

COUNTRY REPORT: MALAWI

INTRODUCTION

1. **RHC Involvement.** Malawi is not an IHO member, but is an associate member of the SAIHC. It was represented at the 5th SAIHC Meeting in September 2005, and a National Report was available to the RHC Study Team.
2. **Preliminary Liaison.** Mr Michael Mzunzu of the Survey Department assisted with co-ordination of the visit. A committee meeting of stakeholders with maritime interests under the chairmanship of Mr D. Gondwe, the Surveyor General, had been held to prepare for the visit.
3. **Points of Contact.** Details in the IHO Year Book for the Department of Surveys, to which the Hydrographic Survey Unit reports, require minor amendment. It was also agreed during the visit that details should be shown for Captain T. W. Kamanga as point of contact in the Marine Department of the Ministry of Transport and Public Works. These amendments are at Appendix 1.

DESCRIPTION OF MARITIME ACTIVITIES

4. **National Maritime Affairs.** A round table meeting of authorities engaged in activities on Lake Malawi was convened in the Survey Department. The list of attendees is at Annex B to the Main Report. This meeting confirmed the continued importance of water transportation on the Lake, and also highlighted the strategic significance of the Shire-Zambezi project to restore access to the Indian Ocean.
5. **Trade and Maritime Traffic.** At the meeting the following information was obtained:
 - a. **Regional Cargo Operations.** Bulk cargoes of sugar cane and maize are carried from Nkhata Bay to Mbamba Bay in Tanzania. General cargo is carried from Nkhota Kota to Metangula in Mozambique. Barge transportation of cargo to the Indian Ocean was interrupted by the civil war in Mozambique. It was emphasised that the Shire-Zambezi project to re-open this route to the sea had high political profile, and that a feasibility study was under discussion.
 - b. **National Cargo Operations.** Because of the topography of the Rift Valley, access by the lake remains easiest and cheapest for many coastal communities as well as for the islands of Likoma and Chisumulu.
 - c. **Regional Passenger Operations.** Fixed routes from Monkey Bay include ports in Mozambique. Tanzania operates one route in the N part of the lake to Nkhata Bay.
 - d. **National Passenger Operations.** A fixed schedule of sailings from Monkey Bay covers Malawian ports.
 - e. **Tourist Operation.** Yachting is becoming popular, especially in the vicinity of Cape Maclear. Hotel cruise operations are presently offered in the South of the lake but are expected to increase and to extend into the North.
 - f. **Fisheries.** There is local artisanal activity. Four trawlers are operated commercially. The Fishery Department also operates a RV. Deep water trawling capability is under discussion because of diminished fish stocks in the S part of the lake.

6. Responsibility for Safety of Navigation. The Marine Department is responsible for the ports and for the maintenance of existing aids to navigation. The department also promulgates Marine Notices. There is no national organisation for promulgation of Maritime Safety Information, including Notices to Mariners.

7. Defence Force Responsibilities. The Malawian Navy provides a presence in national waters, supporting the Water Police in SAR and patrols. The Water Police is responsible for enforcement of compliance with maritime safety regulations. The Navy is based in Monkey Bay, but has expressed a need for the promulgation of dedicated naval exercise areas. The Police are present everywhere around the coast and on the rivers.

8. Coastal Zone Management and Environmental Protection. There is a Technical Committee on the Environment which reports to a National Committee on the Environment and which is responsible for commissioning Environmental Impact Assessments before the approval of projects. This has been done for mining near Chilumba and for hotel beach reclamation. There is a Lake Malawi National Park in the S, where fishing is prohibited.

OUTLINE S-55 ANALYSIS

9. Status of surveys within the National Maritime Zone. It was indicated that the Hydrographic Survey Unit (HSU) took the advice of the stakeholders, and especially the Marine and Fishery Departments, into account when prioritising their survey programme. To date this has focussed on the shallower water in the South of the lake, but is being extended to the more complex port approaches in the N. Information provided in the reports to SAIHC was confirmed. The latest of these is at Appendix 2. In summary, all recent hydrographic surveys have been controlled by DGPS, and have been conducted using single-beam echo-sounder.

10. Collection and Circulation of Nautical Information. Apart from the Marine Notices there is no organisation for the collection and dissemination of information to alert the mariner to urgent information and to update charts and publications. After discussion with the Survey and Marine Departments and the stakeholders present, it was agreed that a further round table meeting would be held to give urgent consideration to this matter.

11. Survey Capability. The report at Appendix 2 gives details of the HSU. There are 3 personnel allocated to data collection. They have no hydrographic qualifications, and have been trained on the job. The surveys which they produce consist of single beam echo sounder profiles without supporting sonar sweep. They also have no capacity for measurement of water flow. Survey output has been gravely affected by difficulties in manning the RV TIMBA, and in particular in recruiting a qualified Master. The programme of technical support from Iceland has run its course. Some resources were identified within other departments. The Water Department operates gauges to monitor levels in the lake, and any historical records will be important in redefining Chart Datum. It was noted that a rating from the Malawi Navy is attending the SAN Survey Recorders Course.

12. Chart Production Capability. The Department of Surveys has a budget for the production of new charts based on the survey programme. These charts are sold by the Department. They are produced by traditional scribing technology. The Department has a CARIS system, but has not received sufficient training to use it for automated cartography.

PROPOSALS FOR CO-ORDINATION AND CAPABILITY BUILDING

13. National Hydrographic Committee. The group which met for discussion with the IHO Visit Team has been entitled the Special Committee for Hydrography. The Visit Team recommended that this committee should meet at least annually under the Surveyor General's chairmanship, and that it should subsume existing liaison mechanisms for survey prioritisation. It was noted that representatives of the Malawi Navy, of the Meteorological Service, the Disaster Relief Services, and Radio Service, although not

in attendance on this occasion, were members of the committee and had taken part in the preparatory meeting. The Malawi Navy had subsequently submitted a report to the Chairman.

14. MSI Organisation and GMDSS. The meeting provided an ideal opportunity to encourage team work between the departments present.

a. MSI (Navigational Warnings). Following discussion it was agreed that the Special Committee would consider the identification of a focal point for the collection and dissemination of urgent navigational safety information. This focal point might best be placed under the Marine Department with a remit to issue Local Warnings, possibly to utilise the regional GMDSS arrangements, and certainly to alert the Survey Department to urgent changes to the information in charts and publications.

b. Information on Ports and Harbours. It was noted that the Lake Pilot published in 1957 had not been updated and was indeed very difficult to obtain. The Visit Team noted the key role to be played by the Marine Department, and by the mariners who actually navigate on the lake. The latter would be the best source of updating information which could then be passed to the Survey Department for promulgation. It was emphasised that new developments in ports and harbours must be reflected in official documents without delay.

c. GMDSS Status. Mr Muindi noted that a recent meeting, at which Malawi had been represented by the Police, had resolved that a regional approach would be taken to GMDSS implementation. The Visit Team noted the specific importance of the MSI aspect of GMDSS.

15. Hydrographic Capability. The call on Mr G. Mkondiwa, Permanent Secretary of the Ministry of Lands, Housing and Survey, and the subsequent welcoming speech by the Minister, the Honourable, indicated a clear appreciation of the importance of hydrography to realisation of the marine elements of Malawi's National Land Policy. The creation of the Special Committee has also reinforced arrangements to give the HSU access to the advice of local mariners. The Team considered that the unit received good support from its parent department.

a. Provision of Survey Data. The HSU has a clear remit to provide modern surveys for Malawi. The Visit Team confirmed the readiness of the IHO, through SAIHC, to assist to develop and train a sustainable cadre, and to identify an appropriate equipment package including options for short-term hire. The Team also noted that, with a Category A surveyor, the HSU could also specify, oversee and quality control work by contract survey companies. This option might be particularly appropriate for specialised river survey along the Shire-Zambezi route, with the HSU conducting the preliminary feasibility and subsequent check surveys. They also noted the need to co-ordinate between departments to optimise opportunities, recalling the attendance of the Malawi Navy at the course in South Africa.

b. Survey Capability. The short period of the visit did not permit familiarisation with the HSU at Monkey Bay, and the Team's judgment of current and potential capability was based on an update of the information at Appendix 2. It was clear, however, that the team must be augmented, trained, and given extended field experience. The team was encouraged by the regional team work noted below at sub-paragraph 15.d. and noted that this area should be kept under regular review by SAIHC.

c. Chart Production. The Team did not have time to form a judgment on current capability in survey specification and routine data management, such as assessment of density of sounding and selection of charted soundings. All of these are fundamental to the quality of the resultant chart. They would recommend that this might be covered by a focussed follow-up advisory visit through SAIHC, and that this visit should also cover the options of introducing sidescan survey techniques and oversight of MBES surveys. They would recommend that Malawi also formulate a bid for further training in the use of the CARIS system.

d. Potential for Regional Activity. The Team were encouraged to learn of an agreement for a co-operative survey of Mozambique's waters in Lake Malawi. The Malawi HSU will provide the platform, and Mozambique INAHINA will embark surveyors with MBES. The HSU surveyors will clearly benefit from this field experience. The RV TIMBA clearly constitutes an important regional resource on Lake Malawi, and the HSU would benefit from further co-operation with colleagues from neighbouring states.

PROPOSALS FOR ASSISTANCE

16. Training. The Special Committee was advised to conduct an urgent review of national requirements for training and for subsequent field experience. The opportunity represented by the forthcoming Technical Workshop, special session of SAIHC, and the meeting of the IHOCBC in the SAIHC region, was stressed. It was suggested that Malawi should be identifying suitable candidates for Cat A and B survey training, and for attendance at the IHO workshop in June, which would focus on the role of collecting and disseminating urgent navigational safety information.

17. Equipment. The particular challenges of maintaining survey equipment in tropical climates were noted, especially where such equipment was second-hand. The option of hiring was again stressed.

18. Funding. In addition to the seed funding allocated by the IHOCBC, especially for training, the Team noted the ability of the IHO to advise on project definition. The significance of progress with the Lake Victoria project was noted in this context.

FOLLOW UP ACTIONS

19. Encouragement of Formation of a NHC, Development of a National Hydrographic Strategy, and RHC Membership. The Surveyor General was urged to implement regular meetings of the Special Committee on Hydrography. SAIHC support was pledged. In subsequent discussions with the Minister, it was indicated that Malawi will pursue membership of IHO, and guidance on the process will be provided by SAIHC. ACTION: **Malawi Survey Department; SAIHC Chairman.**

20. Encouragement of Effective and Timely Collection and Promulgation of Hydrographic Information.

a. The Special Committee should give urgent consideration to the identification of the focal point mandated to collect and promulgate urgent navigational safety information. It would be beneficial if this could be done in time for the designated post holder to attend the Technical Workshop in Maputo on 5 June. ACTION: **Special Committee for Hydrography.**

b. The Special Committee should identify the optimum means of promulgation of urgent navigational and safety information for lake users, including assessment of the benefit of using any regional GMDSS arrangements which are developed for MSI. ACTION: **Malawi Survey Department and Marine Department.**

21. Encouragement of Development of Hydrographic Capability. Malawi should consider seeking SAIHC support with the following:

a. Conduct of a follow-up advisory visit to the HSU and Survey Department. ACTION: **Malawi Survey Department and Chairman SAIHC.**

b. Identification of opportunities for field and office experience with IHO Member States. ACTION: **Malawi Survey Department and Chairman SAIHC.**

c. Preparation of bids to the IHO CBC, particularly for funding of training. ACTION: **Malawi Survey Department and Chairman SAIHC.**

APPENDIX 1 TO
ANNEX C TO
FOF/HYD/R/320/19/1
DATED 10 MAR 06

AMENDMENT TO ENTRY FOR MALAWI IN THE IHO YEAR-BOOK

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