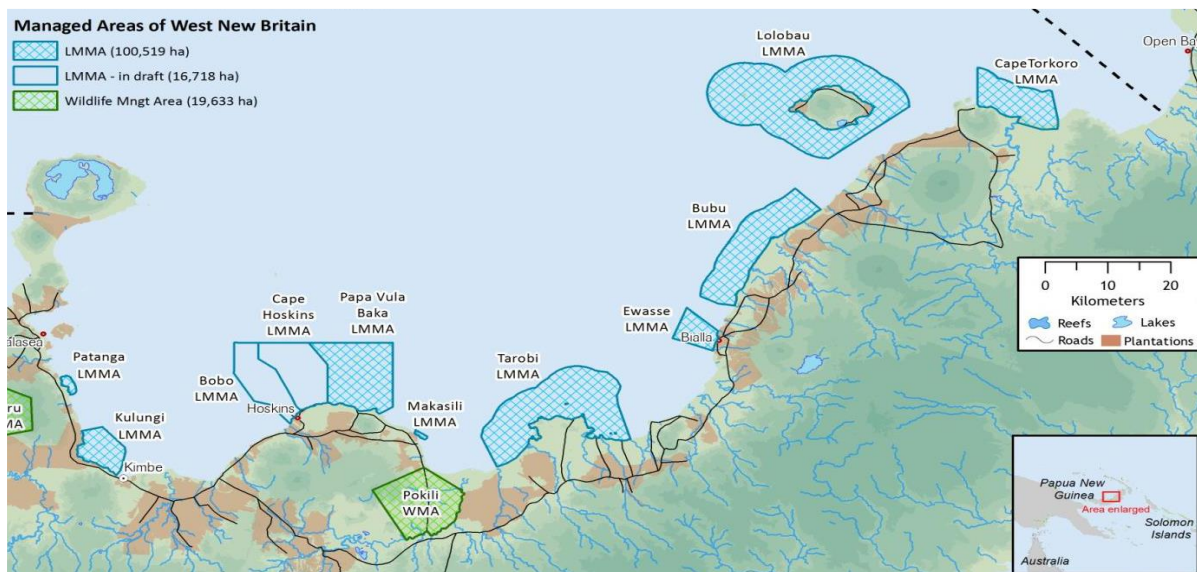


Papa ‘Vula’ Baka Locally Managed Marine Area

Talasea District, West New Britain Province

The LMMA is located in Hoskins LLG Area in Kimbe Bay, near Hoskins airport. The people of Ward 5 in the villages of Valoka, Kolo and Kavutu, established the LMMA, with the assistance of The Nature Conservancy, to protect their marine area and provide for the sustainable livelihoods of their customary landowners and to protect against the effects of climate change. All three villages are part of the Nakanai tribe. The LMMA extends three miles from the coastline (see below) and protects Papala reef to the north and Vulai Island (see next page) and extends south to Bakaku reefs. There are several islands in the inner reefs, which are used only for fishing. The area is accessed by road from Kimbe and by boat.



(Source: Wise et al. 2016)

Papa ‘Vula’ Baka LMMA in brief

Protected: 9/10/2009

Extent: 3 miles from shore (see right), including 1 island and 2 reefs

Customary land

Ward 5 with 3 villages (Valoka, Kololo, Kavutu)

Purpose: to protect marine environment and ensure sustainable livelihoods

Customary landowners - 14 Clans (Kakae, Bobiso, Lolu’Holu, Vagolu’Golu, Vavaha, Baumumu, Ababe, Kevemuki, Gararua, Buhalali, Mamapa, Uge’Uge, Kurkuru, Voraria Clans)

Management Committee (23 men, 2 women) and Management Plan

No people live within the LMMA

No paid staff

No operational or project budget

Management objective:

- ✓ Marine area is well protected, improved and maintained in good condition and contributes to improved livelihoods for the local peoples of Valoka, Kololo and Kavutu villages.



Participants’ perspective on Papa ‘Vula’ Baka LMMA’s values and benefits

Marine zones are identified in the Management Plan, including preservation (e.g. Agu and May Reefs and Vulai Island Sacred Site), habitat protection (e.g. Vulai island forest ecosystem and all inner reefs), no-take, conservation, species management (e.g. for dugong) and general use (e.g. inter-tidal sandy flats, beaches, seagrass beds, and sea areas) zones. The Management Plan has identified a vision (to protect, maintain and sustainably use our marine resources to support local consumption and to attract economic benefits to the resource owners and community), a goal (by 2012 and beyond, marine ecosystems ...are improved and maintained, and contribute to support local consumption and contribute to improved livelihood of local people), management objectives, several strategies and indicators for success.



Key Values, Condition and Trend

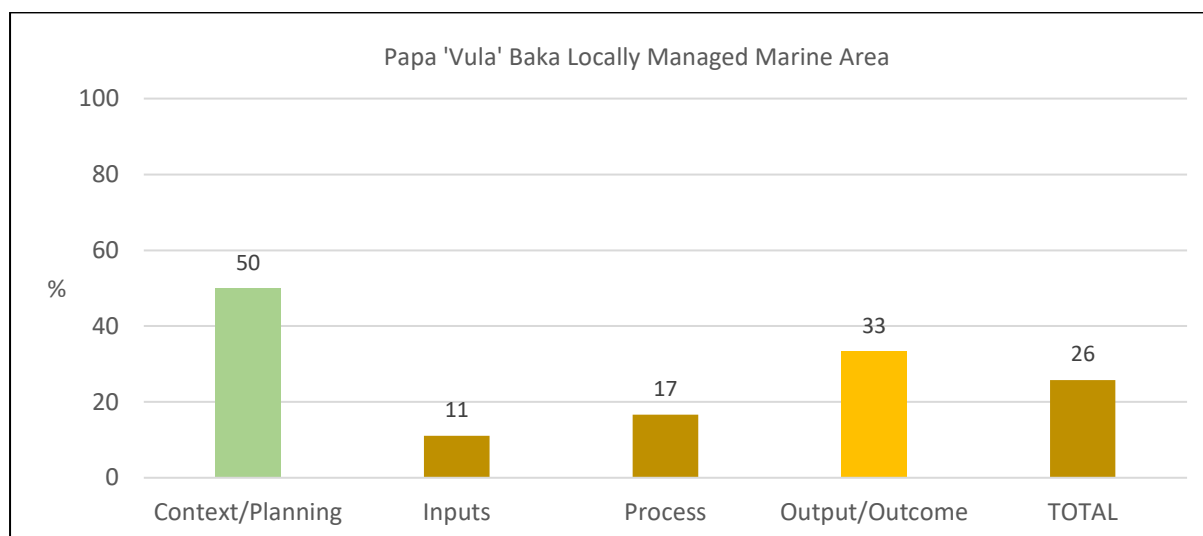
Value	Condition	Trend	Description
Coral reef ecosystem	Fair	↔	All reefs (esp. Papala and Bakku) and marine life are important for biodiversity and sustainable livelihoods; impacted by over-harvesting
Island ecosystem	Good	↔	Vulai island forest and birds; Vulai orchid; seagrass (8 species) are important for dugong feeding and fish breeding; fish and shells
Seagrass ecosystem	Fair	↔	Extensive in area, but increasing impact from runoff from land based development (e.g. oil palm plantations)
Ocean	Very good	↔	Many marine species - fish, stingrays (tabou), turtle, beche de mer, dugong – important in providing sustainable livelihoods; subject to over-harvesting
Sacred sites	Very good	↔	Vulai Island (initiation of children, rock ‘brothers’ look after land and sea)
Dugong	Fair	↓	Feed on seagrass beds in the area; numbers declining due to over harvesting (about a 90% loss from numbers seen in the 1970s)

Threats

Description	Impacts
Population pressure	Increased pressure on LMMA resources (e.g. fish, turtles)
Over-harvesting	Decline in fish size, turtles, and dugong
Invasive pest species	Crown of Thorns destroying parts of the reef
Fishing methods	Poison rope, small nets, dynamite, night fishing
Oil palm waste, fertilisers, chemicals	Declining in coastal water quality
Illegal entry	Take marine resources, orchids, chop trees, leave rubbish
Soil erosion (oil palm - roads)	Loss of water quality
Climate change (Sea level rise, temperature extremes)	Loss of marine species/coral bleaching, inundation of coastal settlements
Potential for sea-bed mining	All resources in the LMMA



Protected Area Management Effectiveness – Summary of Results



Evaluation – key findings

Element of evaluation	Result
Context/ Planning	<p>Agreed by customary landowners with legislation developed under local government by-laws</p> <p>Management plan with vision, goal, objectives, strategies, indicators, but not implemented</p> <p>Customary landowners live on the coastline (3 villages)</p> <p>Zoning plan in place, but not enforced</p> <p>Rules for resource harvesting (nets, size, methods) identified in Management Plan, but not enforced</p> <p>No monitoring/evaluation and no work plan</p> <p>Little cooperation with adjacent land uses, who do not respect the LMMA rules</p>
Inputs	<p>No paid staff</p> <p>No budget, law enforcement, training, equipment</p> <p>No resource inventory</p>
Process	<p>Boundaries are mapped, but not known (in the marine environment)</p> <p>No permit system or patrols in place (although a process is identified in the Management Plan)</p> <p>No training or skills building</p> <p>No research and monitoring, or education/awareness raising</p>
Outputs /outcomes	<p>Some economic benefits from sale of marine resources to support sustainable livelihoods</p> <p>Condition of the values in general remains high, although decline in some reefs, dugong, leatherback turtles</p> <p>No visitor facilities</p>

Strengths, Challenges and Ways Forward

Strengths	<ul style="list-style-type: none"> • A management plan is in place (identified vision, goal, objectives, zoning plan, strategies, and indicators) • Biodiversity and the marine environment is important and in relatively good condition. It includes reef ecosystems (outer and inner reefs), diverse marine species (e.g. stingray, turtle (leatherback and others), dugong, dolphins. • Sustainable income generating activities e.g. sale fish and shells. • Important sacred sites (Vulai Island) are protected and are important to the community. • The customary landowners are supportive of the LMMA and the Management Plan • Opportunities for tourism related income-generating activities based on coral reefs, marine life and islands, bird watching and attractive scenery. • Value for research (as part of the Coral Triangle Initiative)
Challenges	<ul style="list-style-type: none"> • Overcoming the lack of funding from all levels of government which impacts on the implementation of the Management Plan (e.g. no monitoring, evaluation, resource inventory, training, awareness raising, equipment, enforcement) • How to re-engage with all levels of government (‘disappearance of government from the scene’) • Controlling illegal entry by surrounding communities, some of whom are customary landowners who are not part of the LMMA and who do not respect its provisions. • Stopping future sea bed mining and addressing the impacts of oil palm on water quality and the marine environment. • Providing economic benefits e.g. creating employment opportunities or tourism ventures.
Ways forward	<ul style="list-style-type: none"> • Strengthen the links between all levels of government and establish Environment Offices within the Province, to help with management, enforcement and prosecution. The officer could be responsible for administering and managing operations within the LMMAs. • Provide funding and resources to the Management Committee to review the Management Plan and ensure effective implementation. • Enforce Management Plan restrictions on: <ul style="list-style-type: none"> ○ fishing methods (e.g. use of small nets, dynamite, poison rope, metals used in clam harvesting and night diving) and size restrictions (e.g. for sea cucumber and fish) ○ dumping of household waste ○ illegal activities in the marine zones ○ payment of fees and penalty provisions ○ surveillance and monitoring (e.g. Vulai Island and marine zones) • Raise awareness about the meaning of sustainable harvesting – to be done in collaboration with Hoskins LLG, NGOs, churches and other partners. • Try to resolve resource management issues within the community. • Reduce population numbers (e.g. through family planning) to reduce impact on the marine environment.