

ANNEX G TO EA_tHC WEST AFRICA ACTION TEAM REPORT DECEMBER 2002

COUNTRY REPORT: SENEGAL

INTRODUCTION.

1. RHC Involvement. Senegal is not a member of IHO, but is an associate member of the EA_tHC and has participated to the most recent meetings of this regional commission. Senegal is member of the IMO, MOWCA and PMAWCA.
2. Senegal is member of IALA, has acceded to the SAR and SOLAS conventions and is signatory to UNCLOS.
3. Preliminary Liaison. The visit of the WAAT was prepared by the French Defence attaché services (Colonel Bonningues, Major Noto). Locally Mr Thioub, head of the Subdivision des Phares et Balises, had organised the various meetings which had been adjusted because of some recent changes in ministerial appointments.
4. Points of Contact. Up-dates to the IHO Yearbook :

N° of Charts published / Nombre de cartes publiées: 11 cartes du SHOM (France)
n° 7388,7389,7569,7550,6174,6147,5752,6137,6297,6135,6136

Maritime Authority / Autorité Maritime : M. Abdoul Hamid Diop, Administrateur principal des Affaires maritimes, Directeur de la Marine Marchande, 12 avenue Faidherbe x Vincens, Dakar ;
tel : +221 821 36 43

Name and rank of the Director or Head / Nom et grade du directeur: M. Bara SADY, General Manager of Dakar Port Authority / Directeur Général du Port Autonome de Dakar tel +221 849 45 01
Fax +221 823 36 06 e-mail : sady@portdakar.sn).

Lighthouse Authority / Service des Phares et Balises: M Mamadou THIOUB, Head of Lighthouses and Beacons subdivision

DESCRIPTION OF MARITIME ACTIVITIES.

5. National Maritime Affairs. The Service de Sécurité Maritime (Maritime Safety Service) comes under the Ministry of Transport that is responsible for most maritime matters. The Service de Sécurité Maritime is now merged with the Subdivision des Phares et Balises. Management and running are in the hands of the Port Autonome de Dakar (PAD). The general manager of the PAD, Mr Bara SADY, is also the Head of the Service de Sécurité Maritime.
6. The Subdivision des Phares et Balises, led by Mr Mamadou THIOUB, is responsible for hydrographic and cartographic services as well as maritime buoyage. Besides the Port of Dakar, work is undertaken in the Saloum and Casamance estuaries and the St Louis river. The service hydrographique et cartographique is part of the Subdivision des Phares et Balises.
7. The Direction de la Marine Marchande (Merchant Marine Directorate) manages the secondary harbours in Senegal and, according to the various works to be done, requests PAD for the necessary means.
8. It was noted that PAD is responsible for its financial administration, so that it can assure necessary investments in maritime safety and hydrographic matters at the national level. This way of

financing hydrographic services could be a good example for hydrographic offices of other countries to follow. In addition, a regional co-operation is now strengthening with the neighbouring countries of Mauritania, Gambia, and Guinea-Bissau through agreements that concern the installation and maintenance of buoyage.

1. Finally, the Senegalese Navy also has national responsibilities in maritime safety (see below).
9. Trade and Maritime Traffic. Original statistics on shipping transit and port calls were not available. There is no published national report.
 - a. Through Routes. The main route is an international route off the west coast of Africa. Density and exact position of this coastal route is unknown by the Senegalese authorities who do not have observation means.
 - b. Transshipment. Dakar harbour is the main transshipment port for the secondary ports. Main goods are phosphate (exportation to Europe and Asia), sulphur (importation) and grain (regional importation and exportation).
 - c. Bulk Trades. The main local shipping is the through route between Dakar and Casamance (the only passenger ship was the JOOLA).
 - d. Offshore Supply and Support. None.
 - e. Tourism - Cruise Liners. Dakar is a port call for cruising liners.
 - f. Tourism - Small Craft. There is a marina in Dakar. M'Bour (first port to the southeast of Dakar) is a tourist destination with a marina.
 - g. Fisheries. Dakar is a major fishing harbour; 90% of the fishing ships come from foreign countries, including Russian, French and Taiwanese. The Direction des Océans et des Pêches Maritimes is in charge of fishery resources. The Senegalese Navy is in charge of fishery surveillance and controls. There are also artisanal fisheries all along coasts.
10. Responsibility for Safety of Navigation. The Subdivision des Phares et Balises is in charge of safety of navigation within the port area. Senegal started hydrographic survey works some time ago; in 1992 a hydrographic centre was placed under the control of a national lighthouses service. Its activities, which were restricted in the early years, have been really increasing in 2002, although it still has to reach its full potential. Responsibilities for bathymetric surveys, wrecks (positioning, marking) and the promulgation of Notices to Mariners outside ports and estuaries was not made clear during the WAAT visit. The Senegalese Navy sends to maritime Dakar radio all information centralised by the Subdivision des Phares et Balises for broadcasting
11. Defence Force Responsibilities. Senegal Navy is not directly involved in hydrographic matters. No specific requirements had been specified and no surveying capability exists in the Navy. Two naval officers have received a 6-month hydrographic course in United-States but have not employed their skill since returning to Senegal. It would be useful if the Navy's responsibilities in this area could be better defined. The Navy operates a Centre de Coordination du Sauvetage (Safety Coordination Centre) in which the maritime affairs are managed by Senegal Navy (contact: Operations Officer, Cdr N' DIAYER). The Direction de Surveillance et de protection also has an aircraft (out of order at the moment). French forces in Senegal can operate a long-range maritime patrol aircraft according to a bilateral SAR agreement.
12. Coastal Zone Management and Environmental Protection. There is an oceanographic research centre: Dakar Tiaré.

OUTLINE S-55 ANALYSIS.

13. Status of surveys within the National Maritime Zone. Published French charts of Senegal waters are mostly based upon surveys prior to 1960. Up-dates were received by SHOM until 1990, but since the information flow has stopped. The WAAT were told that, except for some silting close to

the north jetty in Dakar harbour, none of the ships passing through Senegalese waters had reported any concerns about the quality of charted information.

14. Recent surveys have been carried out in Dakar harbour and approaches (Gorée bay) by the hydrographic vessel USNS LITTLEHALES (2001); the validated fair sheets have yet to be delivered. The French member of the WAAT requested that once the fair sheets had arrived in Senegal they be passed to SHOM for charting action— this was agreed to by the US and Senegalese representatives at the WAAT meeting. Senegal should indicate their intentions to the Commanding Officer, Naval Oceanographic Office prior to dissemination of the data to a third party, as outlined on the distribution statement on the smooth sheets.
15. As a priority, modern hydrographic surveys are necessary in the rivers and Casamance and Saloum estuaries, the last one with an annual frequency.
An important project concerning hydrography and beacons in Casamance is planned.
16. Collection and Circulation of Nautical Information. The Subdivision des Phares et Balises regularly sends urgent information to the Senegalese Navy for broadcasting via Dakar radio. The hydrographic service has yet to organise a regular transmission of surveys and nautical information to SHOM. To broadcast MSI beyond range of VHF there is a possibility of using the SafetyNET service of INMARSAT via the NAVAREA II coordinator, as an interim phase before NAVTEX capacity is locally implemented. Senegal has not used this service yet, but a formal proposal to use the facility has been made by SHOM.
17. Survey Capability. With its hydrographic service, Senegal has a real capacity to survey the shallow waters, i.e. the most critical and important for the safety of navigation, with a good combination of means and qualified persons. Its current equipment is composed of:

one numeric gauge and one limnometric gauge OTT R20
two echo sounders DESO 14 and 17
one station DGPS Aquarius, a receptor DGPS NCR 109(VH)
software PC NAV2 and PC DALI 2000
HP designjet 500 with plotting sheet OCE 5200.

These functions can also be undertaken:

Monitoring seabed change (stored statistics);
calculating volumes to be dredged;
improving maps (GIS: Geographic Information System)

18. Otherwise, Senegal has a buoy-ship “ LEON BOURDELLES” (55 meters, 800 tons, 1 survey boat) ; built in 1948, a new multipurpose ship, with hydrographic capacities, is planned.
19. Independent Chart Production Capability. The “Direction des Travaux Géographiques et de la Cartographie” is officially in charge for all kind of cartography. In practice, they work on topographic maps and are not involved in marine charting. SHOM assumes the primary charting responsibility for Senegal’s waters, and can continue this task provided that nautical information is regularly made available. At this stage of development it is not considered a priority or feasible for Senegal to set up its own marine cartographic unit.

PROPOSALS FOR CO-ORDINATION AND CAPABILITY BUILDING.

20. National Hydrographic Committee. In Senegal there is no national co-ordinating committee for hydrographic and marine safety matters. But there are “Commissions Nautiques”: co-ordinating bodies for substructure matters (e.g. buoyage) including hydrographic actions. The Senegal Navy, the merchant marine, PAD, the subdivision of lighthouses, the captain of the buoy-ship and any expert involved in hydrography are suggested to be members of the commission.

21. MSI Organisation and GMDSS. For the time being, there is no real MSI organisation or GMDSS operations. Local MSI is provided to mariners through Radio Dakar and by the pilots when they embark. 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 Senegal. For ships sailing through Senegalese waters or approaching Senegalese harbours, NAVTEX would 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 II 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 PAD. For local coastal warnings, the only practical solution is to continue to use VHF through the local coast radio stations.
22. Hydrographic Capability. This Hydrographic capability has been described above. There already exists an effective hydrographic centre, which should be the national focus point for further development.

PROPOSALS FOR ASSISTANCE.

23. Training. A category B course is already planned in 2003 in Bordeaux (France) for a second person. Mr Thioub intends to attend a 5-week course in hydrographic data processing and marine cartography at UKHO in July 2003.
24. Equipment and Funding. The projects prepared by the PAD are clearly defined both in terms of equipment and of funding.
25. Partnership. Global experience in hydrographic matters and the national future investment plan shows that Senegal, with PAD, has a great integration between hydrography and buoyage activities. Assistance for capacity building has already been undertaken, so that Service de Sécurité Maritime could strengthen the upper level to develop international partnerships. In this context, the following proposals are presented.

CO-OPERATION AND FOLLOW UP ACTIONS.

26. Encouragement of Effective and Timely Collection and Promulgation of Hydrographic Information.
 - a. Concerning nautical information dissemination and promulgation, a copy of all notices sent to Dakar Radio should be systematically addressed also to SHOM.
ACTION : Senegal (DPA and Senegal Navy) and SHOM (initial action: Senegal)
 - b. When modern hydrographic surveys and data are received from USNS LITTLEHALES they should be sent to SHOM for chart updating
ACTION : Senegal and France (initial action: Senegal)
 - c. The links between the 'Subdivision des Phares et Balises' and EPSHOM should be strengthened. Another meeting with Senegal could offer the opportunity to analyse national and regional affairs. A joint meeting with Senegal, Gambia and Guinea Bissau, which was planned but cancelled at the last moment, should be rescheduled.
ACTION : Senegal and France (initial action : SHOM)

- d. At the necessary level, Senegal authorities should examine coherence between responsibilities and means of the various structures; the Senegalese Navy, especially, does not seem to have enough means to be a focus and promulgating point for all hydrographic information at a national level. It is suggested that Subdivision des Phares et Balises should be in charge of this task.

ACTION : Senegal

- e. GMDSS : Use of Safety Net should be established to disseminate MSI in Senegalese waters.

ACTION : Senegal and France (initial action :France)

- f. Senegal should consult with the IMO and neighbouring states on a plan to establish a NAVTEX station in the region.

ACTION: Senegal and IHB (EAtHC)

27. Provision of Hydrographic Services in accordance with SOLAS. France can continue to issue nautical publications, charts and up-dates, on behalf of Senegal. The provision of MSI and the capacity to conduct surveys according to local priorities will support the safety of navigation in Senegalese waters. An agreement between the States of France and Senegal could provide an unambiguous statement regarding Senegal's commitment to meet SOLAS regulations.

Action: Senegal & France (initial action France)

28. Encouragement of Development of Hydrographic Capability

- a. Rather than being involved in a chart production, an analysis, with SHOM advice for example, is at first proposed; it would be focus on possibilities and capabilities concerning:

charts compilation (advantage/disadvantage)

production/ selling charts independently (advantage/disadvantage)

ACTION :Senegal and France (initial action SHOM)

- b. Senegal should consider taking appropriate steps to become a full member of the IHO (a suggestion that was given high-level support during the WAAT visit).

ACTION : Senegal and IHB

29. In conclusion, the WAAT team appreciated the awareness and great interest in hydrographic matters shown by all the people met at different levels in Senegal. The work already achieved by a small hydrographic organisation was impressive, and the plans for future activity, based on sound methods of funding, are very encouraging. Senegal is in a strong position to play a leading role in the sub-region as well as in the regional hydrographic commission of the IHO.

<i>ITEM</i>	N°	Wording	Responsible Organisation And People in charge	Country Approbation	<i>Follow up actions</i>
PROMULGATION OF HYDROGRAPHIC INFORMATION	26 a	Concerning nautical information dissemination and promulgation, a copy of all notices sent to Dakar Radio should be systematically addressed also to EPSHOM.	Senegal (DPA and Senegal Navy) and SHOM (initial action: Senegal)		NB : for the expert team and following the second visit in October 2003, if the process is confirmed, the Navy should be officially recognised as the promulgating point for all hydrographic information at the national level, transferring them to Subdivision des Phares et Balises for transmission to NAVAREA II co-ordinator and EPSHOM.
	26 b	When modern hydrographic surveys and data are received from USNS LITTLEHALES they should be sent to SHOM for chart updating	Senegal and France (initial action: Senegal)		Modern surveys should be sent to Senegal by the USA at the end of 2003
	26 c	The links between the ‘Subdivision des Phares et Balises’ and EPSHOM should be strengthened. Another meeting with Senegal could offer the opportunity to analyse national and regional affairs. A joint meeting with Senegal, Gambia and Guinea Bissau, which was planned but cancelled at the last moment, should be rescheduled.	Senegal and France (initial action : SHOM)		<ul style="list-style-type: none"> - a visit of Mr Thioub, from Senegal, and of M. Kané, of Mauritania(Nouakchott Port) took place in Brest (EPSHOM)et à Paris (SHOM) in 8 September 2003. - the joint meeting has been adjusted ; a visit in The Gambia took place in October 2003 and a first meeting with some Guinea Bissau representatives took place in Dakar and in Banjul in October 2003.
	26 d	At the appropriate level, Senegalese authorities should examine coherence between responsibilities and means of the various structures; the Senegalese Navy, especially, does not appear to have sufficient means to be a focus and promulgating point for all hydrographic information at the national level. It is suggested that Subdivision des Phares et Balises should be in charge of this task	Senegal		See follow up action 26a.

	26 e	GMDSS : Use of Safety Net should be established to disseminate MSI in Senegalese waters.	Senegal and France (initial action : France)		Mr Thioub visited EPSHOM in September 2003. See follow up action 26a.
	26 f	Senegal should consult with the IMO and neighbouring states on a plan to establish a NAVTEX station in the region.	Senegal and IHB (EAtHC)		Item studied again during the second team visit in Dakar in October 2003.
PROVISION OF HYDROGRAPHIC SERVICES IN ACCORDANCE WITH SOLAS.	27 a	France can continue to issue nautical publications, charts and up-dates, on behalf of Senegal. The provision of MSI and the capacity to conduct surveys according to local priorities will support the safety of navigation in Senegalese waters. An agreement between the States of France and Senegal could provide an unambiguous statement regarding Senegal's commitment to meet SOLAS regulations.	Senegal & France (initial action : France)		Draft of administrative arrangement given to M. Throb in September 2003. Discussion during the second team visit in Dakar in October 2003.
ENCOURAGEMENT OF DEVELOPMENT OF HYDROGRAPHIC CAPABILITY	28 a	Rather than being involved in a chart production, an analysis, with SHOM advice for example, is at first proposed; it would be focus on possibilities and capabilities concerning: - charts compilation (advantage/ disadvantage) - production/ selling charts independently (advantage/ disadvantage)	Senegal and France (initial action : SHOM)		During the visit of M. Thioub in September 2003, EPSHOM demonstrated all the processes for charting and provided a cost evaluation. Rather than initially developing a charting capability, it is recommended that Senegal continue collaboration with SHOM and let SHOM remain the primary charting authority for Senegal.
	28 b	Senegal should consider taking appropriate steps to become a full member of the IHO (a suggestion that was given high-level support during the WAAT visit)	Senegal and IHB		Senegal desires the support of France. This desire to become a member and that of French support has been confirmed by the Permanent Secretary of the Transport Ministry and the EatHC team during the second team visit in Dakar in October 2003.

