

PAPUA NEW GUINEA HYDROGRAPHIC SERVICE



IHO

SOUTH WEST PACIFIC HYDROGRAPHIC COMMISSION (SWPHC)

10th Meeting – Port Moresby, SOLOMON ISLAND, 8-10 Nov 2010

SWPHC10-02PNG

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PAPUA NEW GUINEA REPORT

1. INTRODUCTION

1.1. Background

The National Maritime Safety Authority was established by an Act of Parliament in 2003 as a non-profit statutory authority to raise standards of maritime safety, promote marine environment protection and coordinate maritime search and rescue operations. This year will be our 5th Anniversary.

1.2. Functions

The core functions of National Maritime Safety Authority are:

- Registration of ships
- Registration of seafarers
- Quality control of seafarer qualifications
- Establishing and refurbishing navigational aids
- Monitoring navigational aids through maintenance program
- Ensuring search and rescue operations are instigated whenever required
- Monitoring safety of ships through Flag State Control and Port State Control inspections
- Maintaining, updating and supplying the PNG charts portfolio and nautical publications
- Continuously reviewing maritime safety policies and relevant legislation
- Ensuring environmental marine pollution response whenever needed
- Investigation all maritime incidents, accidents & casualties
- Prosecuting infringements of PNG laws
- Enforcing wreck removal

1.3. Organisation

The National Maritime Safety Authority is headed by a General Manager/CEO with two Divisional Executive Managers for Corporate Services and Maritime Operations. There are nine Departments headed by Managers.

Fig1: Division table

CORPORATE DIVISION	MARITIME OPERATIONS DIVISION
Information Technology Department	Hydrographic Services Department
Finance and Administration Department	Navais and Investigation Department
Human Resources Department	Ships Surveys and Inspection Department
	Pollution Control and Search & Rescue Department
	Community Development Department
	Legal Services

2. PNG Hydrographic Service (PNGHS)

The PNG Hydrographic Services Department is responsible for the administration and implementation of the Memorandum of Understanding between the Charting Authority (AHS) and all national programs and activities. While the development program is an on going task, based on the three phased hydrographic development model derived from the IHO Publication M-2, the PNGHS is developing the new 5 year plan development focus on Marine Cartographic capability prepare for print on demand and Supplementary charts. PNGHS is into the second development phase under this model with national activities planned for implementation over the next 3 to 5 years. The main focus being capacity building.

2.1. Phase of hydrographic Development

The phase of hydrographic development in PNG is gradually but will get there eventually. PNGHS has passed first phase and are moving into 2 and 3 especially in the Ports and harbour survey. The Ports Corporation has done 2 weeks Hydrographic Survey and introduction to chart production course and are keen in getting their hydrographic unit setup. The timing is up to them, PNGHS will assist in the setting up. The Hydrographic Standard for Survey within PNG waters is available for the Hydrographic Surveyors who are conducting survey within PNG, its all based on S-44.

2.2. The Hydrographic Plan 2011 to 2015

The hydrographic plan 2011 -2015 will cover the following objectives;

- Build capacity to carry out surveys of ports and their approaches
- Maintain adequate aids to navigation
- Build capacity to enable surveys in support of coastal and offshore projects
- Identify resources and opportunities to further training and equipment and to look at outsourcing survey work
- Develop full cartographic capability to produce supplementary charts and Print on Demand requirement.

a) Building Capacity to carry out surveys of ports and their approaches

To build capacity for the country, the basic course for the lands surveyors and civil engineers will be conducted in country in collaboration with the private industry and a national training institution. It will be hands on training for 2 weeks for the professional. The training could be conducted every six months, 2 course in a year. PNG Ports Corporation would be the target as

much as possible, as they have 16 declared ports that required updated charts and survey of port limits which is not fully surveyed. The target group will be the offshore industries, private survey firms and Port Authority. The objective is to assist establish their hydrographic survey unit.

b) Maintain adequate aids to navigation

The Navigational Aids in the country is maintained by private contractor under the contract agreement. The navigational aids are not categorized as yet, it is maintained within reasonable timing to get the Light Beacons working. Within PNG waters we have light beacons, day makers and buoys in channels and on ship wreck. We have land ownership issues but our community development department programs to resolve these issues as best as possible. The national development partners install navigational aids within their project area to IALA standards per NMSA supervision. They build, commissioned and transfer to the National Maritime Safety Authority. The maintenance and management of all navigational aids is done by NMSA.

c) Build capacity to enable surveys in support of coastal and offshore projects

Many offshore developments are expected in PNG during the period 2011 to 2020. The amount of work within the area will be enormous. The capacity to give approval to surveys and certified surveys within the project areas will be looked. The Surveyor General is looking at encompassing all surveying to a focal point for proper monitoring and certification and signing off of jobs. The standard of hydrographic surveys will be included in the Survey Direction. The hydrographic standard within PNG waters will be bid together with other specifications in one document. This should enable surveys to be probably monitored in the coastal and offshore development.

d) Identifying resources, opportunities and training and equipment

Papua New Guinea does not have the resources to carryout hydrographic survey within PNGHS (NMSA) due to the policy decision. With this decision PNGHS has developed plans to still maintain its obligation. PNGHS identified last report that there are no private firm who does survey, therefore; PNGHS has provided awareness in Surveyors conference and other opportunities that are available to raise the awareness. Training for the personnel was another factor that needs to be considered associated with the suitable equipment. An expression of interest for the course will be put forward throughout the profession institute as a starting point. The 2 weeks course provides the awareness well within the country.

e) Develop full cartographic capability

This is a new project proposal which will the PNGHS will capture in its new 5 year plan (2011-2015). The project proposal scope will cover the entire cartographic process. This will also put PNGHS in line with the Print Demand venture by the charting authority (AHS). The project will be submitted as a proposal for development and establishment. The scope will cover cartographic process, software, hardware and the standard Order of Procedures in cartographic process. The proposal desktop or feasibility will be done before the project is submitted for funding and tender. The desktop will provide cost benefit analysis before submitting for management approval and submission. This is the next step forward planning for the PNGHS. All the work plan activity will be focus in this capability in the next 5 years.

3. Charts

The chart development in Papua New Guinea is an on going activity based on the economic development, especially the large scale charts. The new development to PNG chart development; is the dual badge on the PNG chart folio with its charting authority. All the Modernization of PNG chart folio was completed in 2009. The ENC covering PNG is almost completed. The PNG charting authority in particularly PNG section has work tremendous to achieve objectives.

4. Survey

The survey program is based on the country's economic development. The annual program under the Hydroscheme is very successful, with excellent cooperation almost all scheduled surveys are done to support PNG current economic development. PNG still has 60-70% un-surveyed areas that are planned to be surveyed annually based on Economic development plans. The 3 year priority survey as scheduled for 2008 -2011 is cruise ship, LNG project, ship lane. Currently the SML are engaged in the Caution Bay surveys in PNG. The AHS and PNG development partners meeting once every year to plan and prioritise surveys based on the economic requirement.

5. Other Source of Hydrographic Data

To support our RAN surveys, we also acquire hydrographic Survey data from research vessels, exploration, development companies and private contract surveys. PNGHS (NMSA) have signed the data release deed with Nautilus Minerals (PNG) to release xyz file data (ASCII files) to the National Maritime Safety Authority. Nautilus minerals have exploration license for deep sea mining for Solomon Sea and Bismarck Sea, which basically cover all of PNG waters. They will be release directly to NMSA; it will be kept commercial in confidence until five years. PNG Hydrographic Services has distributed data exchange and storage policy to every partner which underlines the policy guidelines for NMSA and how it shall protect and treat the data. The research vessels provide the bathymetric data to Marine Research Committee as a condition to carryout research as indicate in the diplomatic Note through normal foreign affairs protocol. The private survey contractors carrying out surveys in PNG also provide survey data to National Maritime Safety Authority. Same data exchange and storage condition still applies to their data. All the LNG pipeline work along Gulf of Papua done by Exxon Mobile also provided the data for new large scale chart pending the wharf layout on the new side.

6. Maritime Safety Information

The Maritime Safety information incumbent is not appointed, due to government processes; in the mean time Rhonda Amos is working with Fred Siroi from the MRCCPNG. By early 2011 we should have the MSI officer.

7. Project

The Hydrographic Department has submitted 3 development project proposals to the Government for possible funding for 2011 or as a development proposal to be submitted to any financial institution for possible counter funding.

- Tide Gauge
- Small Navigational Aids
- Utility Boats

Each project has some been sorted to different financial priority. They government go through the normal government process. If they are rejected, the proposals will be table outside for counter funding from other source.

a) Tide Gauges

The Tide Gauge project is an important project which National Maritime Safety put forward to the Transports Sector Budget planning. However the project appraisers prioritise it to level to below navigational Aids. However, NMSA will submit the proposal again to any financial institute for possible counter funding. The proposal indicates the reasons why PNG required those tide gauges and its importance. Next year NMSA will priorities the proposals and work on finding a possible counter funding agency. These tide Gauges will be located within Port facilities.

b) Small Navigational Aids

The small navigational aids project is targeting to support small jetty project under the Community Engagement Water project undertaken by Department of transport through funding from ADB loan. These navigational aids will cover the 14 Maritime Provinces; they will provide safe passage for all vessels limited to small craft. The second objective is to provide all the days markers in the where appropriate. Areas where day markers are no longer there will be replaced. The navigational aids department have all the database and location of the small navigational aids to be established.

c) Utility Boats

The Utility Boats was intended for six major small craft incidents areas, it will serve as the search and rescue, Ambulance and hydrographic and policing within 3NM from island and Bays. The boat was designed by Kelvats in Australia to NMSA specification and requirement.

c) Maritime Boundary Delimitation Project

The second phase of baseline survey was completed on 18th Oct 2010. The final coordinates will be put together with the first phase for NEC approval for complete maritime boundary of PNG. Once the boundary is approved it will be captured in PNG chart folio.

8. Marine Science Research

This is an important committee form by government instrument for the purpose of screen, recording and monitor the research conducted in PNG waters. NMSA benefits in the acquiring of the hydrographic data from these research vessels

9. Meeting/Conference/Seminar

There are number meetings, conferences and Seminars, attended by PNGHS internally and externally.

a) Meetings

There are total of 10 Meetings done during the 2010 PNGHS operation

Fig1: Meeting table

Meeting	Name	Outcome
1	Nautical Data Committee	Prioritise Surveys for Hydroscheme and charts development
2	Tourism Promotion Authority (PNG)	Provide assistance on Impediments on the cruise ship development – Nautical Charts – Their priority is schedule into Hydroscheme program
3	L3 Nautronics	Support TPA and cruise Ships owners to get the private survey firms to do the required survey at the convenient cost to benefit both parties
4	Marine Science Research	Approved 3 research, atmospheric, and Oceanographic and archipelagic research around development areas
5	Oil Search Limited	Navigational aids up the Kapi river, recommended for proper chart before issue the NTM
6	Nautilus Minerals (PNG) Ltd	Signing of Data Release Deed
7	Ports Australia Hydrographic Surveyors Working Group	Sharing knowledge and skills from experience surveyors on problems and solution. Understanding the format and level of data render from other port surveyors
8	Permanent Committee on Tide and Mean Sea Level	Respective prediction within different ports. The type of tide gauges setup and output. The under water keel clearance model was raised. Learned that PNG should define a model. The importance of establishing tide

		Gauges.
9	Australian Hydrographic Office <ul style="list-style-type: none"> • Geographical Places Names • PNG Section • Navigational Aids Database • Hydroscheme • Hydrographic Course Briefing 	<ul style="list-style-type: none"> • Brief on the Issues with Names not as referred on PNG Place Names Gazetteer, a issue that need the attention of Surveyor General • Briefly discuss the new chart AUS 688, Kopi for the LNG • Highlight on the position and the light details by previous contractor • Brief on the course content of • the Hydrographic training course in Port Moresby (11-22 Oct)
10	Bruttour International P/L	<ul style="list-style-type: none"> • Technical support for the course

b) Conference/Seminar

Fig2: Conference/Seminar

conference	Name	Outcome
1	FIG2010	Strengthen awareness of the economic benefit in Hydrographic.
2	Association Surveyors Papua New Guinea	Technology innovations ease the time of data acquisition.
3	Australasian Hydrographic society	Hydrographic training meeting the need of professionals.

10. Training

Training is part of the capacity building plan for PNGHS development. The PNGHS officers have been sent to do relevant training sponsored by IHO and overseas government to undertake their respective task efficient and effective.

Fig3: Training Table

Name	Course	Sponsor	Outcome	Duration
Rhonda Amos	MSI	IHO, IMO	Preparation of Nav Warmings	3 days, Australia
Nicholas Pion	ENC Technology	Japan Overseas Development Assistance	ENC tools and acquire required skills to update ENC with the appropriate	4 weeks, Japan

			software	
Rhonda Amos	Marine Cartographic Course Module 1	UKHO	Appreciate Manual Cartographic and symbology	5 weeks, Singapore
Rapikal Ikwayaku	Ocean Observation and Hydrographic Surveying	South Korea Government	Introduced to varieties of equipment and its applications	3 weeks, South Korea
Rhonda Amos	Hydrographic Surveying and introduction to Chart Production	IHO	Acquire the knowledge and skills of acquiring data and produce chart	2 weeks, Papua New Guinea

11. CONCLUSION

The PNGHS (NMSA) is embarking on the new Development strategy plan; that is to full develop the Marine Cartographic Capability to suit the charting authority nautical charts distribution arrangement as well as managing the Ports and harbour development. This capability will give or provides the country confidence to produce large scale charts and supplementary charts relevant to activity. The PNGHS is confident that the goals this goal be achieved between this 5 year period. Cooperation and support of the Charting Authority gives us confidence for this development. The superb cooperation between PHGHS (PNG) and AHS (charting Authority) offers useful guide to minimizing cost to provide services such as updated nautical information for safe navigation and effective marine environment protection management within PNG Waters. Other hydrographic services within the region should work closely with its charting authority to achieve its SOLAS V (19) obligation. Papua New Guinea National Maritime Safety Authority (PNGHS) acknowledge its partnership with AHS, IHO and IMO and stakeholders, and industry participants for the support throughout the year 2010 and its achievements.