

COUNTRY REPORT: YEMEN

INTRODUCTION

1. **RHC Involvement.** Yemen is not an IHO member, nor a member of the North Indian Ocean Regional Hydrographic Commission (NIOHC). An observer from Yemen Ports Authority (YPA) attended the 6th meeting of the NIOHC, but Yemen was not represented at the 7th meeting in March 2007, and a National Report was not available to the Technical Visit Team. There is routine liaison with the UKHO for chart production.
2. **Preliminary Liaison.** Mr Khaled E. Alwazir, Executive Chairman of the Maritime Affairs Authority (MAA), and Mr Abdulaziz of his staff, co-ordinated the visit. Arrangements in Aden were made by the MAA Branch and the YPA.
3. **Points of Contact.** Proposed amendments to the IHO Year Book, to reflect the creation and role of the MAA, are at Appendix 1. The MAA is tasked to implement international maritime agreements to which Yemen is party, including the SOLAS Convention, and is the appropriate first point of contact for IHO. It reports to the Ministry of Transport. The YPA also reports to this ministry. A proposal is currently under discussion which would divide the ports into three independent corporations: The Red Sea Ports Authority (Al Hudaydah, As Salif, Al Mukha), The Gulf of Aden Ports Authority (Aden, Socotra), and The Arabian Sea Ports Authority (Al Mukalla, Nishtun). The entry for YPA in the Year Book will require amendment once this change comes into effect.

DESCRIPTION OF MARITIME ACTIVITIES

4. **National Maritime Affairs.** Comprehensive discussions with MAA and YPA (Port of Aden) enabled the Visit Team to obtain an overview of strategic issues and statistics in the maritime sphere in Yemen, a country with significant responsibility for the safety of international and regional traffic.
5. **Trade and Maritime Traffic.** The main components of sea-borne traffic, and the patterns of activity in national waters, are as follows:
 - a. **Through Routes.** Yemen is in a strategic position at the junction between the Red Sea DW route, with TSS in the Bab El Mandeb and its northern approaches, and the DW routes in the Gulf of Aden. From the Gulf of Aden, shipping bound for the Gulf passes off the mainland, whilst traffic for the Far East splits either side of Socotra, with the majority of ships going north of the island. Other traffic passes west of Socotra bound to and from East African ports.
 - b. **Trans-shipment.** Aden is a hub port, with more than 50% of the containers handled (220,000 TEU in 2006) being for transshipment from vessels on the liner routes between the Far East and Europe. However, the hub port for feeder traffic to Hudaydah is Jeddah in KSA.
 - c. **Bulk Trades.** Aden handles wheat (1.2M tonnes in 2006) and cement (1.2M tonnes in 2006). As Salif handles grain and cement, and Hudaydah handles grain. Little Aden receives crude oil, and exports refined products to ports in the southern Red sea, Gulf of Aden and E Africa. The crude oil at Little Aden comes from the Ras Isa terminal on the Red Sea coast, where an FSO and a SPM are linked by pipeline to the Marib field in Yemen. There are currently only spasmodic loadings for export from the Rudum Terminal on the coast of the Gulf of Aden. However, further east, the Ash Shihr Terminal (2 SPM) is the principal facility for export of Yemeni crude oil, to the Far East and the USA. On the same coast, a new port is under development at Balhaf for export of LNG from the Marib field. It is due to become operational in 2008.
 - d. **Feeder, Coasting and Local Trade.** Beginning from the border with KSA in the Red Sea, the pattern of trade is as follows. As Salif is a new port for the northern provinces of

Yemen. Hudaydah is the main port on the Red Sea coast, handling containers delivered from Jeddah by feeder ships, fuel from Aden for the power station, and general cargo. Mukha imports mainly from Djibouti and Berbera (cattle), with fuel from Aden for a nearby power station. In the Arabian Sea, Mukalla is the port for the Hadhramaut region, handling containers and fuel from Aden, and general cargo, mainly regional traffic from Indian Ocean ports. Finally, Nishtun is a fishing port, but handles small volumes of imports for the local area. There is a small and exposed jetty at Hawlaf on Socotra where supplies from Mukalla, Nishtun, and other ports such as Dubai, are landed. There are plans for a new port close to the airport at Qormih.

e. Offshore Supply and Support. Oil exploration has started offshore from Mukalla, which is the chief port for Yemen's offshore industry and handles most oilfield supplies.

f. Tourism - Cruise Liners. Aden is the main port of call (16 in 2006), but cruise liners also call at Hudaydah and occasionally at Mukalla.

g. Tourism - Small Craft. The anchorage off Tourist and Abkari Piers is frequented in season (October to the end of March) by yachts awaiting favourable winds for passage through the Red Sea, or NE into the Indian Ocean. They follow a well-established itinerary advised in the Pilot Books, with most west-bound yachts coming direct from Salalah, though some stop in Mukalla. 106 yachts visited Aden in 2006. A small number of yachts remain in port through the summer. Aden is seeing an increasing number of mega-yachts (c12 in the last 12 months).

h. Fisheries. It is estimated that there are c80,000 artisanal fishers in Yemen operating in cooperatives all along the coasts in the Red Sea and Gulf of Aden, and this is a sector of high economic significance. Industrial fishing is conducted under license by foreign companies based in Hudaydah and Aden. Numbers have fallen sharply in the last 3 years to c30 operational boats, following the strict implementation of licensing procedures. Plans are in hand to position 3 Fish Aggregation Devices (FADs) off Balhaf, and these must be shown on the official charts.

6. Responsibility for Safety of Navigation. The ports are responsible for maintenance of channels, removal of wrecks and provision and maintenance of aids to navigation within their limits. Outside the port limits MAA is in the process of taking responsibility for making the necessary arrangements.

7. Defence Force Responsibilities. Yemen has a Navy with its main base in Hudaydah, and a Coast Guard, established in 2002, with its main base in Aden and smaller units at Hudaydah and a new base in Balhaf. The Coast Guard is charged with EEZ patrol (e.g. operations to counter smuggling and movement of illegal immigrants). At the moment it can cover the coast from Ras Isa to Mukalla. Further infrastructure development is planned to enable it to extend its operations. The Visit Team noted with concern that the Coast Guard has not provided an outfit of charts and publications for all its vessels. They consider that this deficiency should be addressed as soon as possible. Assistance from UKHO could be raised with MAA through the Coast Guard representative on the Board of Directors.

8. Coastal Zone Management and Environmental Protection. No marine National Parks or other management zones have yet been declared in the waters of Yemen. The MAA operates Pollution Control craft from Hudaydah and Aden. There are plans to establish an IOC/GLOSS tide gauge at Aden as part of the response to the tsunami of December 2004. This installation will be of particular value because of the long period of historic tide records at that port.

OUTLINE S-55 ANALYSIS

9. Status of surveys within the National Maritime Zone. The Visit Team discussed Yemen's entry in S-55 with MAA and YPA. MAA explained that following the completion of the survey work in 2001 for the definition of the TSS in the N approaches to the Strait of Bab el Mandeb, the national priority was to improve aids to navigation in that area. This approach had the endorsement of IMO and IALA. The Visit Team acknowledged this, and noted the ongoing effort by the World Bank Global Environment Fund (WB GEF) and PERSGA to extend the surveyed area further into the Red Sea, as

indicated in S-55. They pointed out the existence of unsurveyed areas of Yemeni coastal waters immediately adjacent to the TSS, and that the majority of the coastal zone elsewhere had not been surveyed since the nineteenth century. Discussions with the Coast Guard indicated that they relied very much on local knowledge in such areas, and that they and other authorities, including the MAA Pollution Control units in Aden and Hudaydah, require better hydrographic information in order to respond to an emergency in inshore waters. The Visit Team recommended that Yemen develop a prioritised national survey plan and that a bid could be submitted through the NIOHC to the IHO Capacity Building Committee (IHOCBC) for the funding of a short loan of a hydrographic surveyor with suitable experience to assist in the development of such a plan. One new urgent requirement is for larger-scale chart coverage of the coast west of Ras al Kalb to meet the requirements of the vessels which will call at Balhaf. The Visit Team noted that several reported shoals are shown on the current chart SE of Sikha Island, and they considered that coastal waters in the approaches to Balhaf out to c10 nm offshore should be surveyed. They recommended that Yemen consider an approach through the NIOHC to see whether an IHO Member State (MS) with a survey ship in the region could offer spare capacity to undertake the required work. They noted that at the recent NIOHC Conference the Indian Hydrographer had stated that a government to government approach for such assistance from any coastal state would be very favourably received.

10. Collection and Circulation of Nautical Information. Historically, the Port of Aden has acted as the link with UKHO to provide information for the update of charts. The advent of MAA, with its clear national role of oversight and monitoring of compliance with international and bilateral agreements, offers the opportunity to ensure that all agencies are providing the necessary information to the appropriate co-ordinators, either within MAA or the Port Captains' organisations.

11. Survey Capability. The Port of Aden has a well-established Hydrographic Section which undertakes surveys in all Yemen's ports, and from which MAA draws expertise when required. The Senior Hydrographic Surveyor is trained to IHO Cat B level, and training is being sought for an assistant. This training has been reinforced by field experience with the contract company performing the survey for the Red Sea TSS and with visiting survey ships of IHO MS. The most recent opportunity allowed the survey team to witness multi-beam echo sounder (MBES) operations in Aden harbour during the visit of FNS *Beautemps-Beaupré*. The port survey team has a launch, an ATLAS Deso 21 single-beam echo sounder (SBES), and a total station to supplement traditional horizontal sextant angle position-fixing. Funding is awaited for a new launch with a comprehensive modern equipment fit. The Visit Team discussed interim investment in a sidescan-sonar, and possibly a Hypack system. They also suggested examining the option of hiring MBES when required, rather than purchasing such a system for the new boat. The most urgent equipment requirement is the return of the Port tide gauge to proper operation. Outside the port areas, surveys are conducted by commercial companies e.g. for port development. The PERSGA surveys of 2001, in which Yemen played a key planning role, provide a classic example of good liaison between national agencies, commercial contractors, and an IHO MS HO which provided specifications, quality control, and appraisal and publication of results. The same model would work equally well elsewhere in national waters.

12. Independent Chart Production Capability. Yemen is content with current arrangements for production and publication of official charts by the UK, with which there is a bilateral arrangement. The MAA is working with UKHO to obtain training, with the aspiration of producing charts nationally with UK certification. The Visit Team noted that a good interim step, with precedent in both the French and UK HOs, would be to seek an attachment of a Yemeni cartographer, after completion of training, to produce one of the charts of Yemen's waters using the facilities and advice available in UKHO. Meanwhile, MAA and YPA maintain a good dialogue with UKHO to indicate the requirement for additional charts. During this mission, the Visit Team was made aware that France was experiencing difficulty in obtaining survey data to update the International Chart Series in the Southern Red Sea. This issue should be readily resolved within the IHO, and they recommend that the NIOHC Chairman and the IHB provide advice to PERSGA and Yemen on procedures for sharing information.

PROPOSALS FOR CO-ORDINATION AND CAPABILITY BUILDING

13. National Hydrographic Committee. The Visit Team were given comprehensive documentation relating to the organisation of the MAA. From this, and discussion with the Executive Chairman, they concluded that the Board of Management of the MAA, which draws in members from the Ministries of Oil and Minerals, Fish Wealth, Interior (Coast Guards Authority) and Finance,

together with the seaports and other authorities, is well-placed to act as a National Hydrographic Committee (NHC). The Visit Team suggested the formation of an advisory work committee for hydrography, under the chairmanship of the Director General of Pilotage and Maritime Safety (MAA). Such an arrangement would be fully in accordance with Articles (10) and (14) of Republican Decree No. 352 of 2001, which established the MAA. The Team suggested that the Board of Directors should have a standing agenda item on hydrography. Key issues would be the implementation of GMDSS, the development and delivery of a national prioritised survey plan, and the assessment of new charting requirements. They suggested that the Board should approve the annual national report to NIOHC conferences, which could be delivered there by the Director General of Pilotage and Maritime Safety (MAA). They urged Yemen to sign the statutes and become an Associate Member of NIOHC, and to initiate an application to join the IHO. Copies of M-2, which include comprehensive guidance on the application process, were supplied to MAA.

14. Phase 1 Hydrographic Capability: MSI Organisation and GMDSS. By virtue of its role and sphere of competence the MAA is well aware of the importance of this element of the obligations under SOLAS V/9. The Visit Team recommended that MAA consider issuing a directive requiring information to be passed to the Port Captains in Hudaydah and Aden as co-ordinators for the Red Sea and Gulf of Aden/Arabian Sea sectors respectively, working in close co-operation with the local MAA Control Centres.

a. MSI (Navigational Warnings). The Port Control stations broadcast warnings by VHF for their areas. Consideration needs to be given to provision of national Coastal Warnings for the intervening areas. Advice can be provided by the specialist committee of IMO and IHO.

b. Information on Ports and Harbours and Coastal areas. Existing liaison between YPA and UKHO works well. However, the MAA Board of Directors, assisted by its advisory work committee, will be an excellent source of future wider co-ordination. As an example of the potential to deliver even more data in a timely fashion, the Visit Team learned with pleasure that MAA had power under the licensing arrangements to require offshore exploration companies to pass all bathymetric information to the government of Yemen.

c. GMDSS Status. The Visit Team were informed of plans for GMDSS installations in Aden and Hudaydah in the course of 2007. The MAA had considered a project for a NAVTEX station to cover those waters which could not be accommodated by potential arrangements with KSA and Oman. However, funding for this project had a lower priority than the VTS, AIS and dGPS coverage recommended in IMO and IALA reports. The Visit Team explained how, in the meantime, Yemen could be linked into the WWNWS by declaring a SafetyNET Coastal Warning Area, providing a service to INMARSAT-capable shipping. The Visit Team could help to establish a direct link to the NAVAREA IX co-ordinator in Pakistan, as soon as Yemen nominated a national co-ordinator, especially if the experienced Port Captains were confirmed in this role. The Visit Team undertook to provide more information on this option, and this is at Appendix 2.

15. Phase 2 Hydrographic Capability: Survey. The Visit Team learned that MAA is actively seeking hydrographic training for its staff, including an RN survey course in UK. Undoubtedly a qualified hydrographic surveyor would be a great asset to the MAA Board of Directors in its role as a NHC. However, training would need to be followed up by substantial field experience before such a person was truly useful. This could be done by joining in the activity of the Port Survey Team as much as possible, and also by seeking attachments to IHO MS survey ships. The NIOHC would be the ideal conduit through which to seek such openings. Meanwhile, as part of its national oversight, the MAA should monitor and support efforts by YPA (and subsequently by the Corporations) to enhance the training and equipment of the Survey Team, which is most certainly a national asset. The target should be to achieve a position where, in addition to the conduct of surveys within the port areas, the MAA Hydrographic Surveyor and the Senior Hydrographic Surveyor YPA can both oversee and provide quality control for operations by contract companies in national waters.

PROPOSALS FOR ASSISTANCE

16. Training. Yemen is clearly making excellent use of existing bilateral relationships to obtain training. The Visit Team became aware of only two additional requirements at this time. The YPA

senior surveyor seeks refresher training. The Coast Guard would benefit from a training course in chart correction. These requirements will be passed through NIOHC to seek opportunities in IHO MS.

17. Equipment. Similarly, authorities in Yemen are using well-established bilateral arrangements to seek advice on equipment purchase. The NIOHC is another good source, and requirements can be submitted using the standard format of the annual national report or by letter to the NIOHC Chairman at any time.

18. Funding. The Visit Team were told that the lead for major projects was taken in Yemen by the Ministry of Planning and International Co-operation. They explained how the comparatively limited funds of the IHOCBC were deployed in response to requests endorsed by the regional hydrographic committees (RHCs), including the NIOHC.

FOLLOW UP ACTIONS

19. Encouragement of Formation of a NHC, Development of a National Hydrographic Strategy, and IHO and RHC Membership.

a. The MAA Board of Directors should review this report and decide the means of conducting a regular review of the status of SOLAS V arrangements. The recommendations of the Technical Visit Team are at paragraph 13 above. The NIOHC Chairman should establish routine liaison with the Executive Chairman of MAA. ACTION: **Executive Chairman MAA; NIOHC Chairman.**

b. Yemen should make every effort to participate in future NIOHC meetings, and should sign the statutes as an associate member. ACTION: **Yemen.**

c. Yemen should consider application to join the IHO. Guidance to amplify that given in M-2 should be supplied by IHB, on request. The IHO delegation should seek out the delegation of Yemen during forthcoming IMO meetings. ACTION: **Yemen; IHB.**

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

a. MAA should confirm the identity of the national co-ordinator, and his role should be promulgated as quickly as possible, requiring all authorities to pass information related to safety of navigation and chart update. The Visit Team should confirm that correct contact details for the co-ordinator are held by UKHO. ACTION: **MAA; Visit Team.**

b. Once the co-ordinating authority for MSI information has been confirmed and a post-holder identified, the Visit Team will make contact with the NAVAREA IX Co-ordinator and facilitate the access of Yemen to regional SafetyNET arrangements. ACTION: **MAA; Visit Team; NAVAREA IX Co-ordinator.**

21. Encouragement of Development of Hydrographic Capability.

a. Yemen should take up a place on the Phase 1 Technical workshop to be held in Jeddah in Nov 07. The person attending must be someone who will subsequently carry out the work of collation, analysis and dissemination. ACTION: **MAA Board of Directors; NIOHC Chairman.**

b. The Yemen MSI national co-ordinator should attend the training course in Goa to be held in 2008, details of which will be supplied by IHB and Chairman NIOHC. ACTION: **IHB; NIOHC Chairman.**

c. Yemen should consider a bid through NIOHC for IHOCBC funding for an attachment of an experienced surveyor to advise on development of a prioritised national survey and charting plan, and on specification, oversight and quality control of out-sourced survey work. ACTION: **MAA Board of Directors.**

AMENDMENTS TO THE ENTRY FOR YEMEN (REPUBLIC OF) IN THE IHO YEAR-BOOK

YEMEN

MARITIME AFFAIRS AUTHORITY

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The Maritime Affairs Authority is responsible for the implementation of all international maritime agreements to which Yemen is party, including SOLAS.

YEMEN PORTS AUTHORITY

GUIDANCE ON THE ESTABLISHMENT OF A SAFETYNET COASTAL WARNING AREA

1. The following official guidance is given on the use of SafetyNET where NAVTEX is not in place:

4.2.2 Coastal warnings

4.2.2.1 Coastal warnings promulgate information which is necessary for safe navigation within a given region. Coastal warnings should normally provide sufficient information for safe navigation to seaward of the fairway buoy or pilot station and should not be restricted to main shipping lanes.

Where the region is serviced by NAVTEX, it should provide navigational warnings for the entire IMO-approved service area of the NAVTEX transmitter. Where the region is not served by NAVTEX, it is necessary to include all warnings relevant to the coastal waters up to 250 miles from the coast in the SafetyNET Service transmission.

2. The recommended procedure is for a coastal state to define and promulgate the co-ordinates of a SafetyNET Coastal Warning Area for which messages will be promulgated via the NAVAREA Co-ordinator. This is shown in diagrammatic form for an example in West Africa. Full advice can be given by the IHO/IMO Committee for the Promulgation of Navigational Warnings, and this can be arranged by the Chairman NIOHC.

