

ANNEX E TO EAHC WEST AFRICA ACTION TEAM REPORT DECEMBER 2002

COUNTRY REPORT: GHANA

INTRODUCTION.

1. RHC Involvement. Ghana is not an IHO member, nor has it attended any recent RHC meetings. A National Report on hydrography is not produced. Ghana has enjoyed a good working relationship with the UKHO in the past and is keen to increase the current level of cooperation.
2. Preliminary Liaison. Liaison for the WATT visit was coordinated with Mr. Richard A-Y Anamoo, Chief Engineer, Ghana Ports and Harbours Authority (GPHA). The GPHA invited interested parties to attend a meeting with the WAAT. These bodies included:
 - Ghana National Petroleum Company
 - Ministry of Roads and Transport, Directorate of Shipping and Navigation
 - Ministry of Foreign Affairs
 - Ministry of Energy
 - International Maritime Organization, Regional Coordinator
3. The Ghana Department of Surveys was not at the initial meeting but was later visited. This Department has overall legislative authority to conduct all mapping and charting in Ghana.
4. Points of Contact. During the visit it was established that GPHA would continue to be the point of contact for international hydrographic activities for the present moment. The IHO yearbook entry for the Director General, GPHA should read: Mr. Ben Owusu-Mensah.

DESCRIPTION OF MARITIME ACTIVITIES.

5. National Maritime Affairs. Hydrographic activities in Ghana are organized as follows. The Ministry of Roads and Transportation, Division of Shipping and Navigation has overall responsibility for hydrographic surveying and maritime safety in Ghana. The Ministry is an administrative organization and does not have the infrastructure to directly support these activities. GPHA has the only national capacity to conduct hydrography. There is no nautical charting capacity in the country, although the Ghana Department of Surveys, organized under the Ministry of Lands and Forestry, has the responsibility for nautical charting. Presently, they have no nautical charting capability. The Ghanaian Navy is responsible for enforcing fishing regulations, immigration (not seen as a major problem) and responds to SAR requirements. GPHA is usually the first line of contact for SAR operations as well.
6. Trade and Maritime Traffic. Tema has more than 1400 ship visits per year and Takoradi has more than 500. These figures could very well increase if the civil unrest in Côte d'Ivoire continues.
 - a. Through Routes. There is a large volume of CAPE MAX vessels (too large to transit the Suez Canal) that pass by Ghana. Ghana is not prone to severe weather conditions, and has a regular coastline, and therefore accidents have been limited. Any maritime accident involving one of the large vessels transiting to and from the Cape of Good Hope could have major consequences for Ghana, and this scenario was of particular concern to the authorities.
 - b. Transshipment. Most transshipments come from Europe to the main port of Tema. A majority of the cargo is containerized and there is a lot of transit cargo that arrives and is sent by truck or by inland waterways to neighboring land-locked countries (Burkina Faso, Mali and Niger). It is noted that traffic in the Port of Tema has increased recently due to the diversion of ships from Abidjan during the current civil unrest in Côte d'Ivoire.
 - c. Bulk Trades. Crude oil is imported, refined, then used locally and also exported.

- d. Feeder, Coasting and Local Trade. Feeder services sail along the coast from the major ports of Tema and Takoradi.
 - e. Offshore Supply and Support. To date there is only one jack-up oilrig offshore and it is currently undergoing refurbishment. It is not currently producing crude. The rig has been in place some fifteen years. There are also barge installations offshore containing electricity generating plants.
 - f. Tourism - Cruise Liners. There are a few cruise liners that come into Tema and Takoradi. Ghana hopes to increase tourism.
 - g. Tourism - Small Craft. There are no small craft marinas for pleasure boats.
 - h. Fisheries. There is a national fleet that ranges from industrial to semi-industrial vessels, as well as trawlers. There are joint ventures in place with Asian (mostly Korean) and European countries. Most of the ships are Ghana flagged vessels. Ghana is currently in contract discussions with a UK company called Blue Finger to provide fisheries policing.
7. Responsibility for Safety of Navigation. GPHA (under the Minister of Roads and Transport) is responsible for maintenance of channels, removal of wrecks, provision of nav aids and the promulgation of Notice to Mariners (NtMs) within the boundaries of the major ports. The Minister of Roads and Transport, Division of Shipping and Navigation, is responsible for the areas outside the ports, but within territorial waters. All nav aids were reported to be in good shape and positioned as shown on the current Admiralty charts. All changes to nav aids within the limits of Ports and Harbour areas are reported to the UKHO by GPHA Harbour Masters. Wrecks within the ports boundaries are the responsibility of the GPHA. Wrecks outside the harbour boundaries are the responsibility of the Minister of Roads and Transport, Division of Shipping and Navigation. GPHA stated that they attempt to place buoys on all wrecks, if the wreck presents a danger to navigation. The Ministry of Roads and Transport does not have the capability to remove or mark wrecks. There are many wrecks (more than 140) along the coastline. These were recently compiled in a report by a commercial contractor for Ministry of Roads and Transport. Most of the wrecks are on the beach. The Ministry does not currently have funds available to remove these wrecks. Promulgation of NtMs is under the authority of the Ministry of Roads and Transport, Division of Shipping of Navigation; however the capacity to do this is a problem.
8. Defence Force Responsibilities. The Ghanaian Navy handles some SAR requirements, but on a somewhat informal basis. Normally ship owners call the Navy and they in turn respond if available. The Navy is also responsible for fisheries protection and countering illegal drug trafficking and immigration. At present none of these are seen as a major problem. There was no mention of specific defence requirements for improved hydrographic data during the visit.
9. Coastal Zone Management and Environmental Protection. There was no mention of National Parks, management zones or climate monitoring stations. Ghana is presently in the process of offering a private tender for a contract to provide port reception facilities (gray water, sewage and garbage). There is currently no means of controlling pollution outside of port areas. The Ministry of Works and Housing has an ongoing Sea Defence Project in place. The purpose of this project is to ensure that erosion is kept in check. The Environmental Protection Agency is studying inland pollution, and the Ministry of Roads and Transport has the responsibility to control ship pollution. The Ministry wants to enact a Marine Pollution Act to ensure enforcement. There has been a chart prepared that shows the effects in the event of an oil spill.

CAPACITY ANALYSIS.

10. Status of surveys within the National Maritime Zone. Status of surveys within the territorial waters and the EEZ is poor. Surveys date back as far as 1837 with some small portions of the territorial seas being surveyed in 1953. The EEZ contains no systematic surveys at all. The only recent surveys appear to have been carried out by dredging companies following dredging operations. The latest survey results observed was a 1:2500 survey of Tema done in 2001 by the Dutch dredging company, Bolkalis Inc. The chart was on the War Datum Spheroid, a local

variation of Clarke 1880 Spheroid. A full survey out to the limits of existing coastal charts is required to bring the charts up to modern standards. The existence of some uncharted wrecks was mentioned by the Port Surveyor. There are plans to deepen the ports of Tema and Takoradi from a controlling depth of 9.6 meters to 11.0 meters. The bottoms of the harbors are bedrock and drilling and blasting will be required to deepen the port.

11. Collection and Circulation of Nautical Information. Maritime Safety Information is forwarded to agents of shipping companies by the harbour masters by manual methods and to ships by local VHF radio stations. Updated survey information has not always been forwarded to the UKHO in recent years, but GPHA were resolved to ensure it does in the future. This will enable the information to be reflected on published charts. It was noted that there have been no navigational warnings sent to the NAVAREA II Coordinator from Ghana. The GPHA Chief Engineer stated that this was because there had been no link established. He stated that they were more than happy to establish this link and begin passing appropriate navigational warning information.
12. SAR and GMDSS. Ghana attended the IMO Conference on SAR and GMDSS in Florence 2000, but to date has not signed the SAR convention. It was understood that within the sub-regional grouping Guinea, Sierra Leone and Liberia have accepted the convention and will begin cooperation, whilst both Ghana and Côte d'Ivoire have yet to do so. Legislative activity was in hand and it was anticipated that the convention would be accepted by Ghana at some time in the near future.
13. Survey Capability. In reality, there is no national hydrographic surveying activity being undertaken at the present time, other than post dredge surveys by private companies. However, Ghana is very interested in developing a capability to conduct inshore survey work and monitor the development of offshore activities (oil, energy and natural gas). There is a single port surveyor at GPHA who received Category A training in the UK in 1992. GPHA have two very new survey launch/pilot boats, which are located in the ports of Tema and Takoradi. Additionally they possess two survey equipment suites consisting of Marimatech single beam echosounders (E Sea Sound 206), collection units (P Sea Master 400), Chart Master collection software, Terra Model processing software, and some other IT equipment. GPHA has had this equipment for more than one year, but unfortunately, much to the frustration of the Port Surveyor, it has never been successfully set to work and there has been no on-job training. The equipment is now showing signs of deterioration. It was reported that the equipment providers would revisit in early December 2002 to set to work the equipment and provide training.
14. The Ghana Department of Surveys is responsible for the collection and dissemination of tidal information. They are soon to receive two pressure tide gauges from India, under the sponsorship of the UNESCO-IOC African GOOS Project, and they have already sent a person to India to receive training for these gauges.
15. Independent Chart Production Capability. The WAAT saw no evidence of a nautical chart production capability.

PROPOSALS FOR CO-ORDINATION AND CAPABILITY BUILDING.

16. National Hydrographic Committee. For the present moment there was universal agreement that a NHC should be set up, and that GPHA should be the focal point for its development. Ghana is in the process of forming a National Maritime Authority from the current Directorate for Shipping and Navigation that will have responsibility for all aspects of maritime safety; it seems likely that a NHC will come under the umbrella of this authority at some stage in the future. The NHC should ensure, firstly, there is an organisation for the collection and circulation of nautical information. Secondly it should encourage the development and direct the employment of a national hydrographic capability based on the existing resources within GPHA.
17. MSI Organisation and GMDSS. For the time being, there is no real MSI organisation or GMDSS operations. The existing method is to pass important information to ships on arrival via the pilot.

Within GMDSS several technical means are used for passing MSI to mariners. For ocean-going ships, the navigational warnings should be made available on INMARSAT (SafetyNET) via the NAVAREA II coordinator: although it was noted that no input has been received from Ghana. For ships sailing through Ghanaian waters or approaching Ghanaian harbours, NAVTEX should be the optimum solution; but this infrastructure does not exist at the moment. However, since the concerned ships are part of international shipping, they will have INMARSAT facilities onboard, hence the same information could be passed on SafetyNET via the NAVAREA II co-ordinator. This requires the MSI to be made available to the NAVAREA coordinator by telephone/fax/e-mail. It was agreed that a link would be established with the NAVAREA II Coordinator and that MSI would be passed by GPHA. For local coastal warnings, the only practical solution is to continue to use VHF through the local coast radio stations. It was noted that privatization of the coast radio stations must not prevent the national requirement to be able to broadcast MSI.

18. Information on Ports and Harbours. It was acknowledged that information concerning plans and co-ordinates of new port developments, results of surveys or changes to navigational aids must be forwarded to the charting agency without delay. In this regard the Port Surveyor, in coordination with the Harbour Masters, must ensure that hydrographic and nautical information is provided to UKHO so that it can be reflected in the relevant charts and publications (List of Lights and Sailing Directions etc.). Ghana does produce Tide Tables with the assistance of Proudman Laboratories (UK) and these were found to be adequate.
19. Inland Waters. The Ghana Department of Surveys currently has no hydrographic survey capability, but they should consider acquiring a capability so that surveys of inland waterways and Lake Volta can be undertaken. It was revealed that many accidents occur on Lake Volta due to unmarked and uncharted waters. The new National Maritime Authority should ensure that national plans and resources are coordinated between Ministries.
20. Hydrographic Capability. The sole Port Surveyor does not have a capability to conduct hydrographic surveys. He does not have sufficient personnel, or expertise to conduct surveys with the equipment he presently possesses. GPHA's Chief Engineer indicated that the requirement to train more hydrographers had been noted and he intended to send personnel to the UK for training. An independent hydrographic capability should be considered for the Ghana Department of Surveys in order to maintain the inland waterways and Lake Volta.
 - a. Provision of Survey Data. GPHA, as the current focal point for hydrographic information agreed to forward all relevant information on wrecks, aids to navigation and results of recent harbour surveys to UKHO so that the published charts can be brought up to date.
 - b. Survey Capability. GPHA acknowledged the need to increase capabilities of the Port Surveyor by setting to work the current equipment and providing a trained assistant. A survey capability will not be realized without these investments.
 - c. Chart Production. Nautical charting capabilities do not exist in Ghana. The Survey Department does have the capability to produce 1:50,000 topographic maps, and the additional capability to produce nautical charts could be realized with additional training. It is however to be premature to consider this until hydrographic survey capabilities are substantially improved. Until an internal charting capability is realized, the provision of hydrographic data to the established HO with primary charting responsibility (UKHO) is considered the best alternative.
 - d. Potential for Regional Activity. Ghana has a very limited national capability to conduct hydrographic surveys. The ability to provide technical hydrographic advice to neighbouring states is not possible at this time, but is a worthy aspiration for the future. The Regional Maritime Academy located near Tema is currently training merchant mariners from several West African states. The possibility of adding hydrographic training to the curriculum should be explored. The formation of a regional hydrographic training center would greatly enhance the capabilities in the region.

PROPOSALS FOR ASSISTANCE.

21. Training. GPHA should concentrate in augmenting the current hydrographic capability by assigning additional personnel to the Port Surveyor following receipt of formal hydrographic training. The training of Survey Department personnel in hydrography should also be explored. The WAAT provided details of training courses (in English) at the IMA in Trieste and in both USA and UK. At least one person should be trained on an IHO Category B course. It was emphasized that individuals should be selected for training who have a suitable background and motivation, and for GPHA to ensure that their survey skills are properly employed on return to Ghana within the hydrographic unit.
22. Equipment. GPHA should pursue receiving additional training from the contractors who provided the modern hydrographic equipment. Without this additional small investment, the resources spent on hydrographic equipment to date will be lost.
23. Funding. No specific proposals for assistance were made. A copy of IHO Paper M-2 was forwarded to the IMO Regional coordinator for information.

FOLLOW UP ACTIONS.

24. Encouragement of Formation of a NHC, Development of a National Hydrographic Strategy, and RHC Membership.
 - a. A NHC should be formed and develop plans to meet the first two stages of development towards creating a hydrographic service. Further advice and assistance can be provided by the UKHO/IHB.
Action: Ghana and UKHO/IHB
 - b. Ghana should follow up its expressed intention to apply to join the IHO and attend meetings of the EAthC (details are provided in IHO Publication M2 that was passed to IMO Regional Coordinator). The IHB and EAthC should provide advice and support to Ghana.
Action: Ghana, IHB and EAthC members
25. Encouragement of Effective and Timely Collection and Promulgation of Hydrographic Information.
 - a. As discussed during the WAAT visit, GPHA should forward information on all uncharted wrecks that pose a danger to navigation to UKHO for charting and NtM action. The Harbour Masters at Tema and Takoradi were also invited to forward updated views for Sailing Directions. It is hoped that regular updates on hydrographic information, including the results of dredging surveys can be provided to the UKHO in the future.
Action: GPHA and UKHO.
 - b. Ghana should establish a link with the NAVAREA II Coordinator at EPSHOM (Brest) and be prepared to provide MSI for broadcast on SafetyNET to vessels in Ghanaian waters. The IMO should be kept fully informed of developments in GMDSS operations.
Action: Ghana, NAVAREA II Co-ordinator (France), IMO Regional Coordinator.
26. Encouragement of Development of Hydrographic Capability.
 - a. The Port Surveyor urgently needs assistance from the contractor who provided the recently purchased equipment in order to set the systems to work and provide on-job training.
Action: GPHA
 - b. At least one additional trained surveyor is required to support the hydrographic unit. A suitable student should be placed on an IHO Category B as soon as possible. Information on courses was provided during the WAAT visit and is also held by the IHB.
Action: GPHA