

SAR 9



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Australian Maritime Safety Authority



INTERNATIONAL
MARITIME
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SAR BRIEF: PAPUA NEW GUINEA

Name **Capt. Krzysztof Orlowski**

Title/Role **Executive Manager Maritime Operations**



NATIONAL MARITIME SAFETY AUTHORITY

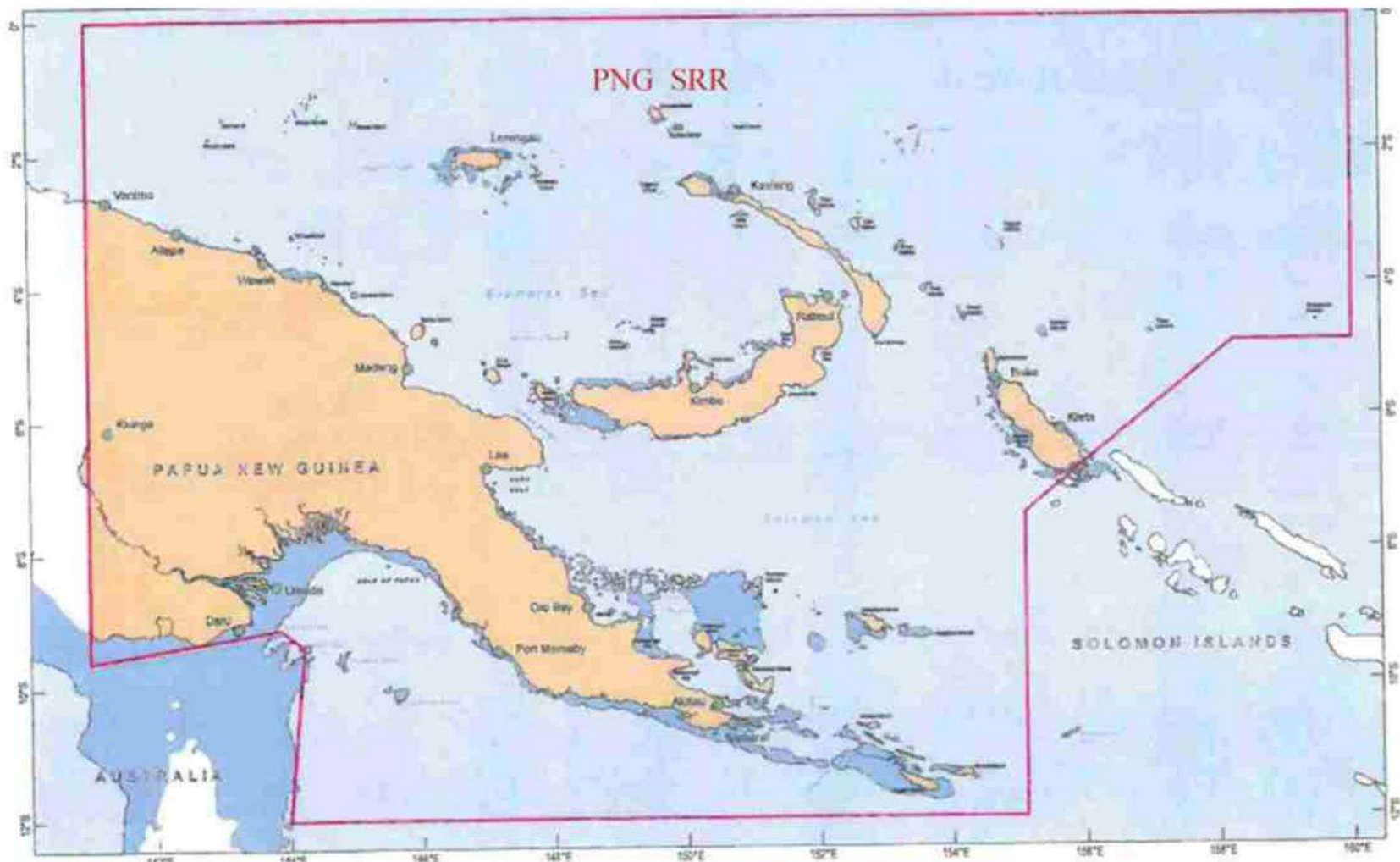
Papua New Guinea Search & Rescue Region



**Total Sea Area
2,425,200 km²**

**Land Area
462,840 Sq. km**

SAR COORDINATION – PNG Search & Rescue Region (SSR)



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SAR GOVERNANCE

SAR Legislation in place	National SAR Committee established	National SAR Plan in place	Signatory to SAR Tech Arrangement for Cooperation
Partially	Partially	Yes	No

Ratification of various safety conventions of UN, IMO, and ICAO			
International Civil Aviation 1944	Maritime Search and Rescue 1979	Safety of Life at Sea 1974	Convention on the High Seas 1958
Yes	Yes	Yes	No



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SAR GOVERNANCE

National SAR Committee

- Is yet to be established pending Maritime SAR Legislation (to become Maritime SAR Act).
- SAR Legislation is currently undergoing review processes. It outlines the roles and responsibilities of various organizations and committees including National SAR Committee.

Organisational Role

- National Maritime Safety Authority through MRCC-Port Moresby coordinates maritime SAR
- NiuSky Pacific Limited (formerly PNG Air Services Ltd) is responsible for coordinating Aeronautical SAR
- Royal Papua New Guinea Constabulary (Police) has overall responsibilities for land SAR operations while the Water Police section participates in maritime SAR.
 - Provincial Disaster Coordination Centers. Coordinate all kinds of incidents in Provinces including assistance in SAR

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SAR COORDINATION

Maritime or Joint Coordinating Authorities established	Coordinating Authorities have appropriate systems, processes, and procedures	Coordinating Authorities have appropriate communication systems and response planning tools
No	Yes	Yes
List of deployable assets is developed and maintained	Coordinating Authorities have effective system for monitoring and documenting responses	Lessons management process is in place to support continuous improvement
Yes	Yes	No



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SAR COORDINATION

MRCC:

MRCC Port Moresby maintains 24/7 watch with 3 shifts

Located: PMMI Building L2, Downtown Port Moresby, NCD, PNG

Key Capabilities:

- Attending to SAR incidents using NMSA SAR boats and Water Police fast boats.
- Managing SAR incidents on Search and Rescue Information Management System
- Monitoring position of the ships in PNG waters through 14 AIS stations and Vessel Monitoring Centre
- Monitoring movement of the ships transiting Vitiaz Strait and Jomard Passage through Coastal Monitoring Stations
- Utilizing MOU on SAR cooperation with AMSA, Water Police and Niusky Pacific Limited
- Identification of the ships not using AIS through Satellites from UNSEENLABS

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SAR COORDINATION – KEY ISSUES

- Over 15.000 small crafts operating in the open sea
- Lack of tracking system for monitoring movement of the small crafts
- Great number of small crafts not using LSA and not registered
- Lack of reliable ship to shore/shore to ship communication system
- Lack of NMSA own aircrafts, both manned and unmanned for SAR operation
- Air SAR operation depends on availability of aircrafts from JRCC Australia and local operators in PNG



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SAR RESPONSE

SAR Standard Operating Procedures that align with the National SAR Plan are developed and in use	Training Needs Analysis is undertaken; Training Plans are developed and in use	Exercises that focus on preparedness for key risks are undertaken	Effective communication systems are established to support SAR coordination and response
Yes	Yes	No	Partially

SAR RESPONSE

Resources available:

- 3 x 9.5m Rescue Boats build in Australia (additional 1 x 9.5m and 1 x 16.4m already approved for this year)
- SARIMS- for managing SAR information including Drift Model Analysis/SAR planning, real time weather information, vessels traffic display.
- Access to Water Police assets/assistance under the current MoU arrangement.
- Effective SAR Coordination working arrangements with various Provincial Disaster Coordination Centres.
- Effective SAR Coordination working arrangements with JRCC Australia.
- Designated Trust Account with allocated PGK 25 million for SAR operation and PGK 25 million for Oil Spill Response incidents)

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SAR RESPONSE



Key challenges:

- Lack of dedicated Aerial and Surface SAR Assets.
- Lack of reliable Ship to Shore/Shore to Ship communication system
- Not established RSCs (Rescue Sub-Centres) nationwide including maritime provinces.
- PLBs / EPIRBs not available on small crafts

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SAR PREVENTION

Maritime safety education programmes are implemented	Maritime safety regulations (and compliance regimes) are in place	Mariners have access to appropriate safety equipment	Increased use of technology-based safety equipment (e.g. distress beacons, mobile/emerging technologies)
Yes	Yes	Partially	Partially

Components of the NMSA SAR concept

- Vessels Monitoring Centre (VMC)  
- Coastal Monitoring Stations (CMS) 
- Automatic Identification System (AIS) 
- Search and Rescue Information Management System (SARIMS) 
- Unseenlabs 
- SAR Vessels  
- UAV drones (not available yet) 
- AIS 2.0 (VHF Data Exchange System) – future planning 
- NAVTEX System (recently approved by NPC)
- 10.000 Life Cells for small crafts (trial in progress) 
- Solwara Sefti Android Mobile Phone Application (contract awarded) 
- New type of dinghies designed by Yamaha, tested and approved by NMSA – in use



Rescue Boat Hetahu – RPYC,
Port Moresby



Rescue Boat Pilasi – MBPTA
Wharf, Alotau



NMSA Rescue Boat – Madang
bound



NMSA Work Boat – RPYC, Port
Moresby

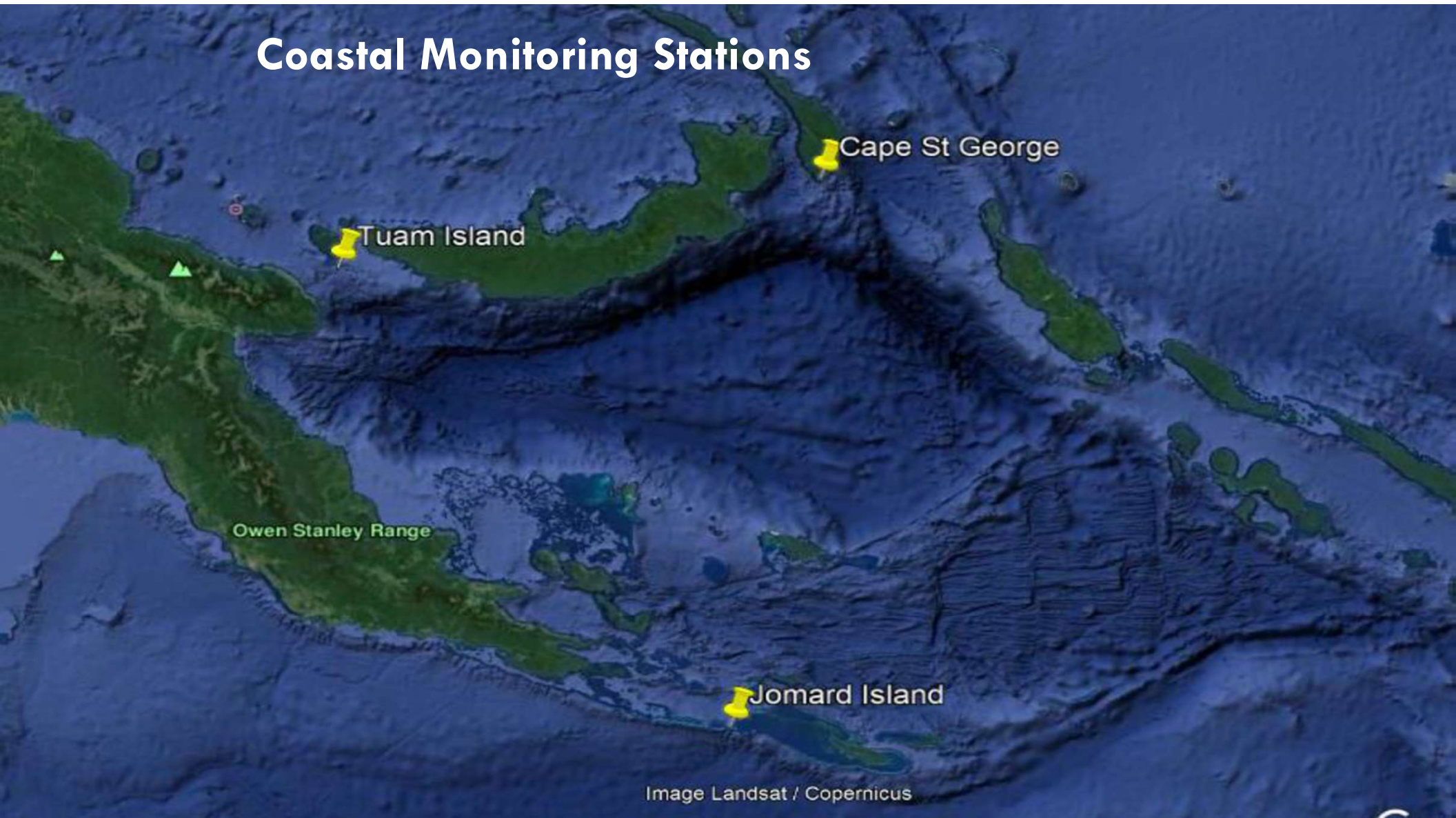
Vessel Monitoring Centre



Vessel
Monitoring
Centre (VMC)
developed by
VISSIM company
from Norway



Coastal Monitoring Stations



Vessel Monitoring Centre – view from CCTV camera of CMS



- NMSA maintains the Vessel Monitoring Centre (VMC) developed by VISSIM from Norway which monitors vessels operating in PNG waters including vessels of interest relating to ML/TF/PF sanctions.
- The VMC collects data from 2 Coastal Monitoring Stations (CMS) and 14 stations of the Automated Identification Systems (AIS) in the country.

Costal Monitoring Station on Tuam Island

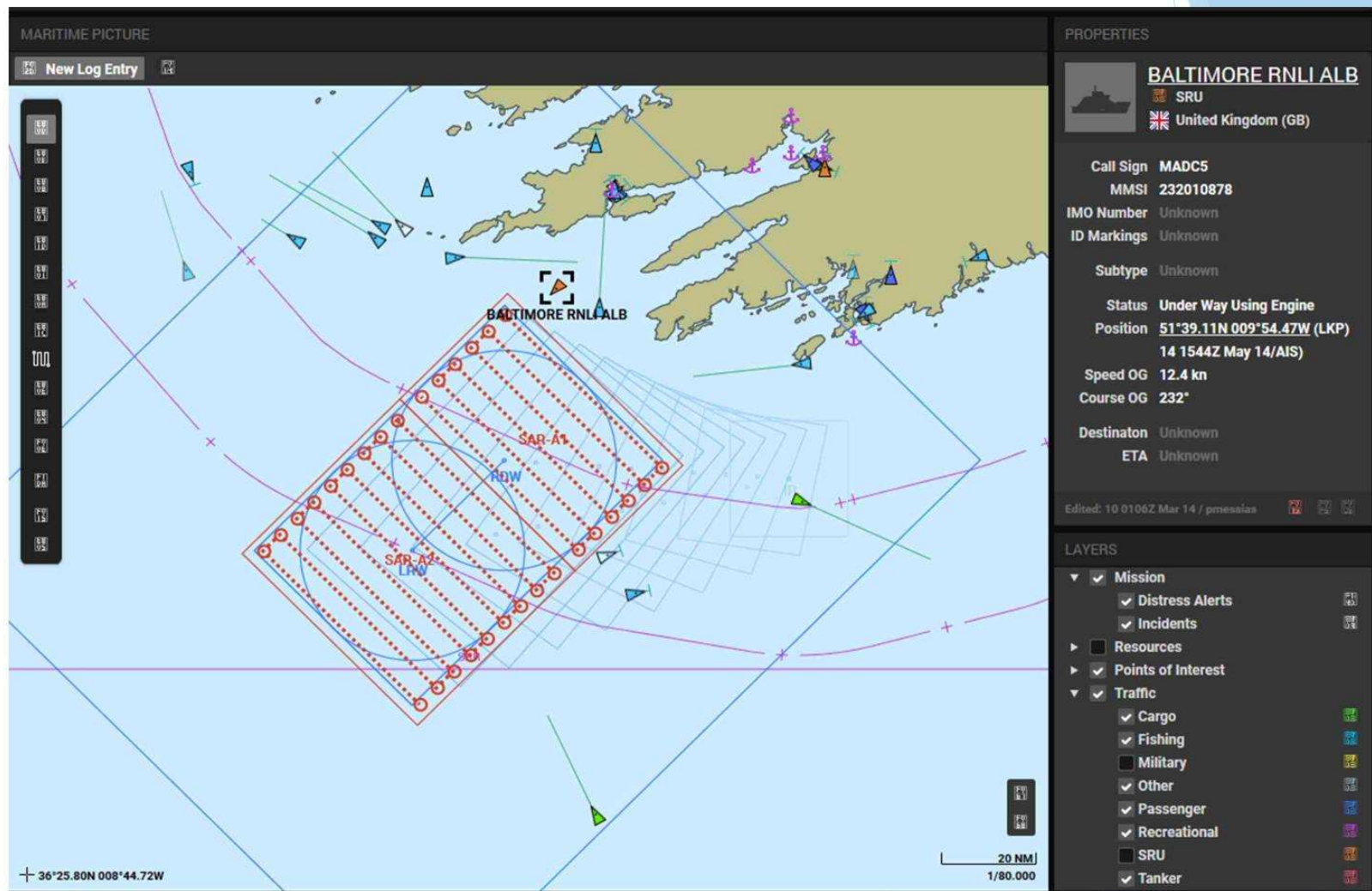


Search and
Rescue
Information
Management
System
(SARIMS)
developed by
Critical
Software
company from
Portugal



ens Martensson

SARIMS- IAMSAR compliant search planning pattern



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SAR PREVENTION

Initiatives

- Maritime Safety Awareness Programs through media platforms
- Maritime safety information publications (brochures/pamphlets)
- Training on maintenance of outboard engines, safety at sea, first aid, navigation etc)
- Building additional SAR vessels in Australia using the funds allocated in NMSA budget
- Japanese grant to build 3 x 20m SAR vessels to cover the whole PNG SAR Region
- Development by Critical Software the Solwara Sefti Mobile Phone App.
- Conducting Operation Overload to monitor safe transport of passengers in PNG
- Distributing Life Cells among the owners of small crafts
- Building 2 x Navtex (Navdat) stations (recently approved by NPC)
- Implementation of drones technology in PNG
- Participating with AMSA in trial of the AIS 2.0 (VDES) system

Old type of dinghy not provided with buoyancy chamber



The new model of dinghy now in production has improved visibility to aid search and rescue as well as provide far better buoyancy and is able to maintain level flotation when swamped with the passengers remaining on the dinghy. The boat is able to maintain level flotation with double the recommended passenger load:



Life Cell

The survivability of passenger casualties in the water remains an issue for the people who continue to use the estimated 12,500 older model boats which have only basic flotation.

To address this, the NMSA approached an Australian manufacturer of a commercial “float off” flotation device to investigate the possibility of designing a PNG specific model.



Life Cell - The device has two waterproof lockers. One for supplied safety equipment and valuables and the other for perishable items like food or fish catches.

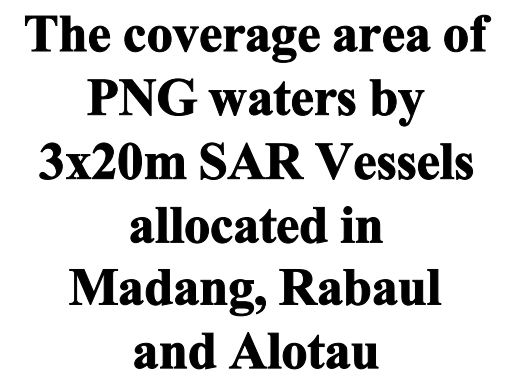


Unseenlabs- detection of ships not using AIS



20m SAR Vessels sponsored by Japan - NMSA proposal





Camcopter Schiebel S-100



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SAR PREVENTION

Opportunities

- Mariners have access to maritime safety information (Navtex, AIS 2.0)
- Mariners develop basic knowledge in maritime safety requirements
- Reduce Maritime Casualties or SAR related incidents
- Identification distress signals and coordinate incidents at sea (Solwara Sefti App, SARIMS)
- Improvement capabilities to attend to SAR incidents



WHAT IS THE ONE THING....

- We do really well:
 - in maintaining 24/7 shift watch and responding to distress calls efficiently.
- We could do more effectively?
 - gathering and managing distress information, followed by monitoring and coordinating search and rescue efforts in collaboration with various organizations both domestically and internationally (adjoining/neighboring RCCs).



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THANK YOU!

QUESTIONS?

