and Law of the Sea*

*Division for Ocean Affairs and the Law of the Sea*

# Offshore Petroleum Exploitation and International Law: Legal and Environmental Aspects for Coastal States of the Gulf of Guinea

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# Overview of the presentation

- ▶ **Introduction**
- ▶ **Preliminary: Remarks on the background and dynamic of Petroleum industry in the Gulf of Guinea**
- ▶ **Legal framework of offshore petroleum exploitation in Coastal States of the Gulf of Guinea**
- ▶ **Implementation of mining legislations on offshore petroleum exploitation**
- ▶ **Legal framework of the protection and the preservation of the marine environment by Coastal States of the Gulf of Guinea**
- ▶ **Responsibility and liability for damage caused by oil pollution on marine environment**
- ▶ **Recommendations**

# Introduction

- Geopolitical and strategic reasons influence petroleum exploitation: Increased needs and dwindling reserves of fossil fuels, in fact impose for States to take control of their demand and diversify those resources
  - During 2002 and 2030, world energy demand may increase for 60%.
  - Demand for oil will reach 121 millions barrels per day in 2030, an increase of 37% compared to 2006, Source: IEA
- With interest to environment challenges, the Offshore petroleum exploitation must integrate the practical approach of marine management called Large Marine Ecosystem (LME).

# The concept of LME

- The LME is applied to the oceanic areas  $\geq 200.000$  Km sq , characterized by different regimes of hydrography and geomorphology underwater and marine living resources.

## Cont..

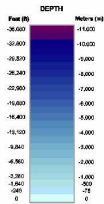
- In terms of governing policy, the implementation of the LME concept should lead to the development of an integrated maritime policy, built on a global vision of marine affairs. Pratically, a regular Environmental Impact assessment should be undertaken to prevent damage on marine environment and its resources.



# MAP KEY:

- LINE NUMBERS:**
1. East Bering Sea
  2. Gulf of Alaska
  3. California Current
  4. Gulf of Mexico
  5. Northwest U.S. Continental Shelf
  6. Northeast U.S. Continental Shelf
  7. Hudson Strait
  8. Labrador Current
  9. Labrador-Grand Banks
  10. Grand Banks-Newfoundland Shelf
  11. Pacific Central American Coastal
  12. Caribbean Sea
  13. Caribbean Current
  14. Panama Sea
  15. South Brazil Shelf
  16. Brazil Current
  17. North Brazil Shelf
  18. West Greenland Shelf
  19. East Greenland Shelf
  20. Labrador Sea
  21. North Sea
  22. Baltic Sea
  23. North Sea
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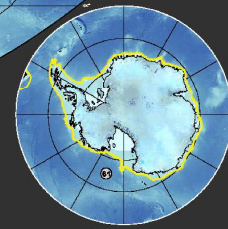
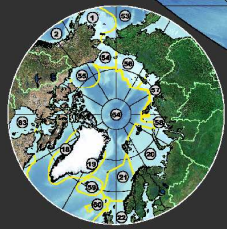
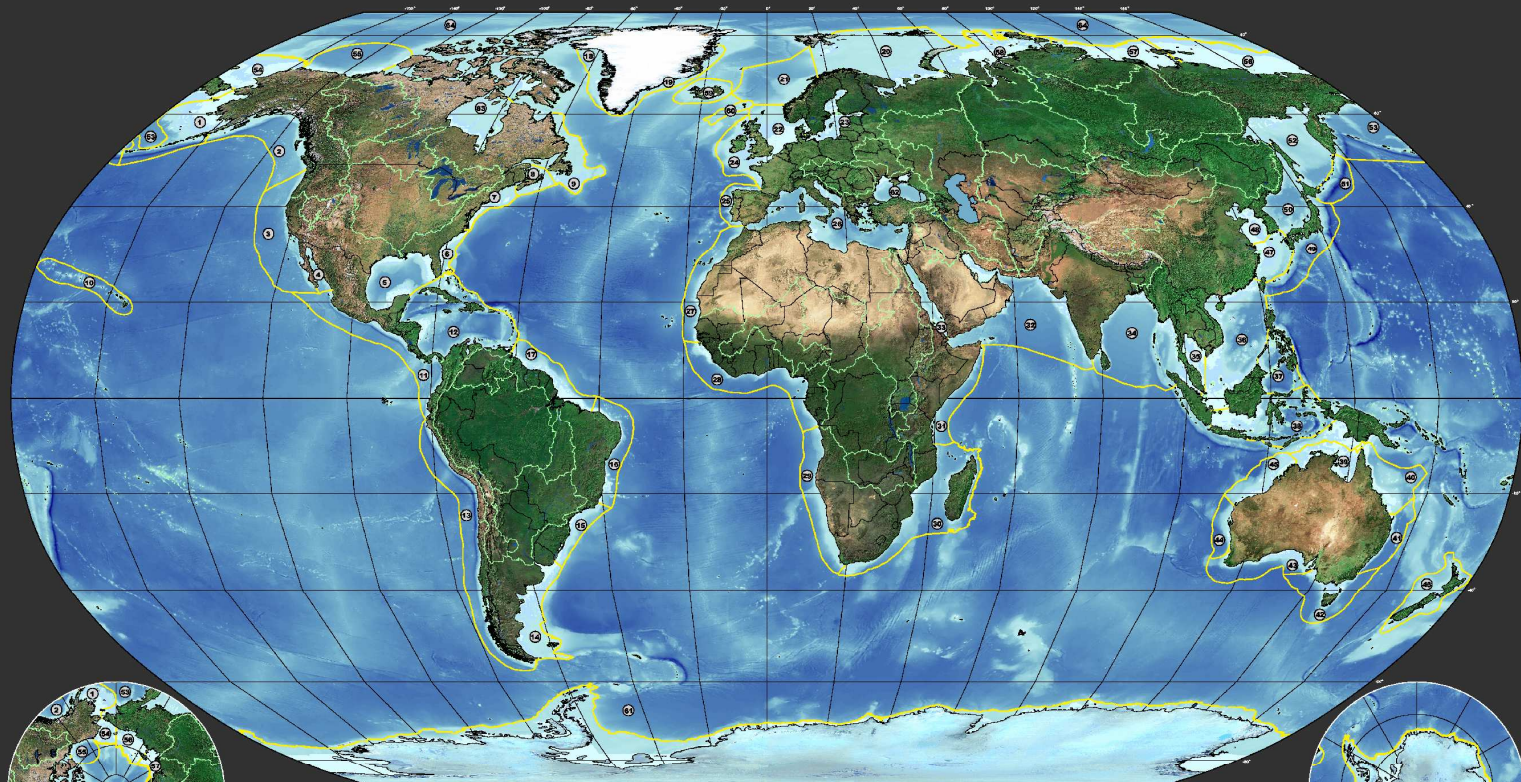
- Large Marine Ecosystems
- Watershed Boundaries
- Political Boundaries



Map Sources:  
 Bathymetry: GEBCO  
 Political: CIA World Factbook  
 Watershed: NOAA  
 Data: NOAA  
 Date: 2000

UICN

## Large Marine Ecosystems of the World and Linked Watersheds



**LARGE MARINE ECOSYSTEMS** are areas of the ocean characterised by distinct bathymetry, hydrography, productivity, and trophic interactions. They annually produce 95 percent of the world's fish catch. They are national and regional focal areas of a global effort to reduce the degradation of linked watersheds, marine resources, and coastal environments from pollution, habitat loss, and over-fishing.

For More Information Visit: <http://www.lme.noaa.gov>

# The Guinea Current Large Marine Ecosystem (GCLME)

- The GCLME extends from Islands Bissagos (Guinea Bissau) to Cape Lopez (Gabon). But, due to the influence of Current Guinea on Oceanography waters of Congo and Angola, the GCLME area understand the Exclusive Economic Zones of 16 States: Angola, Benin, Cameroun, Congo, Congo (R.D.), Côte d'Ivoire, Equatorial Guinea, Gabon, Ghana, Guinea, Guinea-Bissau, Liberia, Nigeria, Sao Tome & Principe, Sierra Leone, Togo





# Gulf of Guinea as LME

- ▶ The LME approach is adopted in view to have the suitable link between Petroleum Industry and Marine Environment challenges.
- ▶ The objectives are to:
  - Combat Marine pollution by Offshore activities;
  - Avoid the depletion of marine living resources while exploiting minerals.

# Preliminary

- ▶ **The background and the dynamic of offshore industry in Coastal States of the Gulf of Guinea**



# Background of Petroleum industry in the Gulf of Guinea

- ▶ Through the Extractive Industries Transparency Initiative (EITI) the international community is making currently a challenge against the « thesis of petroleum curse for African States ».
- ▶ Dependency issues relating to petroleum industry:
  - Lack of financial capital,
  - Offshore technologies are most voracious in financial investments,
  - Dependence of the African States economies to petroleum revenues (petroleum resources represent more than 50% of Gross Domestic Product)

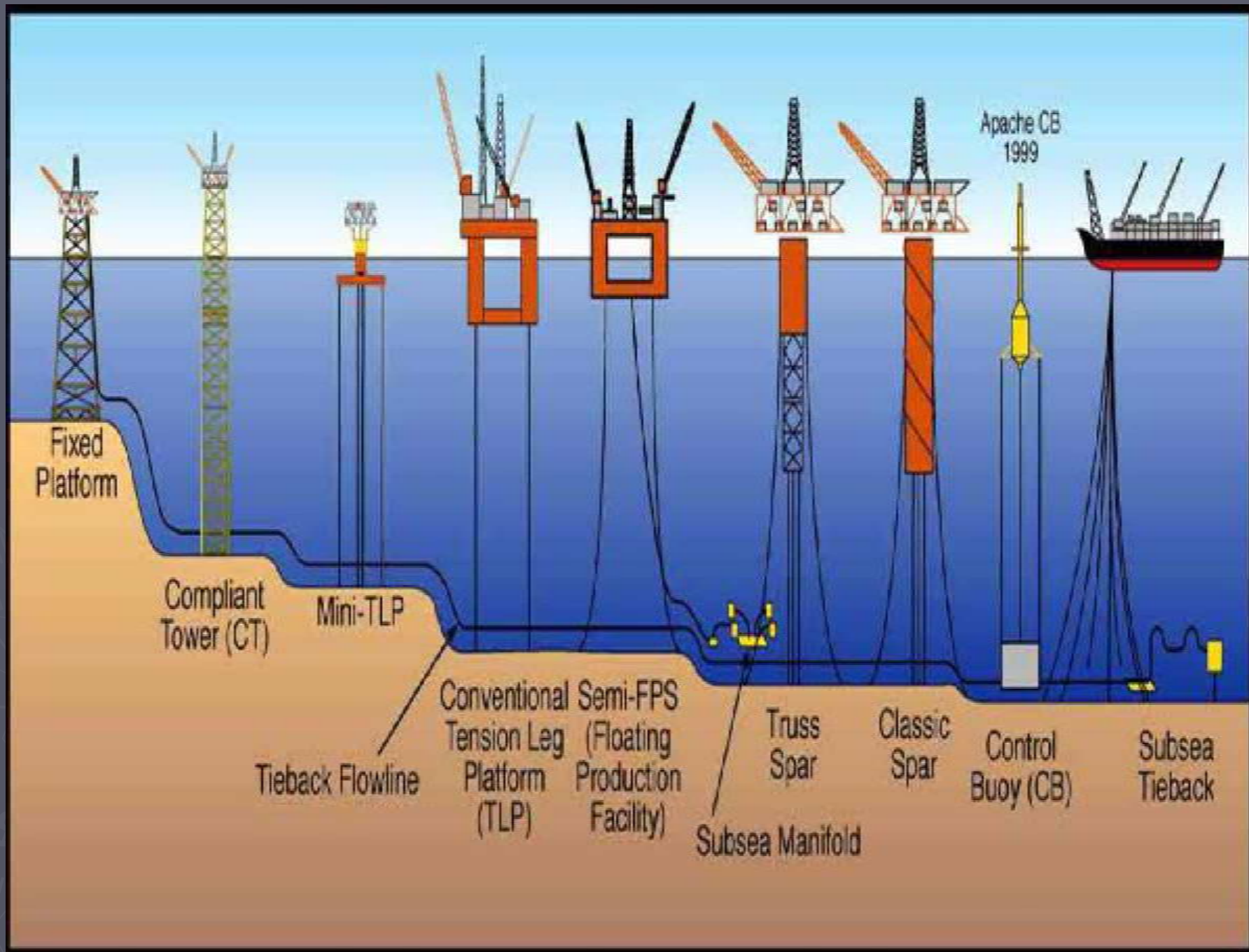
# Dynamic of the offshore Petroleum industry in Gulf of Guinea

- ▶ According to recent marine prospections in Gulf of Guinea most important discoveries of deposits are located in offshore sedimentary basins beyond the bathymetric curve of 500 meters.
- ▶ And West African Coastal States have become major players in the world oil arena (More than 9,091 millions barels of Oil equivalents of reserves in deepwater fields, 2000-2005)
- ▶ Gulf of Guinea includes: major oil producers as Nigeria, Angola, Gabon; and significant producers (Cameroun, Equatorial Guinea, Congo, Côte d'Ivoire) and potential ones (Togo, Sao Tome & Principe and Benin).

# Platforms operating conditions

- ▶ 2 kind of Platforms: Drilling operations Platforms and Permanent platforms for production.
- ▶ For drilling, there is Fixed Platforms and mobile platforms (MODU, TLP, Spars)
- ▶ Fixed Platforms can only be use in shallow waters (depht  $\leq 400$  m)
- ▶ Deepwater is  $\square$  400 m to 1500/1800 m, Ultra deepwater  $\square$  1800 to 3000 m and more.
- ▶ Platforms should take the time of the petroleum operations (15-20 years)
- ▶ Platforms should withstand severe climate conditions:
  - Winds of up to 18 Km/h
  - Swell height up to 33 m
  - Cyclone's conditions: wind 250 Km/h
  - Weight of Platforms up to 40000 T

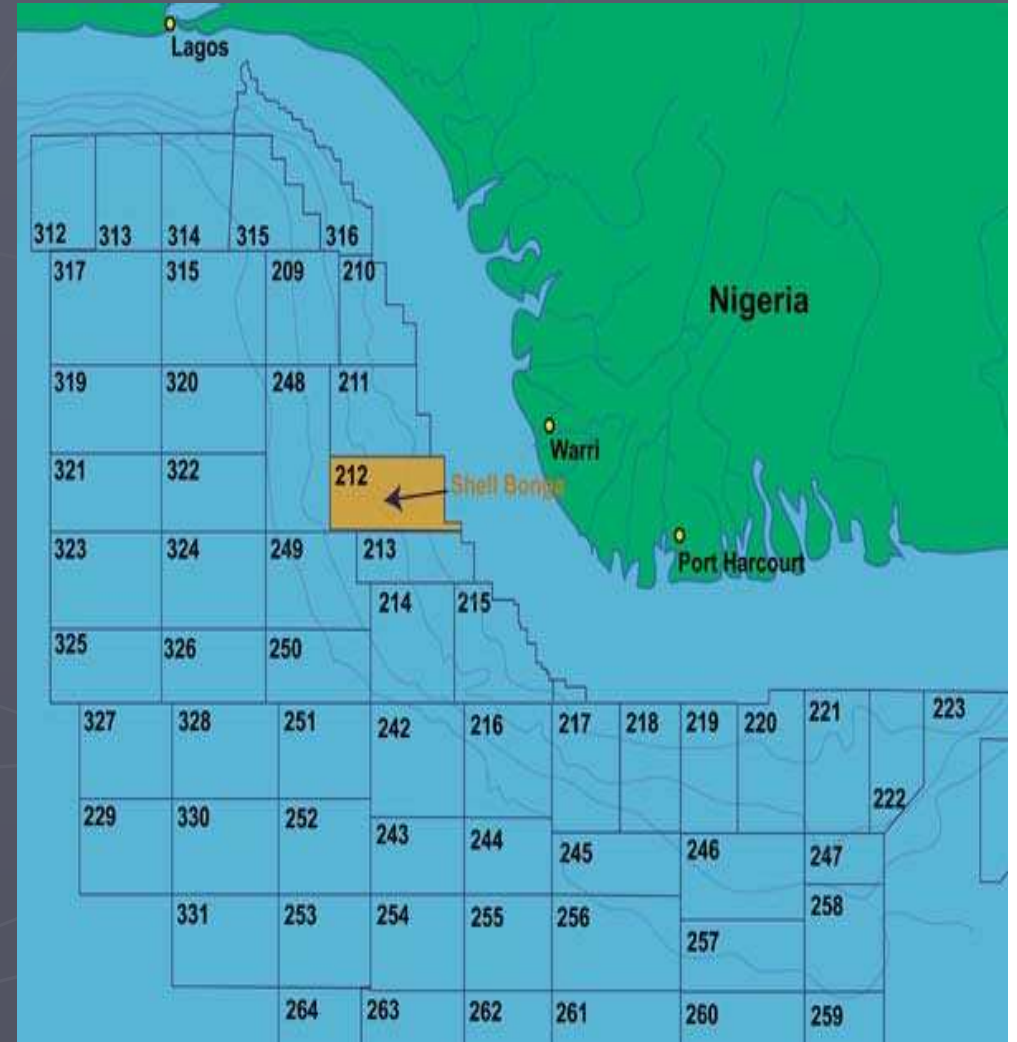




# Link surface/submarine



# Oil-drilling platforms in Niger Delta and petroleum blocks, Nigeria



# Total Elf Fina offshore, Nigeria



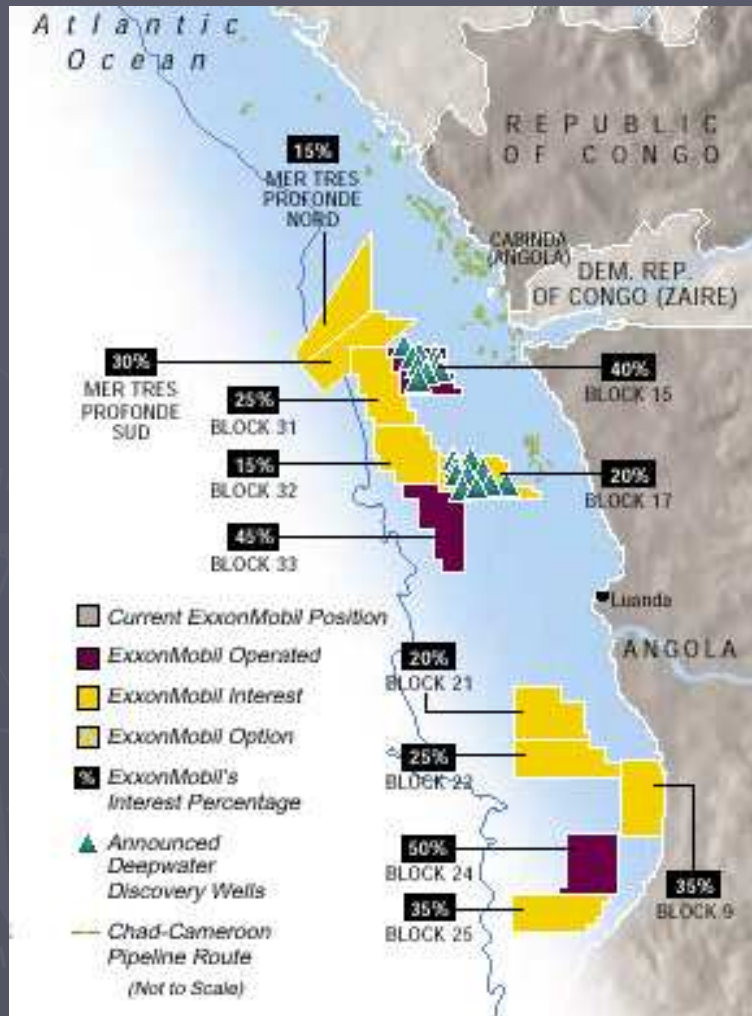


# Platforms in Cabinda, Angola





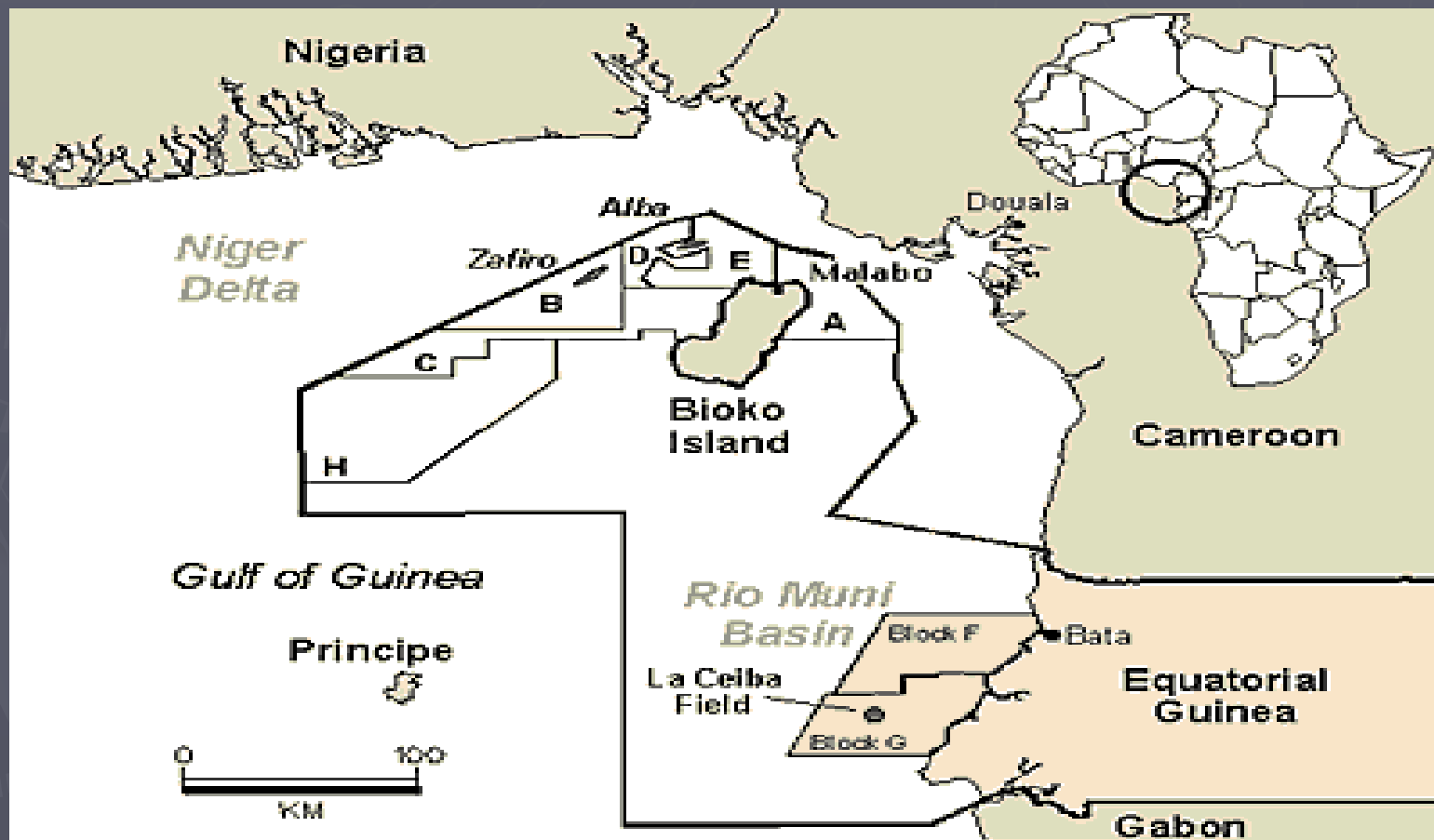
# Angola,(R) Cabinda's offshore; Congo ( oil production Block 0



# Platforms of Abana and La Ceiba (Equatorial Guinea)



# Offshore oil fields of Equatorial Guinea



# PART I

- ▶ **Legal framework of offshore petroleum exploitation in Coastal States of the Gulf of Guinea**
- ▶ **Implementation of mining legislations in relation to offshore petroleum exploitation**

# **Legal framework of offshore exploitation**

- ▶ **Legal framework of offshore petroleum exploitation in Coastal States of the Gulf of Guinea is based on exercise of the sovereign rights and the exclusive jurisdiction of Coastal States in the Exclusive Economic Zone (EEZ) and on the Continental Shelf (Art. 60, 76, 77, 80 and 81, UNCLOS)**
- ▶ **The exercise of these rights must not infringe the rights of others States (Art. 78)**
- ▶ **The rights of Coastal State over the CS do not affect the legal status of the superjacent waters or air space above those waters**
- ▶ **Accordingly, it involves the maritime boundaries delimitation**



# The maritime boundaries delimitation

- ▶ With regard to minerals wealth, States often have disputes on maritime spaces.
- ▶ For the boundaries disputes on Continental Shelf (CS) between States with opposite or adjacent coasts, the jurisprudence of the ICJ affirm the mandatory character of *Equitable solution*.
  - That solution may take into account the equitable principles/circumstances relevant to the delimitation of the CS.
  - Some relevant disputes have been resolved by ICJ (e.g. Cameroun vs Nigeria, 2002)
  - Some relevant treaties have been concluded between Coastal States of Gulf of Guinea for *Joint exploration of crude oil and other resources* (e.g. *Nigeria-Sao Tome & Principe*, *Nigeria-Equatorial Guinea*)

# **The delineation of the CS beyond 200 nautical miles**

- ▶ On the establishment of the outer limits of the CS beyond 200 nautical miles, majority of Coastal States of the Gulf of Guinea may extend theirs. But, they are Least developed States and have difficulties to face the scientific, technical and financial requirements of the submissions.

# Interests of delimitation in offshore production

- ▶ Define the areas of overlap of sedimentary basins
- ▶ Establish the schemes of management of oil resources
- ▶ Avoid conflicts between neighbouring Coastal States

# National mining legislations includes:

- ▶ Competences and monitoring of petroleum operations
- ▶ Award contracts
- ▶ Overlapping and conflict rights
- ▶ Mining operations (exploration, prospection, drilling and production)
- ▶ Tax and Royalties
- ▶ Environmental protection and sanitation
- ▶ Liability

# National Mining Legislations

- ▶ **Angola** : Loi n° 13/1978 relative aux activités pétrolières en Angola.
- ▶ **Bénin** : Loi n° 2006-18 du 17 octobre 2006 portant Code pétrolier.
- ▶ **Cameroun** : Loi n° 001-2001 du 16 avril 2001 portant code minier; Loi n°99/013 du 22 décembre 1999 portant Code Pétrolier et son Décret d'application n° 2000/465 du 30 juin 2000.
- ▶ **Congo** (Brazzaville) : Loi n° 4-2005 du 11 avril 2005 portant Code minier ; Loi n° 24-94 du 23 août 1994 portant Code des hydrocarbures.
- ▶ **Côte-d'Ivoire** : Loi n° 95-553 du 17 juillet 1995 portant Code minier et le Code pétrolier (version du 31 mai 1996).
- ▶ **Gabon** : Loi n° 05-2000 du 12 octobre 2000 portant Code minier; Loi n°14/74 du 21 janvier 1975 portant réglementation des activités de recherche et d'exploitation pétrolière sur le territoire de la République Gabonaise et Loi n° 14/82 du 24 janvier 1983.
- ▶ **Guinée Equatoriale**: Hydrocarbons Law No.8/2006, of 3 November of the Republic of Equatorial Guinea.
- ▶ **Nigeria**: Petroleum Act 1969 and the Petroleum (Amendment) Decree 1996; Petroleum (Drilling and Production) Regulations, 1969 with amendments in 1973, 1979, 1995, 1996 and Petroleum (Amendment) Decree 1996; Deep Offshore and Inland Basin Production Sharing Contracts Decree No 9 of 1999; Deep Offshore and Inland Basin Production Sharing Contracts (Amendment) Decree No 26 of 1999.
- ▶ **Togo**: Loi n° 96-004/PR portant Code minier.
- ▶ La plupart des textes cités ci-dessus sont accessibles sur les sites suivants : <<http://www.droit-afrique.com/>>; <<http://www.nigeria-law.org/LFNMainPage.htm>> et <<http://www.equatorialoil.com>>



# Petroleum contracts

- ▶ There is two basics contracts:
  - Joint Operating Agreements (JOA)
  - Production Sharing Contract (PSC)
- ▶ The National Company is often the concessionary of Mining rights (SONANGOL in Angola, NNPC in Nigeria and GEPetrol in Equatorial Guinea). But, there are some old petroleum agreements in which foreign compagnies are holders of mining rights (Gabon, Congo and Cameroun)

# Joint Operating Agreements (JOA)

- ▶ The JOA sets the guidelines/modalities for running the operations between National Compagnie and the operators.
- ▶ In this contract one of the partners is designated the Operator.
- ▶ All parties are to share in the cost of operations. Each partner can lift and separately dispose its interest share of production subject to the payment of Petroleum profit tax and royalty

# Production Sharing Contract (PSC)

- ▶ The PSC is an agreement born in response to the funding problems faced by old Joint Venture arrangement as well as the desire of Governments of the States in Gulf of Guinea to open national petroleum sector for more foreign participation.
- ▶ Its main features are:
  - Contractor bears all costs of exploration and production which are recoverable with crude oil in the event of commercial find, with provisions made for:
    - ▶ Tax Oil: is to offset actual Tax, Royalty and Concession Rentals due and payable/deductible in full in the year
    - ▶ Cost Oil: To reimburse the Contractor for capital investments and operating costs
    - ▶ Profit Oil: The balance after deduction of Tax Oil and Cost Oil, which is to be shared between the National Compagnie and the Contractor in an agreed proportion

## PART II

- ▶ **Legal framework of the protection and the preservation of the marine environment by Coastal States of the Gulf of Guinea**
- ▶ **Responsibility and Liability of Coastal states for damage caused by oil pollution on marine environment**

# Offshore industry potentials risks

- ▶ The disaffection and fire are potentials dangers of the offshore platforms



# March 2001, P-36, Rancador field, BRAZIL's offshore





# Platform accident in Egypt's offshore



# Cont..

- ▶ **Legal framework of the protection and the preservation of the marine environment by Coastal States of the Gulf of Guinea**

# General Provisions: Section XII, UNCLOS

Coastal States have obligations and competences:

- ▶ Obligation to protect and preserve the marine environment (through this provision Coastal States must adopt measures to prevent, reduce and control pollution of the marine environment, and shall also cooperate as appropriate)
- ▶ There are relevant national legislations on environment, and some provisions relating to environment protection which are included in Petroleum legislations

# Environmental legislations (general)

- ▶ **Bénin** : Loi n° 98-030 du 12 février 1999 portant Loi-cadre sur l'environnement
- ▶ **Cameroun** : Loi n° 96/12 du 5 août 1996 portant Loi-cadre relative à la gestion de l'environnement.
- ▶ **Côte-d'Ivoire** : Loi n° 96-766 du 3 octobre 1996 portant Code de l'Environnement.
- ▶ **Gabon** : article 1er de la Loi n° 16/93 du 26 août 1993 relative à la protection et à l'amélioration de l'environnement.
- ▶ **Guinée Equatoriale** : Environmental law n° 7/2003 dated November 27 and its amendements
- ▶ **Nigéria** : Environmental Impact Assessment Decree No 86 of 1992 Laws of the Federation of Nigeria.

# Competences of Coastal States

- ▶ **Exercise of Regulations powers in EEZ in accordance with UNCLOS**
  - Coastal State can institute proceedings in respect of any violation of its laws and regulations
  - Coastal State may undertake physical inspection of the vessel relating to the violation
- ▶ **In case of oil discharge causing major damage or threat to coastline, Territorial Sea and EEZ, the Coastal State may institute proceedings, including detention of the vessel.**

# International Conventions on Marine pollution

## ► GLOBAL LEVEL

- International Convention relating to Intervention on the High Seas in Cases of Oil Pollution Casualties, 1969
- MARPOL Convention 73/78: Combat oil pollution from vessels. This involves the fitting of appropriate equipment, including an oil-discharge monitoring and control system. It establishes the Gulfs as special areas, which are vulnerable to pollution by oil.
- Convention on Oil Pollution Preparedness, Response and Cooperation (OPRC 90)

## ► REGIONAL LEVEL

- Convention for cooperation in the protection and development of coastal regions of West Africa and Central Africa (WACAF) and its Protocol (1981)
- Memorandum of Understanding (MOU) of Abuja on Port State Control: Inspection of foreign ships in national ports to verify that condition of the ship and its equipment comply with the requirements of International Conventions and maritime laws



# MARITIME SAFETY STANDARDS

- ▶ International Safety Management Code (ISM, 1993)
- ▶ International Convention for the Safety of Life at Sea (SOLAS, 1974)
- ▶ Convention on the International Regulations for Preventing Collisions at Sea (COLREG, 1972)
- ▶ International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW, 1978)
- ▶ International Ship and Port Facility Security (ISPS Code, 2002)

# National Standards of environmental provisions imposed on petroleum operations

- ▶ Regulations relating to safe working
- ▶ Regulations relating to the conservation of resources
- ▶ The prevention of pollution of watercourses and atmosphere
- ▶ Obligations of Environmental Impact Assessment

# Cont..

- With regard to the provisions of the various marine Conventions for Oil pollution Prevention and marine safety Standards, States must introduce them into their national petroleum legislations.
- Currently, OPRC Convention is likely to serve a mechanism which can focus on initiatives at the international, regional and national levels in matter of prevention of Oil spills.
- Within the framework of the Global Initiative project « GI WACAF), Interim Guinea Current Commission (IGCC), International Maritime Organisation (IMO), International Petroleum Industry Environment Conservation Association (IPIECA) and other partners work together to encourage and facilitate improvement for Oil spill preparedness and response measures.
- This is important for Gulf of Guinea LME which must face the intense activity both of Oil transportation and Offshore petroleum drilling.

# Responsibility and Liability

- ▶ Responsibility of State (Art. 235, UNCLOS): States shall be liable in accordance with International Law.
  - To ensure that recourse is available for prompt and adequate compensation or other relief in respect of damage caused by pollution of the marine environment by petroleum operators under their jurisdiction
- ▶ Liability of the operator:
  - International Convention on Civil Liability for Oil Pollution Damage (CLC, 1969 and 1992)
  - International Oil Pollution Compensation Funds (IOPC Funds, 1971, 1992 and Supplementary Fund), provide compensation for Oil pollution damage resulting from spills of persistent oil from tankers.
  - The subscription to private insurance is also a mean of compensation of damage by oil pollution

# RECOMMENDATIONS

- ▶ Strengthening the legal framework of the offshore exploitation by adopting a convention on technical standards and safety
- ▶ Establishment of a special fund for protection of marine ecosystem. This can be financed by IOPC Funds, States or regional financial Institutions (African Development Bank, West Africa Development Bank).
- ▶ Adoption of specific laws on exploitation of EEZ and CS.



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