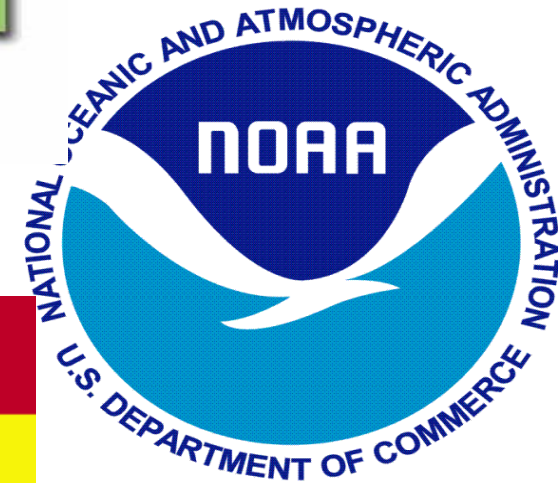


West Africa

Capacity Building and Partnerships



Teresa Turk

Office of Science and Technology/Office of International Affairs

Overview

- Background
 - Legislation
 - IUU
 - US Navy's role
 - Observers
- Training
- What we learned...
- Spin-Offs
- Future Plans



Background

- Why do outreach to other countries?

(Magnuson-Stevens Reauthorization Act, 2006)

- Enhance International Cooperation
- Improve international monitoring and compliance
- Strengthen regional fishery management organizations (RFMOs)
- Maintain historical U.S. catch shares
- Establish new Secretarial representative for international fisheries
- Provide assistance to other nations (e.g., technology transfer)

Background (continued)

- Address illegal, unreported, and unregulated (IUU) fishing and bycatch of protected living marine resources
- Biennial Report to Congress on International Compliance
- NMFS will certify as to whether nations are taking appropriate actions to address IUU fishing and bycatch of protected living marine resources
- Nations could be subject to sanctions of the High Seas Driftnet Fisheries Enforcement Act

NMFS OIA Capacity Building Focus Areas

- **Central and South America (OSPESCA)**
Began in 1993
 - Nancy Daves (Lead and Capacity Building Coordinator)
- **West Africa (African Partnership Station)**
Began in 2007
 - Teresa Turk (Lead)
- **Coral Reef Triangle (USAID)**
Began in 2008
 - Michael Abbey (Lead)

Scope of Activity

Gulf of Guinea (GOG)



Why work in West Africa?

- Huge IUU (Illegal, Unreported, Unregulated) Activity and Maritime Security Problems

Illegal:

Fishing done contrary to established rules or regulations.

Unreported:

Fishing that is either unreported or misreported to relevant national or regional organization.

Unregulated:

Fishing conducted by a vessel without nationality or flying a flag from a State not party to regulations governing the fishing area.



Impacts of IUU Fishing

Worldwide: Estimated cost is \$4-9 billion USD annually of illegally harvested fish.

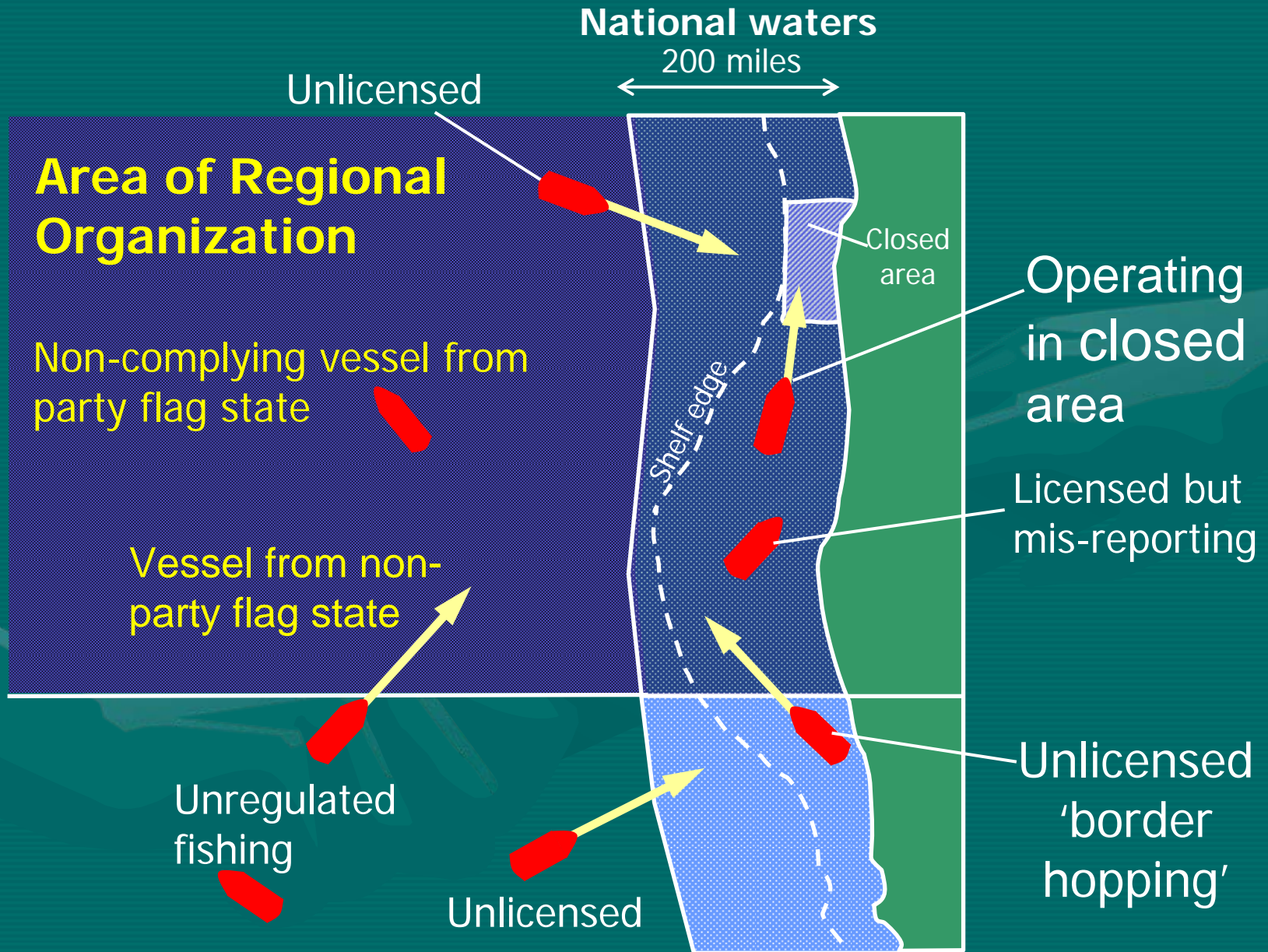
Cost to Coastal States:

- **Economic:**
 - loss of revenue, loss of multiplier effects
 - loss of potential export revenues
- **Resource:**
 - damage to coastal stocks – overfishing
 - compromised management & assessment
 - damage to sensitive marine ecosystems
 - birds, turtles, sharks, mammals killed
- **Social:**
 - conflict with domestic/artisanal fishers
 - food security/livelihoods jeopardized
 - undermine rule of law

Statistics on West Africa IUU

- Level of IUU fishing is largest in the world in the Eastern Central Atlantic (Agnew et al. 2009)
- Estimated revenue loss is **\$265 Mil-506Mil** from 2000-2004
- Estimated IUU fishing in **37-40%** of total catch
- Accounting irregularities with access agreements from EU and Asian countries
- Lack of at sea monitoring/enforcement
- Lack of information on protected species

Examples of IUU Fishing



Why Does NOAA Care?

- Population growth will stress fish stocks and other marine food resources
- Serious employment, nutrition and economic concerns
- Marine fisheries threatened in coastal waters and on the high seas by:
 - Over-fishing (Tuna)
 - Bycatch/Discarding (Protected Species)
 - Environmental Degradation (Health)

US Navy to the re



- Population growth will stress fish stocks and other marine food resources (Food Security)
- Serious employment, nutrition and economic concerns (Weakened governance)
- Use of fishing/marine vessels to transport drugs and munitions (Maritime Security)
- Corruption throughout system (Oil and other mineral resources)
- Geopolitical (Chinese and other foreign interest)

Failed States and Terrorist Havens

01K 756

02.09.2008 07:29

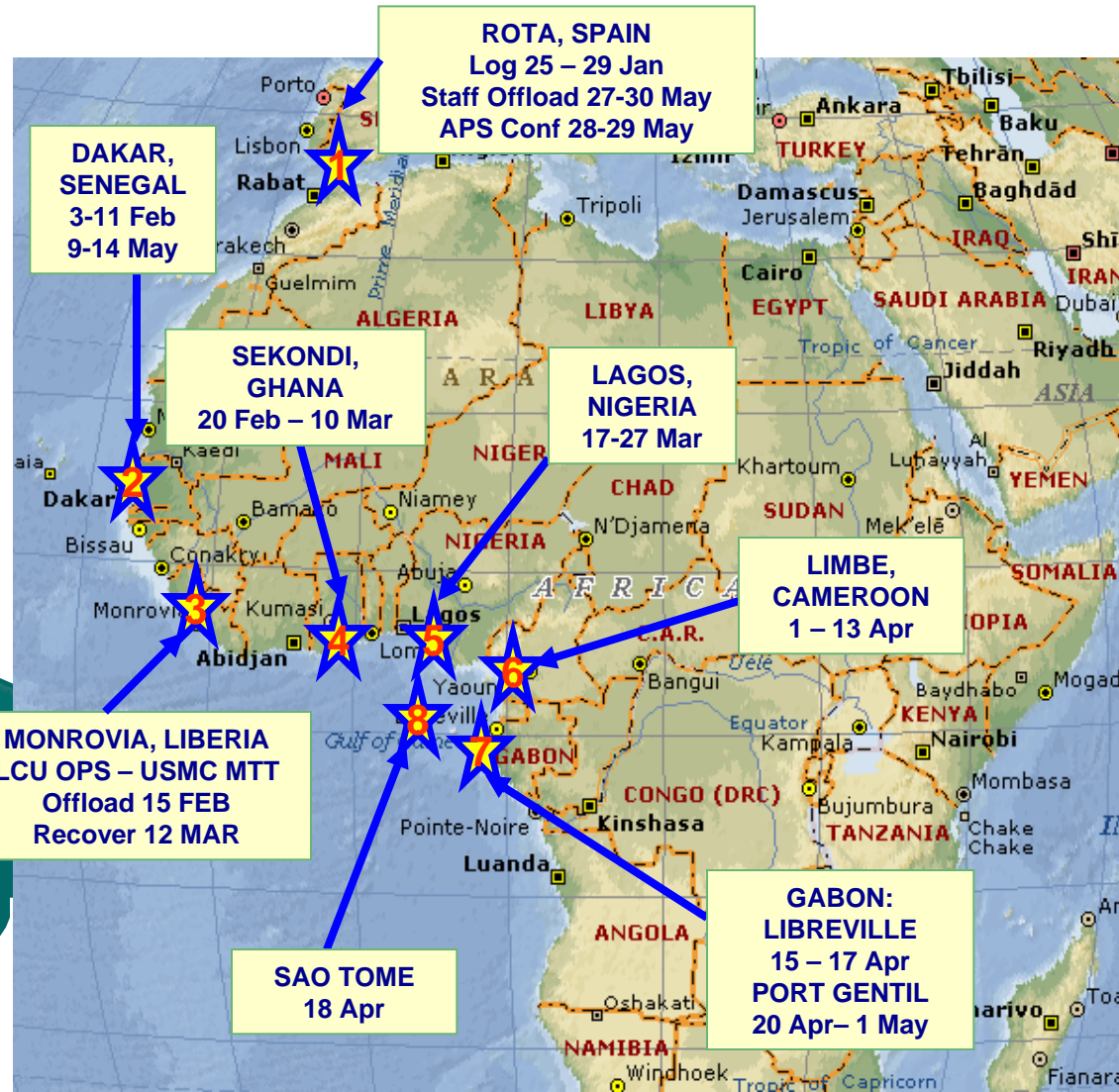
USN's African Partnership Station (APS)

- Since 2008, USN has series of vessels operating in the Gulf of Guinea area
- Variety of vessel types from USN/USCG
- Multi-national guests on board but currently activity is led by USN




USS Nashville Engagement Schedule

- ✓ 25-29 Jan Rota, Spain
- ✓ 3-11 Feb Dakar, Senegal
- ✓ 15 Feb-12 Mar Monrovia, Liberia
(USMC trng and HA delivery only)
- ✓ 20 Feb-10 Mar Sekondi, Ghana
- ✓ 17-27 Mar Lagos, Nigeria
- ✓ 1-13 Apr Limbe, Cameroon
- ✓ 15-17 Apr Libreville, Gabon
- ✓ 18 Apr Sao Tome
- ✓ 20 Apr-1 May Port Gentil, Gabon
- ✓ 9-14 May Dakar, Senegal



Convergence of Goals

- **Combat IUU Fishing**
(Marine Domain Awareness)
 - **Increase internal capacity for resource management** (Create stable food source)
 - **Increase overall governance**
(Reduce corruption)
 - **Generate revenue to support nations' monitoring and control efforts** (Sustainable funding)
- 
- The background image shows the deck of a ship. A sign on the wall reads "NOT JUST SUCCESS" in an arc above a map of Africa. Below the map, the word "PARTNERSHIP" is visible. A person in a white uniform and cap is standing on the deck near the sign. A large, dark, spherical object, possibly a buoy or a piece of equipment, is mounted on the deck in the foreground. The overall scene is a maritime setting.

Other Reasons to work in West Africa

- Long standing international partners in International Commission for the Conservation of Atlantic Tuna (ICCAT), International Whaling Commission (IWC)
- Geo-political management in the region
- Lack of information on marine mammal, sharks, and sea turtle populations
- Large areas of good habitat for sea turtle nesting areas usually unprotected

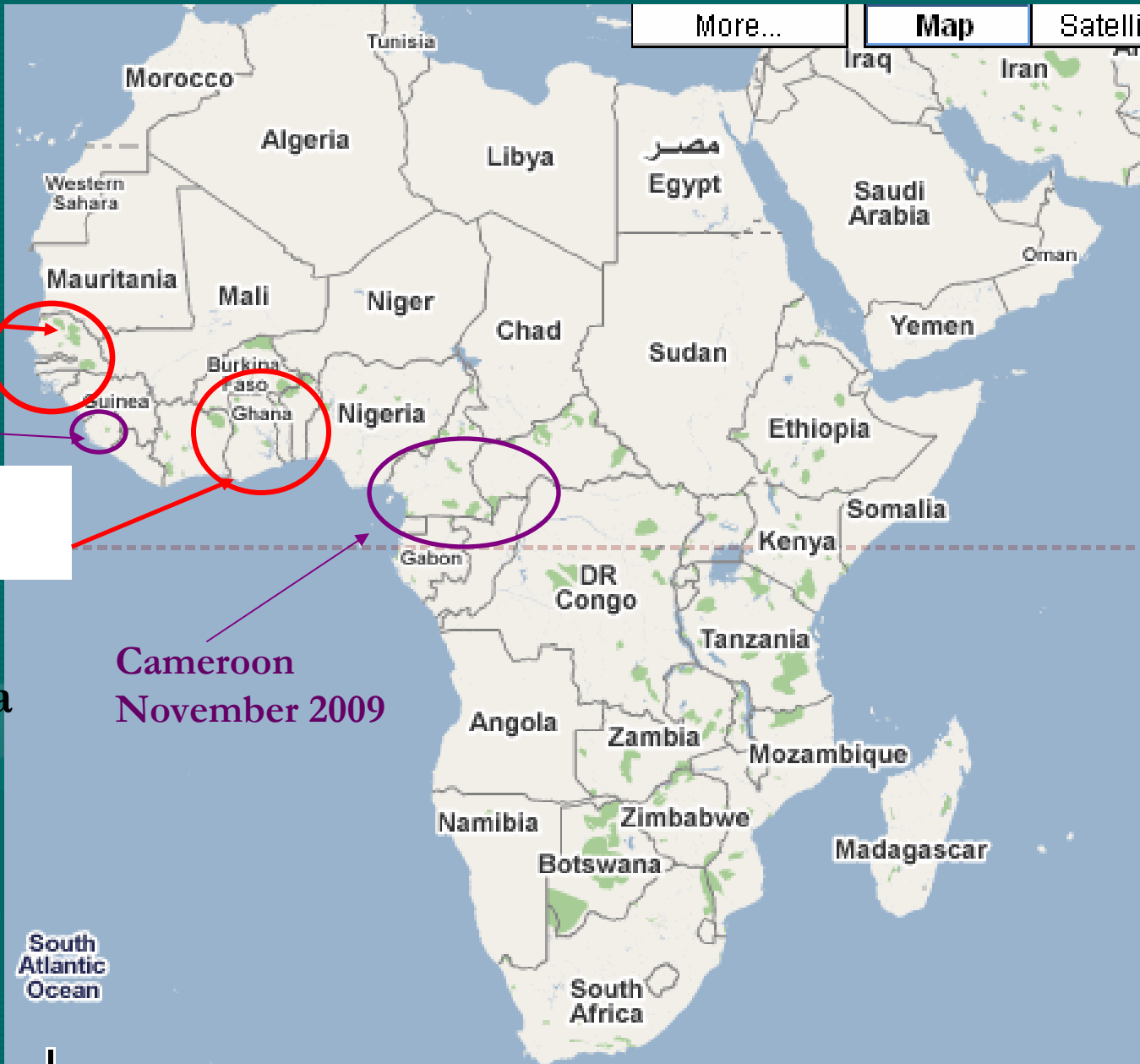
West Africa

SENEGAL
February 2009

Sierra Leone
2010

GHANA
April 2008

Cameroon
November 2009



Morocco to Namibia
20 Countries within
the West African
region

Partners in Training

- Conducted Observer Training in April 2008 in coordination with the Ministry of Fisheries-Ghana and US Navy's APS-HSV2 Swift.
Tema, Ghana
- Conducted Observer Training in February 2009 in coordination with the Direction des Pêches Maritimes-Senegal and US Navy's USS Nashville. Dakar, Senegal

Ghana Fisheries Sectors

4th leading producer of tuna in the world.

Member of ICCAT since 1968

Industrial fleet—17% of landings

Shrimp: Trawlers-2

Demersal Fish: 62 trawlers

- Tuna: Targeting skipjack, yellowfin
- & big eye tuna
 - Average catch/year 60,000 MT
 - Using Fish Aggregating Device
 - Purse seines-11
 - Bait boats/pole and line-22
 - Longliners-2



Ghana Fisheries Sectors

65% of protein in country comes from fish

- Artisanal-70-75% of landings:
 - Beach seines over 700 areas
 - Canoes-12,000--50% powered, 50% wind or paddles
 - Over 300 landing sites
- Inshore fleet-3% of landings

Targeting primarily sardines and mackerel.



Artisanal- Sector



Senegal Fisheries Sector

- Artisanal-90% of landings:
 - Canoes-10,000-90% are motorized
 - Over 300 landing sites
 - Primarily small pelagics and sardines



- Industrial Fleet:
 - 166 Senegalese vessels primarily bottom trawl (no observer coverage)
 - 44? Foreign vessels (observer coverage)
 - 10? Tuna vessels (Member of ICCAT since 2004)



Who are observers and what do they collect ?

- Independent 3rd party contracted or government biologists that serve on board commercial fishing vessels, plants and other platforms.
- Observers are usually the only independent data collection source for some types of fishery dependent, at-sea information, such as bycatch, catch composition, and gear configuration. In the developing world, they may collect information that is more enforcement related.

Observer Data Collection

- Fishing effort, location, and gear type
- Composition, size, sex, and weight for catch and bycatch
- Interactions with marine mammals, sea turtles, and sea birds
- Biological samples (tissue, aging structures, stomach contents)
- Compliance and economic information

NOAA Training Team

- **Kate Wynne-Alaska SeaGrant/U of Alaska**
 - Marine Mammal Expert
 - Author of 2 MM Identification books
 - Alaska, East Coast and Gulf of Mexico
- **Manjula Tiwari-SWFSC**
 - Turtle expert-West Africa is primary focus
 - Francophone
- **John La Fargue-NWFSC**
 - Long time observer and observer coordinator
 - Expert on at sea safety for observers
 - AMSEA certified



Training Topics

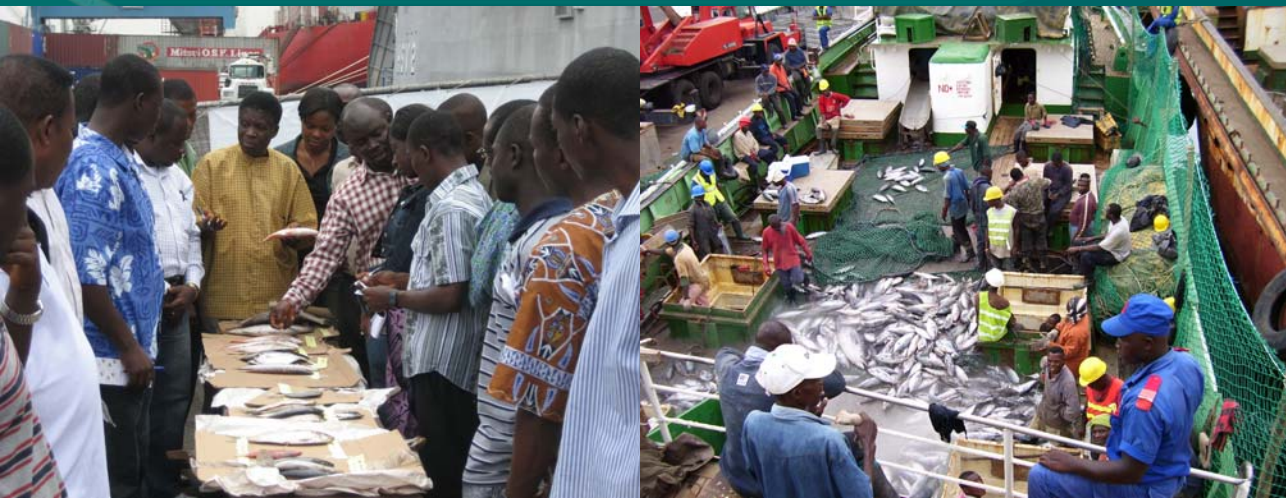
- Overview of US & Senegalese/Ghanaian Observer Programs
- Overview of Law Enforcement and Monitoring, Control, Surveillance (MCS)
- Safety training and demonstration
- Sea Turtle ID and data recording
- Marine Mammal ID and data recording
- Fish ID and data recording
- Collection of biological samples (otoliths & stomachs)



Training Support from Host Nation

Ghanaian/Senegal Ministry of Fisheries:

- Housing for trainees (Ghana), local residents (Senegal)
- Co-taught workshop (Fish ID, enforcement, status of stocks)
- Tour of market and fishing port
- Interview & translation with artisanal canoe fishers (Ghana)



Training Support from USN

- Classroom and support (computers, projectors, screens, printing certificates, email)-Ghana
- Payment for hotel training room-Senegal
- Logistics (on board and off vessel)
- Transportation and lunch every day
- Accommodations for US trainers



Training Support from USN

- Tour of the Bridge
 - Communications, Vessel Navigation, AIS
 - Vessel safety equipment
- Tour of Tema/Dakar Harbor using skiffs and “rhibs”.
 - Familiarization with being in a boat



Benefits to NOAA

- Security (training and berthing)
- Facilities with full support
- Networking with other US personnel on board (Saves NOAA \$\$\$)
- Exposure of Ghanaian and Senegalese nationals to USN and NOAA



Transportation of Equipment and Outreach Materials (US Navy Fleet)

- Safety Equipment (PFD's/Liferaft) (Senegal and Ghana)
- Office Materials for use in observer training (Senegal and Ghana)
- Books and Fisheries Journals (Ghana)
- All Terrain Vehicles (Ghana)
- Turtle Excluder Devices (Gabon-later in 2009)

Ongoing Support in West Africa



What we learned...Ghana

- Dockside observer program/some at sea
- No transshipment allowed
- 75% Ghanaians on board all ships
- Only Ghanaian flagged vessels allowed in EEZ
- Company must have office in Accra
- Vessel given permit quarterly and at time accepts observer
- No information on bycatch (sharks, MM, ST)

What is bycatch in Africa?

- Fish Bycatch in Africa is called the “African product”
- Paid to crew as part of compensation
- Flash frozen
- Wives sell in the fish market
- Does not include PR species or sharks



What we learned...Senegal

- Observer program started in 1982-govt. employees
- Observers can only be stationed on board foreign vessels-not Senegalese
- Foreign companies negotiate access with Senegal government
- No TAC process, license limited
- Good stock assessments but lack of fishery dependent data-most vessels are from Senegal

Vessels and Ports



Spin-offs from training

- Making contacts with other USG agencies (USAID, Peace Corps, State Dept.)
- Networking with local and global NGO's (Ocean Conservancy, WWF, Turtle Village, HATCH)
- Setting up cooperative work through the university system and museums. (Univ. of Ghana, Florida Gulf Coast Univ., U of South Florida) possibly U of Alaska, in future
- Meeting with local fishing groups (Sport Fishing Federation and Artisanal Fishing Cooperative)



Beach Clean-up

USN, U of Ghana, Ocean Conservancy

- Facilitated by NOAA
- September 2009



Strandings in Dakar



Challenges to NOAA working with USN

- Advance Planning (Classified information)
- Government policy coherence, goals and approach
- Coordination with all USG operations
- Reservation and payment of facilities
- Funding (good and bad)
- High overhead working with USN
- Corporate structure, acronyms, and process



Challenges with host nation

- Advance information for more focused training
 - Prior information on current program
 - Forms and manuals
- Cultural Awareness
 - Per Diem
 - Religion (Prayers)
 - No women as observers
- Logistics
- Shared funding/participation
- Long term engagement and technical support



Upcoming Events

- Attendance of 10+ Africans at IFOMC (July, 2009)
- Development of a West African regional observer program including standardized forms, procedures, protocols and manual (Summer/Fall 2009)
- Observer Training in coordination with International MCS network (October/November 2009 Limbe, Cameroon)
- Observer Training in Sierra Leone (January/February 2010)
- Potential trainings: Egypt, Liberia, Cape Verde, Uruguay



Potential Future Assistance

- Stock Assessment Surveys (additional vessel time and training)
- Stock assessments (modeling and tools)
- Database for observer, enforcement, and survey information
- Enforcement (IMCS network, USN, USCG)
- Access Agreements for post conflict (Liberia, Sierra Leone, others?)



Joint Ghana-USA Fisheries Observer Training Program 2008

