



# **Merging traditional community-based management approaches and catchment modeling to address land-based impacts to coastal ecosystems in Fiji**

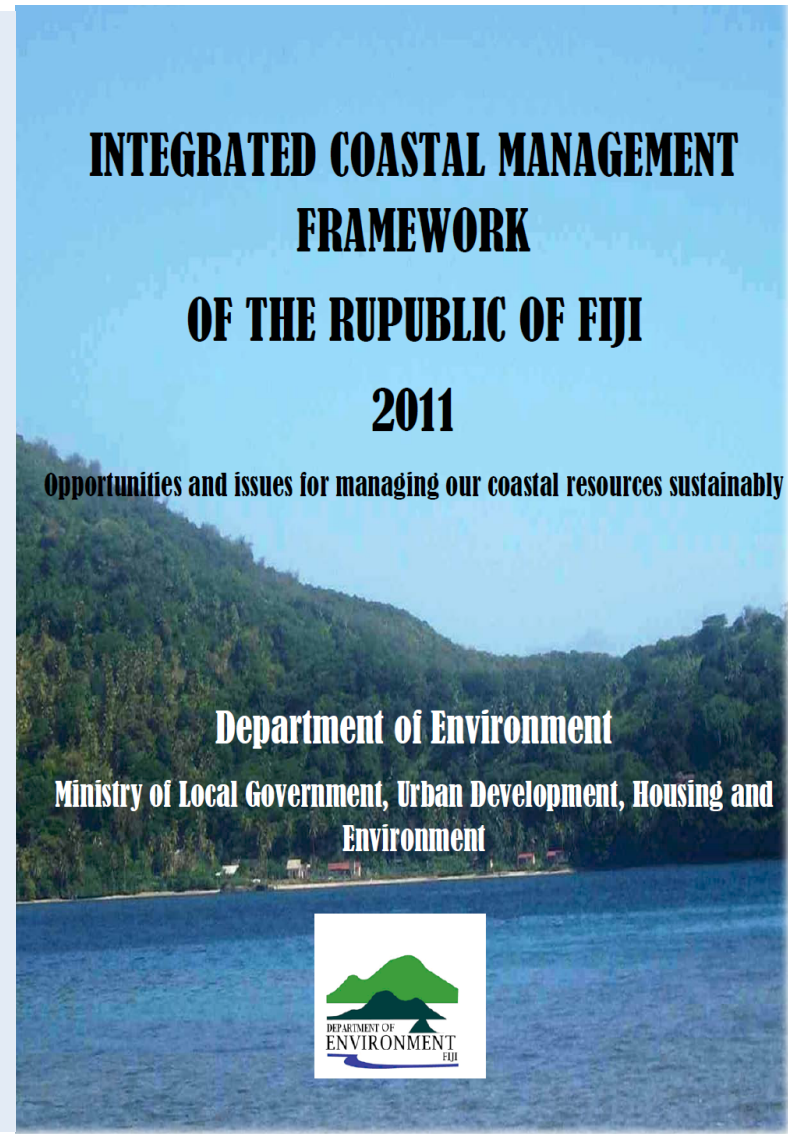
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# INTERGRATED COASTAL MANAGEMENT IN FIJI

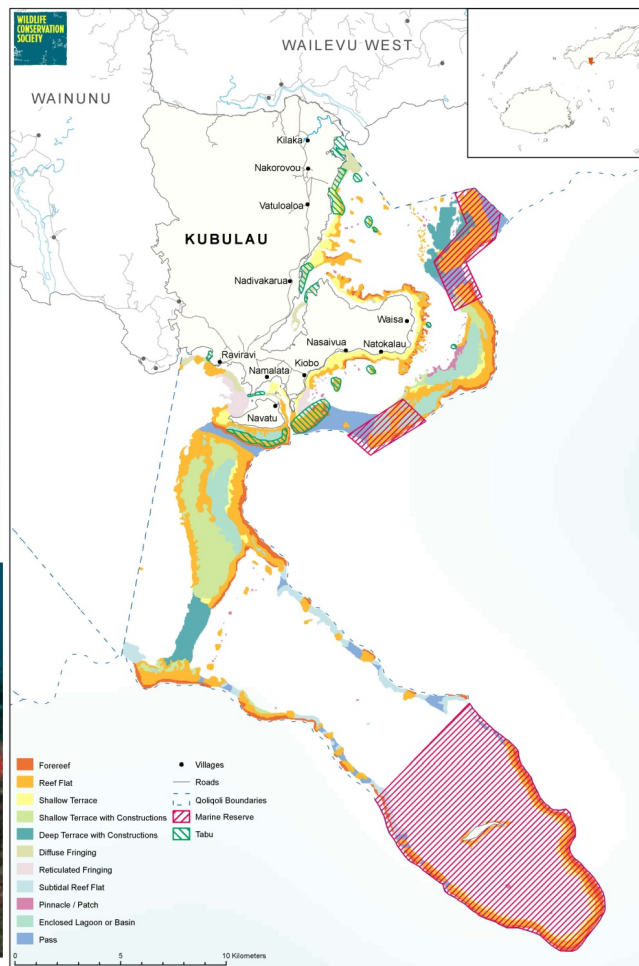
- Environment Management Act 2005 stipulates the development of a coastal management plan for Fiji
- The ICM Framework 2011 provides a general scope and structure of the National ICM Plan
- The national approach is to first develop ICM plans at the provincial level → National ICM Plan





# HISTORY OF WORKING IN KUBULAU, BUA

Kubulau District, Fiji



## ECOSYSTEM-BASED MANAGEMENT PLAN

Kubulau District, Bua Province, Fiji

4/30/2012  
Wildlife Conservation Society



Kubulau  
Business  
Development  
Committee





# MANAGEMENT PLANNING WORKSHOPS



**Community:** *Bose Vanua,*  
Fishers, Farmers, Women, Youth

**Different communities** working  
together!

**Government:** DoEnv, DoF,  
Health, Agriculture, TLFC, TLTB....

**-NGOS**

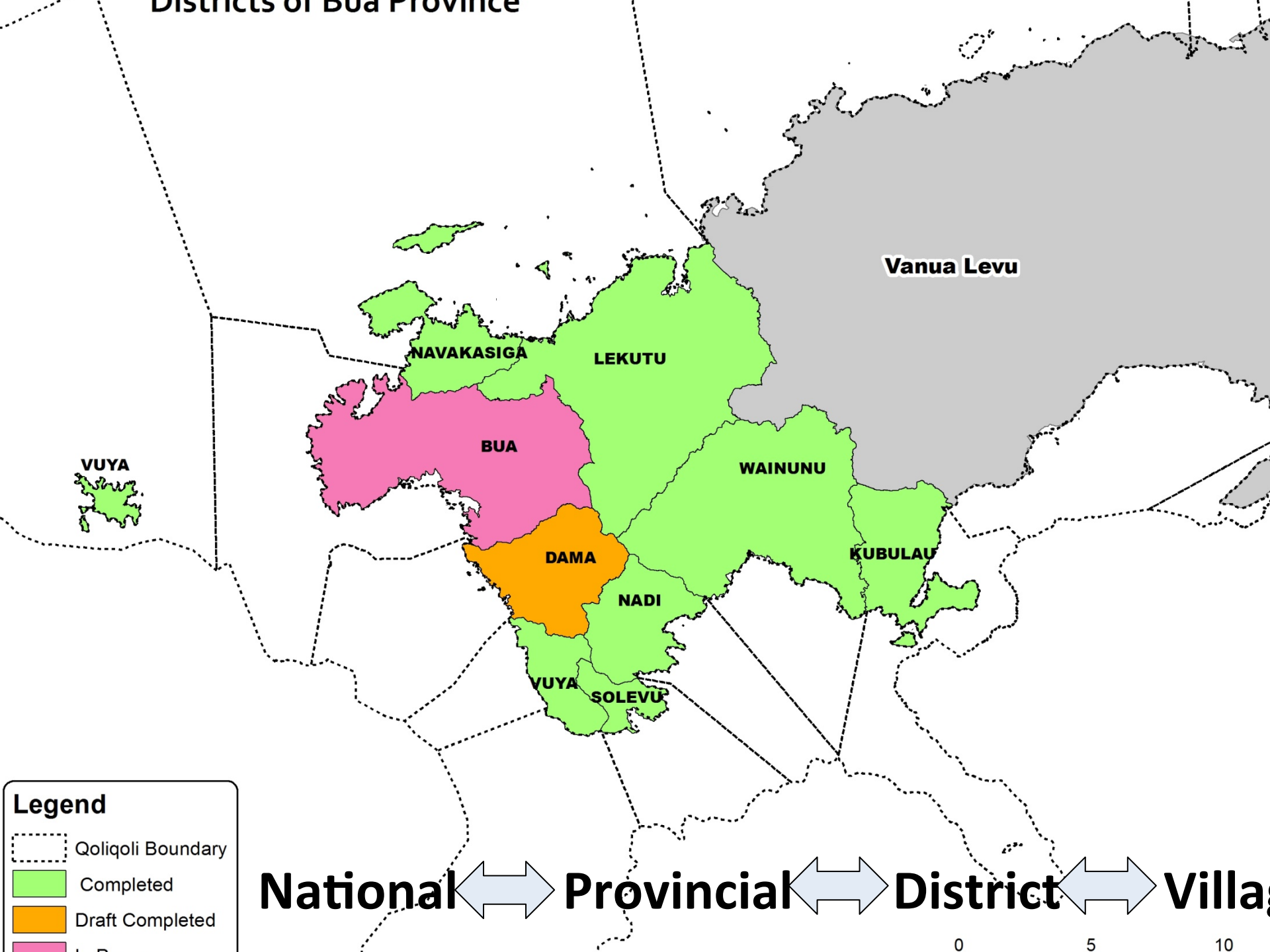


# NATIONAL RULES AND BEST PRACTISES

RULE	EXCEPTIONS	NATIONAL	DISTRICT
Taking <i>davui</i> is prohibited.	-	✗ <sup>1</sup>	
Taking any species of grouper during the month of August is prohibited.	-		✗ <sup>2</sup>
Dynamite fishing is prohibited	-	✗ <sup>3</sup>	✗ <sup>4</sup>

RECOMMENDATION	RATIONALE
Do not clear, burn or farm within 100 metres of the bank of a river or stream.	Riparian buffers reduce soil erosion and improve downstream water quality.
Restore degraded river banks and riparian zones by planting native trees and shrubs.	Riparian vegetation reduces erosion and provides food and shade for freshwater fauna.
Use fertilisers and pesticides only as necessary, and always follow manufacturer's instructions.	Fertilisers cause algal growth and eutrophication. Many pesticides are toxic to people and animals.
Do not build crossings, weirs or other structures in a manner that prevents fish migration.	Migration up and down rivers is a vital part of the life cycle of many fishes, including food fish.
Do not allow logging within 100 metres of the bank of a river or stream.	Riparian buffers reduce soil erosion and improve downstream water quality.

# Districts of Bua Province







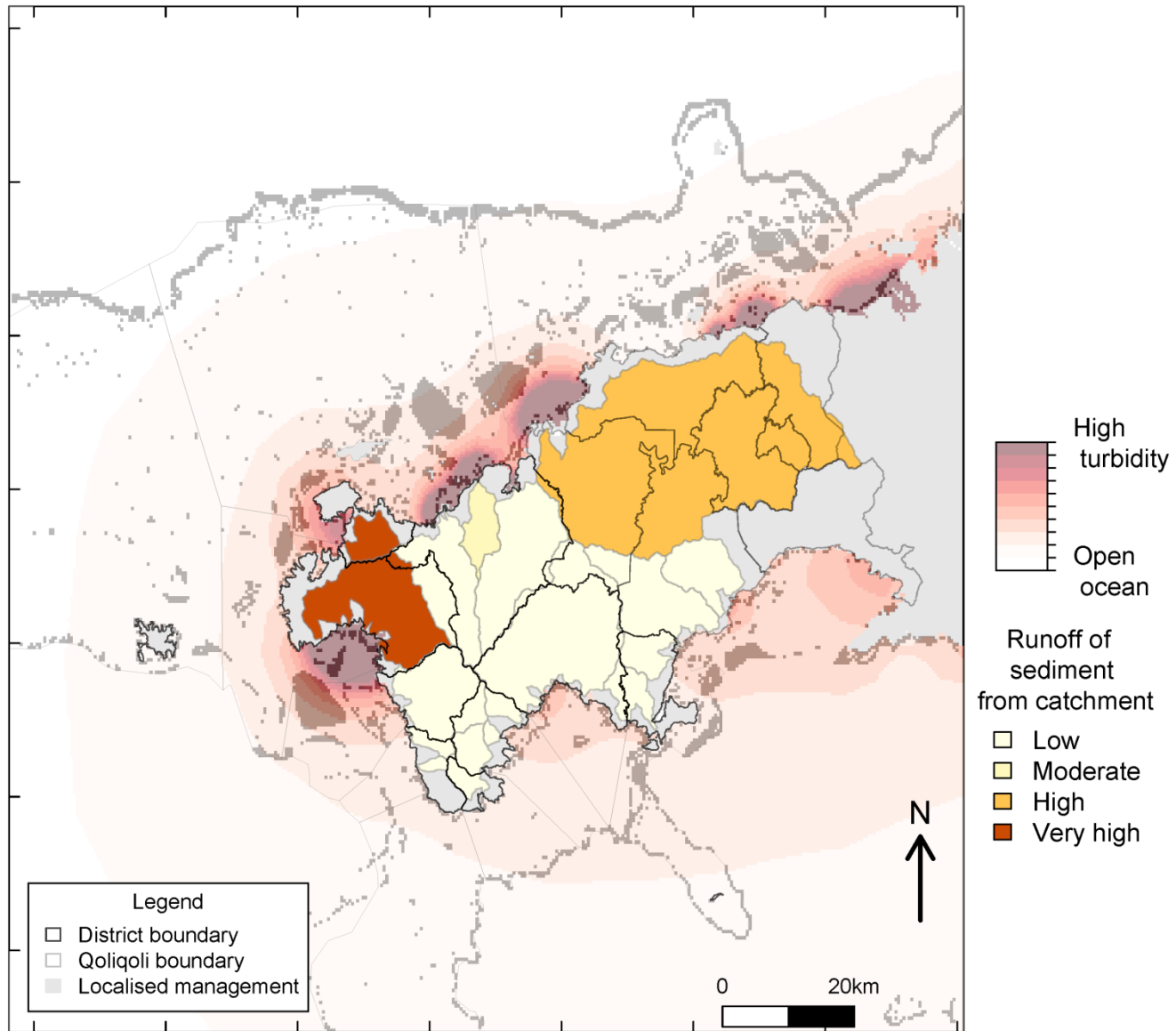
# OVERVIEW OF PROVINCIAL ICM PROCESS



Mapping out the potential areas for development in Bua and its impacts on the qoliqolis

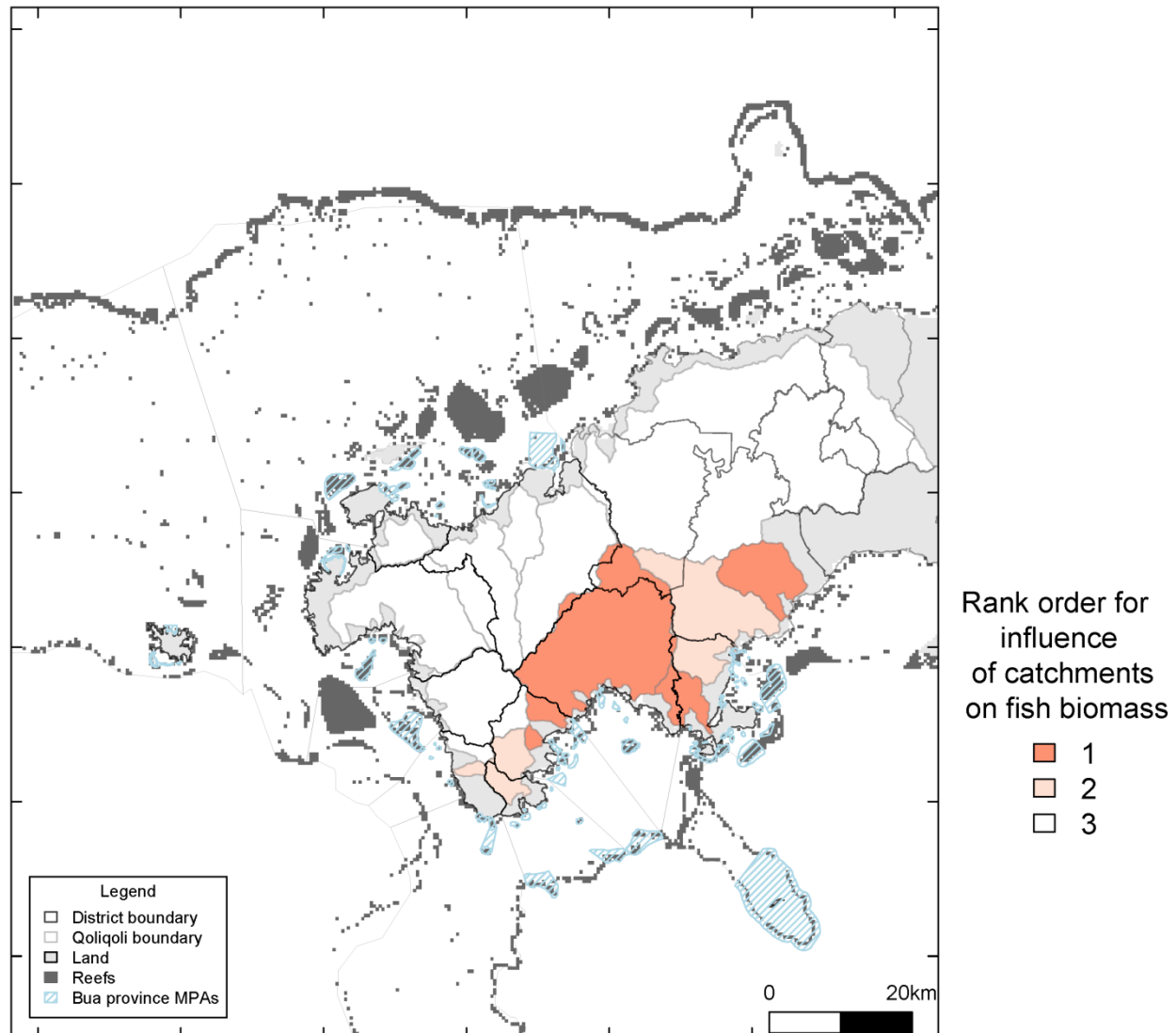


# Na Vanua e Drodrova Yani na De ni Qele e Bua



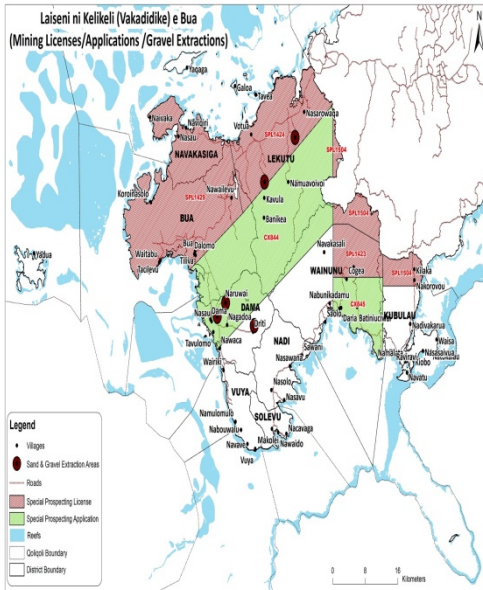


# Influence of catchments on predator fish biomass

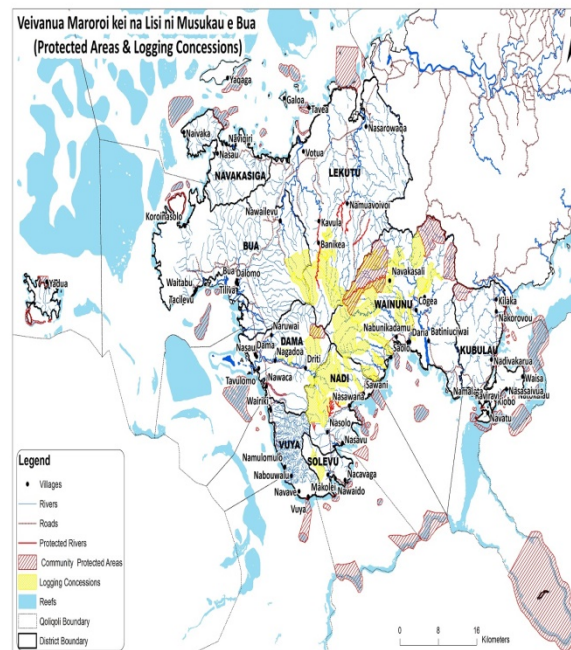
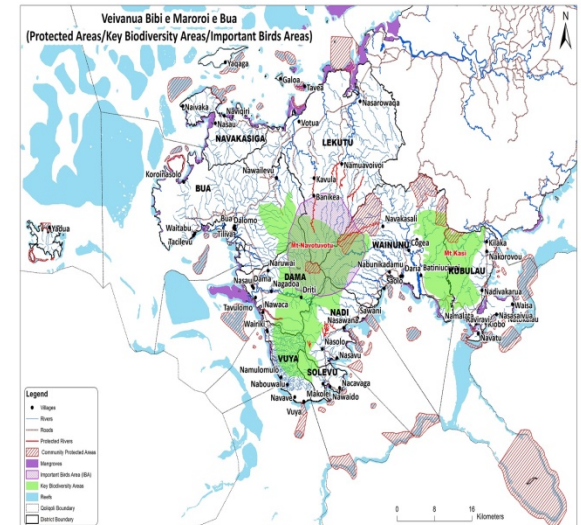




# OVERVIEW OF BUA ICM WORKSHOP



1. Mining License/  
Application/Gravel  
Extraction
2. PA, KBA, IBA
3. PA & Logging  
Concessions







# CONCLUSION

## SCIENTIFIC REPORTS

OPEN

### Tracing the influence of land-use change on water quality and coral reefs using a Bayesian model

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Christopher J. Brown<sup>1,2</sup>, Stacy D. Jupiter<sup>2</sup>, Simon Albert<sup>3</sup>, Carissa J. Klein<sup>4</sup>, Sangeeta Mangubhai<sup>2</sup>, Joseph M. Maina<sup>4,5</sup>, Peter Mumby<sup>2</sup>, Jon Olley<sup>2</sup>, Ben Stewart-Koster<sup>2</sup>, Vivitskaia Tulloch<sup>6</sup> & Amelia Wenger<sup>2,4</sup>

### Where Does River Runoff Matter for Coastal Marine Conservation?

Alicia Fradette-Hermann<sup>1\*</sup>, Christopher J. Brown<sup>2</sup>, Simon Albert<sup>3</sup>, Carissa J. Klein<sup>4</sup>, Sangeeta Mangubhai<sup>2</sup>, Joanna L. Nelson<sup>4,7</sup>, Lida Teneva<sup>8</sup>, Amelia Wenger<sup>4</sup>, Steven D. Gaines<sup>9</sup> and Benjamin S. Halpern<sup>1,8,10</sup>

### Opportunities and constraints for implementing integrated land–sea management on islands

STACY D. JUPITER<sup>\*1</sup>, AMELIA WENGER<sup>2,3</sup>, CARISSA J. KLEIN<sup>3</sup>, SIMON ALBERT<sup>4</sup>, SANGEETA MANGUBHAI<sup>3</sup>, JOANNA NELSON<sup>8,7</sup>, LIDA TENEVA<sup>8</sup>, VIVITSKAIA J. TULLOCH<sup>6</sup>, ALAN T. WHITE<sup>10</sup> AND JAMES E.M. WATSON<sup>3,11</sup>





Vinaka vakalevu