



Port Vila ESRAM Project

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Presented by:

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SPREP
Secretariat of the Pacific Regional
Environment Programme





Outline

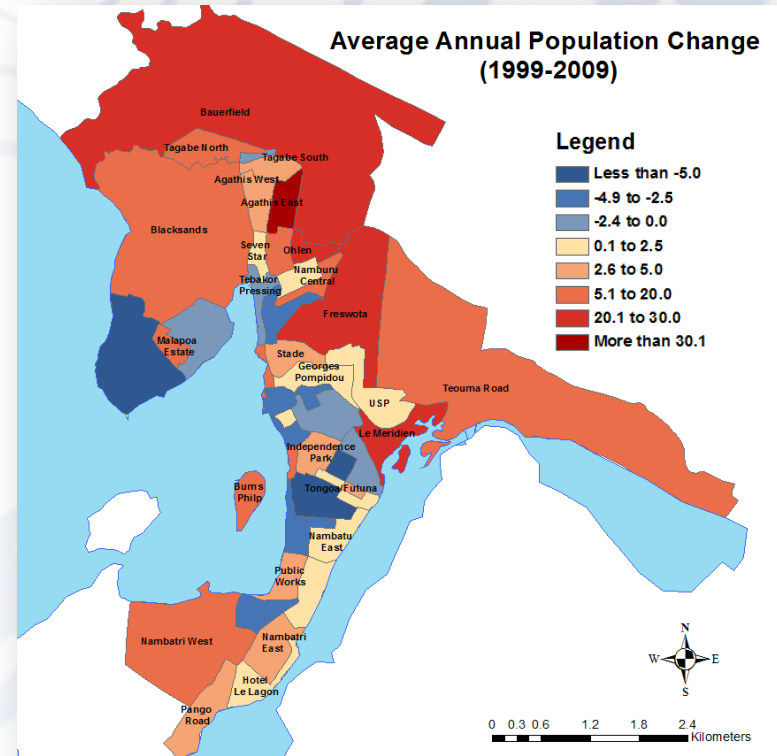
- Port Vila ESRAM Overview
- Methodology & Approach
- Key EbA issues
- Project findings
- Work to date



Port Vila ESRAM Overview

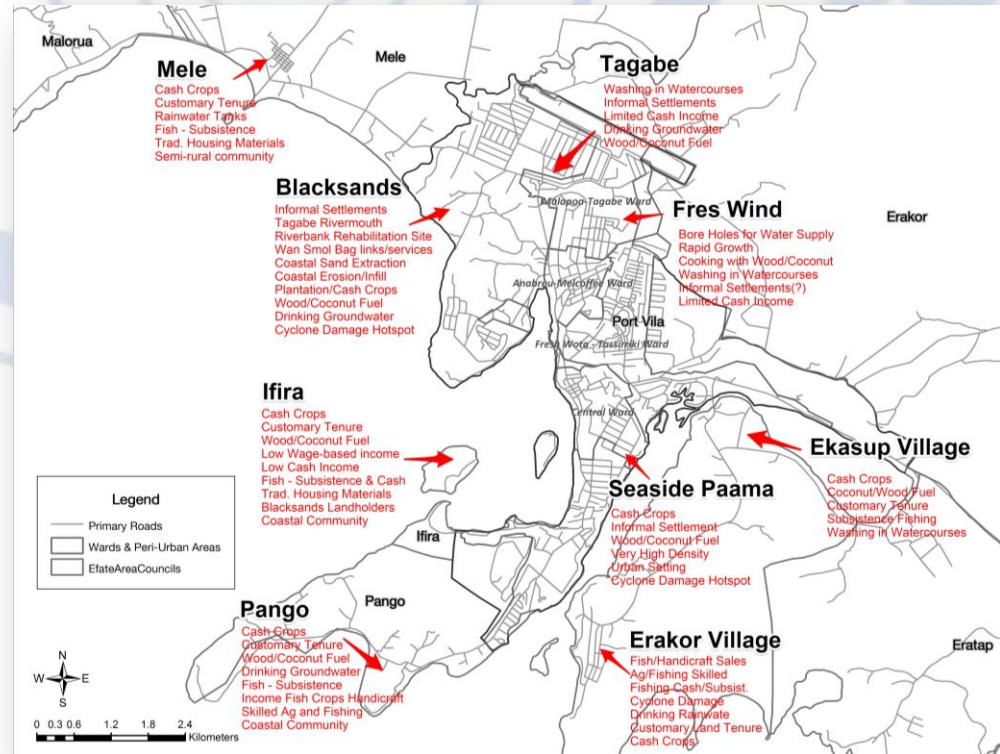
- Partnership between RMIT University, Vatu Mauri Consortium (VMC) and VEPAC (Vanuatu Education Policy Advocacy Coalition network)
- Included Port Vila and key peri-urban areas
- Terrestrial and marine environments
- Ridge to Reef

- Port Vila is growing rapidly
 - 10.7% annual population growth over the last decade (1999-2009)
 - Even more growth since 2009 & TC Pam

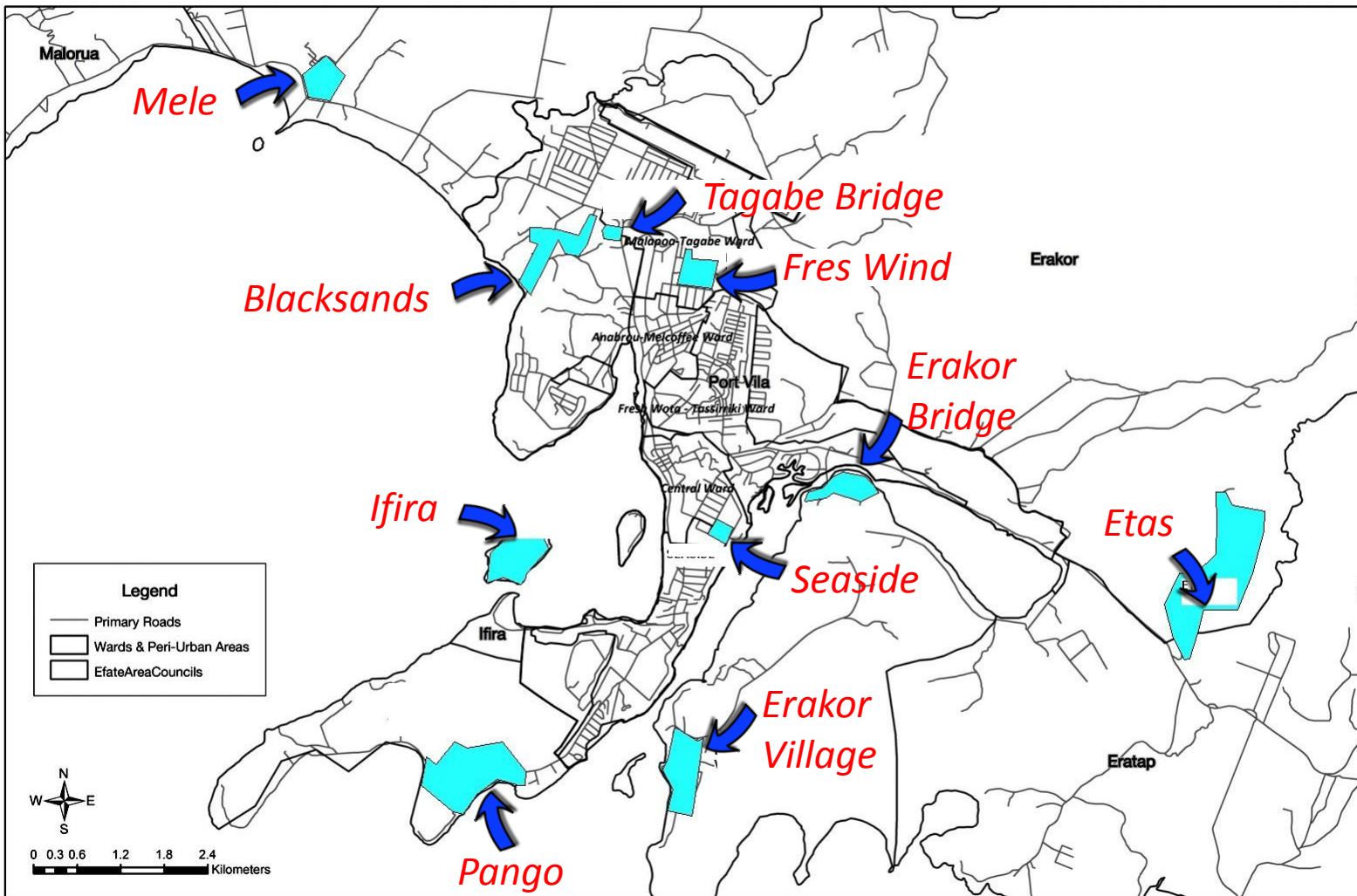


Candidate Locations

- Census data, post-Pam surveys & UNH VA used to identify 'ecosystem hotspot' communities
- **Key variables:**
 - Crop use/farming
 - Use of marine resources
 - Fuel use, water & sanitation
 - Land tenure & pop. Growth
 - Disconnects from *kastom*, kinship & traditional (ecosystem) knowledge

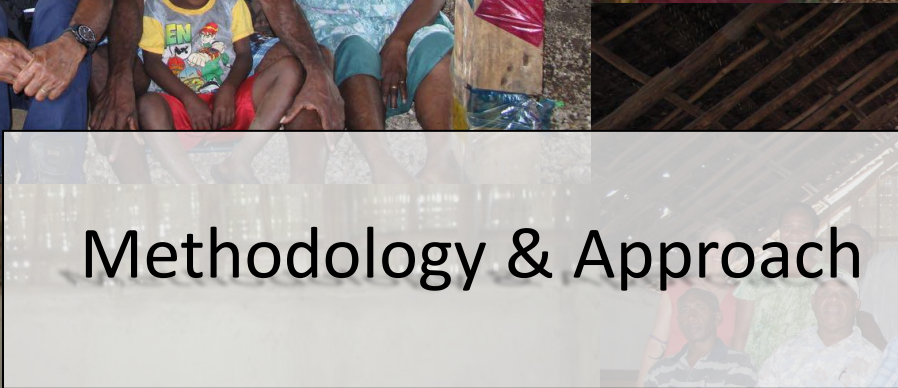


Greater Port Vila





Methodology & Approach





Methodology & Approach – Community driven

- Selecting candidate community areas based on socio-economic analysis
- Agreement on wish-list of community areas
- Initial training of surveyors & 1st iteration of survey form
- Got permissions and started household surveys in first community (Seaside - chosen by surveyor team)
- Ongoing in-field training, final iteration of survey form, data entry spreadsheet, scheduling & re-scheduling of surveys/workshops,
- Assisted with arranging permission with chiefs/church, sending invitations, facilitating workshops, conducting meetings/interviews with government and non-government stakeholders

Note: this didn't occur in sequence....



Survey form

Ecosystem & Socio-economic Resilience Analysis & Mapping for Port Vila

The aim of the survey is to identify, document, and map the ecosystem resources, benefits and services that are critical to the livelihoods and day to day lives of residents of Port Vila. Local input is important to understand what the issues are, what can be done about it and how to implement ecosystem-based approaches to management and planning that enhances resilience of Port Vila to climate change.

Area/Community:	Date:
Facilitator Names:	Household name:

HOUSEHOLD DATA

# people in household:	Years living there:	Person interviewed: <input type="checkbox"/> male <input type="checkbox"/> female
Main livelihood:		Role/position in household:
What community/island are you from:		Other comments:
GPS location: or photo at household taken <input type="checkbox"/> Who's camera:	Other photos: Y / N #:	Resources marked on A4 map: Y / N List code/description:

ECOSYSTEM & RESOURCES DATA

Natural resources used/harvested/collected from land and/or sea/freshwater

traditional wealth items: Y / N / U <input type="checkbox"/> pigs <input type="checkbox"/> chickens <input type="checkbox"/> yams <input type="checkbox"/> mats <input type="checkbox"/> kava <input type="checkbox"/> other (describe)	marine/coastal: Y / N / U <input type="checkbox"/> sand <input type="checkbox"/> shellfish <input type="checkbox"/> dead coral <input type="checkbox"/> green snail <input type="checkbox"/> trochus <input type="checkbox"/> turtles <input type="checkbox"/> crabs <input type="checkbox"/> other <input type="checkbox"/> fish (list types)
location:	location:
forest: Y / N / U <input type="checkbox"/> bamboo <input type="checkbox"/> natangura <input type="checkbox"/> coconut <input type="checkbox"/> bandanas <input type="checkbox"/> firewood <input type="checkbox"/> timber <input type="checkbox"/> medicine <input type="checkbox"/> other <input type="checkbox"/> fruits/nuts (list types)	freshwater resources: river, lake, springs: Y / N / U <input type="checkbox"/> fish/crustaceans/other animals <input type="checkbox"/> plant material <input type="checkbox"/> rocks or other non/living <input type="checkbox"/> water <input type="checkbox"/> other
location:	location:
bush gardens: Y / N / U list crops:	livelihood items: Y / N / U <input type="checkbox"/> basket/other handicrafts <input type="checkbox"/> cattle/livestock <input type="checkbox"/> pig tusk <input type="checkbox"/> home-based manufacturing <input type="checkbox"/> cash crops (list) <input type="checkbox"/> other
location:	location:
home garden: Y / N / U list crops:	
Additional comments:	

Ecosystem Services provided by the natural goods & resources listed (direct & indirect)

Provisioning - material benefits from ecosystems for subsistence or cash crops: Y / N / U <input type="checkbox"/> water (drinking/other) <input type="checkbox"/> fuel (cooking/other) <input type="checkbox"/> medicine <input type="checkbox"/> ornament <input type="checkbox"/> raw materials, fibre & timber for housing, transport, other <input type="checkbox"/> food (for subsistence S cash crops CC fodder for animals A	Regulating - local benefits from ecosystem process: Y / N / U <input type="checkbox"/> air quality regulation <input type="checkbox"/> water purification & treatment <input type="checkbox"/> regulation of water flows <input type="checkbox"/> flood protection <input type="checkbox"/> climate regulation, moderates micro-climates <input type="checkbox"/> erosion prevention, soil regulation <input type="checkbox"/> pest & disease regulation
Cultural - non-material benefits from ecosystems: Y / N / U <input type="checkbox"/> spiritual religious values/experience & ceremony <input type="checkbox"/> aesthetic value <input type="checkbox"/> recreation & tourism (physical & experiential interactions <input type="checkbox"/> cultural diversity & inspiration for art, design <input type="checkbox"/> knowledge & educational values	Supporting - underlying processes needed for the production of all other services: Y / N / U <input type="checkbox"/> nutrient cycling <input type="checkbox"/> soil & biomass formation <input type="checkbox"/> soil fertility <input type="checkbox"/> biodiversity & habitat to maintain life cycles & gene pools <input type="checkbox"/> pollination
Additional information (i.e. changes since Pam):	

- Household data
- Natural resources used
 - Traditional wealth
 - Forest
 - Marine
 - Freshwater
 - Gardens
 - Livelihood
- Ecosystem services provided
 - Provisioning; Regulating; Supporting; Cultural
- Changes since TC Pam





Survey Format (on a VERY good day)

- Go into community after approval from Chief or Church leader
- Set a meeting time & place
- Surveyor pairs conduct interview
- Take GPS-coded photos
- Map key resources & services identified
- Data Entry



Initial in-field training – Tagabe Bridge

Workshop Format



- Introduction & preliminary survey findings
- Marine/terrestrial discussion groups led by consultants
- Focus group discussions facilitated by participants
- Feedback, recommendations for community resilience actions.
- Field visits to key resource areas

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Surveys: *key EbA issues*

- Allow more time for training - surveyors
- Assess level of knowledge and tailor training to local needs
- Training: mix of classroom and fieldwork demonstrations, role play etc
- Translate to *Bislama*
- Quality not quantity
- Ethical implications/illegal activities



Workshops: *key EbA issues*



- Don't workshop after lunch

Workshops: *key EbA issues*

- Prepare beforehand, check and re-check whether community is **informed & available**
- Workshop fatigue
- *Bislama* is key!
- Provide a brief lesson on ecosystem services and a pre-prepared poster





Key EbA issues

- *PAYMENT* to the surveyors and for the workshops
- Lack of commitment from some government departments



Project Findings

Household Data

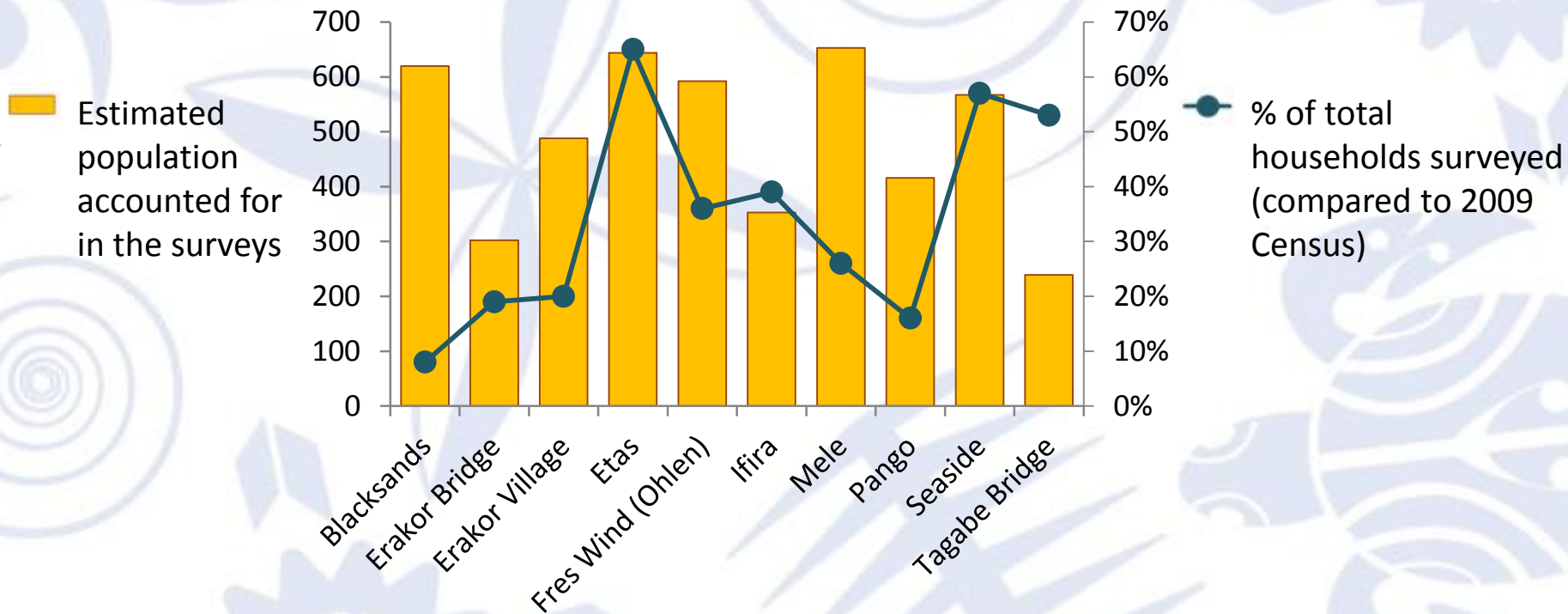


A total of
823 households
were interviewed

Median Household size
5-6



Population accounted for in surveys





Ecosystem resources & services

Marine & Freshwater

- Over 85% of coastal communities reliant on marine resources
- Loss of traditional knowledge with respect to these resources

Main marine resources:

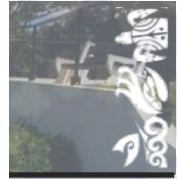
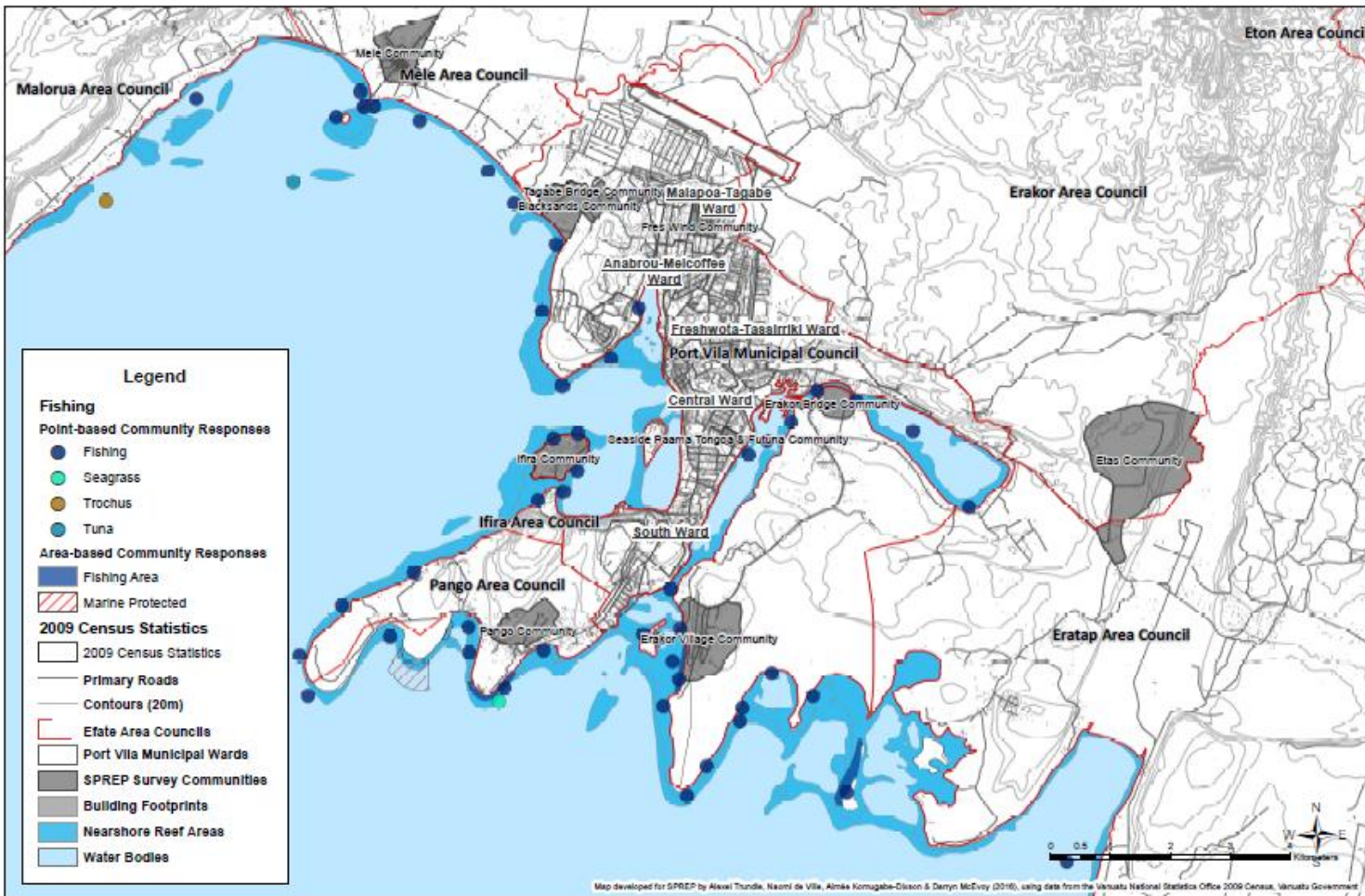
- Fish & Shellfish
- Sand
- Dead coral

Main freshwater resources:

- Water
- Naura (prawn)
- Plants e.g. water taro, watercress



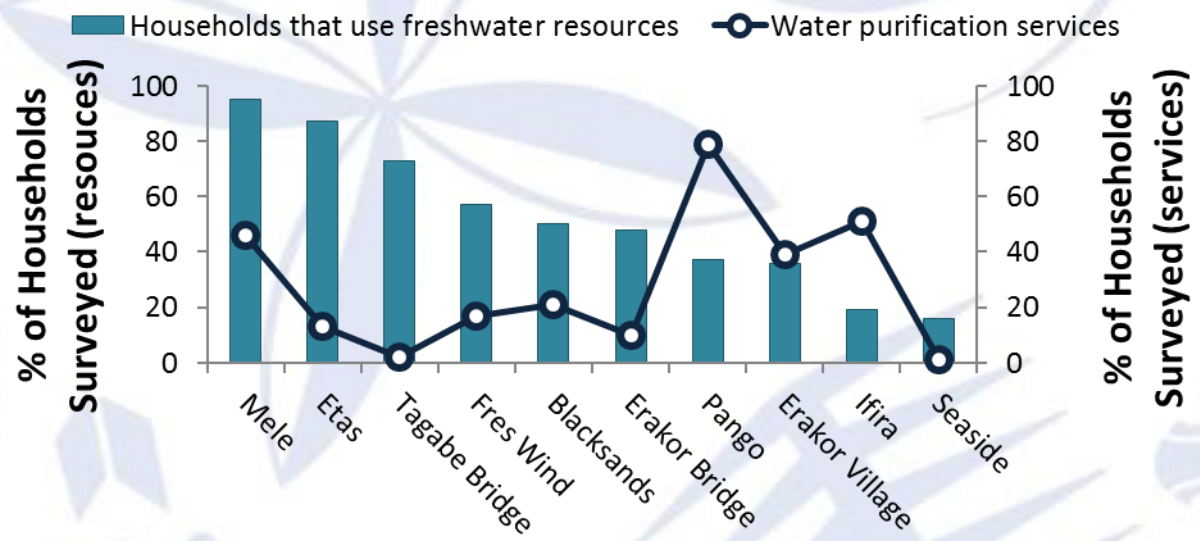
Greater Port Vila - Ecosystem-based Community Resources - Fishing





Ecosystem resources & services

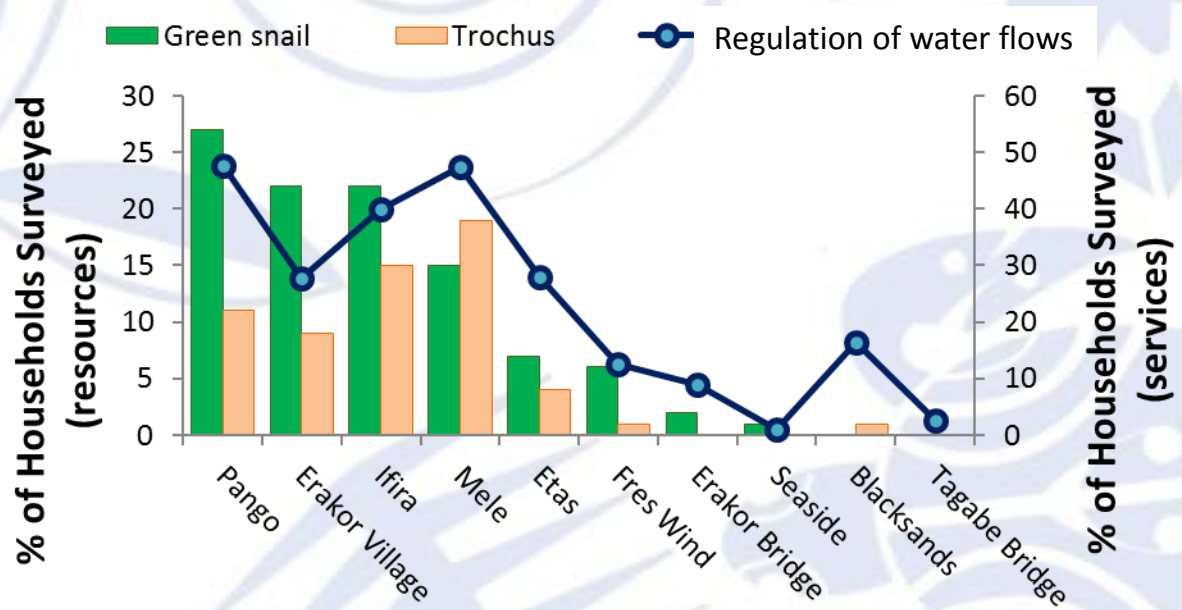
Freshwater resources



Ecosystem resources & services



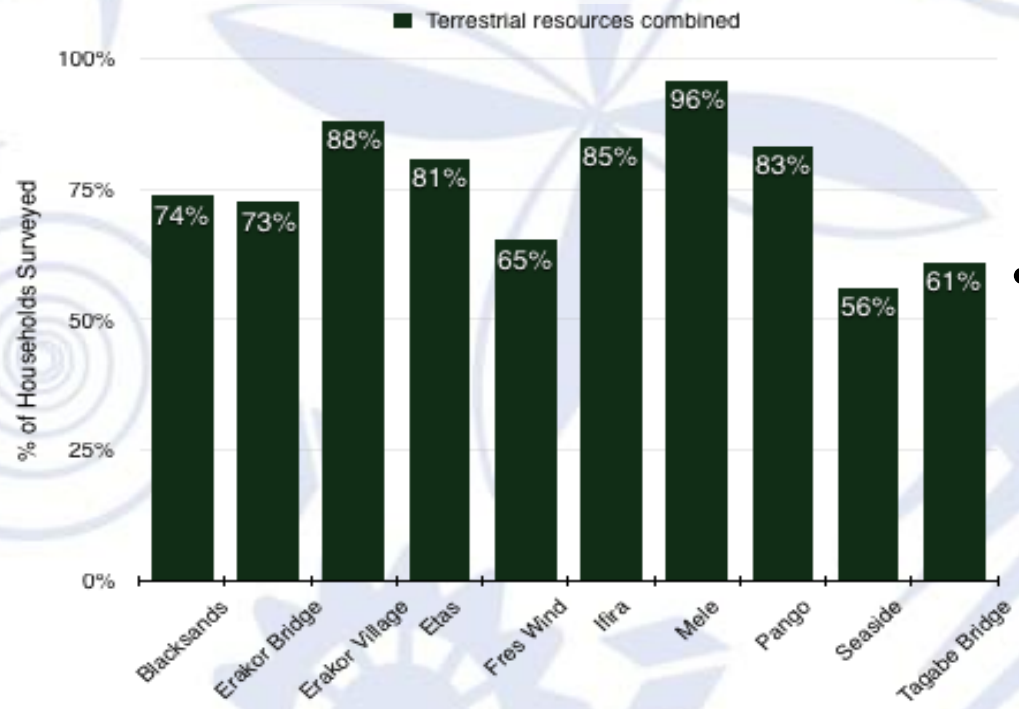
Trochus shell





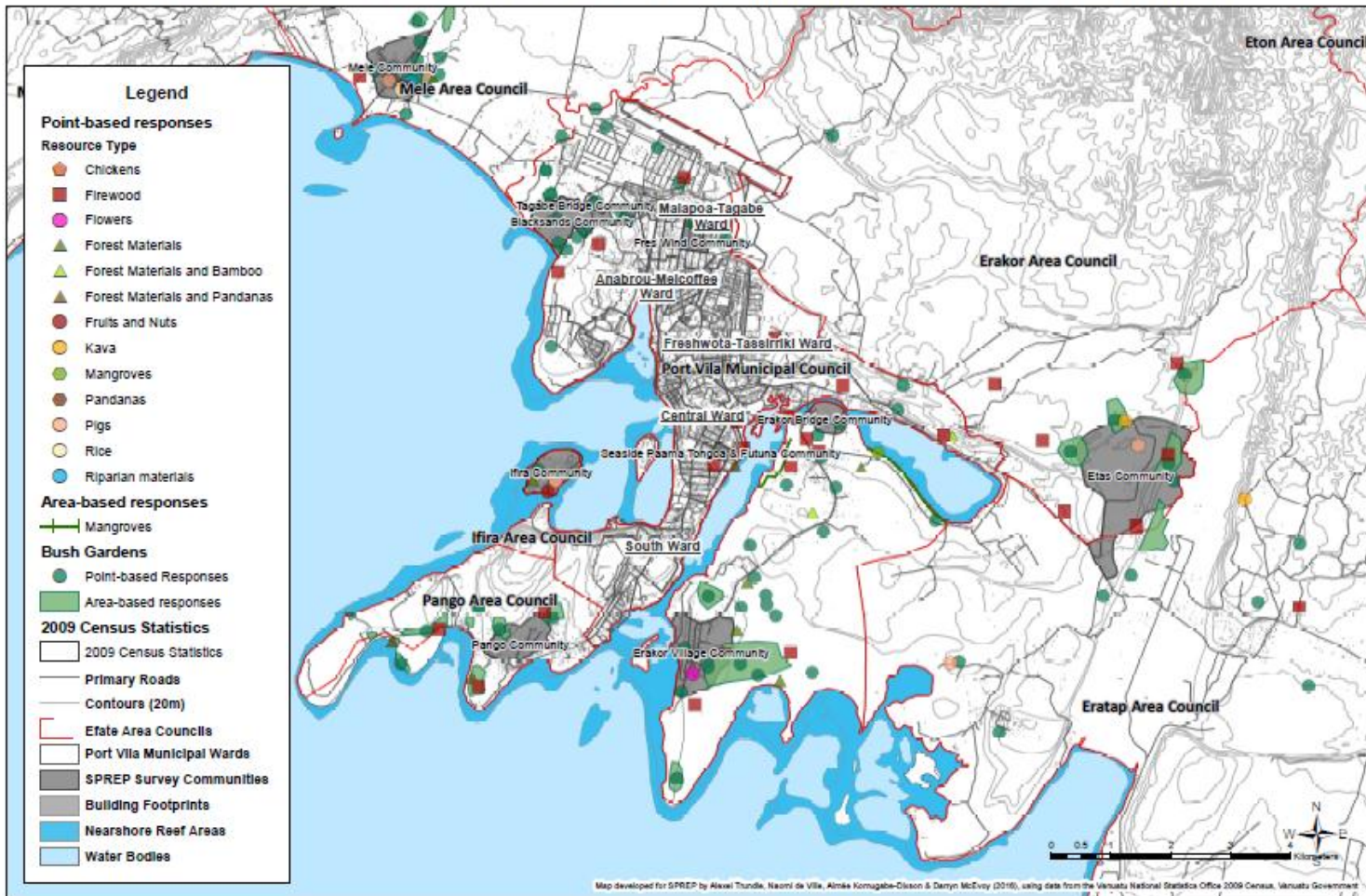
Ecosystem resources & services

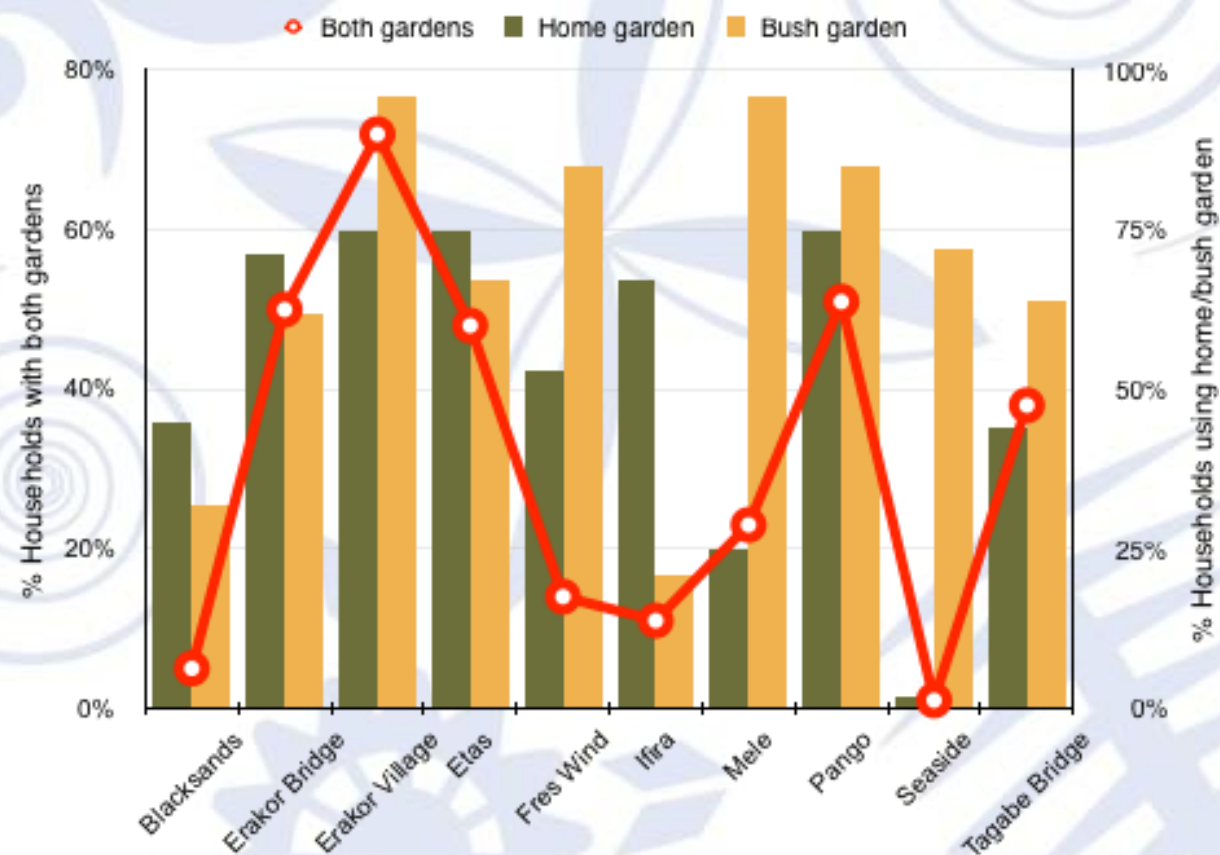
Terrestrial



- Over 70% of 7 communities utilize and benefit from terrestrial ecosystems
- Traditional wealth items are almost exclusively sourced from terrestrial ecosystems

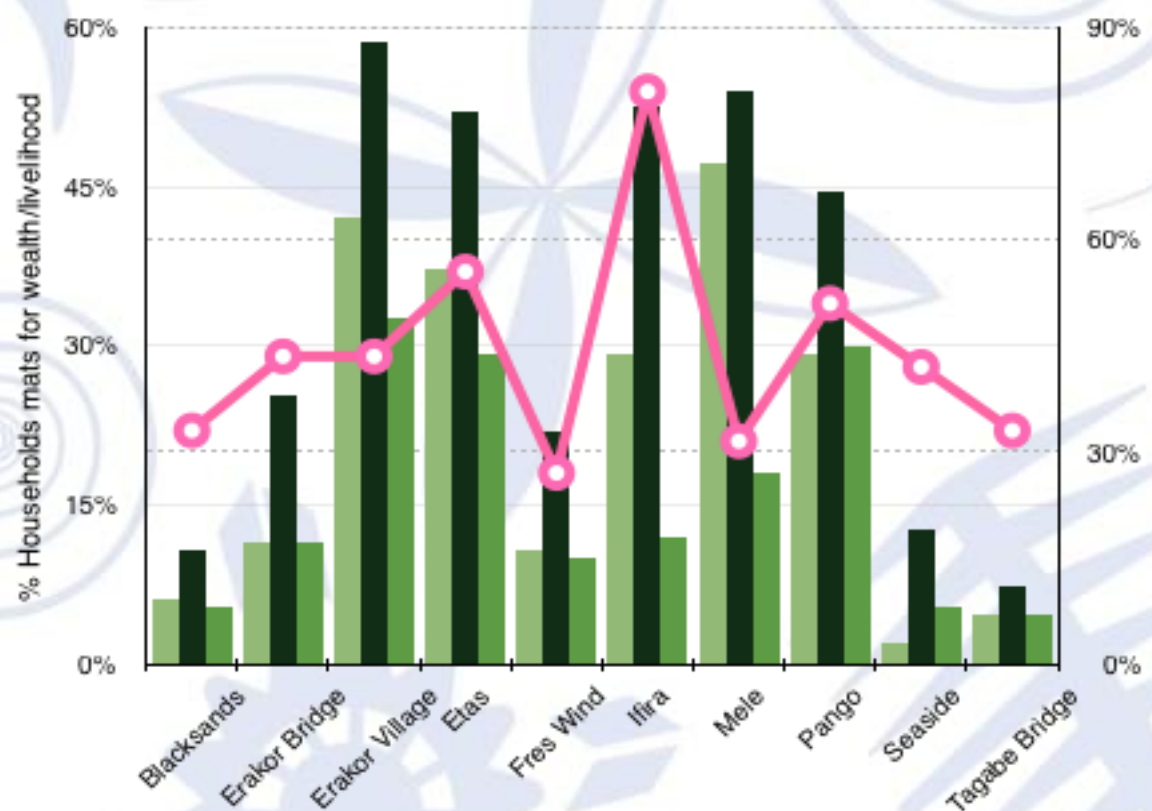
Greater Port Vila - Ecosystem-based Community Resources (Terrestrial)







◊ Mats, baskets, handicrafts
 ■ Natangura
 ■ Coconut leaves
 ■ Pandanas



Mainly demographic & socio-political

1. Urban development
2. Pollution
3. Access to clean water
4. Overharvesting & poor management practice
5. Sand-mining
6. Climate-related impacts



Landfill at Etas Community

Adaptation Options – Aquatic

- Create more marine protected (*tabu*) areas
- Replanting programs: riparian vegetation, coastal vegetation - mangroves, pandanus
- Protect water catchment area
- Fish farms (fresh water fish, sea cucumber)
- Training and awareness programs
 - Aquaculture
 - Clean-up programs
 - Pollution and proper waste disposal
 - Fish catch – sizes, non-destructive methods
 - Water management practices
 - Deep-sea fishing methods



VCC Aquaculture Pond, Fres Wota



Adaptation Options – Terrestrial

- Training in urban agriculture practices, mulching & composting methods
- Planting programs, especially with youth
- Alternative cooking methods such as charcoal stoves
- Women co-operatives for baskets/mats & value-adding for tourism
- Rainwater harvesting training
- Training/mentoring arrangements between youth and elders re natangura roofing, carving, weaving, canoe building, etc





Work to date

- Desktop analyses conducted
- Interviews with key government, municipal, NGO, donor and community stakeholders
- Conducted baseline surveys of key ecosystems & their services
- Ecosystem services assessed & mapped
- Training and capacity building
- ESRAM Technical Report – *almost finalised*
- Community Briefings – *to be translated and disseminated*
- **Google Earth database** as an interactive resource

Acknowledgements

- ★ Vatu Mauri Consortium (VMC)
- ★ VEPAC Surveyor Team
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- ★ Meteorological and Geo-Hazards Department



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