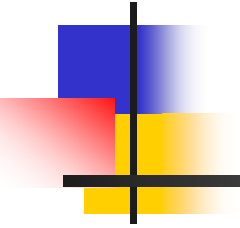


ARGO: INNOVATIVE TECHNOLOGY FOR UNDERSTANDING SUBSURFACE OCEAN OBSERVATIONS OFF NIGERIA AND THE GULF OF GUINEA



By
Regina Folorunsho

STUDY AREA

- Approximately bet. lat 3°S and 8°N and long 7°W - 8°E .
- Coastline: 2,519km from Cape Palmas to the Cameroon
- Major countries: Cote d' Ivoire, Ghana, Togo, Benin, Nigeria, Cameroon, Equatorial Guinea and Sao Tome and Principe

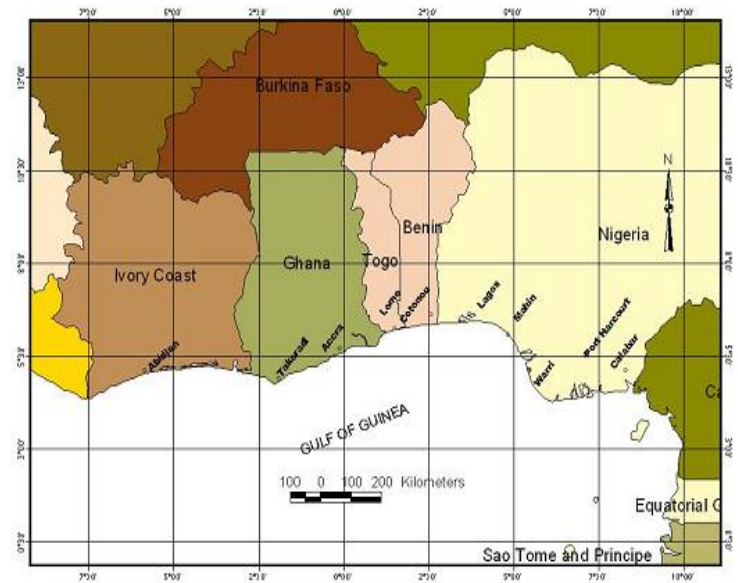


Figure 1: The Gulf of Guinea



SOCIO-ECONOMICS:

- **ABUNDANCE OF NATURAL & HUMAN RESOURCES**
- **OIL AND GAS DEPOSITS**
- **EXTENSIVE WETLANDS**
- **FISHERIES RESOURCES**



➤ **CLIMATE**

➤ ***SEA SURFACE TEMPERATURE***

➤ ***SEA SURFACE SALINITY***

➤ ***OCEAN CURRENTS***

➤ **UPWELLING**



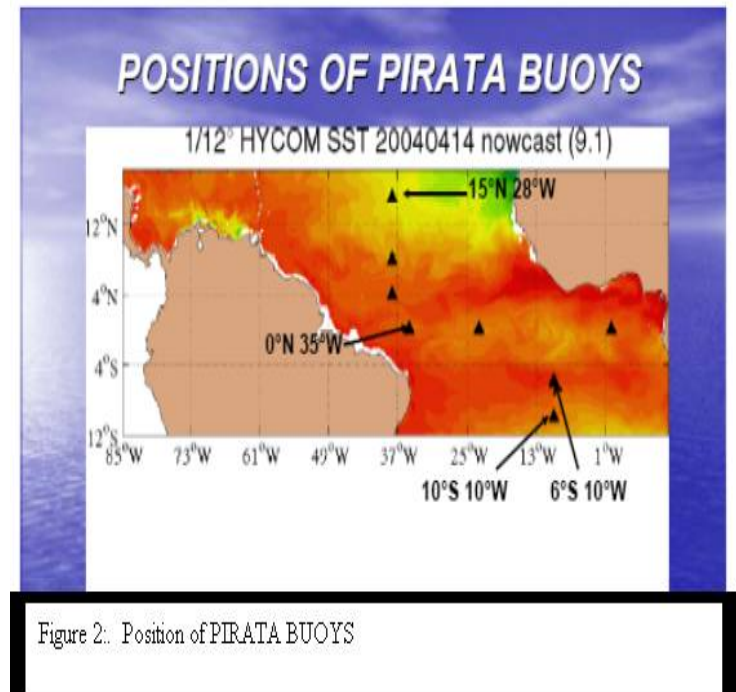
GLOBAL OCEAN-ATMOSPHERE PROGRAMMES IN NIGERIA AND THE GOG

WOCE

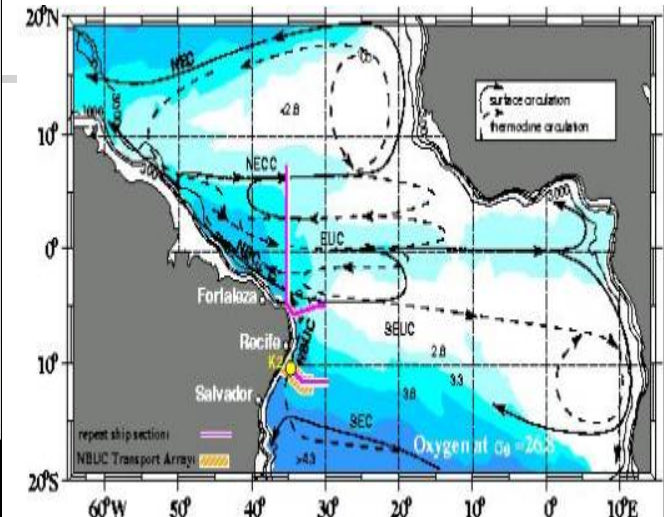
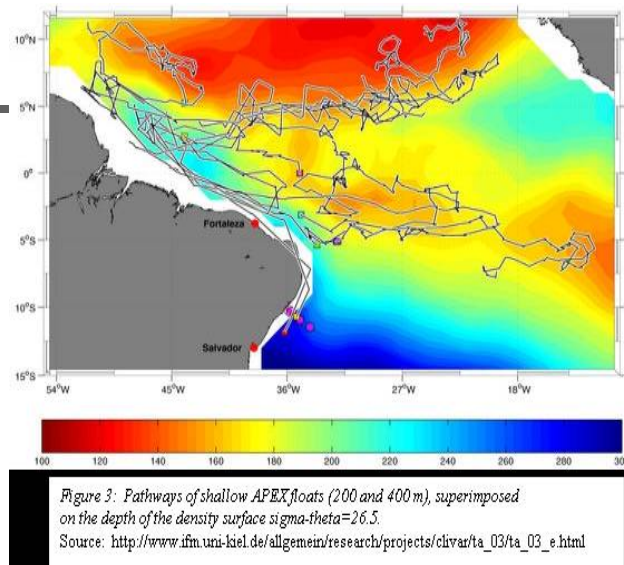
THE WOCE LINE AX-14 (LAGOS TO RIO) IMPLEMENTED BY NIOMR IN NIGERIA COLLECTED SEA TEMPERATURE AND SEA SALINITY DATA OVER A SHORT PERIOD OF TIME BETWEEN 1992 TO 1993. THE GOG WAS HOWEVER POORLY COVERED BY THIS PROGRAMME.

PIRATA

- ONE STATION (0° - 0°) IN THE GOG
- DATA COLLECTED USED IN UNDERSTANDING REGIONAL CLIMATE VARIABILITY.



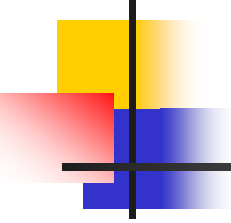
CLIVAR



1. Aimed at the understanding of the process, nature of forcing and the coupling of Ocean-Atmosphere in the Tropical Atlantic Variability (TAV).

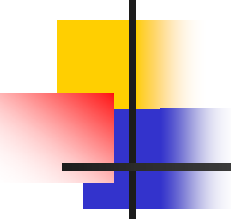
Several cruises, deployment and recovery of moorings carried out in the Atlantic. RESULTS?

ARGO

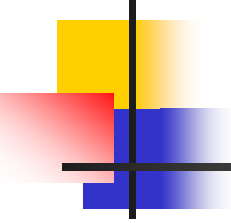


**ARGO PROJECT IS AN INTERNATIONAL
EFFORT THAT WILL DEPLOY A GLOBAL
ARRAY OF 3000 PROFILING CTD FLOATS
FOR A BROAD RANGE OF OPERATIONAL
AND SCIENTIFIC APPLICATIONS (Ref.)**

Yves Desaubies and Silvia L. Garzoli (2001)



**OBJECTIVES OF THE DEPLOYMENTS:
DESCRIBE THE SPATIAL
CHARACTERISTICS OF REGIONAL OCEAN
SIGNALS THAT ARE CORRELATED WITH
ATMOSPHERIC SIGNALS ON SEASONAL
TO INTER-ANNUAL TIME SCALES.**



**➤ INCREASE UNDERSTANDING OF THE
DYNAMICS OF THESE MODES OF OCEAN
VARIABILITY;**



➤ **CONTINUOUS MONITORING OF THE TEMPERATURE, SALINITY, AND VELOCITY OF THE UPPER OCEAN.**

➤ **DATA RELAYED TO BE MADE PUBLIC WITHIN HOURS AFTER COLLECTION .**



**ARGO HAS EXPOSED THE
VARIABILITY IN AREAS WHERE
THE PROJECT HAS BEEN
IMPLEMENTED SO FAR.**

**IN THE EAST CENTRAL
ATLANTIC, ARGO CAN EXPOSE
THE STRUCTURE AND
VARIABILITY OF HER OCEAN
FOR A BETTER UNDERSTANDING
OF THE GOG METOCEAN
PROCESSES, UPWELLING AND
CLIMATE CHANGE.**



EFFECTIVE IMPLEMENTATION OF ARGO

HUMAN CAPACITY ENHANCEMENT

ARGO technology, calibration,
launching, retrieval and data
transmission

Analyses and interpretation of data.

Physical Infrastructures



**FAST COMPUTERS,
HARDWARE,
SOFTWARE AND OTHER
PHYSICAL INFRASTRUCTURE**



Communication

Effective Internet services



Awareness Creation

POLICY MAKERS

SCIENTISTS

STAKEHOLDERS

**AWARENESS ACTIVITY IN THE REGION
COULD HELP IMPROVE NATIONAL
PARTICIPATION AND COMMITMENT TO THE
PROJECT.**



CONCLUSION

Gulf of Guinea is one of the least studied oceans in the world.

It is hoped that ARGO programme in the region will address the vital elements of climate variability and climate change, which has not been fully comprehended, by scientist, Governments and stakeholders in the region.