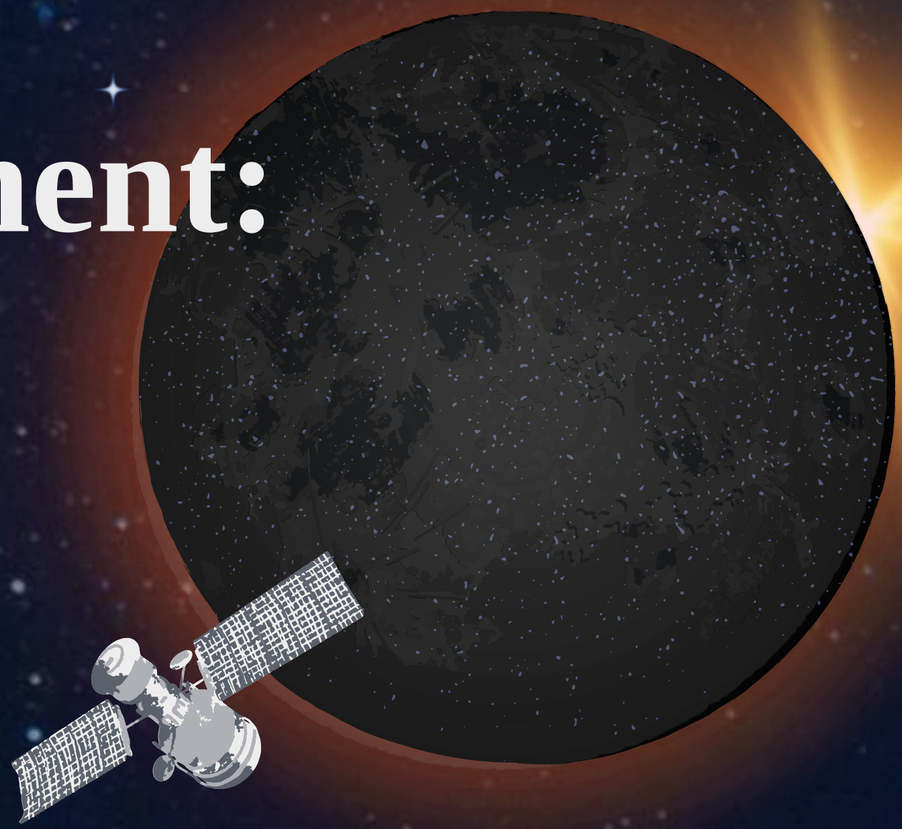
Republic of Kiribati.

Disaster Risk Management: KMSPCC, Marine and Terrestrial Mapping.



PRESENTED BY KIRIBATI MARINE SPATIAL PLANNING COORDINATING COMMITTEE (KMSPCC)

Land Management Division

WHERE MARITIME SAFETY & ENVIRONMENT COMES FIRST

GEOLOGY & COASTAL MANAGEMENT DIVISION MFMRD

Overview

1. Background Information.
2. Stakeholders to KMSPCC.
3. Te Baiku Ocean Database.
4. Importance of GIS KMSPCC Member Organizations
5. Issues and Challenges.
6. Way forwards.

KMSPCC BACKGROUND

Previous Years

CABINET MANDATES Geoscience to coordinate GIS User Group.

ISSUES

Poor Coordination, Mandate, Authority. Legal Gaps

JANUARY 2024

MSP CABINET PAPER MSP Cabinet Paper was submitted to Cabinet for approval to give Geoscience the Mandate to implement Marine Spatial Planning

FEB - MARCH 2024

In Feb, 2024 Cabinet gave approval and mandate to Geoscience to Establish KMSPCC

Onwards

MSP Implementation

Ministry of Women Youth Sport and Social Affairs
- Gender Inclusivity

Ministry of Fisheries & Marine Resources Dev.
- Coastal Fisheries Division
- Oceanic Fisheries Division
- Geoscience Division
- Media Unit

Office of Te Beretitenti
- Climate Change Unit
- Kiribati Meteorological Service

Ministry of Environment Land & Agriculture Dev.
- Environment & Conservation Division
- Land Management Division

Ministry of Information Communication & Transport
- Kiribati Port Authority
- Digital Transformation Office
- Marine Division

Ministry of Line & Phoenix
Administration Unit

Ministry of Tourism, Commerce, Industry & Cooperatives
- Kiribati National Tourism Authority

Ministry of Culture & Internal Affairs
- Island Councils
- Culture and Museum

Attorney General Office
Drafting Unit/ Ocean related legal advice

Kiribati Marine Spatial Planning Coordinating Committee

Chair: MFMRD Secretary/DS

Co-chair: Rotate with key stakeholders

Secretariat & Coordinating Authority: Geoscience Division MFMRD

National Ocean Database: Te Baiku Database.

Marine Spatial Planning Framework and Regulation (Draft).

REPUBLIC OF KIRIBATI

Fisheries (Amendment) Act 2021

(Part2A (4)

MARINE SPATIAL PLANNING REGULATION 2024

In exercise of the powers conferred by section 8 of the *Fisheries (Amendment) Act 2021*, the Beretitenti, acting in accordance with the advice of the Cabinet, hereby make the following Regulations.

PART I-PRELIMINARY

1. **Short Title**

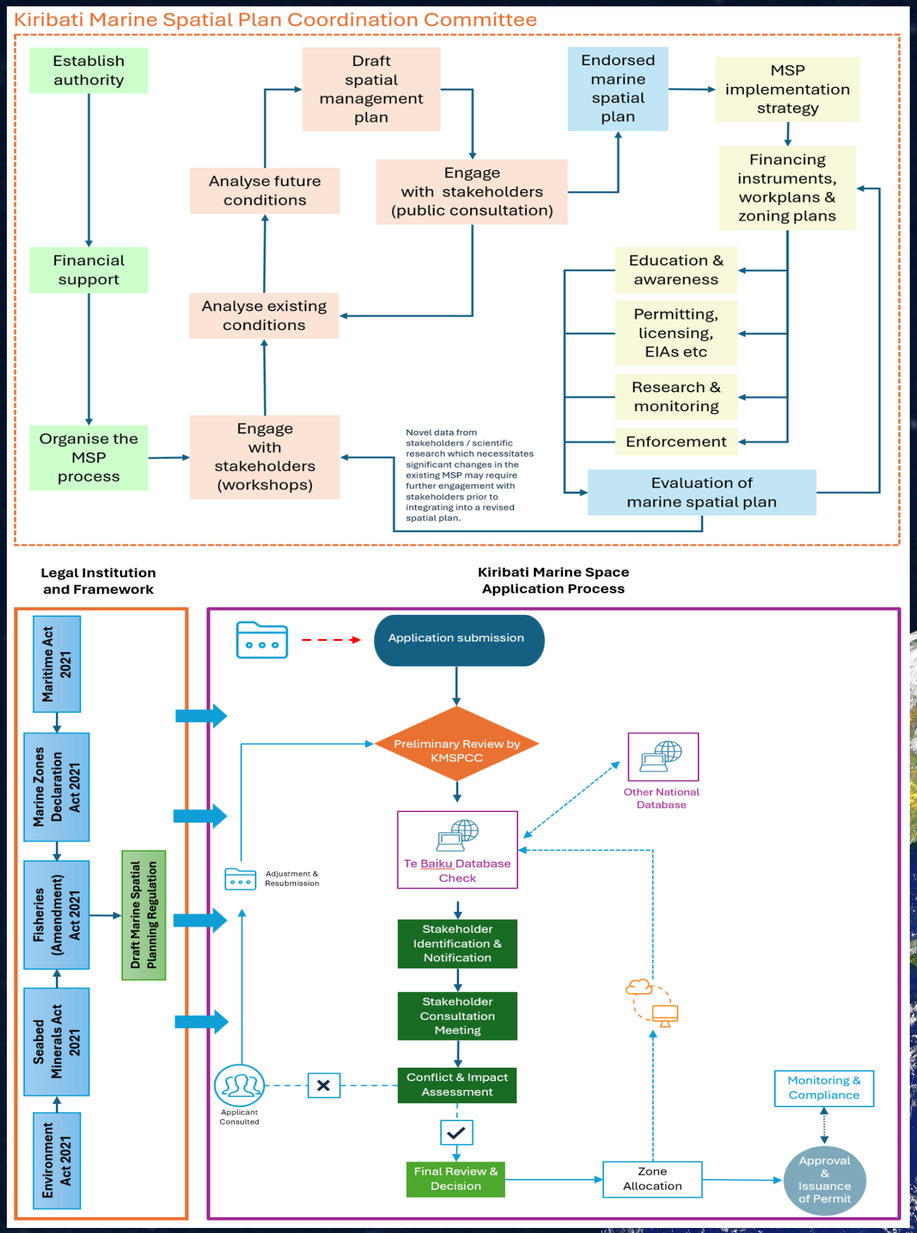
(1) This Regulation may be cited as the *Marine Spatial Planning Regulation 2024*.

(2) These Regulations are to establish the Kiribati Marine Spatial Planning Coordination Committee under the Fisheries Act to regulate the management and use of the marine space as a whole, including but not limited to the Coastal and Exclusive Economic Zone of Kiribati.

2. **Commencement**

(1) This Regulation shall come into force on the date appointed by notice by the Minister.

(2) Notice of these Regulations must be published for exhibition at the public office of



Importance of GIS in KMSPCC Member Organizations

Practical Applications of GIS in LMD Kiribati Mainly on Cadastral Mapping.

Land Parcel Mapping

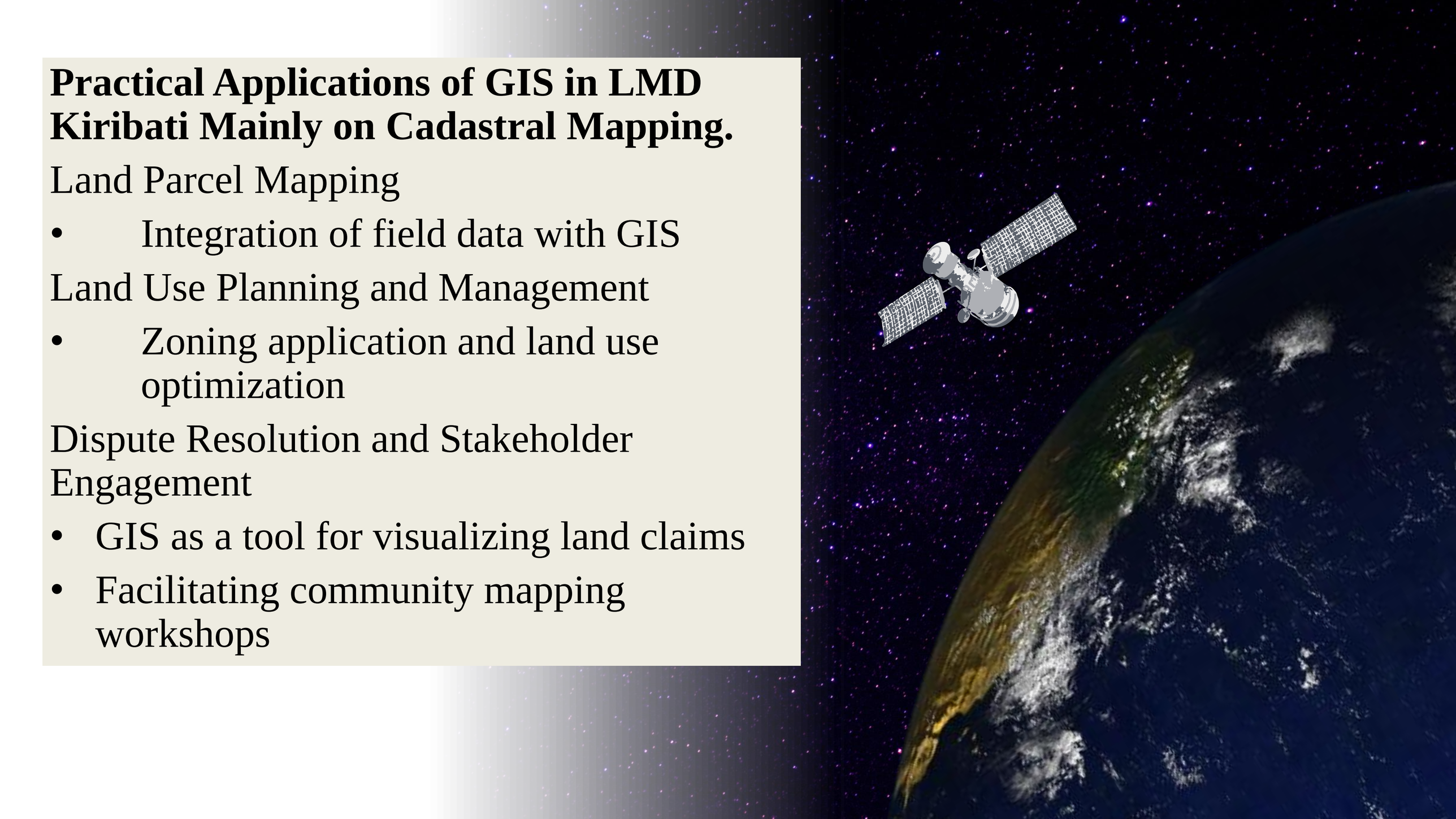
- Integration of field data with GIS

Land Use Planning and Management

- Zoning application and land use optimization

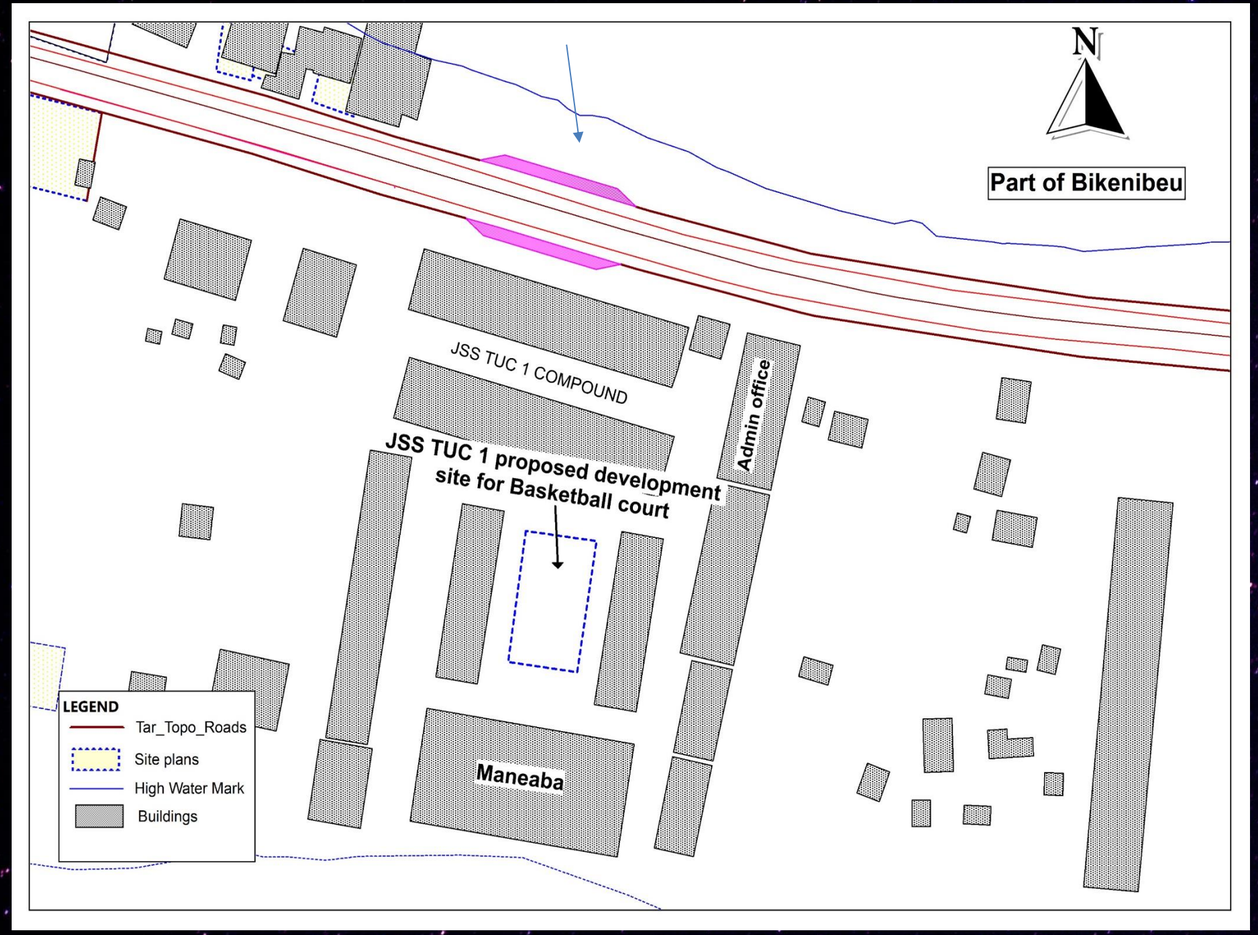
Dispute Resolution and Stakeholder Engagement

- GIS as a tool for visualizing land claims
- Facilitating community mapping workshops

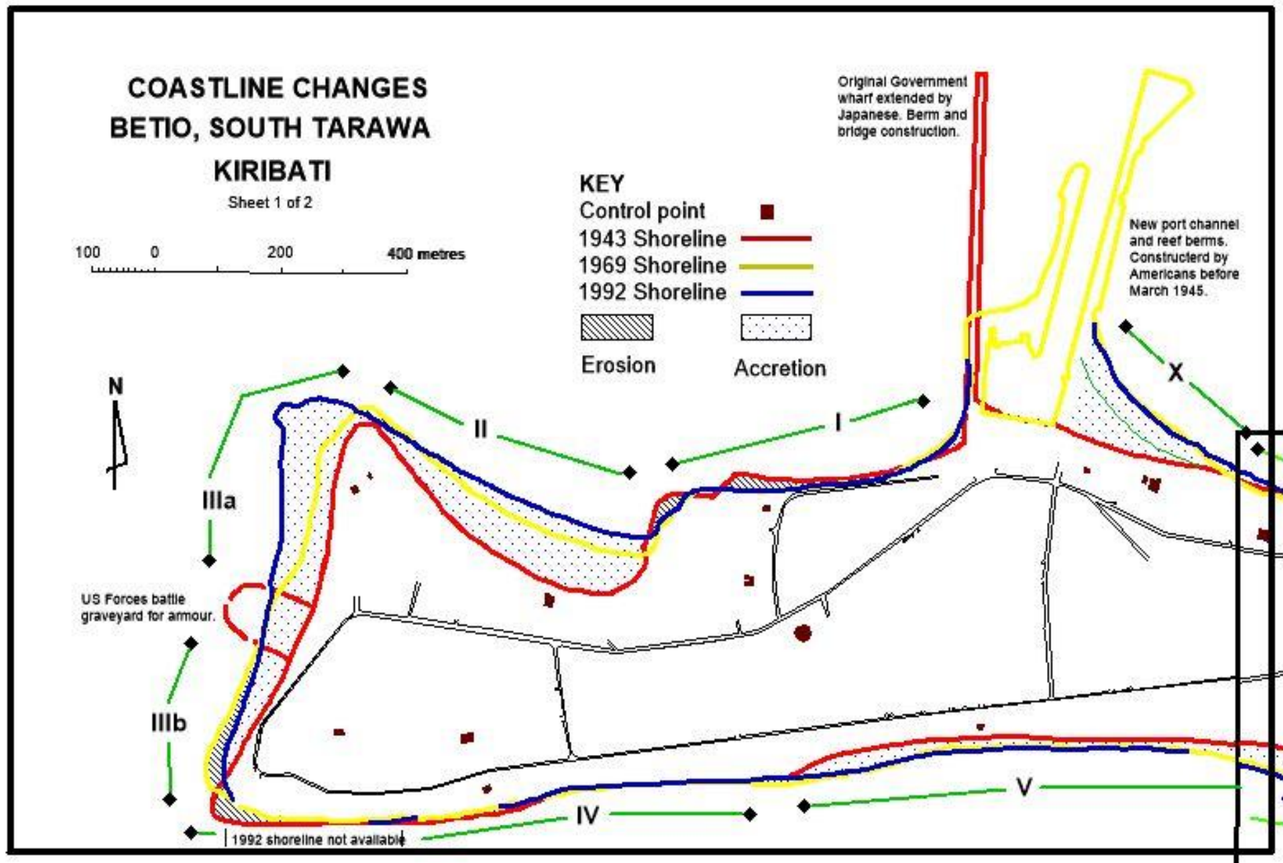


Primary Tasks in Land Management Division Supported by GIS.

1. Land Development Site Plans

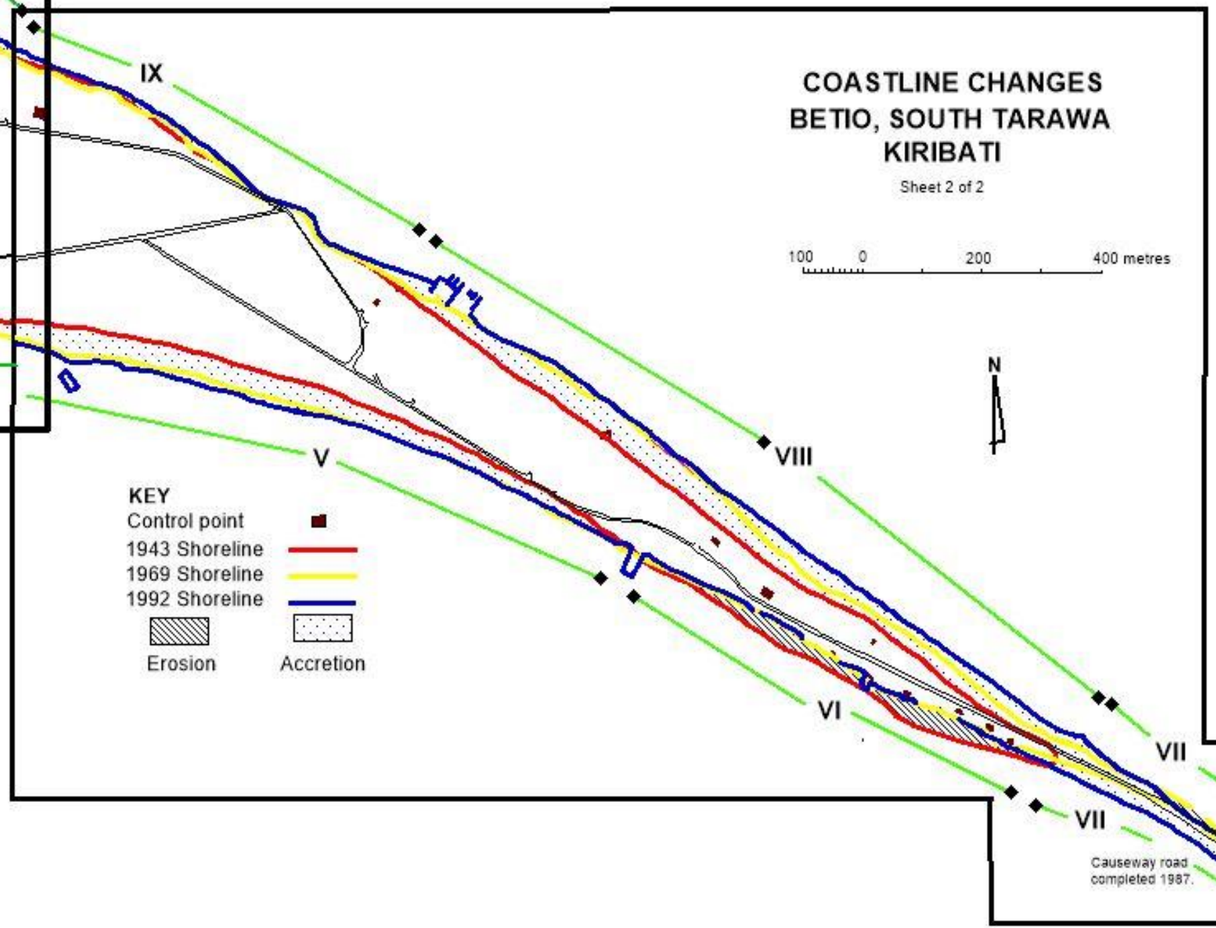


2. Seawall Developments



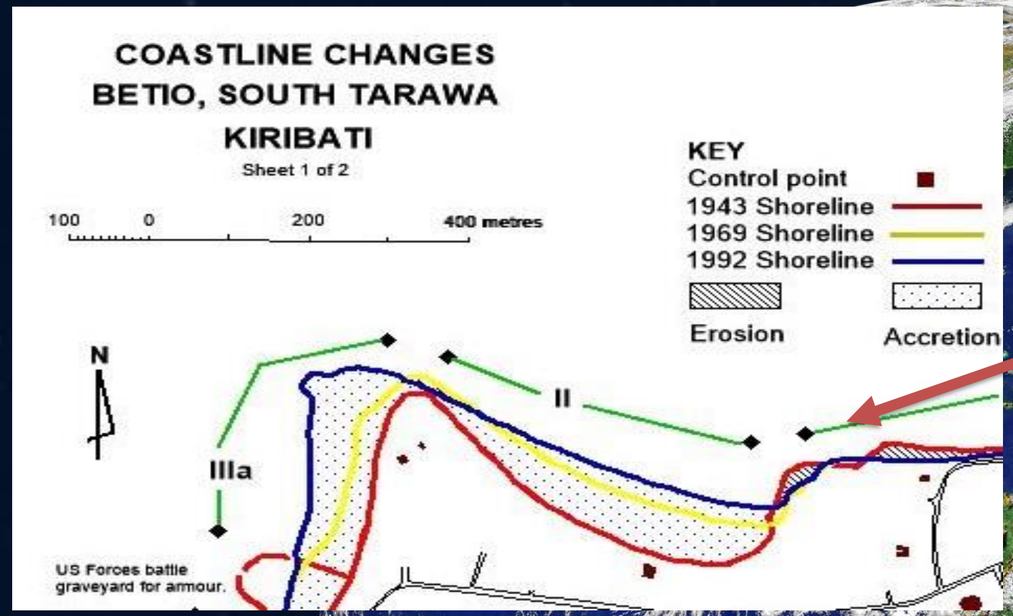
1969 Shoreline:

- Show minor changes in the coastline.
- The shoreline is marked in yellow illustrating areas of accretion or minor shifts due to environmental factors.



1943 Shoreline:

- Represents the baseline shoreline, capturing the natural coastline before significant changes.
- The shoreline is marked in red to highlight its position.

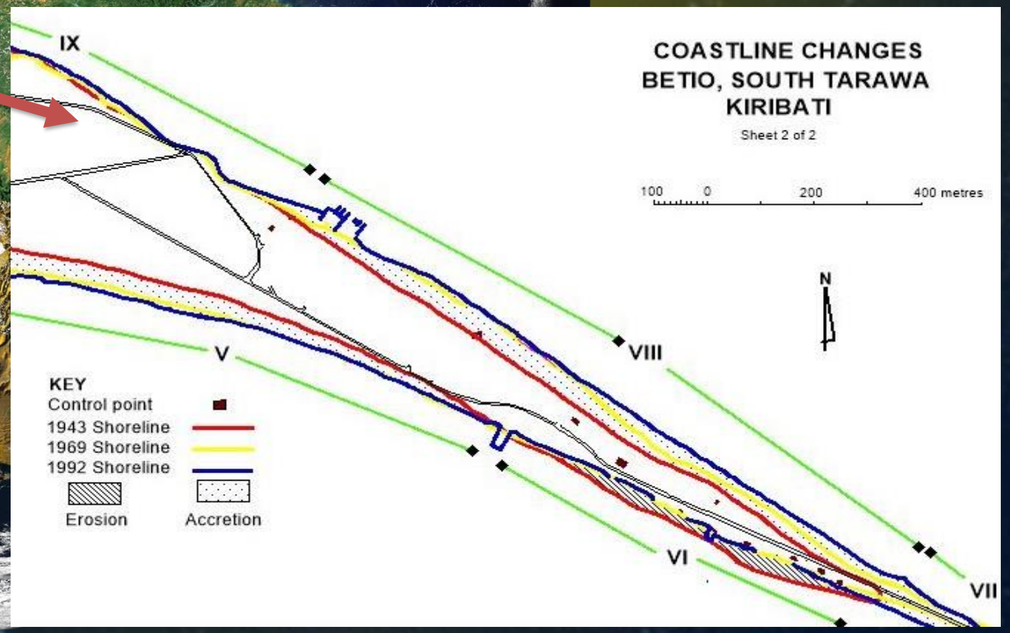


1992 Shoreline:

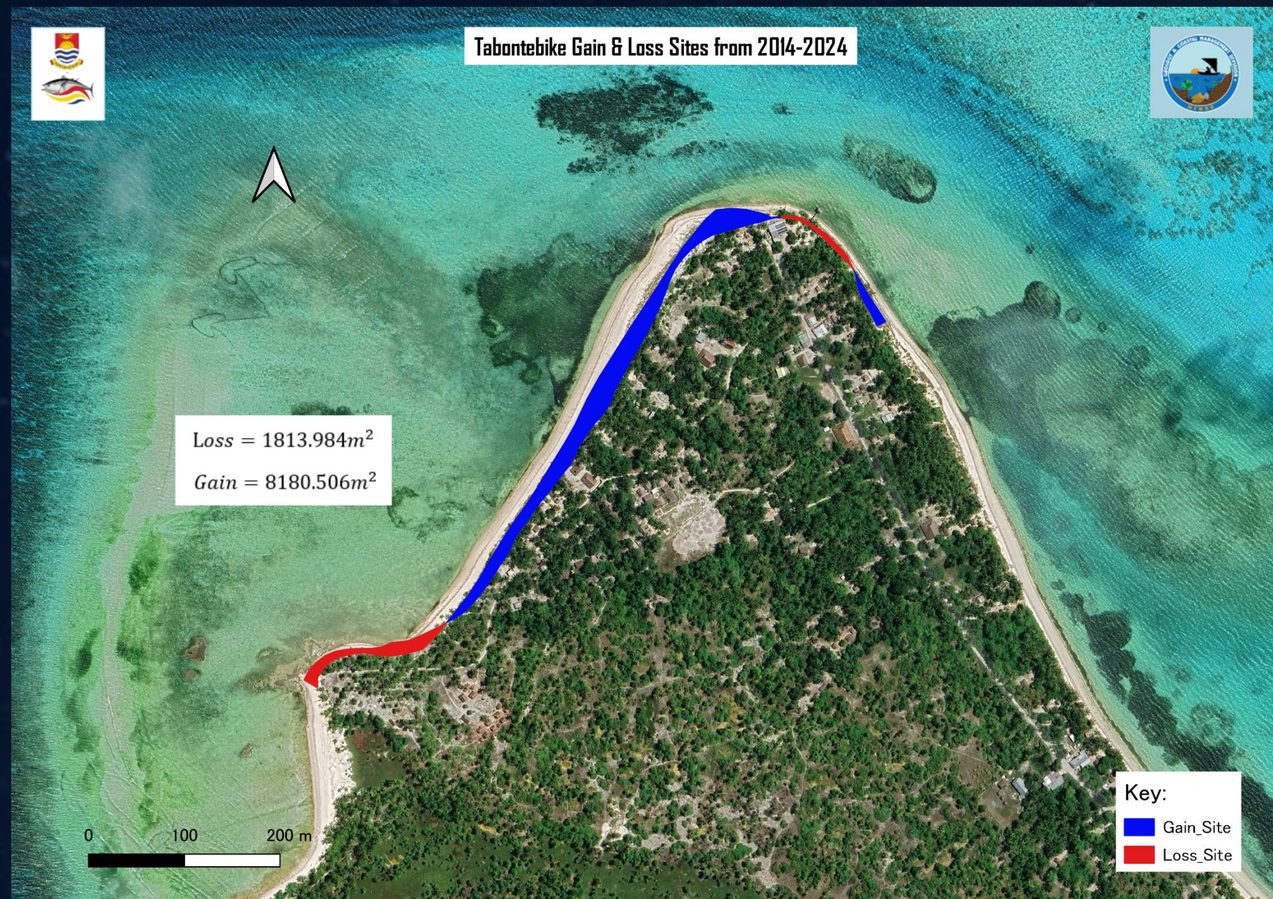
- The shoreline is marked in blue illustrating some areas of erosion and accretion sites.
- In this year, the map highlights a notable accretion (at some part of Betio West and other sites) along the shoreline where land has been gained due to sediment deposition or other natural processes.

1992 Shoreline:

- Also, this year in the map highlight some eroded site of Betio East.
- The erosion can be reflected by the effects of natural forces by climate change or human activity.
- The coastal features are visibly altered indicating the impact of environmental change.

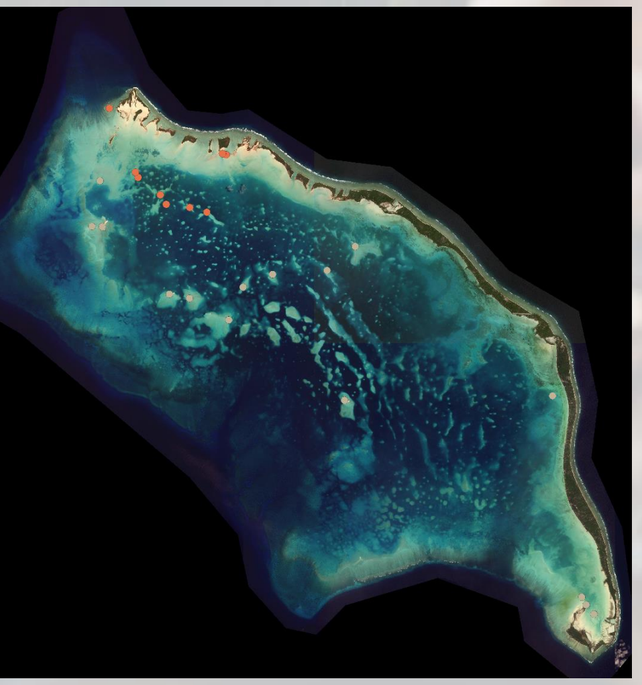


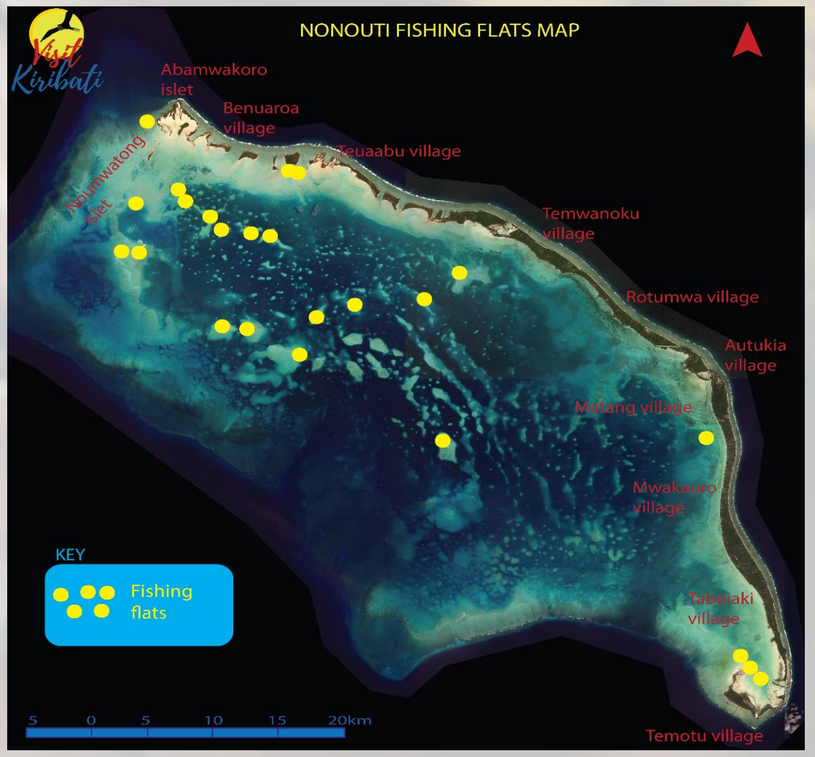

Ribono Gain & Loss Site from 2014-2024
Key:
Loss_Site
Gain_Site
$Loss = 117.211m^2$
$Gain = 883.29m^2$
0
50
100 m


Tabontebike Gain & Loss Sites from 2014-2024
$Loss = 1813.984m^2$
$Gain = 8180.506m^2$
0
100
200 m
Key:
Gain_Site
Loss_Site

GIS in Enhancing Tourism Services.

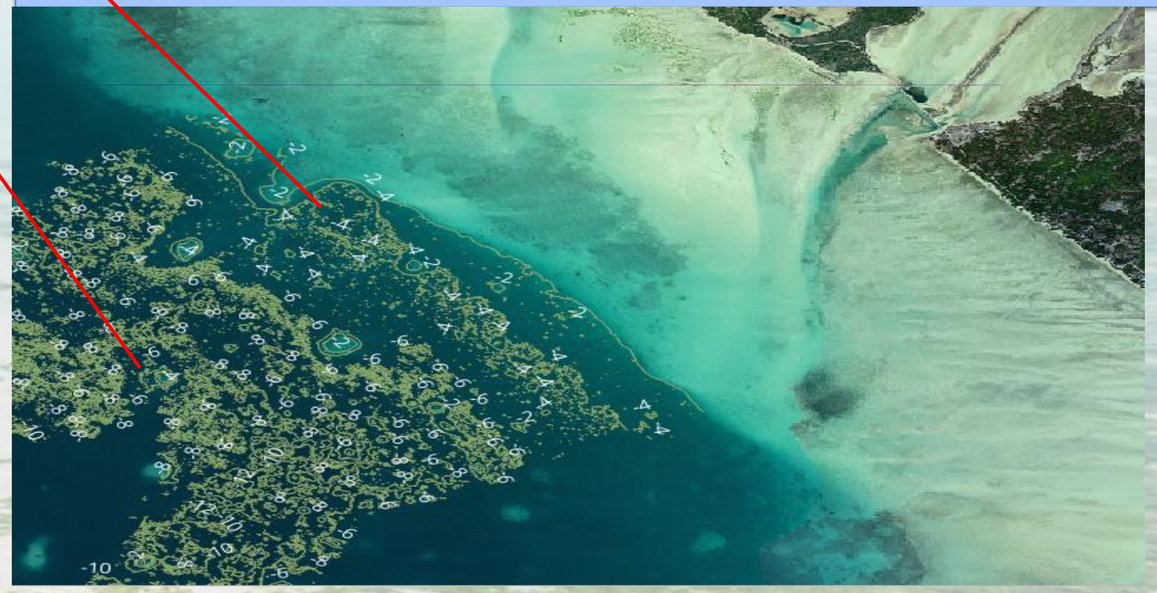
- Resource management
- Emergency Management
- Travel guide
- Travel planning
- Visitor Experience
- Promotion and Marketing
- Route Optimization
- Navigation



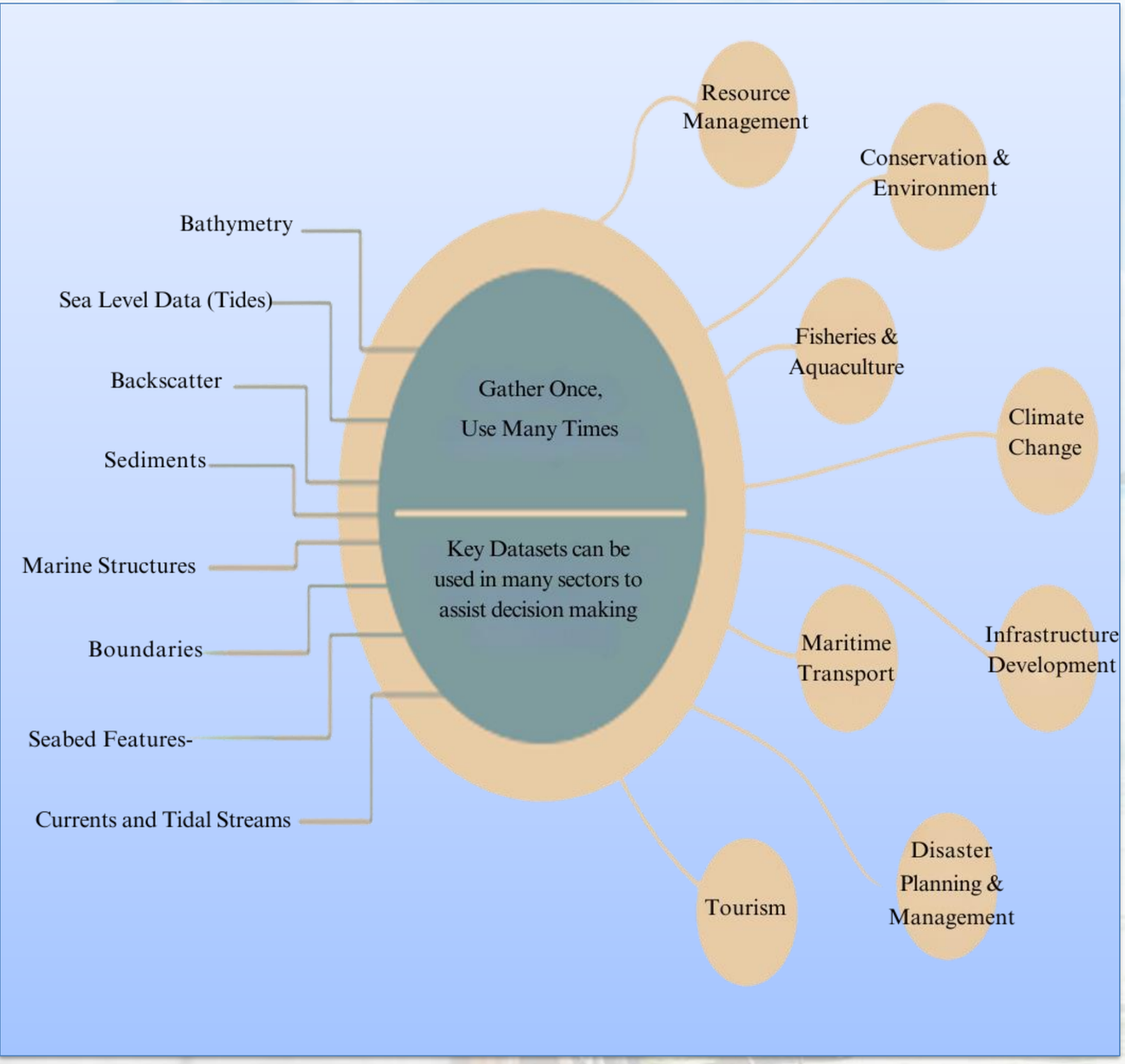


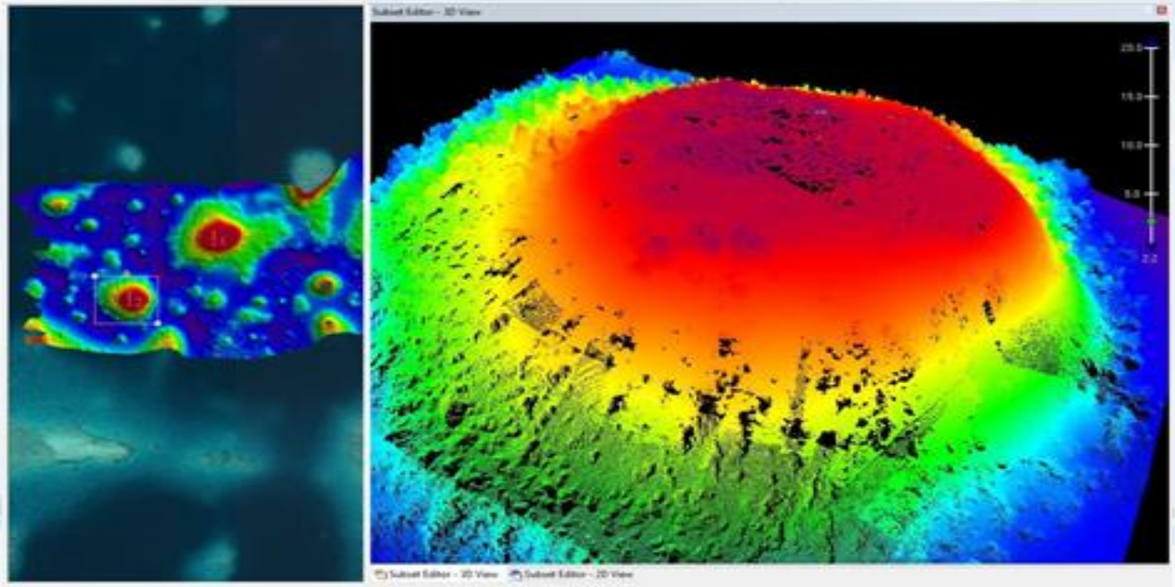
Importance of GIS to Marine Division.

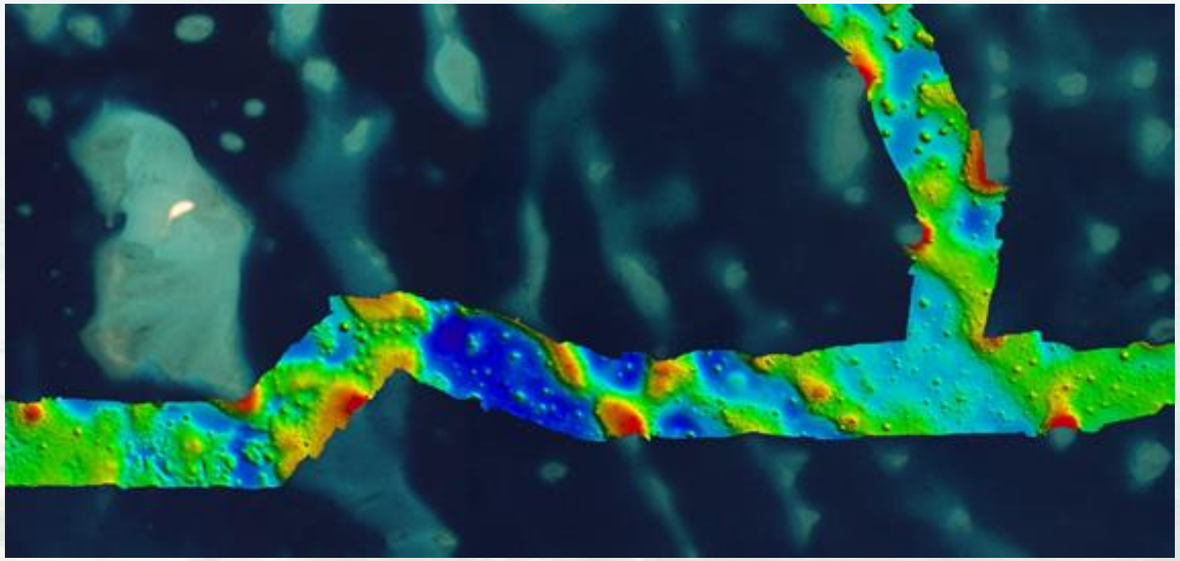
- Resource exploitation - fishing, minerals
- Environmental protection and management
- Maritime boundary delimitation
- National marine spatial data infrastructures
- Recreational boating
- Maritime defence and security
- Tsunami flood and inundation modelling
- Coastal zone management
- Tourism
- Marine science



Outcomes


Resource Management
Conservation & Environment
Bathymetry
Sea Level Data (Tides)
Backscatter
Sediments
Marine Structures
Boundaries
Seabed Features-
Currents and Tidal Streams
Gather Once, Use Many Times
Key Datasets can be used in many sectors to assist decision making
Fisheries & Aquaculture
Climate Change
Maritime Transport
Infrastructure Development
Tourism
Disaster Planning & Management





Challenges and Way forwards.

Challenges:

- Lack of proper equipment & software
- Uncertainty regarding barometric/sea level rise measurements and control points on remote islands.
- Limited experience and skills development
- Human Resources and capacity
- Complex land tenure systems and customary rights
- Atoll Geography and Land Fragmentation

Way Forwards:

- Procurement of survey equipment & software
- Integrated with other stakeholders
- More hands-on trainings
- Land Use Planning and Zoning

Kam Rabwa


KIRIBATI
for surfers
SURF FANNING AND KIRITIMATI ISLAND
Visit Kiribati