



# Regional training on hydrography and marine cartography

November 19th – December 1st, 2012  
ARSTM – Abidjan – Côte d'Ivoire

# Context-Preparation

- **IHO/IMO common programme on Capacity Building**
- **Includes training actions in hydrography, cartography and maritime safety.**
- **For the benefit of African countries**
  - UKHO in April 2011 (EN, Accra)
  - SHOM in November 2012 (FR, Abidjan)
- **IMO funded courses**



# Participants - Content

## Trainees:

**22 participants from 11 countries**

## Instructors: (SHOM)

**2 cat.B hydrographers,**

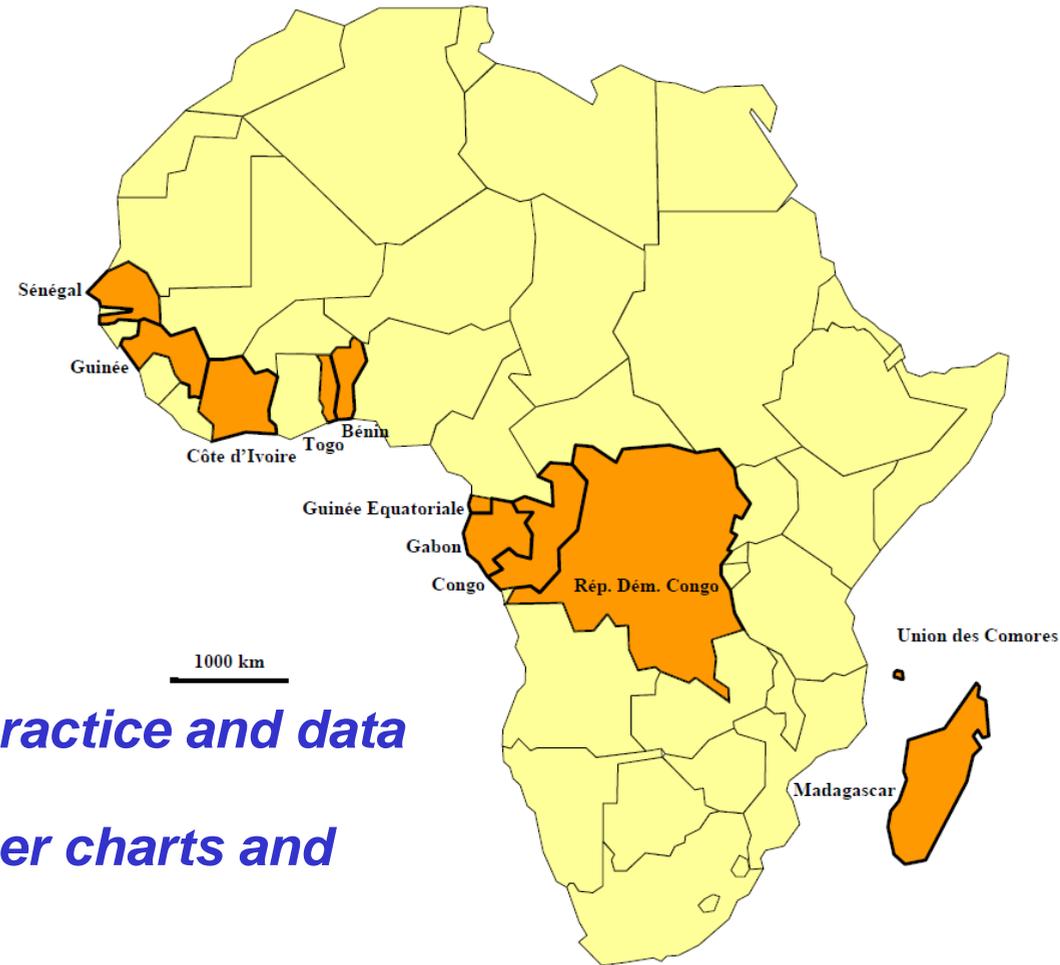
**1 cat.B cartographer.**

## Course programme:

- **Hydrography** > theory, survey practice and data processing
- **Cartography** > principles of paper charts and electronic charts processing

## Course objective:

**Teaching sufficient knowledge and general overview to be able to understand development issues and to specify work done by contractors.**



# L'Académie Régionale des Sciences et Techniques de la Mer (ARSTM) of Abidjan, Cote d'Ivoire

- *Regional institution for maritime instruction for 15 francophone countries of western & central africa*
- *Incorporates two schools*
  - Superior school of Navigation
  - Superior school of Maritime transport
- *Celebrated its 25th anniversary in 2012*



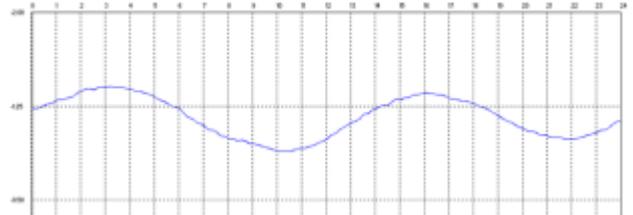
# Hydrographic theory



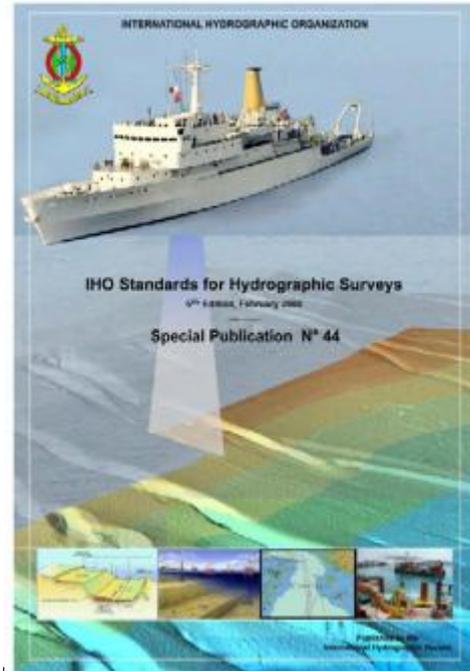
## Methodology / Survey planning



## Geodetic / GPS measurements

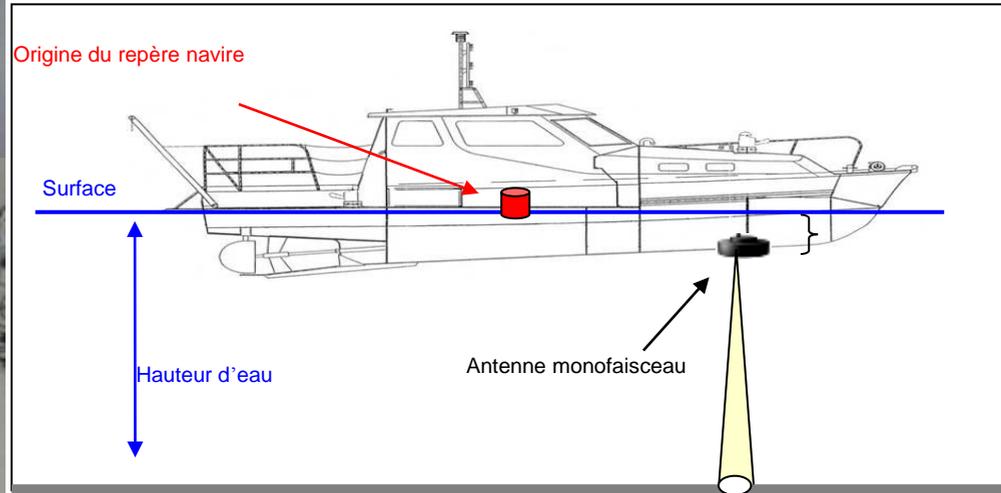


## Tide



## S-44 Standards

Tangage nu.

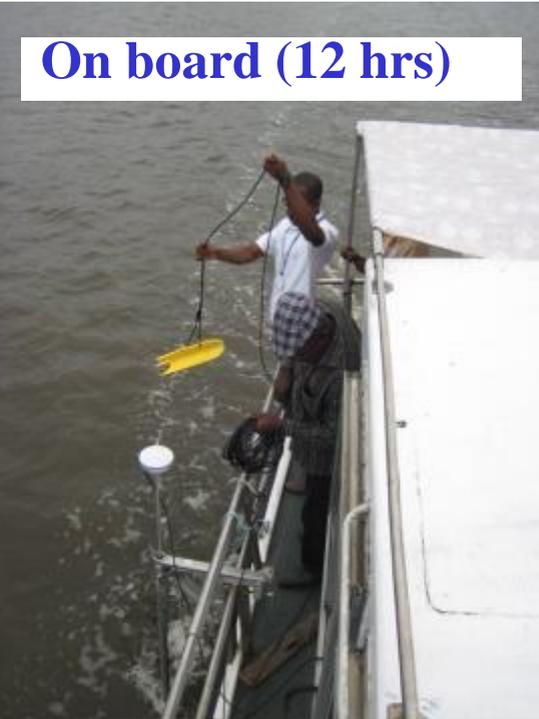


## Acoustic / Depth Soundings



# Hydrographic practice

**On board (12 hrs)**



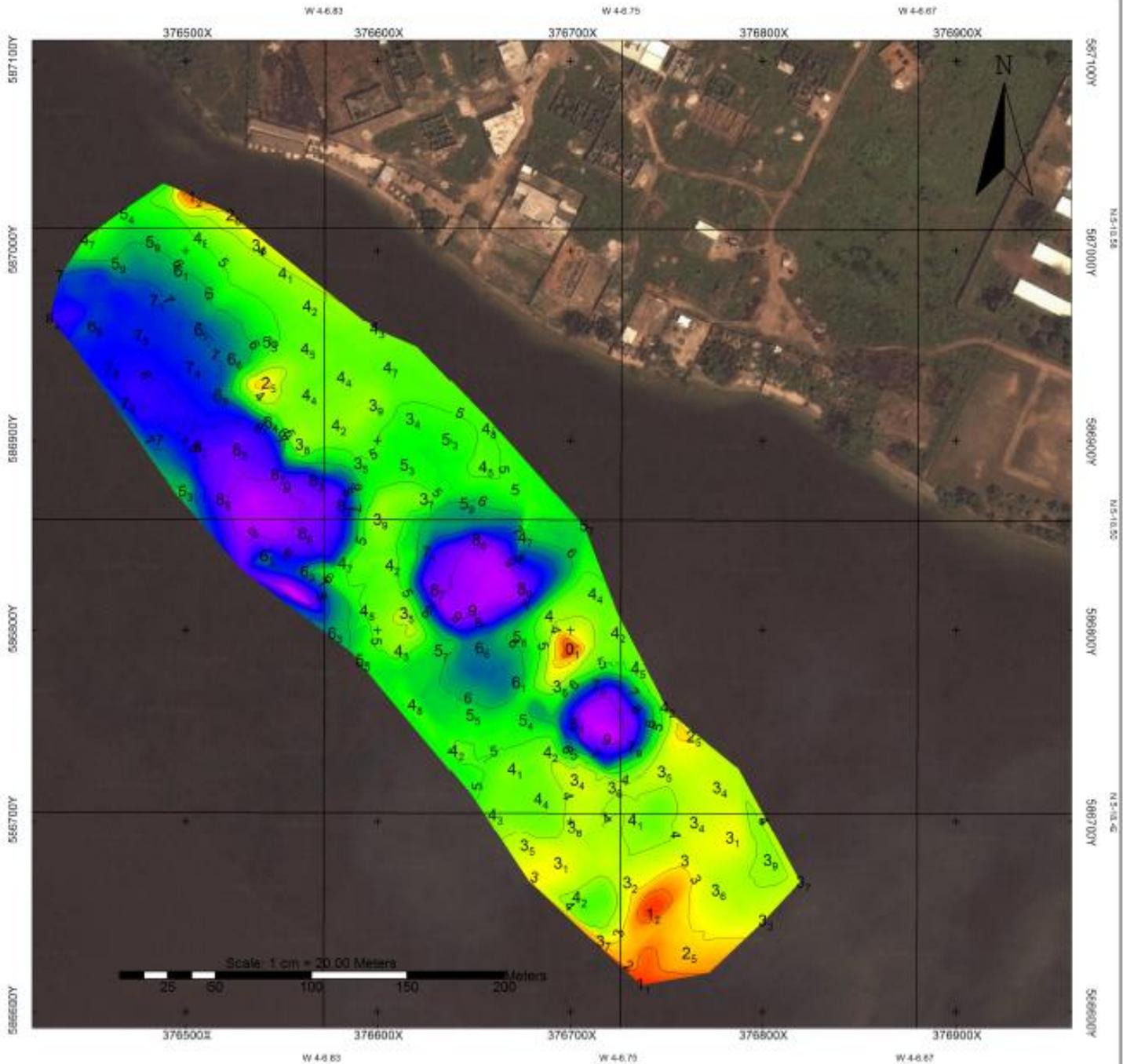
**Survey Equipment**

**Data Processing**



**Data Acquisition**





**B2<sup>1</sup>**

**ACADEMIE DE LA MER**

**REPUBLIQUE DE COTE D'IVOIRE**

**LAGUNE EBRIE  
BAIE DE LOKOUA**

**26 novembre 2012**

**Echelle: 1:2000**

Levé exécuté dans le cadre de la formation CBSC 2012

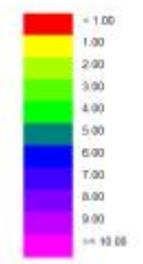
Système géodésique : WGS84

Ellipsoïde : WGS84

Projection : UTM 30 Nord

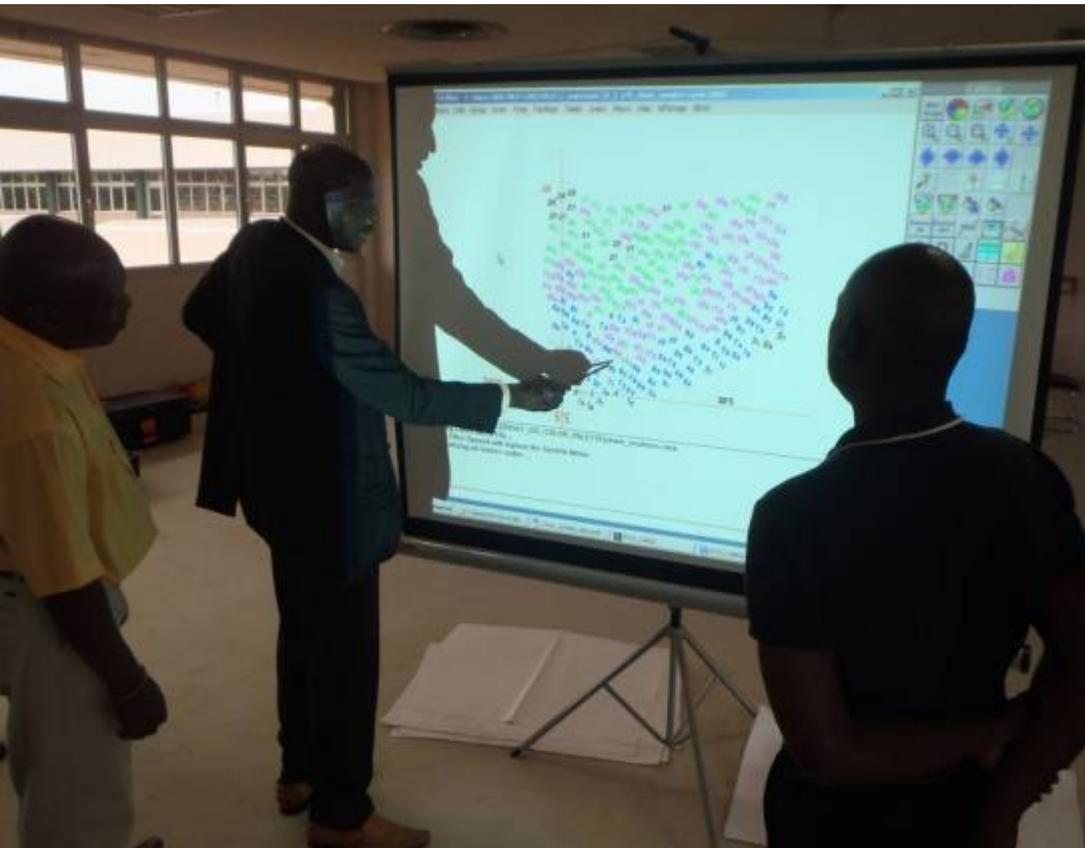
Les sondes sont réelles

Les sondes sont réduites de la marée observée au port d'Abidjan



# Marine cartographic course: Paper charts

- **Introduction** to paper charts + **chart reading** exercise
- **Sounding selection** techniques & methods
- **Production – Update (NtM) Process**
- **International** cooperation



# Marine cartographic course: ENC's

- **Introduction** of Electronic Navigational Charts
- **Production – Update process**
- **E-navigation – S100 standard**



# Graduation Ceremony

- *In the presence of **National & International Authorities***
  - Ministry of transport's Chief of Staff
  - IMO Western Africa representative
  - Maritime Affairs General Director
  - ARSTM General Director
- ***National TV (TVI) and Press** covering this event*



# Potential issues & Improvement ways

- **Heavy Custom procedure** for the equipment (17 offices);
- Training contents **daily adaptation**;
- Participants selection **widened to maritime community**;
- **Low Internet débit (5ko max)**;
- **Violent storms**;
- **Few Electricity blackouts**;
- **Security context.**



## Positive aspects

- **High quality of support provided by ARSTM;**
- **Points of contacts gathered from involved countries;**
- **Enthusiasm and involvement from participants, who expressed a real interest to that field and its development issues.**



# Lessons learnt & Recommendations

- **More accurate** participant selection;
  - **Flexible/Evolutive** learning resources;
  - **Individual training is not self-sufficient**;
  - **Need to complete it with a support structure to sustain the benefit of those courses**;
- 
- **Providing deployable** survey equipment ?
  - **Use of distant-learning** resources?

