

Malawi National Report 2017

1. Malawi Hydrographic Office

The mandate of the Hydrographic office is to carry out surveys of Lake Malawi including the lesser lakes of Malombe, Chilwa and Chiuta as well as the Shire River.

Earnest hydrographic surveys of Lake Malawi were started in the 1950s by the British Admiralty. After a lapse of about 30 years surveys were resuscitated beginning with French cooperation in 1989 and then in 1999 the cooperation with Iceland which went on up to 2006. By this time, the Malawi Hydrographic office became well established with an ability to carry out surveys throughout Malawi and wherever there was a requirement to carry out surveys be it in dams, rivers or smaller lakes and on ports of call on the coasts of Lake Malawi.

2. Hydrographic Surveys

40% of the total area of 24000km² of Lake Malawi has been surveyed. As of now there still remains a substantial amount of work to be done when the River Shire and the smaller lakes are taken into consideration.

Hydrographic Survey Office reached a new level of achievement this year after completion of delimitation of maritime boundary between Malawi and Mozambique. A total maritime boundary of 284.88km (refer annex III). As a result of this exercise, Malawi and Mozambique were invited to the African Union Border Programme meeting in Addis Ababa, Ethiopia involving the Riparian States of Lake Tanganyika, namely; Burundi, Democratic Republic of the Congo, Tanzania and Zambia. Malawi and Mozambique therefore shared there successful experience of a Maritime delimitation boundary exercise.

Another assignment carried out involved the Fisheries Sector where a hydrographic survey was carried out in the Southern part of Lake Malawi in the smaller Lake Malombe. The exercise also involved identification of bottom features of the Lake. The exercise was also conducted to generally inform the resilience to climate change in Fisheries sector.

2.1. Problems

The Hydrographic Survey vessel, RV. Timba which has been on repair for a long period is now ready for surveys of Lake Malawi. For her to be fully operational there is a need to acquire equipment such as GPS and Echo-Sounder and update data acquisition and processing software among other requirements. The government currently has procured a single beam echosounder to be installed on the boat and it is hoped that all required softwares will be sourced and updated accordingly.

The small launch the RV Timba II which is very useful for coastal and river surveys also requires a dedicated positioning and data acquisition equipment to function independently. This launch services surveys in mostly coastal and shoal areas.

The purchase of a side scan sonar would assist in achieving 100% bottom coverage to complement the traditional single beam echosounder especially in harbor and critical areas of concern.

3. New Charts & Updates

To date the following charts have been produced:

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

The Chart Index is attached as Annex I.

Part of chart 50-27, (approaches to Shire River) has been revised with an aim of identifying the sand bar at the mouth of the River (refer annex IV).

Chart Index II takes into account new developments. This takes care of large scale charts required in areas of significant fishing concerns and the sugar factories in Nkhotakota, Salima and Chikwawa districts in the lakeshore and river Shire areas.

ENCs and RNCs are not in production. In addition INT and pleasure Craft charts have not been produced as yet and it is hoped that if another project materializes it will take care of some of these matters.

3.1. Problems Encountered

As far as chart printing is concerned the Departmental printing press has not been functional for some time now. We are currently relying on HP plotters but these have also developed faults which require looking into. However this problem has been partly solved by our cooperation with United Kingdom Hydrographic Office where 100 copies of the chart of Likoma Island has been printed.

4. New Publications & Updates

. The Hydrographic Survey Office is planning for the revision of the Lake Malawi Sailing Directions to be carried out later on this year concomitant with surveys for large scale surveys. The Hydrographic office works in close cooperation with the Marine Department in order to adequately chart the priority areas.

4.1. Problems encountered

With the RV Timba about to start survey operations this year it is hoped that preparation of the sailing pilot will resume and that the personnel will gain from the exposure that the training and experience to be acquired in this project. Currently this activity has been on the shelf for a long time.

5. Maritime Safety Information (MSI)

Nation/Area	INT Region	Local Warning	Coast Warning	Navarea Warning	Port Info	Master Plan
Malawi	H	Partial Lake Malawi pilot update	No	No		Marine Transport Sector

The transmission of safety information to Mariners is the responsibility of Marine Services Department. To this effect the Marine Services department has formulated a Master Plan for the Marine Transport Sector.

IMO carried out an audit scheme which includes safety of navigation and importance of charts. Currently, however the main items for communication are still problematic which has now and again compromised safety at critical times when ships need urgent rescue.

5.1. Problems Encountered

The Hydrographic Survey office still intends to work in close cooperation with Marine Department in order to develop reliable Maritime Safety Information.

6. C-55

As has been the case, charts are at scales 1:10000, 1:50000 and 1:100000. With the resources at hand the status of hydrography and nautical cartography may be ranked as fairly good. However with the lapse of time and the inactivity brought about when the survey vessel Timba was idle we have somewhat lagged behind. Still the revival of operations will enable resumption of production of charts and we look forward to this.

The C55 status therefore remains similar to the one carried out during the IHOCBC Malawi Visit Report of 2008 with the current addition of the Likoma chart.

7. Capacity Building

It is obvious that personnel have been the major input into the achievements made to date and in order to avoid gaps capacity building needs to be a continuous exercise. Training is thus required in hydrography and nautical cartography.

The Government of Malawi has done its part in fulfilling its training obligations by training members at local Universities and occasionally at international training institutions such as the STC in Netherlands. In addition training has been funded by the IHOCBC mainly in South Africa. At an earlier stage training was also provided by France at EPSHOM. In addition training was also provided by the IHO at Trieste in Italy. Currently comprehensive training is sought both at CAT A and B training in Hydrography. However this year due to the problem in communication, Malawi missed out on the training at Fish Hoek this year. It is our hope that there will be better luck next year.

Malawi and Mozambique have had multilateral agreements involving hydrographic surveys on Lake Malawi (Niassa) which also involved Iceland. The joint project of the lake boundary between Malawi

and Mozambique also involved the German cooperation GIZ and benefited Malawi and Mozambique by having their officers trained in CARIS Lots software which resulted in successfully delimiting maritime boundary of the lake.

The Shire-Zambezi waterway project is a regional project facilitated by SADC for integrated transport system within the region. This project which involve the cooperating partners Zambia, Mozambique and Malawi has somewhat stalled for some reasons. The project was meant to bring further integration and transport infrastructure development to an otherwise hitherto isolated area. It is still Malawi's hope that Project will be revived in due course since Malawi currently greatly relies on road transport which has made its transport costs to be some of the highest in the world and the coming in of such a project would bring benefits to Malawi and the neighboring countries in the region.

8. Oceanographic Activities

The department of Water resources maintains a network of tide gauges throughout the western part of the Lake including gauges on Lake Malombe and the Shire River. Hydrographic office and department of water resources were engaged in hydrographic survey of the approaches to Shire River which has been explained earlier on. Lake Malawi is currently experiencing low water levels and and hydraulic modeling data is required to come up with better model of the riparian areas.

The hydrographic office also maintains one automated pressure tide gauge at Monkey Bay, but additional automatic pressure tide gauges will need to be installed at Nkhota Kota, Nkhata Bay and Chilumba ports in order to complement and check the Water Resources department data. The commencement of operations should revive most of the planned installations. Other oceanographic equipment used by the hydrographic office includes a sound velocity profiler and a Grab corer.

8.1. Problems encountered

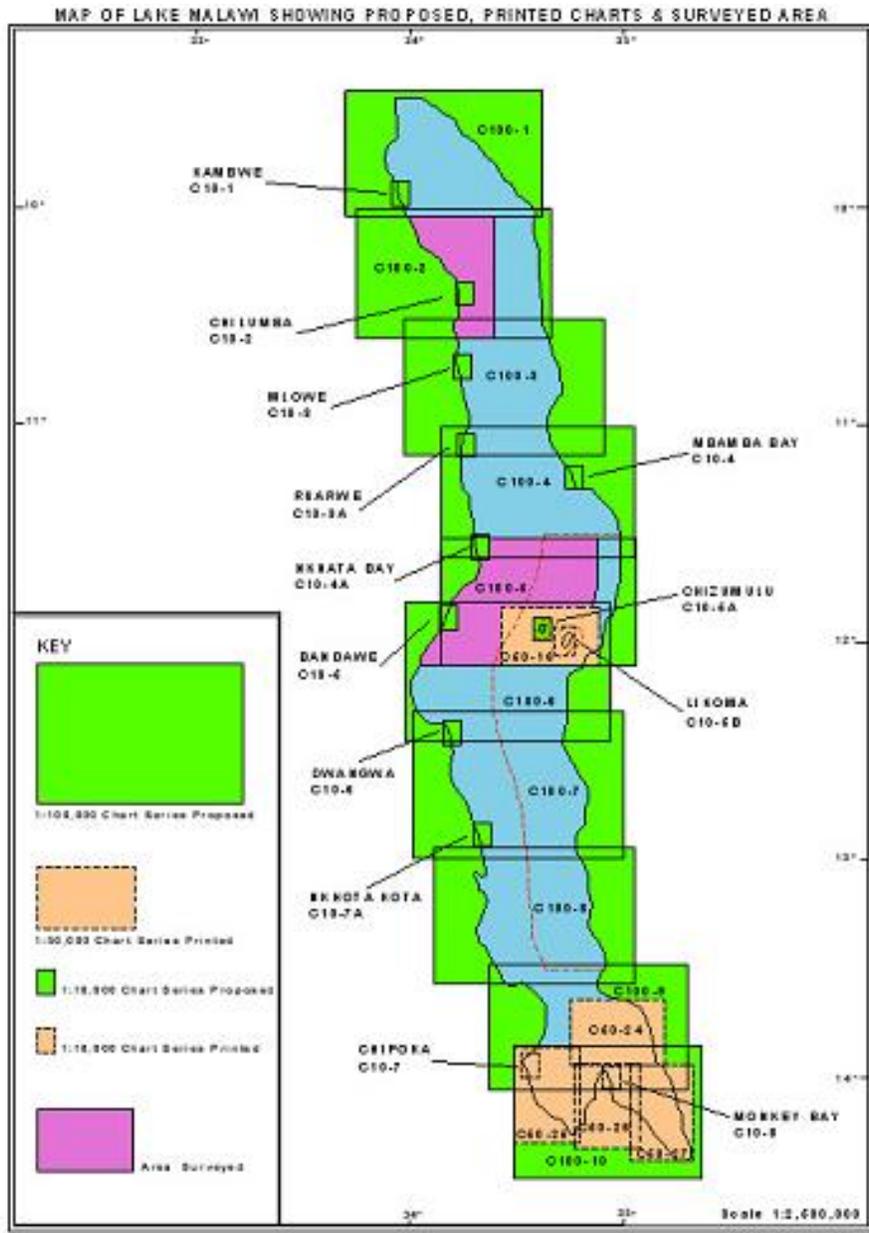
The automatic tide gauge and the sound velocity profiler are in a working order but when operations start in vigor may require updates.

9. Concluding Remarks

With the growing demand of hydrographic data by different stakeholders, we have to strive for modern equipment and technology for a wider use of hydrographic data.

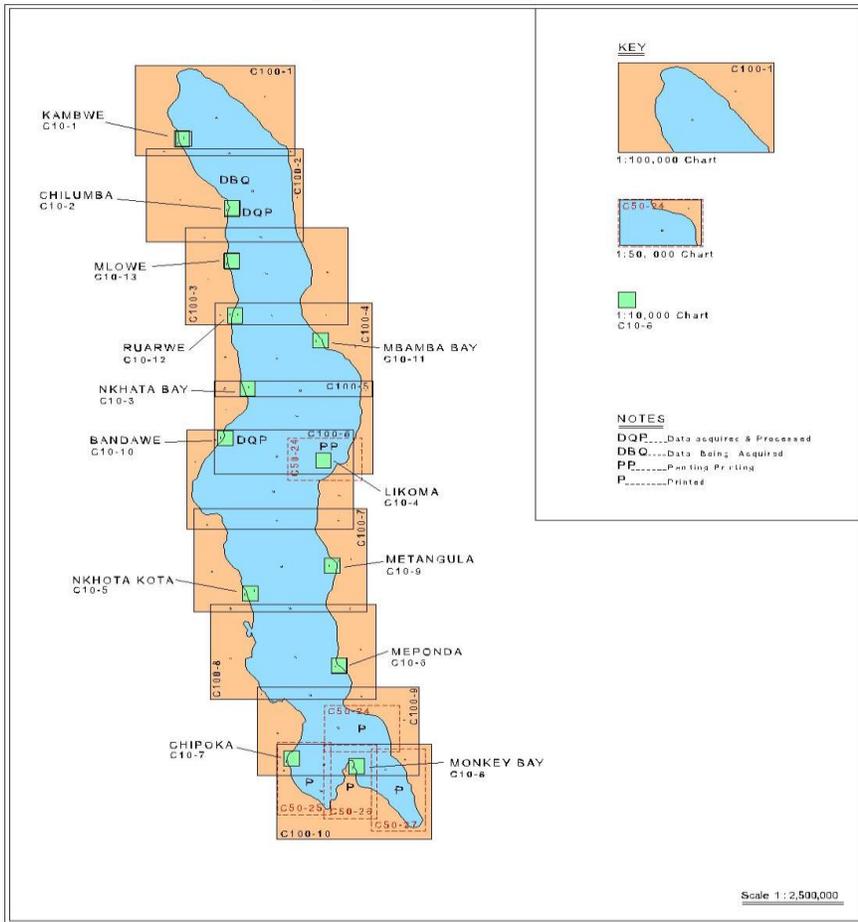
We have also trust in our erstwhile development partners who have shown a willingness to assist us even in the face of adversary. We appreciate the support both past and present from Iceland, Germany

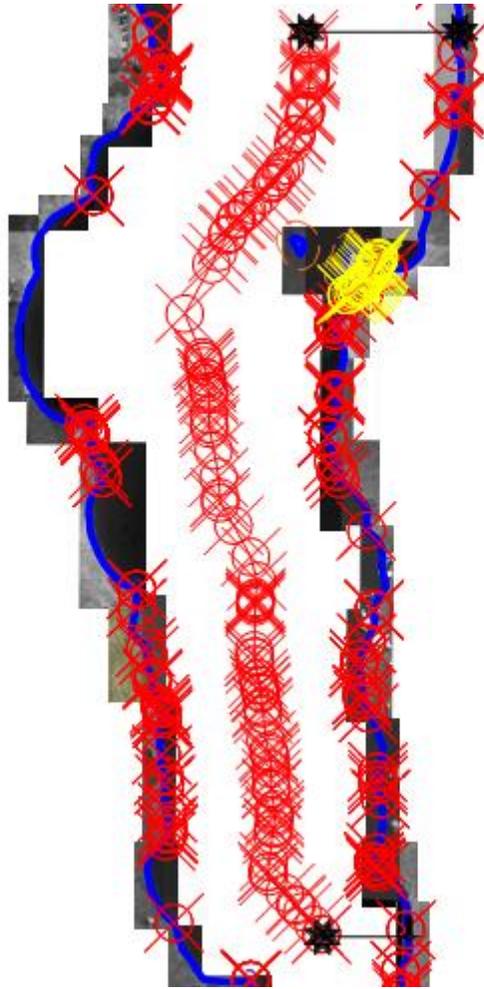
GIZ and UK who have pledged to support Malawi in printing charts and not forgetting the mother body the IHO who have provided short training courses to our staff tirelessly every year (Except for this year) and with such support we would like to assure our partners that the noble cause shown will not be in vain. As a country we realize the vital role played by the water infrastructure and the requirement to develop it and not take it for granted. We are therefore happy to be here at the 14 SAIHC conference and meet again in amicable but serious discussions despite problems of finances that are always glaring their uncanny faces to stop us from sharing with the SAIHC community our zealous and worthy efforts at sustained establishment of a hydrographic concern.



Annex 1

PROPOSED CHART INDEX





Annex III

