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12 May 2008

File ref: FOF/HYD/R/320/19/1

SOUTHERN AFRICA AND ISLANDS HYDROGRAPHIC COMMISSION (SAIHC) ADVISORY VISITS: COUNTRY REPORT: MALAWI

References: a) IHB Director & Chairman CBC Letter CBC-1 dated 11 July 2007.
b) Minutes of 6th SAIHC Meeting Malawi, Mangochi 27 – 28 August 2007.

INTRODUCTION

1. The Capacity Building Committee of the International Hydrographic Organisation (IHO CBC) met in Riga, Latvia on 5 to 7 June 2007, and reviewed its Management Plan containing all candidate bids for funding which had been received from RHC Chairmen. The following bids from the Southern Africa and Islands Hydrographic Commission (SAIHC) were approved for 2008:

Year	Bid
2008 APPROVED	Advice for development of prioritised national survey plans in Angola and Namibia.
2008 APPROVED	Follow up advisory visit to Malawi to consider management of national hydrographic unit, following end of ICEIDA project.

2. At the 6th SAIHC Meeting it was agreed that the outgoing Chairman liase further with Member States to identify advisors to conduct this very important visits in 2008. As the Chairman, Captain A. Kampfer, was involved in the last Technical Visit conducted to Malawi in 2006, it was considered to be the best for continuity that he conducted the follow-up visit as well. Malawi is not an IHO member, but is an associate member of the SAIHC. Malawi hosted the 6th SAIHC Meeting in Mangochi, Malawi on 27 to 28 Aug 07 and presented a National Report. The National report and the Visit Report of 2006 formed the basis for preparations for the visit.

3. Preliminary Liaison. Mr Michael Mzunzu, Chief Surveyor, Malawi Survey Department assisted with co-ordination of the visit and compiled the visit programme. The programme of the visit is attached at Appendix 1.

4. Points of Contact. Details in the IHO Year Book for the Department of Surveys, to which the Hydrographic Survey Unit reports, require minor amendment. These amendments are at Appendix 2.

RECORD OF PROCEEDINGS

5. The main objective of the advisory visit was to determine the status of hydrography, following the end of the ICEIDA funded project "Charting of Lake Malawi for the Safety of Navigation" that ran from 2001 to 2004. It was decided to conduct the visit to Monkey Bay and have discussions at the Survey Unit Office with full participation of the staff members. At the start of the proceedings agreement was reached on an agenda to assist in the achievement of the main objective of the visit. The summary of events is attached as Appendix 3. The following main topics formed the basis of discussions:

a. ICEIDA Hydrographic Project. Status and the way forward

b. 2007 Malawi National report presented at 6th SAIHC meeting. Confirmation

c. Malawi S-55 Input

d. Review of 2006 IHO/SAIHC Technical Visit Report

e. Capacity Building. Feedback on SAIHC submissions to CBC

f. Closure and Site Visits

ICEIDA HYDROGRAPHIC PROJECT

6. A very brief background of the project was provided by Mr Mzunzu and discussions were limited to the conclusions and recommendations of the very comprehensive ICEIDA Evaluation Report of the Project.

7. In the conclusions, specific mention was made of the lack of agreed support by the Malawian Government to the project and the appointment of a Captain for the TIMBA was mentioned as a point in case. This situation has now improved as Captain Peter Limau has since been appointed and it was mentioned that a Strategic Government Plan caters for support to hydrography. A copy of the Strategic Plan was not available.

8. The report also states that the introduction of charting software solved cartographic problems as it replaced the manual processes. This statement is quite correct, but from discussions it was quite clear that it also introduced new challenges. There is only one workstation and one software license and although the cartographer has been able to produce two charts from new survey data, they have not been able to produce file formats for bulk printing by the Government Printer. The chart files were send to the Iceland Hydrographic Office for the production of positive images for printing, but nothing has been forthcoming for some time. During discussions it was learnt that the cartographic workstation was totally infested with computer viruses and although a virus scan programme was installed, it has not been updated for some time.

9. The report stated further that a link between the Iceland Hydrographic Office and the Hydrographic Unit at Monkey (MSU) should be maintained to ensure that day-to-day

hydrographic and computer problems could be resolved via the Internet. The consensus from the meeting was that this referred to link, only functioned during the project. The Hydrographic Unit does have a dial-up internet connection which is not ideal for transferring data files.

10. The recommendations of the ICEIDA Evaluation Report were discussed and comments are as follows:

a. If the lake is to be completely covered the input from Mozambique is essential. It will be an interesting development if a multilateral Project with the neighbouring country will become a reality and facilitate achieving the aim of a fully charted lake. ***Comment: From Apr 06 to Jun 07 a joint project was conducted utilizing TIMBA and MSU staff assisting INAHINA staff in the data collection phase in Mozambique waters. Still some outstanding issues with regards to the use of TIMBA and it is not known when the data collected will be utilized for the production of new charts. MSU does not have access to the survey data.***

b. Due to lack of necessary navigational aids it is mandatory to install some lighthouses and buoys to increase safety. ***Comment: This is an ongoing issue and was also discussed during the 2006 IHO/SAIHC Technical visit. It should be placed on the agenda of the National Hydrographic Committee (NHC) and dealt with as a priority issue.***

c. A system of Notices to Mariners should be implemented as charts of the lake become available. The base radio station might be used as a first step in promulgating navigational warnings on Lake Malawi by broadcasting Maritime Safety Information **(**MSI), Navigational and meteorological warnings, meteorological forecasts and other urgent safety-related messages. ***Comment: MSU will be responsible for the maintenance of the official charts through Notices to Mariners. The production and distribution of such notices will require further discussion. The process to introduce a system dealing with MSI should also be tabled at the next NHC.***

d. It is necessary to intensify the knowledge of the personnel to handle the new cartographic technology. ***Comment: Refresher courses and further training can be dealt with through Capacity Building initiatives.***

e. Because of unstable power it is mandatory to buy a power generator for the office to be able to continue the daily work. Power failure in Monkey Bay can last for days. ***Comment: Apparently the situation has now improved to such an extent that this is no longer a requirement.***

f. Continued training of personnel in surveying and charting is essential. Training should be ongoing even for experienced personnel not to become stale in the event of new technologies. ***Comment: The SAIHC Capacity Building Plan allows for training and Malawi should ensure that they participate in these activities. Some free courses are also available from time to time and although acceptance is not guaranteed, all efforts should be made to apply for these courses in good time.***

g. The Malawian Government must contribute a new vehicle and replace the Timba's rubber boat. ***Comment: MSU should ensure that these critical deficiencies be rectified through budget action.***

h. The Hydrographic Unit has a need to be in touch with local computer companies to maintain and solve network or general computer problems. ***Comment. It appears that the Department of Surveys has an IT section in Lilongwe. It is critical that all efforts should be made to upgrade computer security at the MSU and consider alternative internet solutions other than dial-up connectivity.***

i. Cooperation with hydrographic office should be on a permanent basis. ***Comment. MSU should continue with efforts to remain in touch with the Hydrographic Office of Iceland.***

j. Reproduction of the Sailing Directions is needed. That could indeed be done in cooperation with Marine Department. ***Comment: This is an ongoing issue and was also discussed during the 2006 IHO/SAIHC Technical visit. It should be placed on the agenda of the National Hydrographic Committee (NHC) and dealt with as a priority issue.***

k. The subscriptions for license for cartographic software must be updated every year. ***Comment: MSU should ensure that this requirement is reflected in the budget of the unit.***

2007 MALAWI NATIONAL REPORT PRESENTED AT 6TH SAIHC MEETING

11. The national report submitted to the 6th SAIHC meeting made mention of several problems and specific issues that the MSU had to deal with and discussions were limited to these issues to obtain more clarity and identify possible solutions. The issues reflected in the report and the comments are as follows:

a. Status of RV TIMBA. As mentioned in the report, both main engines of TIMBA are defective and will have to be replaced. It was confirmed that the engines would be replaced during the 2008/09 Budget period. The propeller that was lost will also be replaced during the same period. The overall condition of TIMBA is good with minor defects, but more attention should be given to ship's husbandry and routine maintenance to prevent costly repairs to the hull and equipment that could have been prevented through a proper maintenance programme. It is not known when TIMBA will be operational again, but it is good news that there is an agreed repair solution.

b. Status of Survey Equipment. The DGPS system reported to be defective has been found to be beyond repair. The Survey General indicated that RTK Systems are available for positioning and as the priority surveys are planned for harbours and approaches it will be more than suitable, but may require some additional components obtainable through the suppliers of the RTK equipment. It does however result in a substantial cost saving as no subscription fee will be payable. The echosounder power unit on TIMBA is also defective and it will appear that the receiver unit also malfunctions. The equipment is a fairly early model and it would be recommended that it rather be replaced than to attempt

any repairs. It is possible that the transducer may still be usable with a new system. If the requirement exists to obtain full bottom coverage of approaches and harbours, it will be advisable to consider investing in a shallow-water side-scan sonar.

c. Lack of a Survey Launch. The requirement for a shallow draft launch to conduct surveys in coastal and shoal areas is valid, but results in an additional requirement for a portable echosounder. As was indicated in the ICEIDA report, the TIMBA requires a new rubber boat and it is the opinion that this can also be utilised as a survey launch deployable from TIMBA or by road on a trailer. It will be advisable to invest in a rigid hull inflatable boat as it is more durable. In the mean time consideration should be given to identify craft in other government departments, eg Police and Marine Unit, that can be utilised as a survey launch.

d. Printing of Charts. The inability to produce chart files for bulk printing and the dependence on the Hydrographic Office of Iceland for the creation of positive images creates unnecessary delays in the provision of new charts. It was noticed that the MHU has an A0 size printer provided to them by the ICEIDA project. A copy of one of the new charts printed on this machine was available and it appears to be of a high quality. It is the opinion that consideration should be given to commence with print-on-demand (POD) programme of all the new charts. The current demand of charts is fairly low and from discussions it will most probably remain so for some time. Colourfast ink should be acquired for the printer to print the charts, but consideration should also be given to spray the present charts with artist's fixative spray until such time as the new ink cartridges are available. The new charts can be made available to users of the lake almost immediately on demand or provided as limited stock to the various points of selling.

e. Production of Sailing Directions. Sailing Directions and Notices to Mariners are the responsibility of a Hydrographic Office. Mariners should use the Sailing Direction with the navigational charts to ensure that they have all available information to navigate safely. MHU should undertake the responsibility to revise and produce the Lake Malawi Pilot with advice from staff of the Marine Department, Malawi Lake Services and the local fishermen. The qualified and experienced mariners can assist with the provision of information on safe routes, avoidance of navigational dangers and instruction on entering or leaving harbours, which can only be obtained through many years of practical experience of sailing on the Lake. The MHU surveyors should sail with vessels to get exposure to the requirements of the mariners and note any visual aids to navigation that should be placed on charts to assist mariners with navigation. Once the Lake Malawi Pilot has been updated and back in use, any new information albeit from surveys or information supplied by mariners, will be promulgated by Notices to Mariners for updating the publication and the charts.

MALAWI S-55 INPUT

12. The 2008 Malawi S-55 input was compiled prior to the visit based on the information contained in the Malawi National Report presented at the 6th SAIHC Meeting. The information was confirmed during the discussions and some small corrections were made. The importance of

updating S-55 was emphasized as many decisions are based on this information. The S-55 input for Malawi is attached as Appendix 4.

REVIEW OF 2006 IHO/SAIHC TECHNICAL VISIT REPORT

13. A very brief review was conducted of the findings of the 2006 Technical visit to determine any changes to the situation. The meeting confirmed the continued importance of water transportation on the Lake, and high-lighted the strategic significance of the Shire-Zambezi project to restore access to the Indian Ocean. At the time of the visit the Marine Department was planning to conduct a navigability cruise as part of the feasibility study. A member of the MSU was tasked to participate in the exercise. The Shire-Zambezi project will be a window of opportunity to enhance the capabilities of the MSU and obtain much needed equipment and training for personnel.

14. The overall situation has not changed much and the majority of the findings and recommendations of the 2006 Technical Visit Report are still valid and should be referred to in any planning to enhance hydrography in Malawi. It was noted that the Metereological Department has now been moved from the Ministry of Transport to the Ministry of Lands, which may improve matters with regards to the co-ordination of weather report for mariners, but the need for national co-ordination for hydrographic needs with stakeholders has remained unchanged. The National Hydrographic Committee should meet at least annually under the Surveyor General's chairmanship.

15. Status of follow-up actions 2006 IHO/SAIHC Technical visit:

a. 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. ONGOING**

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

i. The Special Committee should give urgent consideration to the identification of the focal point mandated to collect and promulgate urgent navigational safety information. ACTION: **Special Committee for Hydrography**. **ONGOING**

ii. 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. ONGOING**

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

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

ii. Identification of opportunities for field and office experience with IHO Member States. ACTION: **Malawi Survey Department and Chairman SAIHC. ACHIEVED THROUGH JOINT PROJECT WITH MOZAMBIQUE**

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

CAPACITY BUILDING

16. At the 6th SAIHC Meeting the chair undertook to compile the SAIHC Capacity Building motivations and submit these requirements to the CBC. Feedback was provided to the meeting on the submissions and the possible benefits to the region with regards to creating hydrographic capacity. The Malawi Survey Department was encouraged to continuously identify capacity building requirements and raise them formally through the SAIHC channels.

17. The Survey General, Mr Gondwe, raised the issue of the requirement for a regional training facility for formal training in hydrography and cartography. Short courses for refresher training are currently conducted through the Capacity Building fund, but formal training are limited to the few free courses available on occasion and there are no guarantees on acceptance of students. After some discussion it was proposed that the CBC should be requested to investigate the possibility of establishing a roving Category B course in hydrography under the umbrella of an authorised training institution. The course should then be conducted in those regions with the greatest need. A similar approach should also be followed for training in cartography.

18. The Shire/ Zambezi project will allow the Malawi Survey Department with a valuable opportunity to enhance the capabilities of the MSU and much will depend on the outcome of the navigation feasibility study by the Marine Department. If the outcome of the study is positive, the Malawi Survey Department should motivate strongly to the CBC, through the SAIHC chair, for the provision of a project advisor to assist with firstly the planning of the project and advise on the acquisition of equipment and secondly monitoring the progress and conduct of the project once it is underway.

CLOSURE AND SITE VISITS

19. The meeting formally closed by midday on Friday 2 May 2008 and the remainder of the day was spent on visiting facilities in Monkey Bay to allow for achieving full visibility. The visit to the Marine Training College was most interesting and it was noted that the training facilities provided by projects funded by JICA and ICEIDA was adequate, well maintained and fully utilised. The deputy head of the College, Captain Mhango, was most helpful and gave a tour of the facilities. Captain Mhango confirmed that the Lake Pilot was still utilised at the College for training and an update of the publication will be most helpful. He confirmed that the majority of changes occurred on the southern part of Lake Malawi, but large sections of the publication are still valid. As an experienced mariner he offered to assist in the process to update the Lake Malawi Pilot.

20. A short visit was also conducted to the Fishery Research Unit and it was noted that daily tide pole recordings were conducted. The group was met by Mr Nyasulu who provided some background on the purpose of the Unit and the operation of the research vessel. The visit to the Marine Naval unit provided insight on the capabilities of the unit. It was confirmed that the unit has requirements for dedicated exercise areas and also some means of promulgating navigation warnings. These are issues that should be discussed in greater detail by the National Hydrographic Committee.

RECOMMENDATIONS

21. Several recommendations are made in the report and can be summarized as follows:

a. The National Hydrographic Committee, under the leadership of the Malawi Survey Department, have a critical role to play in ensuring that Malawi satisfies all hydrographic requirements and at the same time ensuring that all measures are in place to assist with safe navigation. The formation of a simple and effective MSI system is the most important element of Phase One and should be addressed as a priority.

b. The Malawi Survey Department should ensure that the MHU have an operating budget that makes provision for renewal of software licenses, replacement and repair of equipment and training of personnel.

c. Computer security should be improved and care should be taken to keep backup copies of all digital data.

d. The updating and publication of Sailing Directions (Lake Malawi Pilot) should be undertaken by the MHU with the assistance of qualified mariners.

e. Whilst the RV TIMBA will be fitted with new engines care should be taken to introduce a planned maintenance schedule for the complete vessel that will include daily, weekly and monthly routines. The technical training department at the Marine College should be approached for assistance.

g. Vessels of opportunity should be identified that can be utilised as survey launches with portable survey equipment whilst the TIMBA is not operational.

h. A programme of Print on Demand (POD) should commence to get the new charts on the market.

i. Consideration should be given to request assistance from the IHO Capacity Building Committee for the provision of a project advisor for the Shire-Zambezi waterway project as early as 2009.

CONCLUSION

22. The Hydrographic Unit of the Department of Surveys has adequate human resources to carry out survey and charting the lake, but to operate as a fully functioning Hydrographic Office they will need to be funded and operate from a yearly budget to allow for prioritized planning of projects, training and replacement of equipment. The ICEIDA supported Project “Charting of Lake Malawi for the Safety of Navigation” has left the necessary building blocks in place with

regards to equipment and experience gained and this must not be allowed to deteriorate further, but rather be enhanced through investment by the government.

23. The work of the Hydrographic Unit should be made visible at high levels of government and achievements made on limited funding will assist greatly in promoting the cause. All efforts should therefore be made to get new charts on the market and in publishing a new Lake Pilot. This can be done within present capabilities and with limited funding. The Shire-Zambezi waterway project will present new opportunities, but will also require substantial investment in equipment. Project planning will be critical to ensure that money allocated by government is effectively utilised and assistance through the IHO Capacity Building Programme should be requested.

Captain Abri Kampfer SAN

Distribution:

Chairman CBC
Mr D.O.C. Gondwe, Survey General, Malawi

APPENDIX 1 TO
FOF/HYD/R/320/19/1
DATED 12 MAY 08

SAIHC/ IHO CBC ADVISORY VISIT DRAFT PROGRAMME

MEETINGS TO BE HELD AT MONKEY BAY, MANGOCHI FROM 29th APRIL TO 2nd MAY, 2008

PROPOSED PROGRAMME OF ACTIVITIES

DATE	VENUE	TIME (HRS, CAT)	ACTIVITY	ACTORS
Tuesday 29th April 2008	Lilongwe Airport	12:00 - 14:00	SAIHC/ IHO CBC Welcomed at LL and travel direct to Mangochi	Surveyor General personnel/ CSS
Wednesday 30/04/2008	Monkey Bay Mangochi	9:00 - 10:00	Briefing on project at office and hydro office	Surveyor General personnel/
Wednesday 30/04/2008	Monkey Bay	10:00 - 10:30	Tea break	Participants
	Monkey Bay	10:30 - 12:00	Hydro project briefing continued	SG/ Hydro personnel
	Monkey Bay	12:00 - 13:30	Lunch	All particpants
	Monkey Bay	13:30 - 15:30	Visit Marine training school/ Boatyard	All participants
	Monkey Bay	15:30 - 16:00	Tea break	All particpants

	Monkey Bay	16:00 - 17:00	Review of Status of hydro project	All delegates
	Thursday 01/05/2008	09:00 – 10:00	Capacity building issues	All delegates
	Monkey Bay	10:00 – 10:30	Refreshments	All participants
	Monkey Bay	10:30 – 12:30	Discussions on Capacity building issues	All delegates
	Monkey Bay	12:30 - 14:00	Lunch	All participants
	Monkey Bay	14:00 - 15:30	Prepare minutes of discussions	Delegates/ secretariat
	Monkey Bay	15:30 – 16:00	Refreshments	All participants
	Monkey Bay	16:00 – 17:30	Finalise minutes	Delegates/Secretariat
	Monkey Bay Aboard 'Chancy Maples'	19:00 - 21:00	Informal Dinner	Participants/ Invited stakeholders
Friday 02/05/2008	Monkey Bay	09:00 – 10:00	Review and confirm minutes	All Delegates
	Monkey Bay	10:00 – 10:30	Refreshments	All Participants
	Monkey Bay	10:30 – 12:30	Review and confirm minutes	All Delegates
	Monkey Bay	12:30 – 14:00	Lunch Break	All Participants
	Monkey Bay	14:00 –	Visit Fisheries research & Cape Maclear or MALDECO fisheries	All Delegates
Saturday 03/05/2008	Mangochi /Lilongwe	-	Travel to LL	SAIHC Advisor / CSS

APPENDIX 2 TO
FOF/HYD/R/320/19/1
DATED 12 MAY 08

AMENDMENT TO ENTRY FOR MALAWI IN THE IHO YEAR-BOOK

MALAWI (REPUBLIC OF)

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APPENDIX 3 TO
FOF/HYD/R/320/19/1
DATED 12 May 2008

SUMMARY OF EVENTS

Date	**Event**
Visit to Malawi	
29 Apr 08	Arrived Lilongwe, Malawi. Travelled to Mangochi by road
30 Apr 08	Meeting in Monkey Bay at Malawi Hydrographic Unit chaired by Mr M. Mzunzu, Chief Staff Surveyor, with the following attendees: Mr B.G. Chigona — Assistant Hydrographer Mr W.B.S Luwani — Senior Marine Engineer Mr A.G.K Nkhoma — Senior Deck Office, Representing Marine Department Mr C.T.B. Kafunda — Assistant Hydrographer Mr Gumbi Gumbi — National Cartographer Mr D.K. Longwe — Senior Assistant Cartographer Mr P. Jali — Assistant Hydrographer (U/T).
01 May 08	Meeting in Monkey Bay at Malawi Hydrographic Unit chaired by Mr D.O.C. Gonwe, Surveyor General with same attendees as previous day. A visit was conducted to the survey vessel TIMBA. An informal dinner was held onboard the vessel "Chancy Maples" for invited guests and staff of the Malawi Hydrographic Unit.
02 May 08	Meeting in Monkey Bay at Malawi Hydrographic Unit chaired by Mr D.O.C. Gonwe continued with the main focus on Capacity Building. Meeting was concluded by midday and after lunch visits were conducted to the Marine Training School, Fisheries Research Centre and the Marine Naval Unit.
03 May 08	Conducted a visit to MALDECO Fisheries and on completion of the short visit departed for Lilongwe by road.
04 May 08	Departs from Lilongwe and return to South Africa

APPENDIX 4 TO
FOF/HYD/R/320/19/1
DATED 12 May 2008

IHO Special Publication S-55 Update (Visit Malawi Apr / May 2008)

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Basic Data

Maritime Nation/Area	Nation or Area Code	Region ID	Nation or Area (N or A)	EEZ(sq km x 1000)	Length of Coastline (km)	Data for S-55 Edition No.	Latest Update	IHO Member State
Malawi	MW	AF	N	24,0	1290	3	May 2008	N

IHO S-55 Annex 1

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Hydrographic Resources

Maritime Nation/Area	Hydrographic Survey Vessels				Hydro. Staff		Positioning Methods		
	>100m	50m..100m	25m.. 50m	< 25m	Specialists	Assistants	Long >40km	Medium 5-40km	Short Range
Malawi				1	1	2		RTK	RTK

IHO S-55 Annex 2

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Status of Hydrographic Surveys

A1 = % which has been adequately surveyed
B1 = % which requires re-survey at larger scale or to modern standards
C1 = % which has never been systematically surveyed
An entry of –1 in column A1 indicates inland waters

Maritime Nation/Area	Data	State of Hydrography d<50m			State of Hydrography 50m<d<200m Surveys for areas between 0 and 200m			State of Hydrograhy d>200m		
	Y/N?	% adequate	% resurvey	% unsurveyed	% adequate A1	% resurvey B1	% unsurveyed C1	% adequate	% resurvey	% unsurveyed
Malawi		**30**	0	70	**35**	0	65	0	0	0

IHO S-55 Annex 3

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Cartographic Resources

Maritime Nation/Area	Cartographic Staff			Charts printed how?			Converting	Max. sheet
	Cartographers	Draftspersons	Printers	B & W	Colour	Other	to AO (Y/N)	Size (mm x mm)
Malawi		**2**			**Y**	**PoD**	Y	**1260 x 880**

IHO S-55 Annex 4

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Charts

Maritime Nation/Area	Chart Publisher	< 300 000 Schemed	< 300 000 Published	101 000.. Schemed	..300 000 Published	25 000.. Schemed	..100 000 Published	> 25 000 Schemed	> 25 000 Published	Other
Malawi		0	0	0	0	15	**4**	13	**2**	0

IHO S-55 Annex 5

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Nautical Publications

Maritime Nation/Area	Charts	Catalogue	NtM	Nav Warn	Sail Dir	List of Lights	Radio Sigs	Sym & Abbr	Tide Tables	Other
	Y/N?	Y/N?	Y/N?	Y/N?	Y/N?	Y/N?	Y/N?	Y/N?	Y/N?	Y/N?
Malawi	**Y**	N	N	N	N	N	N	N	N	N

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Totals

Maritime Nation/Area	Total Charts		Total Carto. Staff	Total Hydro. Staff	Vessel Capacity Indicator	Total Naut. Pubs.	Hydrogr. Rating	Cartogr. Rating	Combined Rating
	Schemed	Published							
Malawi	28	**6**							

IHO S-55 Annex 7

IHO S-55

Summary Report on MARITIME SAFETY INFORMATION (MSI)

Nation/Area	INT Region	Local Warning	Coast Warning	NAVAREA Warning	Port Info	Master Plan	A1 Sea Area	A2 Sea Area	A3 Sea Area	NAVTEX	SafetyNET
Malawi	H	Partial	NO	NO	Partial						

IHO S-55

Summary Report on the Status of RNCs

In the table below, -1 has been used for Inland Waters

Nation / Area	INT Region	Small Scale	Medium Scale	Large Scale
Malawi	H	0	0	0

IHO S-55

Summary Report on the Status of ENCs

In the table below, -1 has been used for Inland Waters

Nation / Area	INT Region	Small Scale %	Medium Scale %	Large Scale %
Malawi	H	0	0	0

IHO S-55

Summary Report on the Status of INT Charts

In the table below, -1 has been used for Inland Waters

Nation / Area	INT Region	Small Scale	Medium Scale	Large Scale
Malawi	H	0	0	0