

PAPUA NEW GUINEA HYDROGRAPHIC SERVICE (PNGHS) AND THE FUTURE – PAPUA NEW GUINEA HYDROGRAPHIC SERVICE, AN ANT WITH THE GIANTS

J. Kaunda, Papua New Guinea

Abstract. The hydrographic development is very important even though it's expensive; but it has high economic returns to the country. Papua New Guinea has directly seen current economic expansion in all industry. It has seen the international vessels of all size call into the coastal waters and harbours. The Papua New Guinea government has made a right decision to update all its nautical charts to modern datum (WGS84) with the assistance from Asian Development Bank. With the long relationship and the Memorandum of Understanding regarding Hydrography between PNG and Australia has put PNG hydrographic service in good position to update its charts to modern datum.

1 INTRODUCTION

The hydrographic development is very important even though it's expensive; but it has high economic returns to the country. Papua New Guinea has directly seen current economic expansion in all industry. It has seen the international vessels of all size call into the coastal waters and harbours. The Papua New Guinea government has made a right decision to update all its nautical charts to modern datum (WGS84) with the assistance from Asian Development Bank. With the long relationship and the Memorandum of Understanding regarding Hydrography between PNG and Australia has put PNG hydrographic service in good position to update its charts to modern datum. The contractor, the L3 Nautronix (then HSA Systems) provided the contracted charts. To date continuous cooperation with Charting Authority (Australian Hydrographic Service) has enhanced priority for more large scale charts to assist the economic development.

2 PNG HYDROGRAPHIC SERVICE MAIN FOCUS OF RESPONSIBILITY

The PNG Hydrographic Service Department is a department of the National Maritime Safety Authority and is responsible for the administration and implementation of the Memorandum of Understanding between the Charting Authority (AHS) and national programs and activities.

These program activities are based on the three phased hydrographic development model derived from the IHO Publication M-2, "National Maritime Policies and Hydrographic Services", which has been used as a guide for PNGHS development. It has developed its priority into the second development phase; under this model all national activities are planned for implementation over the next 3 to 5 years. The main focus being capacity building;

3 THE NATIONAL ACTIVITY

The last three years PNGHS collaborated with its charting authority, and has successfully linked and established strong relationships with stakeholders and established strong network with its partners and maritime operators in collecting, assessing and circulating nautical information for timely chart updates and nautical publications and updated existing charts and publications.

Since its inception the Papua New Guinea Hydrographic Services has implemented the following in accordance with Hydrographic development model 1:

- Formed the Nautical Information Committee
- Created/Improved current infrastructure to collect and circulate Information
- Strengthened links with charting authority to enable updating of charts and publications
- Training and human resource development.

3.1 Nautical Data Committee

Through the Nautical Data Committee, surveys and charts priority is based on the economic development identified by the stakeholders. The stakeholders consist of the shipping industry and the government representative. The Committee convened four meetings over the last three years. Representatives from the Charting Authority; the Australian Hydrographic Service (AHS) have attended these meetings. The approved surveys are scheduled into the in the 3 years HYDROSCHEME (Australia's Hydrographic surveying and charting programme).

3.2 Communication Infrastructure to Collect and Circulate Information

The communication infrastructure setup to collect and circulate information are phones (Landline and Mobile), facsimile and email; this provide the effective means of receiving and disseminating the information through the industry distribution database. Normal mailing system is used when other delivery services are not available.

3.3 Links with Charting Authority to Enable Updating of Charts and Publications

The existing Memorandum of Understanding on Hydrographic Arrangements between the Department of Transport and Civil Aviation, Papua New Guinea and Department of Defence, Australia; which came into effect on 26th June 1978 has provided the linkage. The linkage has provide PNG hydrographic Services to come this far. The existing MOU is under review to modernise the department responsible for the MOU.

3.4 Training (Capacity building)

PNGHS has been fortunate in receiving attachment training with AHS. One female officer undertook training on chart maintenance, publications and distribution. Another officer did two weeks training on Cartographic skills and data process. This training has been useful in the development of PNGHS. The two officers have continued the relevant job training in Singapore and Japan.

4 FOCUS FOR THE NEXT 6 YEARS AND BEYOND

The development of hydrographic model 2 has been captured in the PNGHS working plan 2011–2015. The plan is to build capacity of the staff to have relevant training on hydrographic and cartographic data processing; more into data quality control and standards. Therefore, the hydrographic data acquisition will be outsourcing to the private industry. Part of the hydrographic development plan 2011–2015 will be structured to development awareness in private industry and as well abreast them on quality control and data management capacity building within PNG.

PNGHS will work toward ISO 9001 - 2000 standards and a quality management system for hydrographic data. PNGHS has the support from the development partner in acquiring hydrographic data for offshore economic development purposes. PNGHS has developed standard contract documents based on the ADB (or where applicable) for outsourcing hydrographic data acquisition for future through formal contract.

Capacity building is crucial in the development of the hydrographic profession for hydrographic data acquisition and processing. Two personnel are on the programme to undertake H2 and marine cartographic category B training. There is also a need to train more hydrographic surveyors for private industry.

The surveying standard is based on S-44 with assistance from the AHS to develop ports and harbours standards. This is important in monitoring and maintaining survey standards and data quality.

Below is the outline for the development model 2 which is structured in 2011-2015; the focus (short term) for the next 3–5 years:

- Build capacity to carry out surveys of ports and their approaches
- Maintain adequate aids to navigation which is an on going national activity
- Build capacity to enable surveys in support of coastal and offshore projects
- Identify resources and opportunities to further train and equip private firms outsourcing survey/charting work
- Building strong PNGHS on Hydrographic data process and cartographic data management.

The objectives and goals will be set around these areas and will be used as an audit to measure our achievement between 3-5 years. This will be our short term goals toward our requirement while we continue to work with our Charting Authority through our MOU for survey and charting priority and continue to update our charts.

In a long term, the PNGHS understands that hydrographic development model 3 requires a large investment by the government and presents a big challenge for the long

term in future. This will required more commitment and dedication when PNG has enough hydrographic professions and marine cartographic.

5 DEVELOPMENT CHARTS AND SURVEY PRIORITY

On January 21 2007, Papua New Guinea received 39 recompiled charts in metric units from its Charting Authority (Australian Hydrographic Services); the project was contracted to L3 Nautronix, under the Maritime Navigational Rehabilitation program which commenced on 1 June 2005; funded by Asian Development Bank loan. Concurrently, electronic versions of these paper charts were also prepared for use. There are 72 charts altogether but these cover only 40% of PNG Waters. The charting program is continued to grow based on the economic development of Papua New Guinea. That means more large scale charts need to be developed to cater for the economic development, which our Charting Authority is committed and continually supportive. This year we have all our PNG chart folio embossed with National Maritime Safety Authority Logo. Which is a way forward of give PNG a start to have the product as partly theirs. The priority for the survey and charting in the area is commercial high priority. The 3 year programme Hydroscheme is very successful, with excellent cooperation and most surveys are done as programmed. Most priority surveys in PNG waters are based on offshore economic development projects or for access to inshore economic development. The Nautical Data Committee provides assessment and supports the PNG survey priority and chart programs. This year (February to April,) we had HMAS LEEUWIN conducted the major survey around the Trobriand Island, Solomon Sea. The survey is for the purpose of development large scale charts for the cruise expedition.

6 PLACE NAMES ON THE CHART

All names on the new charts are approved before it is placed on the chart. The new names are approved through public notices and for National Gazette by the National Place Names Committee. PNGHS has received queries from AHS on names which cannot be found in the 1998 Gazetteer, a matter over which PNGHS has no control. The Gazetteer 1998 is the official for all place names. The Office of the Surveyor-General has the power to call the meeting to approve the names where there is no dispute and we have sought the chairman's consensus on the maritime names under the appropriate section and clause of the Place Names Act 1995 to have them on the charts. This has helped delay the names on the new charts, however, the Surveyor General endorse where appropriate to use the names.

7 MARITIME BOUNDARY DELIMITATION

Hydrographic Service is actively involved in the National Maritime Boundary project with its delimitation program. New base points have been identified and a survey team with SOPAC assistance has completed the survey. The new PNG baseline with a new schedule to the National Seas Act 1977 is currently used until such time when the new act will supersede it. The new maritime Zones bill and the undersea mining bills are prepared for the country and are now under the process of enacting. The current national legislation (PNG National Seas Act 1977) dealing with the maritime zones has no correlation to UNCLOS. The legislation (Maritime Zones Act) encompasses the UNC-

LOS. The main scope of the project was to submit PNG proposal on the Extended Continental shelf beyond 200nm; which PNG did a joint submission with Federated States of Micronesia and the Solomon Islands before May 2009.

8 MARINE SCIENCE RESEARCH (MSR)

The Marine Science Research is strong in PNG, the committee identified the value of hydrographic data acquisition from research vessels and vessels carrying out surveys in PNG. The PNGHS is a member in the committee. MSR build a database profile on research vessels, their tracks, location of surveys and the type of data collected. We continue to maintain the committee.

9 CONCLUSION

The work of hydrographic is new in the government and bureaucratic circles; therefore, we make it our business with the help of our executive team to ensure they have a fair idea of what it is and its importance. The hydrographic service is confident that the short term goals and plans are structured around the Hydrographic Development Phases; which provide the guide as we build strong network regionally and with IHB. Continuous cooperation and support from our Charting Authority gives us confidence for future development. It provides useful guides to minimizing cost to update nautical information for safe navigation and effective marine environment protection management within PNG Waters.

It is strongly encouraged to create and maintain partnership with IHO, the Charting Authority and stakeholders, and industry participants. We are still struggling to educate the government and bureaucrats but we see it as an opportunity for open dialogue for future development if they appreciate it.

To advise and raise awareness of hydrographic to the local private firm is a challenge too and we will strategy to collaborate public – private partnership to invest in the Phase 3 hydrographic development; but it will be a long term plan to outsource most hydrographic and chart work in PNG. In the short term, we will look at developing capacity to carry out ports and harbours. This is our challenges and we will continue to assist and commit through the capacity building and awareness. As I said early in the sub heading, we are just an ant hydrographic service trying to convince the giants (government and the bureaucrats).

BIOGRAPHIES

Joseph Kunda, is the Manager of the Hydrographic Service Department of Papua New Guinea. The Papua New Guinea Hydrographic Service is part of the Navigation and Safety Services which is a division of the National Maritime Safety Authority.

CONTACTS

Level 2, MMI Insurance Building, Champion Parade. P O Box 668, Port Moresby, NCD, Papua New Guinea. Phone: (675) 321-1244 Fax: (675) 321-0873 Website: www.nmsa.gov.pg