

# Ecosystem-based adaptation in Port Vila, Vanuatu

Paul M Blaschke, Victoria University of  
Wellington, New Zealand  
Herman Timmermans, SPREP, Fiji

**Panel discussion on Front-Line Islands and Cities: building  
resilient island communities**  
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# Ecosystem-based adaptation (EbA)

## Nature-based solutions for community resilience

Source: Albert et al 2013





# PEBACC – Pacific Ecosystem-based Adaptation to Climate Change project

Five year project in partnership with governments of Fiji, Solomon Islands and Vanuatu:

- **Objective:** raise profile of EbA as low cost, appropriate response to building resilience in the Pacific
- **Intended outcome:** EbA included in relevant policy and planning processes



Supported by:




Federal Ministry for the  
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based on a decision of the German Bundestag

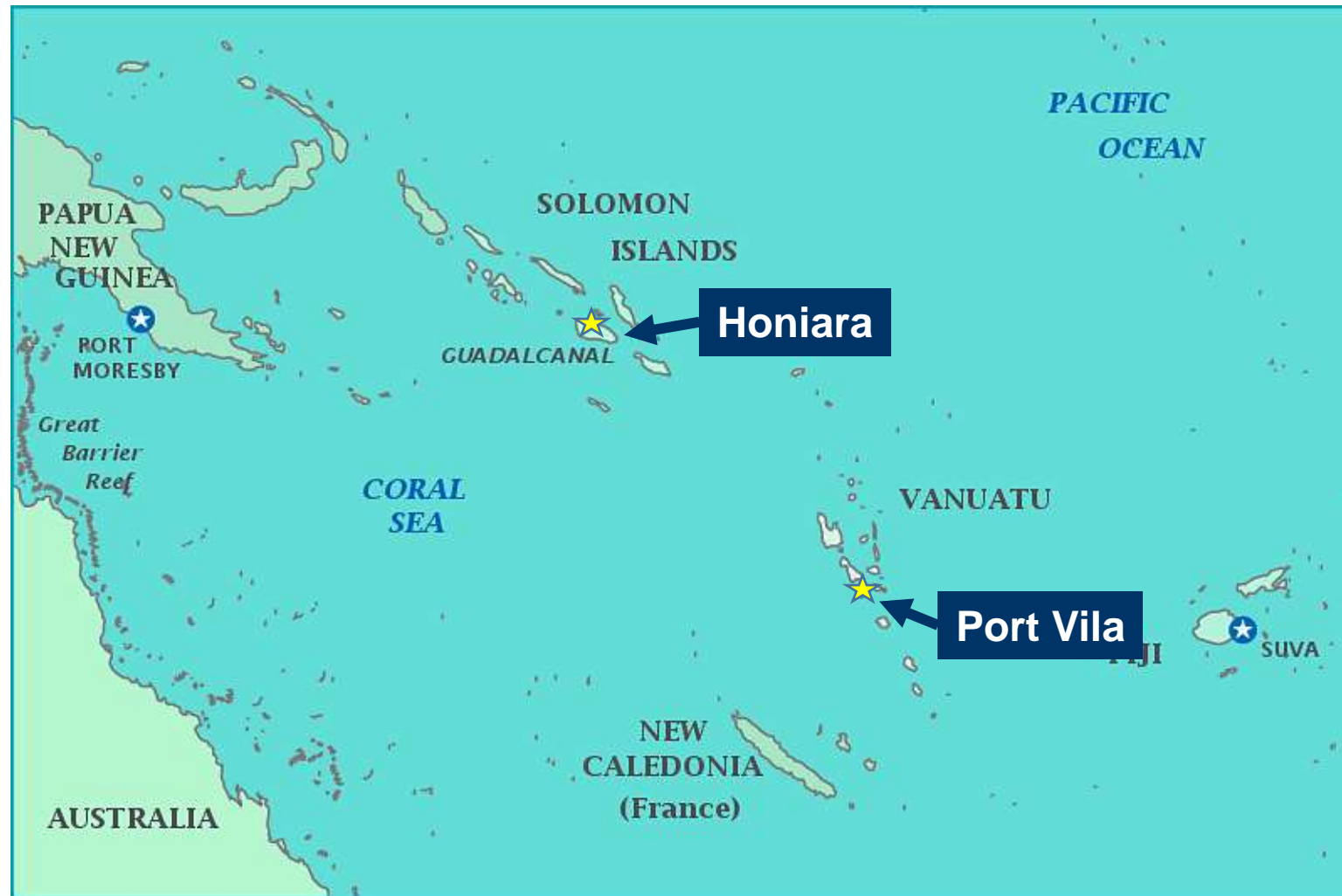


# PEBACC Design

- 
- Phase 1 – Baseline technical assessments
  - Phase 2 – EbA options identified, prioritised & developed
  - Phase 3 – Implementation of EbA demonstration activities
  - Phase 4 – policy integration

(Communication and outreach developed throughout)







# Port Vila - Resilience challenges & vulnerabilities

- Rapidly growing populations (8-9%p.a.)
- Many households largely subsistence based - use ecosystem services for water, food, shelter, income
- Ecosystem resilience pressures (pollution, logging, development)
- Climate change pressures:
  - Sea level rise
  - Rising temperatures (air & sea)
  - Precipitation variability increase





# Five Port Vila EbA Projects



Photos: Stuart Chape, SPREP



## Integrated catchment project for water security



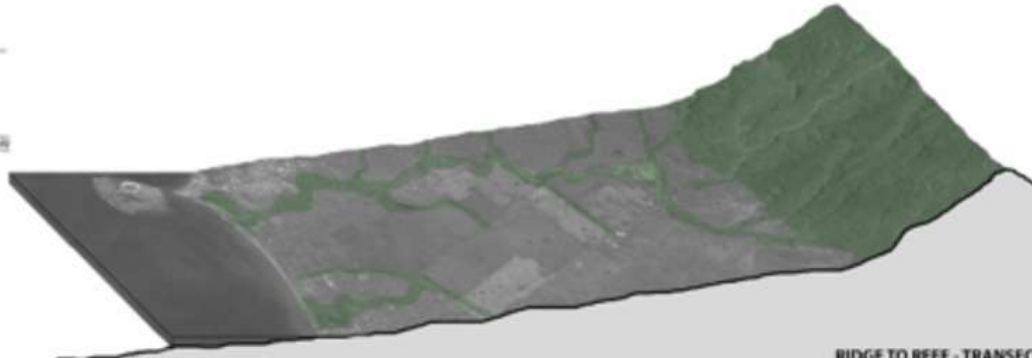
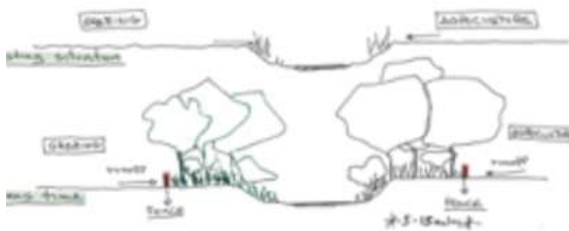
Watershed protection  
& restoration



Ridge to reef corridor



Strategic planning



### Community Benefits



Amenity



Water quality



Disaster mitigation



Health



## Coastal ecosystems regeneration



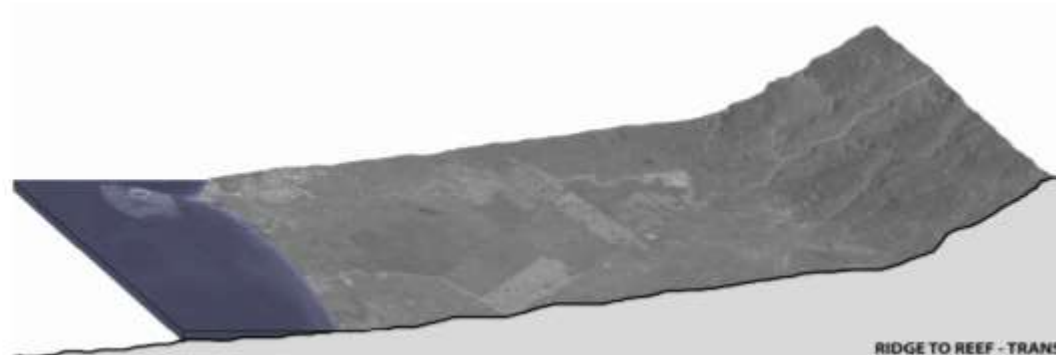
**Strategic planting & regeneration**



**Promote traditional knowledge**



**Policy & long term funding**



### Community Benefits

	Amenity
	Water quality
	Disaster mitigation
	Raw materials

## Urban & peri-urban agriculture



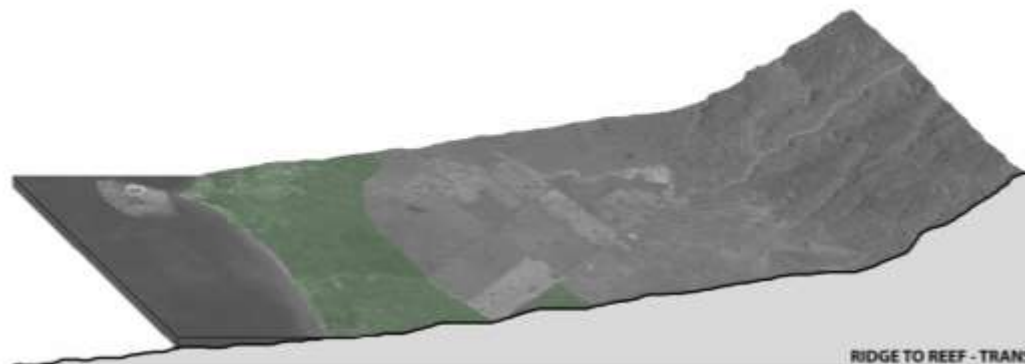
**New arable land**



**Community garden plots**



**Sustainable practices**



### Community Benefits



Disaster mitigation



Health



Raw materials



Food security



## Urban forests & agro-forestry



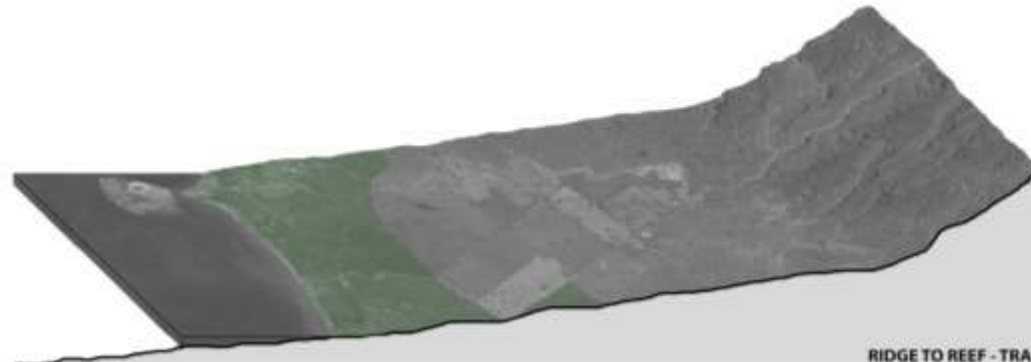
**Planning & community participation**



**Training & nursery**



**Staged planting & monitoring**



### Community Benefits



Amenity



Disaster mitigation



Culture



Health

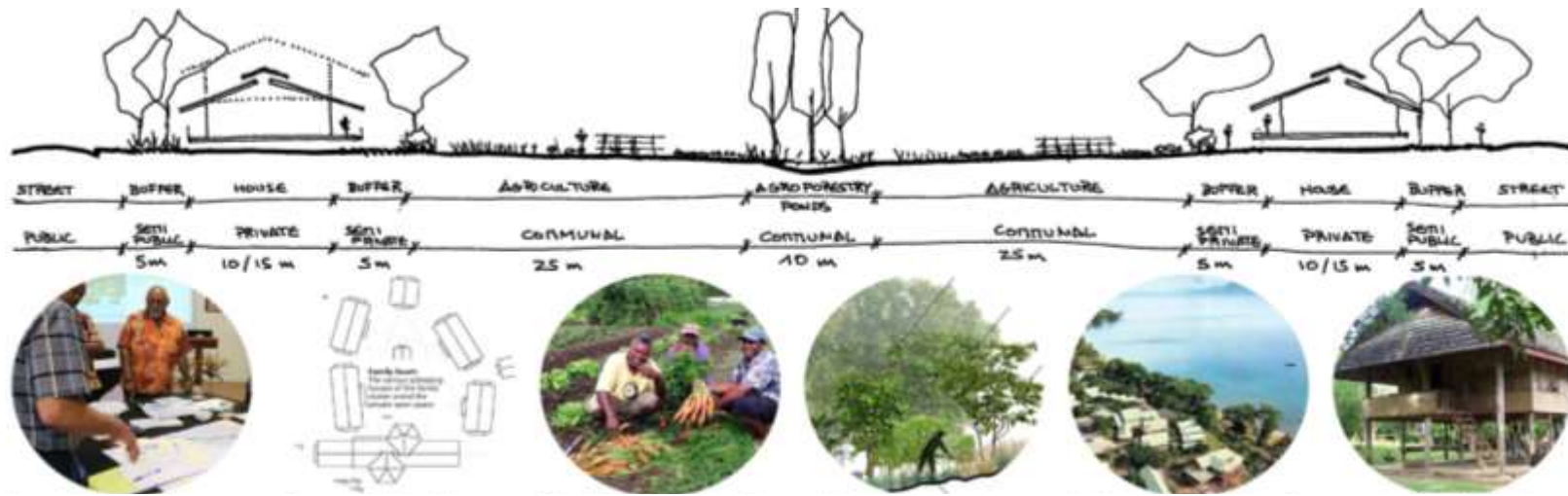


Raw materials



Food security

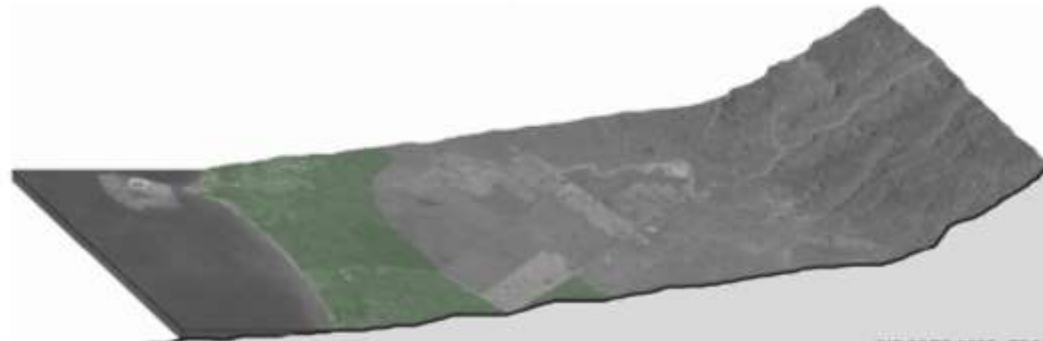
## Sustainable integrated housing development



Location & community participation



Food, energy, water & waste



Integration of landscape & architecture

### Community Benefits

	Amenity
	Water quality
	Disaster mitigation
	Culture
	Health



# Implementation of Port Vila Projects

- Urban gardens (set up permaculture training facility)
- Riparian stabilisation (indigenous bamboo nursery)
- Mangrove replanting and nursery
- Self-sustainable financing
- Policy interventions



# Conclusions

- Catchment-scale and community settings for urban resilience
  - Catchment management (ridge-to-reef)
  - Vegetation protection (coastal, urban)
  - Riparian and waterways protection
  - Food and housing security
- EbA is an appropriate climate change solution for Pacific communities, as exemplified in Port Vila
  - particularly in context of existing development pressures and traditional values
- Implementation challenges – institutional, financial



# Acknowledgements



## Project teams:

- RMIT Melbourne, Victoria University of Wellington



## Local inputs:

- Community representatives
- Government staff – National, Provincial, Local
- NGOs, church leaders, other stakeholders (environmental, social, planning, industry etc.)