ESTABLISHING CONGO’S
NAVY OPERATION CENTER (NOC)
IN THE GULF OF GUINEA

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United-Nations - Nippon Foundation fellowship
2010-2011
INTRODUCTION

- 80 % of global traffic is transported by sea and oceans
- 70 % of the Earth is covered by oceans
- 33 % of global oil production is extracted from oceans
- 30 % of CO2 is absorbed by oceans

All these figures show that nowadays the marine environment is getting a very important impact on the mankind's life and activities. The sea is becoming more and more the Earth’s future and its nations. To be interested today by the marine environment issues means to be interested by the most major global issues of tomorrow.

The Africa continent, straddling two great oceans (Atlantic: the second greatest one in the world, Indian: the third one) is highly concerned by these issues.

But this presentation will be just focused on the part of one of these oceans (Atlantic) called Gulf of Guinea for which this research suggests a way to establish a NOC for its maritime security.
PLAN

I- Gulf of Guinea and maritime security requirements

II- Sub regional maritime strategy in the Gulf of the Guinea

III- Focus on the Republic of the Congo

IV – Establishing Navy Operations Center (NOC)

   A- Operational chain
   B- Technology of data acquisition and management
   C- Command of the action at sea
   D- Legal framework
Gulf of Guinea and maritime security requirements

From the Cape Palmas until Cape Santa Maria (Angola)
More than 6000 km

**Natural resources:**
- Oil estimation: 50 billion barrels,
- Natural gas: 3,863 billion m³,
- Halieutic resources: One of the marine area the most abounding in fish in the world.
- World’s greatest reserve of humpback whales, ...
Gulf of Guinea and maritime security requirements

**Strategic area:**
- Heart of Africa: junction of great seaways
- But also: numerous developed countries’ oil interests
  - **Europe:** SHELL, British Petroleum and Total Fina Elf
  - **USA:** Exxon mobil, chevron, Conoc Philips, Occidental Petroleum, Ameradas Hess, Marathon Oun Perenco
  - **Other:** Petrona, Chinese National Petrole Corporation, ENI, Schlumberger, Sonair…
Gulf of Guinea and maritime security requirements

- Military presence:
  • Corymbe: French permanent navy operation (since 1990) intended to patrol in the Gulf of the Guinea
  • APS: US navy mission intended to improve maritime security and safety in Africa (since 2006)
Gulf of Guinea and maritime security requirements

Maritime threats

- Illegal fishing: waste of 1 million US $ / year
- Piracy: 104 piracy acts in 2009 (77 Nigeria, 22 Cameroon, 5 Equatorial Guinea)
- Marine pollution: 1,501,956 tons of oil spill (from 1960)
- Drug trafficking: ¼ of the consumed cocaine in Europe passes in transit through Africa (west Africa)
- Dumping of toxic waste at sea: Probo Koala, 580 Tons in Abidjan (Ivory coast, August 2006)
- Illegal immigration: 200 people drowned in the shipwreck in the offing of Kribi (Cameroon) in destination to Gabon (April 2006)
Gulf of Guinea and maritime security requirements

**Sub regional response**: Common strategy for increasing vital interests security at sea of the ECCAS' States of the Gulf of Guinea (2008).

**ECCAS**
- Created in 1983 and 10 Member States;
- Goal: creation of a customs union and establishment of common sectorial policies.
- Since 1999: peace keeping capacity and prevention of conflicts in central Africa by creating an organ called COPAX.
- COPAX: Project manager of the strategy

Economic Community of Central African States
Central African Peace and Security Council
Gulf of Guinea’s sub regional maritime Strategy

Functional bodies of the strategy
- Regional Centre for the Maritime Security in the Central Africa (CRESMAC, french initials)
- Multinational Centre of Coordination (MCC)
- Navy Operations Centre (NOC)

Main research topic: NOC

Sphere of activities
- Zone A: Angola; DRC. Pilot State: Angola;
- Zone B: Angola; Congo; Gabon. **Pilote State: Congo**;
- Zone D: Cameroon; Equatoriale Guinea; Sao Tome and Principe; Gabon. **Pilote State: Cameroon**.
Gulf of Guinea’s sub regional maritime Strategy

- Only the zone D is operational (the most exposed to piracy acts)

-CRESMAC = Pointe Noire (Congo), Congo = Pilot State zone B

Subject: Congo’s NOC
Focus on the Republic of Congo

Generalities

- Political Capital: Brazzaville
- Economic Capital: Pointe-Noire
- French former colony (till 1959)
- Administrative language: French
- Area land: 342,000 Km²
- Population: 3,110,000 h
- Coastline: 92 nautical miles
- Oil royalties: 50 % GDP
- Pointe Noire’s port: only deep-sea port in the sub region,

Gross Domestic Product
ESTABLISHING NAVY OPERATIONS CENTER

Research proposal

Congo’s police port authority = Operations Direction + Public Service Missions Direction
Operational chain of the NOC

NOC: Civilo-military organ in charge of the execution of the ECCAS’s maritime strategy at the tactical level, the secular arm of the Operations Direction.

**Missions of the NOC**

-Military Missions: Operational controller of the warships.
Meaning: Responsible of execution and control of a military mission in its sphere of activities (by using warships) on behalf of the Army Forces

-Public service Missions: *interdepartmental coordinator* of the governmental action at sea.
Meaning: coordinate the action all the public departments involved at sea to achieve the Public service assignments
Operational chain of the NOC

Operations Direction

This Direction consists in commanding, coordinating and following the sea operations.

- Operations Director: Head of the Operations Direction
- NOC’s Commandant / Chief: Deputy OPS DIR

✓ 4 divisions: facilitate the permanence of the NOC’s Action in a room called: Operations Management Room (OMR)

DIR= Director, OPS: Operation
Operational chain of the NOC

**Operations Direction:** 4 main Divisions

- Division « Operations Management »:
  - planning, preparation of the OPS (civilian and military)
  - 2 services:
    - Surface Service: OPS (ships)
    - Air Service: OPS (aircrafts)
  - OPSCEL: synthesize and update the information related to the sphere of activity for the OMR (+ Air/Surface Unit Operators)

- Division « Communications »:
  - OMR’s Communication: all ships and partners
  - Provide the OMR with the communications technicians

**OPS CEL:** Operations Cell;
Operational chain of the NOC

- Division « Intelligence »:
  - Intelligence: collect permanently information about the sphere of activities
  - sources: civilian and military Intelligence agencies
  - Intelligence Report in collaboration with the OPSCEL on behalf of the OMR

- Division « Logisitics »
  - Logistical support of the whole Direction
  - OMR’s digital equipments maintenance
  - Provide the OMR with the electronics engineers on duty
Operational chain of the NOC

Operations Management Room (OMR)

Mission: Maintain the permanence of the NOC’s Action (24H / 24) by the control of the Surface/Air tactical situation. Its full team is provided by all the divisions

- Operations Permanent Officer (OPO):
  • Responsible of the permanent NOC’s Action (24 H)

- Operations Watch Officer (OWO): junior Officer
  • Manages in real time the OPS

- On-Call Duty Officer (OCDO) from the PSMD
  • OPO’s legal and administrative advisor

- Technicians et Operators:
  • Maintenance of the NOC’S equipments
  • Radio, sea or air traffic operators…

PSMD : Sea Public Service Missions Direction
B-Technology of data acquisition and management

OMR’s Equipements
-Aim: Allow the OMR’s team to manage, coordinate, intervene and to follow the sea OPS
-Approach to the problem: Detect-identify-coordinate-intervene

Equipements of detection:
-Maritime Radars:
•Adapted Discrimination to the threats (particularly to dugouts)
•Disadvantages:
✓ Range: 20-30 nm
✓ Incapacity to detect wooden small ships (also in composite)

Nm= nautical mille
Technology of data acquisition and management

- AIS = Automatic Identification System
- Radio (VHF) system dedicated to the automated message exchange between ships-ships and ships-on-shore stations
- Information content: identity, status, position, course

Disadvantages:
- Range: 40 nm
- Manual Acquisition: Name, IMO Number or the destination.
- NMEA 0183: possible transmission of an erroneous position or identity.
Technology of data acquisition and management

Satellite: VMS
Aim: regular ship position; global range
Ships: automatic data sending to the satellite then processing in a FMC
Sphere of activity: illegal fishing indeed pollution
Disadvantages: EU exclusivity
Manual acquisition of the fished rates
Other possibilities: VSAT, INMARSAT

VMS: Vessel Monitoring System;
FMC: Fishing Monitoring Centre
VSAT: Very Small Aperture Terminal
INMARSAT: International maritime satellite organization
Technology of data acquisition and management

Long Range Identification and Tracking: LRIT
Aim: ship localization by means of the sending of a message (ship ID, position, T= 6 h)
Adresssees: Coastal, Flag and port State (range 1000 nm from the shoreline)
Range and sphere of activity: Global (satellite), maritime navigation monitoring, SAR
Technology of data acquisition and management

Equipments of identification: identify.
Video Cameras.
optronics = efficient for the ship identification (night and day)
Servo-control by the radar (automatic monitoring of radar tracks)
Technology of data acquisition and management

Equipments of coordination
Electronic Chart Display and Information System (ECDIS) for the data issued from the sensors + telecommunication Systems (VHF, MF, UHF, SHF, phone…)
Preference: ENC chart rather than RNC;

Equipments of intervention
Ships and aircrafts of partners
ENC: Electronic Navigational Chart; RNC: Raster Nautical Chart;
Information research (free access) and partners

Technology of data acquisition and management

Shipping weather forecast:
allmetsat.com
Observation, forecast, satellite pictures

AIS: marinetransffic.com/ais
Global identification of ships detected by AIS antennas
Technology of data acquisition and management

Equasis,
Available: via internet since 2000,
-around 70,000 vessels, more than 40 information sources
-sources: classification, insurance, shipowner societies,
MOUs (Paris, Asia Pacific, US coast guard)
Disadvantage: Tokyo MOU (monthly update).

MOU: Memorandum Of Understanding
Technology of data acquisition and management

SIRENAC 2000
Operating Software of the Paris MOU’s database
Futur plan: THETIS, 2011 onwards
A part of the SIRENAC database is free access
Abuja Mou’s IPC: Pointe-Noire (Congo-Brazzaville)

GUMAR (reserved access)
Digital system for the one maritime window of the Pointe noire’s port

IPC: Information Processing Centre
THETHIS: The Hybrid European Targeting and Inspection System
Technology of data acquisition and management

**Partners:**
Operational Organs of the Congo’s Army Forces, Operations Centres of each public agency operating at sea
State Parties’NOC network
Abuja MOU Centre
Boarding Operation

Definition: extract of CMB art. 110-2

...the warship may proceed to verify the ship's right to fly its flag. To this end, it may send a boat under the command of an officer to the suspected ship. If suspicion remains after the documents have been checked, it may proceed to a further examination on board the ship, which must be carried out with all possible consideration.

This extract can be summarized by 2 relevant notions:
Verification of the ship's flag = flag inquiry (visit)
Further examination on board = search or sweep

CMB: Convention of Montego Bay
Command of the action at sea

**Boarding Operation (BO)**

Aim for a private ship to determine its nationality, the nature and the destination of its cargo, the crew’s nationality, and the use done by its transmission equipments (CMB art. 109)

The Boarding Team (BT) is a seamen’s group coming from a warship (host ship), by means of a boat, whose goal is to execute a boarding operation with regard to a suspected ship (focal ship).

Boarding Operation = flag inquiry + search.
Command of the action at sea

**NOC**
- Only can order the BO to a warship

**Warship**
- Chief: Commanding Officer
- CELCOM: liaise (from the bridge) between
  - NOC and Warship
  - Warship and BT
  - Head: warship’s supply Officer (under the CO)

**CELCOM’s Missions:**
- Make contact with the focal ship (and interrogation)
- Archive Ops (conversations, pictures...)

CO: Commanding Officer
Command of the action at sea

**Boarding Boat:** Boarding team
- **Command Entity (CE):** responsible of the BO execution
- **Security Entity (SecE):**
  - control and watch of the focal ship’s crew
  - reinforce the Search Entity if needed
- **Search Entity (SearE):**
  - Protect of the BT while the BO movement
  - Inspect the ship, cargo in order to find proofs
Command of the action at sea

Execution of a Boarding Operation

Focal ship is cooperative

warship

-Bridge: officer of the watch
• Make arrangements about the BO execution

-Combat Information Center: CIC (if provided)
• General quarters/Battle station
• Set going the electronic warfare (EW)
• Tactical control of the helicopter (if provided)
• Briefing of the Chief of BT after checking CELCOM’s information (ship name, flag, home port, port of registry, ship owner, hull number etc.)
<table>
<thead>
<tr>
<th>Steps</th>
<th>Command Entity (CE)</th>
<th>Sweep Entity (SwE)</th>
<th>Security Entity (SecE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st Step</td>
<td>- Progress safely towards the bridge, SwE ahead then takes control of the bridge</td>
<td>Progression towards the bridge</td>
<td>Waits at the bottom of the access ladder leading up to the bridge and prohibits every</td>
</tr>
<tr>
<td></td>
<td>- The head of the BT meets the focal ship’s captain and explains the goal of the OPS</td>
<td></td>
<td>movement to the bridge</td>
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<tr>
<td></td>
<td>- starting the flag inquiry (log books)</td>
<td></td>
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<tr>
<td></td>
<td>- The deputy Head of the BT manages the SwE and SecE actions:</td>
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<tr>
<td></td>
<td>• SwE: evacuation, then puts under lock and key the radio room (in presence of the</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>chief mate)</td>
<td></td>
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<tr>
<td></td>
<td>• SecE: joins the murder station of the focal ship’s crew</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Report to the CELCOM</td>
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<tr>
<td>2nd Step</td>
<td>Controls the bridge, pursues the flag inquiry and protects itself</td>
<td>Investigation of the crew’s accommodation, canteens, holds etc and control of the</td>
<td>Control s and watches the crew</td>
</tr>
<tr>
<td></td>
<td></td>
<td>duty section in presence of the chief mate</td>
<td>Report to the CE</td>
</tr>
<tr>
<td>3rd Step</td>
<td>The Head of the BO makes sure the operation is executing properly and orders the</td>
<td>Execute the cargo investigation in presence of</td>
<td>Controls and watches the crew</td>
</tr>
<tr>
<td></td>
<td>investigation of the cargo</td>
<td>the chief mate</td>
<td>Report ASAP to the CE</td>
</tr>
<tr>
<td>4th Step</td>
<td>Outcomes of the global investigation</td>
<td>- Unfruitful search: return to the host ship</td>
<td>watches the crew</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(warship)</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>- Fruitful search: divert and put the ship and</td>
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<td></td>
<td></td>
<td>its crew at NOC’s disposal</td>
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</tbody>
</table>
## Legal framework

**Aim:** give to the chief of the boarding team the necessary legal support related to the Boarding operation execution. The boarding operation execution by a warship on a private ship within an illegal context could engage its flag State’s responsibility.

**Legal source:** United Nations Convention on the Law of Sea  
Main operations: Boarding Operation, diversion  
Main key players: Warships, private ships

<table>
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<th>Maritime spaces (1)/(2)</th>
<th><strong>Foreign private ships</strong></th>
<th><strong>Congo’s private ships</strong></th>
<th><strong>Foreign warships</strong></th>
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<td>Internal waters</td>
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<td>Territorial sea</td>
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<tr>
<td>Conitiguous zone</td>
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<tr>
<td>Exclusive economic Zone</td>
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<tr>
<td>High seas</td>
<td></td>
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</tbody>
</table>

(1): maritime spaces subject to national jurisdiction or sovereignty  
(2) Foreign maritime spaces
## Legal framework

### Case: Congolese maritime spaces

Congo’s UNCLOS ratification: January 30th 2008

<table>
<thead>
<tr>
<th>Maritime spaces</th>
<th>Operations</th>
<th>References</th>
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<tr>
<td>Internal waters</td>
<td>BO + Div</td>
<td>CMB: art. 2 § 1. Sovereignty rights</td>
</tr>
<tr>
<td>Terrotorial sea</td>
<td>BO + Div</td>
<td>CMB: art. 2 § 1. Sovereignty rights, right of hot pursuit (till high seas) in accordance with right of innocent passage</td>
</tr>
<tr>
<td>Contiguous zone</td>
<td>BO + Div</td>
<td>CMB: art. 33. control, prevent, punish rights</td>
</tr>
<tr>
<td>EEZ</td>
<td>BO + Div</td>
<td>CMB: art. 56. Sovereignty and jurisdiction rights in accordance with CMB: art. 58. Freedoms: navigation, overflight, submarines cables….</td>
</tr>
</tbody>
</table>
## Legal framework

### Case: High seas

<table>
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<th>Offences</th>
<th>Operations</th>
<th>references</th>
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<td>(1) Piracy</td>
<td>BO + Div</td>
<td>CMB: art.105</td>
</tr>
<tr>
<td>(2) Slave trade</td>
<td>BO + Div</td>
<td>CMB: art.99 &amp; 110</td>
</tr>
<tr>
<td>(3) Unauthorized broadcasting</td>
<td>BO + Div</td>
<td>CMB: art.109</td>
</tr>
<tr>
<td>(4) Ship without nationality</td>
<td>BO + Div</td>
<td>CMB: art.110</td>
</tr>
<tr>
<td>(5) Pollution</td>
<td>BO + Div</td>
<td>CMB: art.221</td>
</tr>
<tr>
<td>(6) Hot pursuit</td>
<td>BO + Div</td>
<td>CMB: art.111 &amp; 1</td>
</tr>
<tr>
<td>(7) Illicit traffic in narcotic drugs or psychotropic substances</td>
<td>BO + Div</td>
<td>CMB: art.108 Vienna convention 1988: art.17</td>
</tr>
<tr>
<td>(8) Maritime terrorisme</td>
<td>BO + Div</td>
<td>Rome convention 1988</td>
</tr>
</tbody>
</table>

(1) … (6)= no flag state agreement  
(7) and (8)= flag state agreement  

Rome convention: Convention for the suppression of Unlawful Acts Against the Safety of Maritime Navigation
CONCLUSION

Analysis this presentation plan

A- Operational Chain = Human resources= Man
B- Technology and data acquisition and management = Machine
C- Command of the action at sea = Procedure
D- Legal framework = Law

This research is a combination of 4 dimensions: Man, Machine, Procedure and the Law.

Here is the interaction all these dimensions:

- Man = centre of the gravity of the making decision process (NOC)
  Needs:

- Machine to control the sea (limited senses).
- Procedure: efficiency about the maritime insecurity fight,
- Law: efficiency is certain if only if the action is carried out in accordance with the international standards commonly allowed by every one.

This way was for me the most obvious to solve this problem but certainly not the one.
The sea so dreaded and so wanted by people, the sea which separates the nations but permits them to join themselves, the sea by where the worst dangers may threaten the States; but without this one there is no greatness.

Général de Gaulle. « La Mer Avenir de la Terre, Chapitre 7, page 290 »