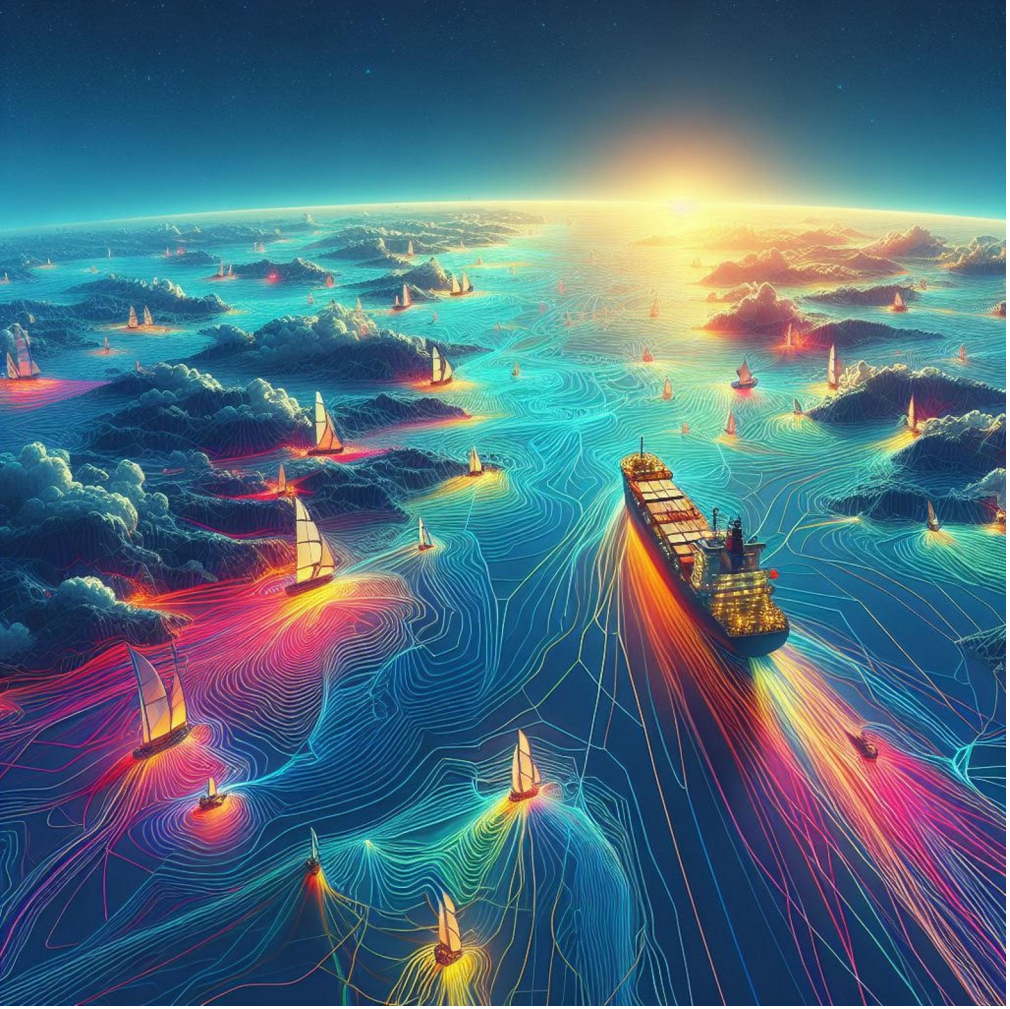

# Crowdsourced Bathymetry in Kiribati


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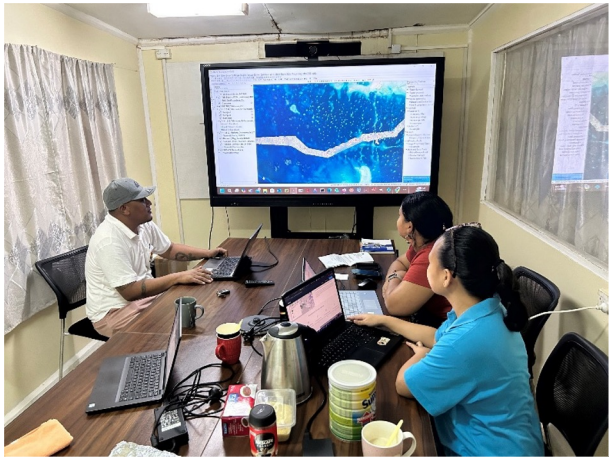
IHO International Hydrographic Organization

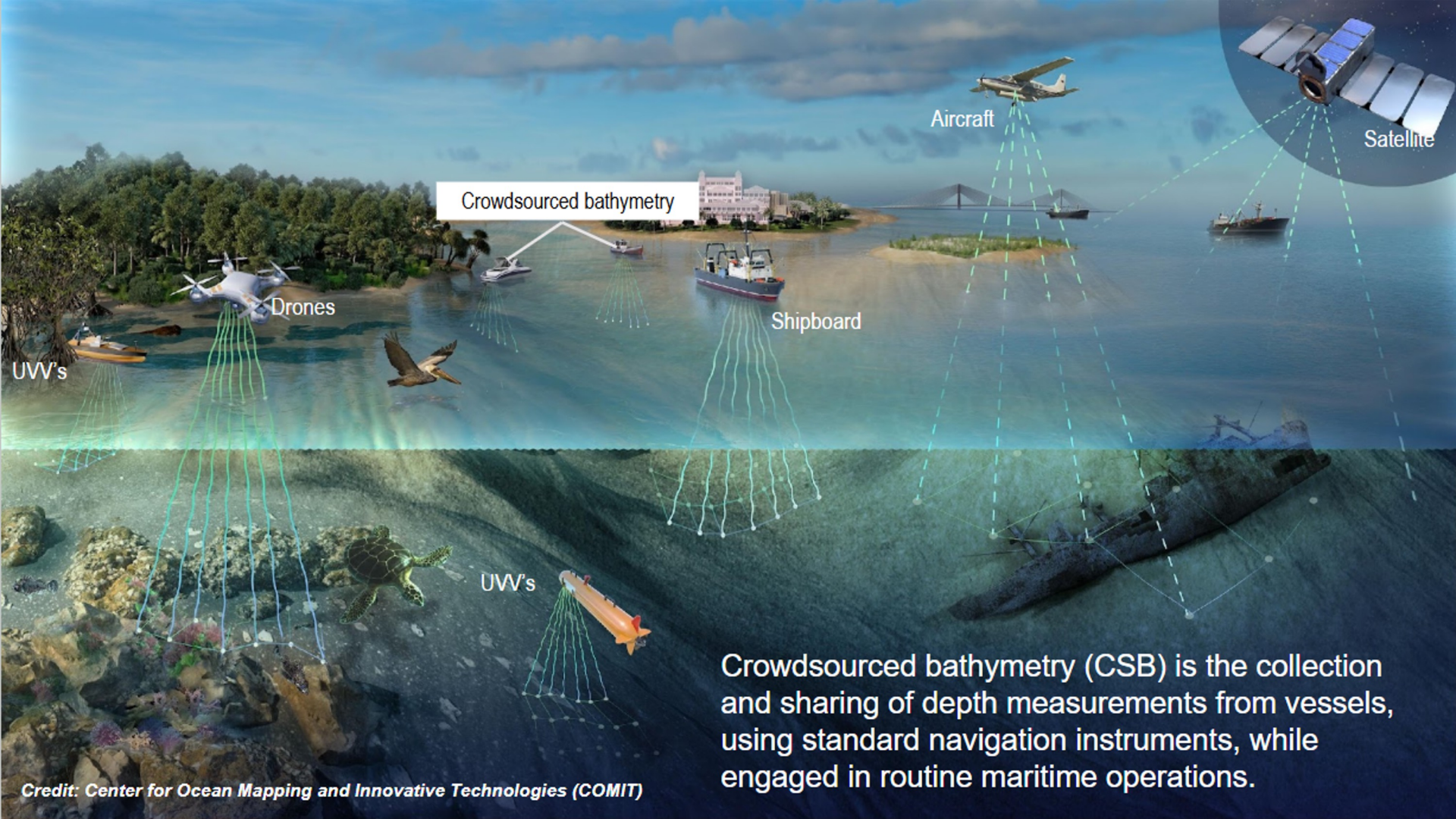
# Introduction

Marine Division of the Ministry of Information, Communication and Transport is the entity responsible for ensuring maritime safety in Kiribati.

Hydrographic unit is one of the units under the Marine Division for ocean mapping. Hydrographic unit team will conduct surveys to obtain data that can help to ensure safe navigation of ships and boats.

Hydrographic unit has recruited 3 new staff (1 Spatial Data analyst & 2 Surveyor Technicians).






Crowdsourced bathymetry (CSB) is the collection and sharing of depth measurements from vessels, using standard navigation instruments, while engaged in routine maritime operations.

*Credit: Center for Ocean Mapping and Innovative Technologies (COMIT)*

# Why Bathymetry Matters for Kiribati

Remote & Widely Dispersed Islands

PACIFIC OCEAN

Kirtimati

Tarawa

33 Atolls & Reef Islands

Phoenix Islands

Vast Exclusive Economic Zone (EEZ)

FIJI

Limited Survey Coverage

Navigation Hazards

Climate & Sea Level Threats

**One of the Largest EEZs in the World**

# Crowdsourced Bathymetry Implementation

- Consultation with different shipping lines and companies
- Vessel check for data logger installation

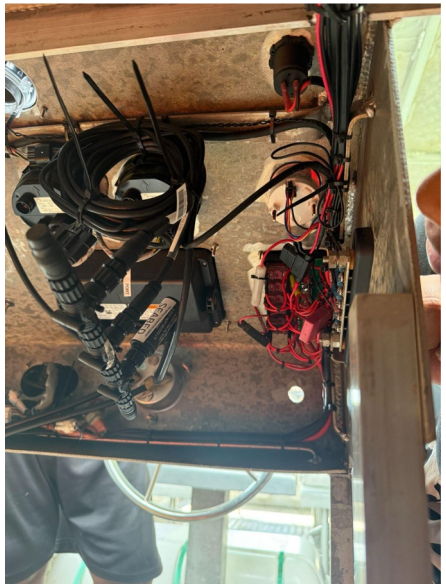

# How CSB Works?

Equipment Required

- Standard echo sounder
- GNSS receiver
- Data logger/software

Process:

1. Vessel collects depth data during normal operations
2. Data quality checked
3. Data Submitted
4. Used to update charts and bathymetric databases



# Vessels in Kiribati

# Results of Crowdsourced Bathymetry


# Contribution to the Kiribati Hydrographic Office

- Improved Nautical charting
- Filling Survey Gaps
- Risk Reduction
- Capacity Building

# Crowdsourced Bathymetry (CSB)

## Key Implementation Challenges

### 1. Limited Vessel Participation

- Low number of vessels contributing
- Limited awareness of CSB benefits
- Voluntary participation challenges

### 2. Limited Funding Support

- Insufficient financial resources
- Budget constraints for maintenance
- Dependence on donor assistance

### 3. Limited Compatible Vessels

- Few vessels equipped for data loggers
- Older vessels with outdated tech
- Technical integration issues

### 4. Delays from Ship Owners

- Slow approval process
- Operational priorities first
- Concerns about interference

## Overall Impact

Reduced data coverage & slower seabed mapping,
Limiting CSB effectiveness in Kiribati.

# Conclusion

Crowdsourced Bathymetry offers:

- Cost-effective data collection
- Enhanced maritime safety
- Support for national planning
- Strengthening of the Kiribati Hydrographic Office
- Contribution to Seabed 2030

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