



16TH MEETING OF THE SOUTHERN AFRICAN AND ISLANDS HYDROGRAPHIC COMMISSION

NATIONAL REPORT

MALAWI



Outline

- Background information
- Mandate of the Hydrographic Survey Unit
- Main Achievements during the Year
- Main challenges
- Progress made
- Capacity building



Background Information

- Hydrographic survey in Malawi started by the British Admiralty in the 1950s;
- During the period **first charts** were produced and printed;
- A Pilot book was published;
- 1988-1989 Hydrographic Survey Unit was established within the Department of Surveys;
- Through the cooperation with the French Government the **RV. Timba was** constructed in 1989;





Mandate of the Unit

- Hydrographic Office is mandated to:
- carry out hydrographic surveys of Lake Malawi, lesser lakes and major rivers;
- produce and revise charts for safety of navigation; and
- revise pilot book and publicize notice to mariner.





Main Achievements During the Year

Major maintenance works are being undertaken on the research vessel following failure of one of the original engines. The following have been achieved this year:

- Completed maintenance work of the vessel RV Timba;
- Procured Single Beam Echo Sounder;
- Process of procuring CARIS Chart Composer is in progress; and
- Carried out survey to determine the positions where to install **weather buoys in the lake.**

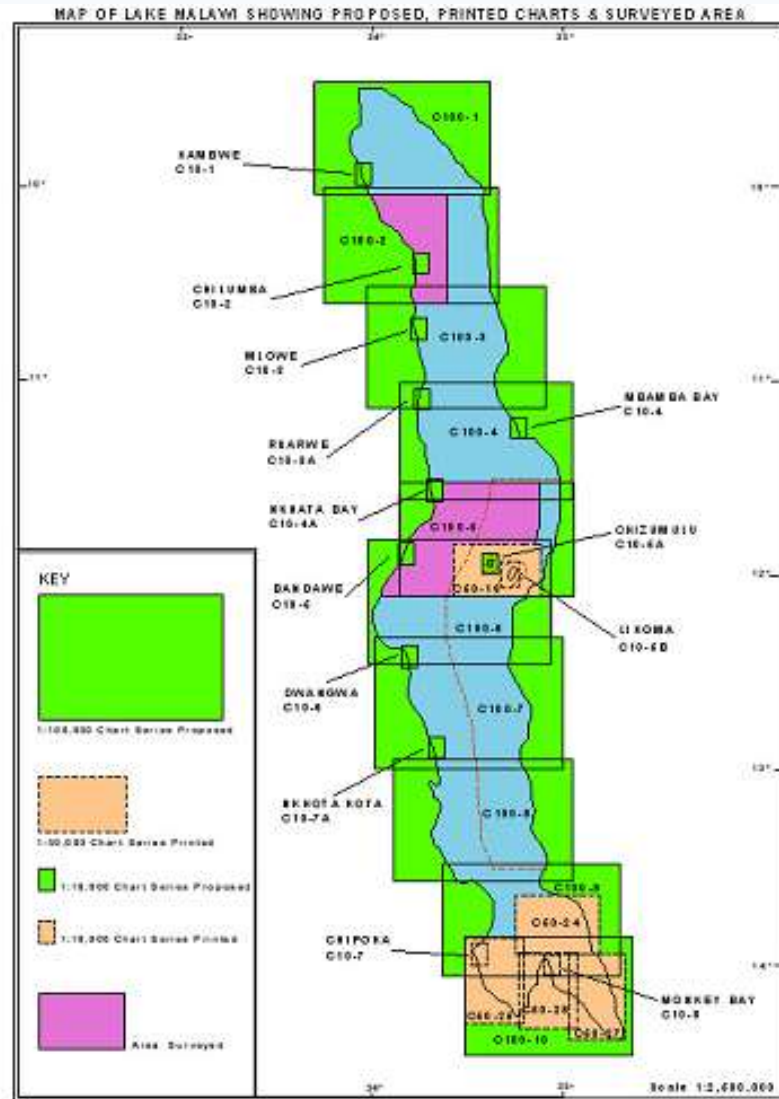


Main challenges

- Lack of modern survey equipment such as GPS;
- Software Updates, Caris GIS to Chart Composer and Hypack Max to be updated to new version; and
- Inadequate training in hydrography and nautical cartography;



Progress on Hydrographic Surveys

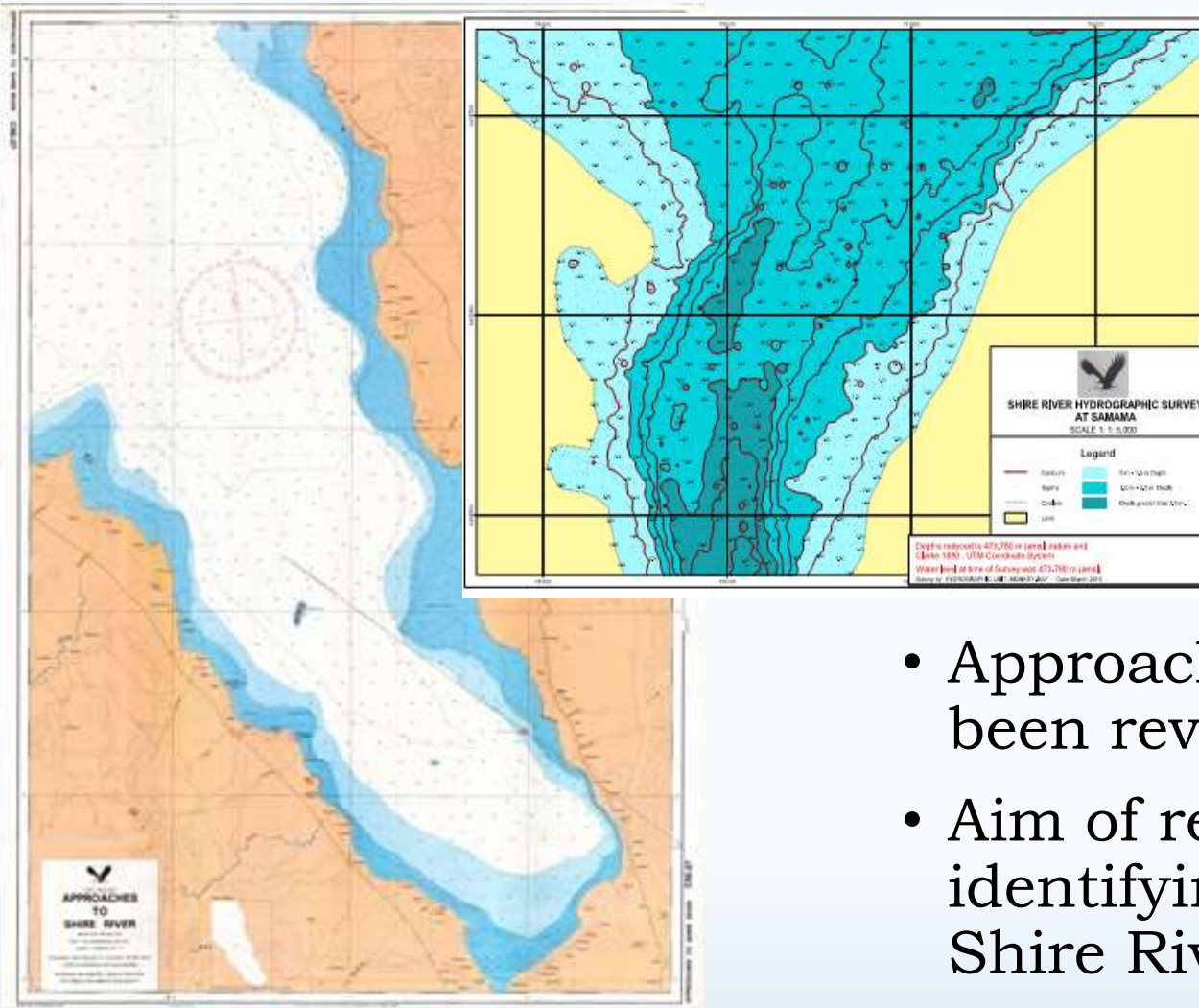


- So far 40% of the Lake Malawi has been surveyed





Progress on surveys

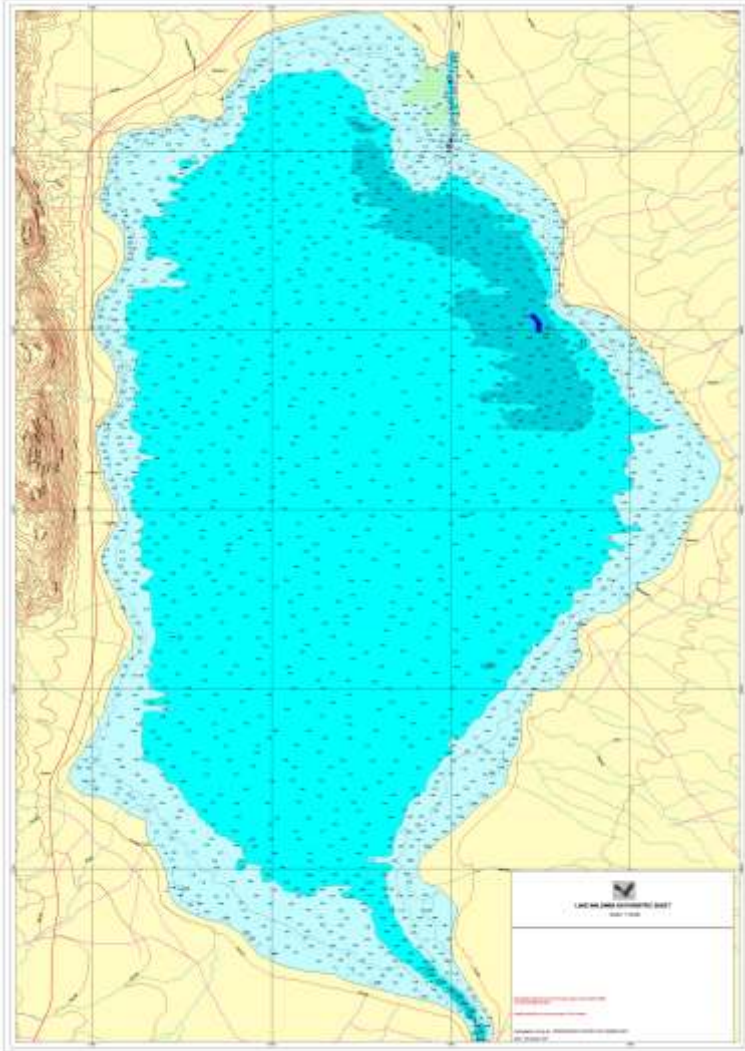


- Approaches to Shire River Chart has been revised;
- Aim of revision was to assist in identifying sand bar at the mouth of Shire River





Progress on surveys



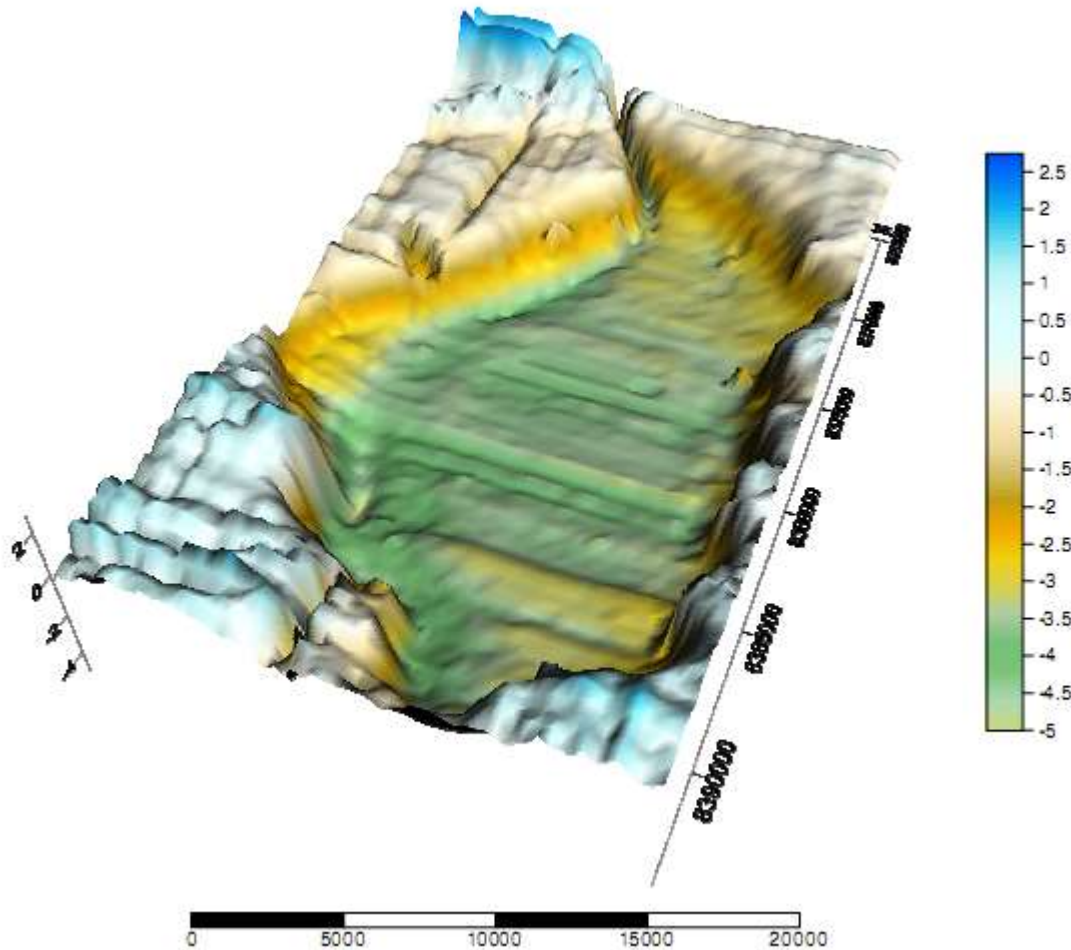
- Hydrographic survey of Lake Malombe has been carried and **Fair chart** produced;
- Carried out to provide geospatial information of a study “Increase Resilience to Climate Change in Fishery Sector of Southern Lakes Malawi and Malombe”;
- The study revealed that there is need for **high resolution mapping** which will include currents and tides modelling;
- This will require modern technology.





Progress on surveys

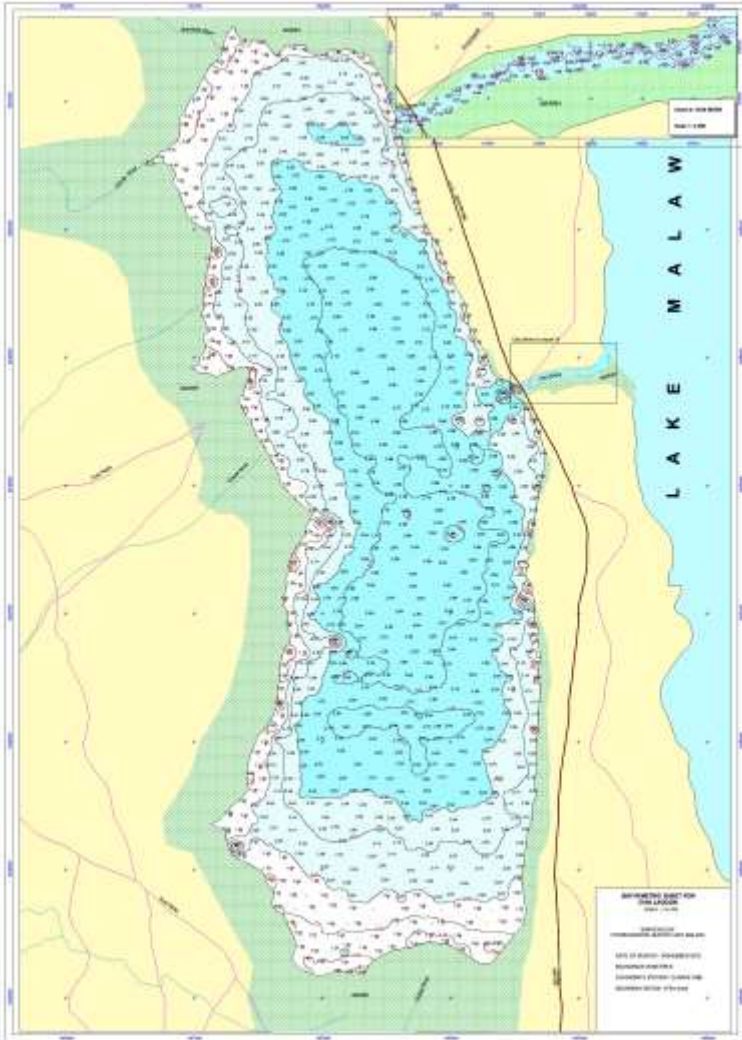
LAKE MALOMBE 3D MODEL



- Survey of Lake Malombe clearly confirmed existence of a channel east of the lake found in 1993



Progress on surveys



- Hydrographic Survey of **Chia Lagoon** was carried out;
- Aimed at studying the siltation level of the lagoon;

Findings

- There is siltation taking place at the rate of **0.062 m³/m²/year**;
- With siltation creation rate of **0.06m/year**



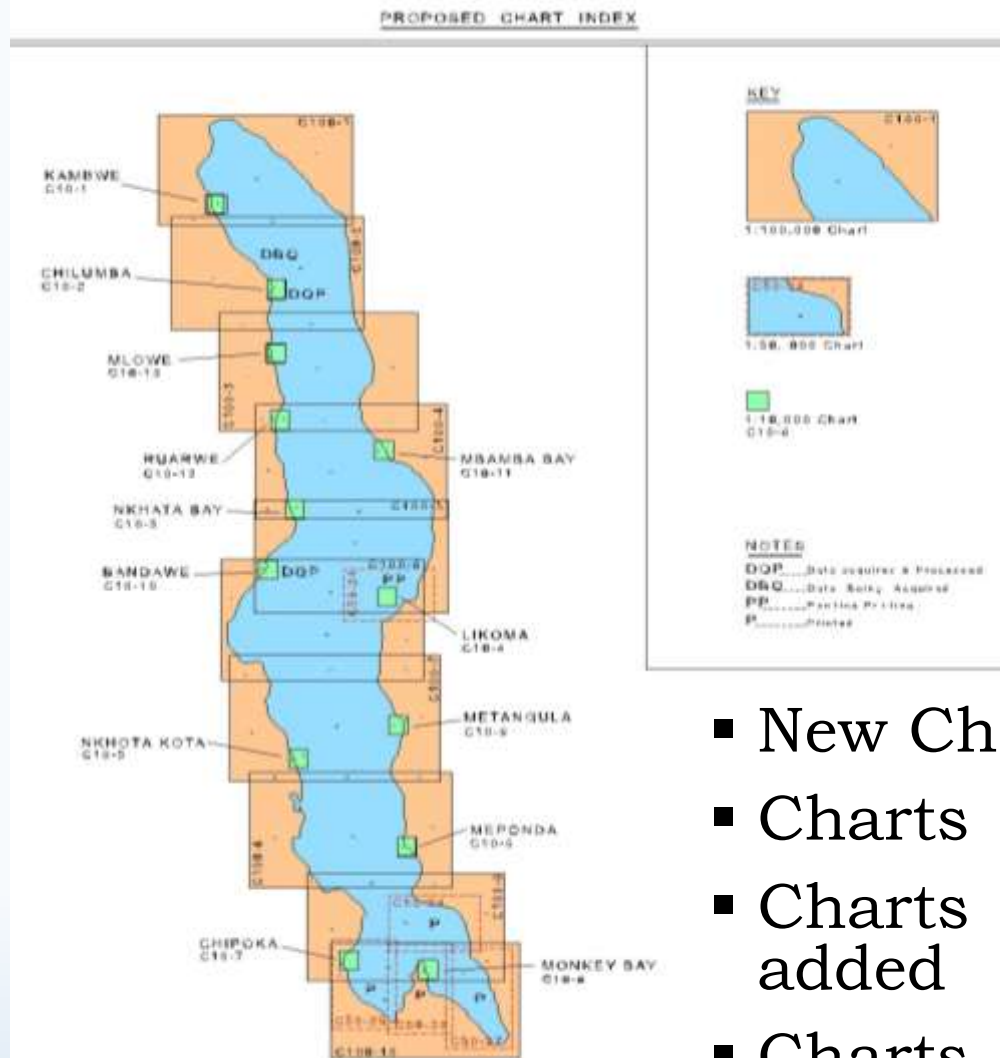
Progress on Charting

Chart No.	Series	Status
C10-8	1:10,000	Printed
C10-7	1:10,000	Printed
C50-24	1: 50,000	Printed
C50-25	1: 50,000	Printed
C50-26	1: 50,000	Printed
C50-27	1: 50,000	Printed
C10-6B	1:10,000	Ready, Printed on demand using CARIS Software
C50-1B	1: 50,000	Ready, Printed on demand using CARIS Software
C10-4A	1:10,000	Data acquired & validated
C10-2	1:10,000	Data acquired & validated
C100-5	1:100,000	Few profiles to be redone in the field
C100-2	1:100,000	50% of data acquired

- 6 Charts printed
- 2 Charts printed on demand
- Other require additional field data



Progress on Charting



- New Chart Index has been introduced
- Charts 1:50,000 series **scraped off**
- Charts 1: 10,000 series maintained and added
- Charts 1:100,000 series maintained





Progress on MSI

- Transmission of MSI is the responsibility of Department of Marine, we contribute information;
- Regionally not contributing much due to lack of capacity, summarized below:

Nation/Area	INT Region	Local Warning	Coast Warning	Navarea Warning	Port Info	Master Plan
Malawi	H	Radio Communication	No	No	Marine Department	Marine Transport Sector



Capacity Building

- One Deck Officer and One Engineer being trained locally at Marin College
- More officers need training in Cat A and Cat B course in hydrography and nautical cartography
- One candidate participated SAIHC seminar on Raising Awareness of Hydrography
- Been invited to attend SAIHC MSI Training course in Mauritius



Progress on MSDI

- Due to growing demand for hydro graphic data, we preparing to develop SDI;
- Therefore we seek assistance from MSDI working group in SDI development



Success Stories to Share

- 40% of the total area of 24,000km² of Lake Malawi has been surveyed
- 6 Charts printed
- Maritime boundary of 284.88km between Malawi and Mozambique has been completed
- Hydrographic surveys of Lake Malombe has been completed



THANK YOU