



32ND IAF WORKSHOP “RESILIENT COASTS, RESILIENT EARTH”

HARNESSING SATELLITE DATA FOR RESILIENCE IN THE COOK ISLANDS



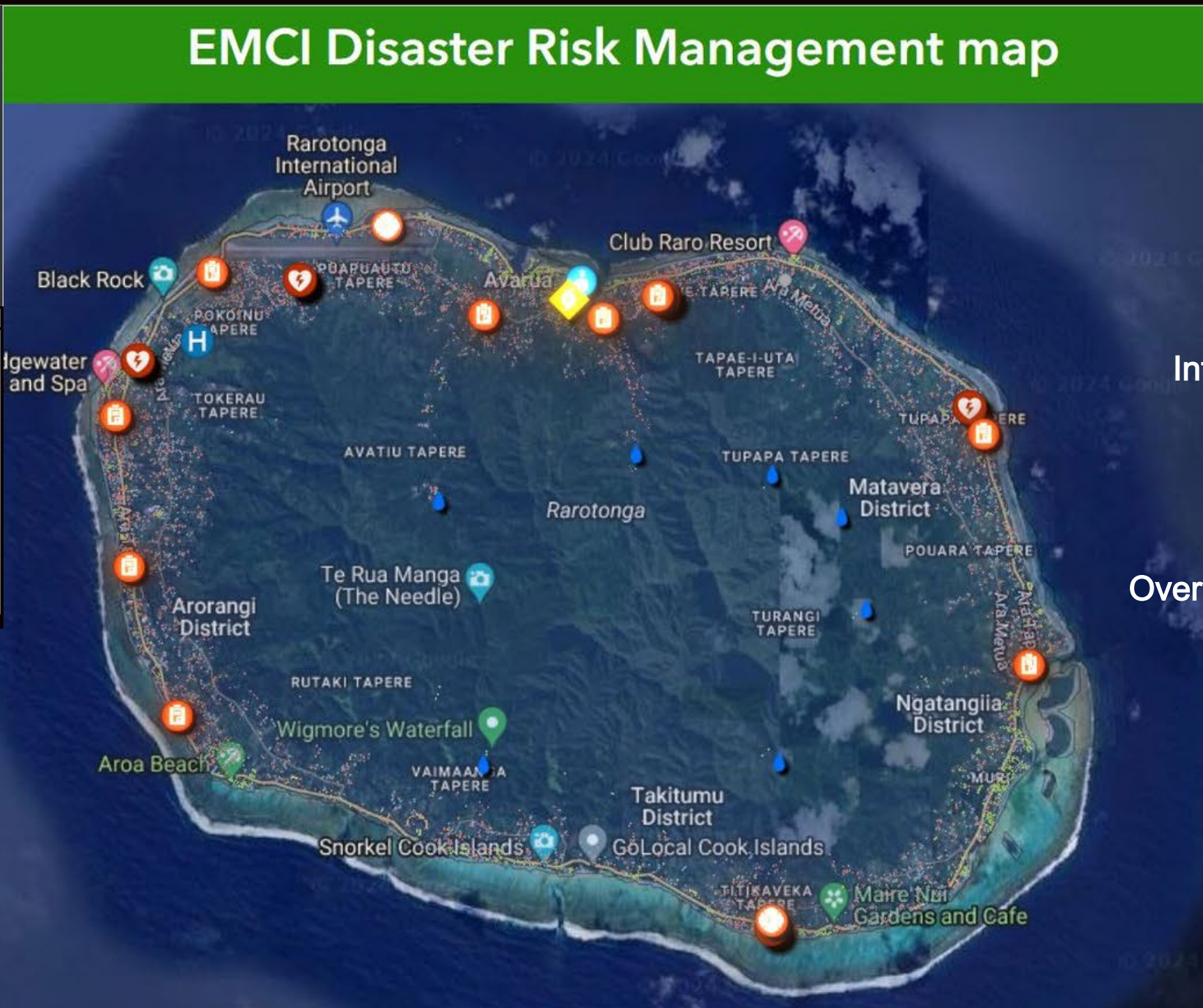
STRENGTHENING EARLY WARNING SYSTEMS

- Integration of satellite -derived hazard data for cyclone tracking, storm surge modelling, and tsunami risk alerts
- Coastal Inundation Models (via RiskScape Tool) use satellite imagery to:
 - Identify vulnerable homes & infrastructure
 - Estimate potential damage costs
 - Inform government planning & adaptation strategies
- Supports community -level preparedness and evacuation planning
- Cell Broadcasting and Tsunami Sirens



EMCI GEOPORTAL

EMCI Disaster Risk Management Dashboard



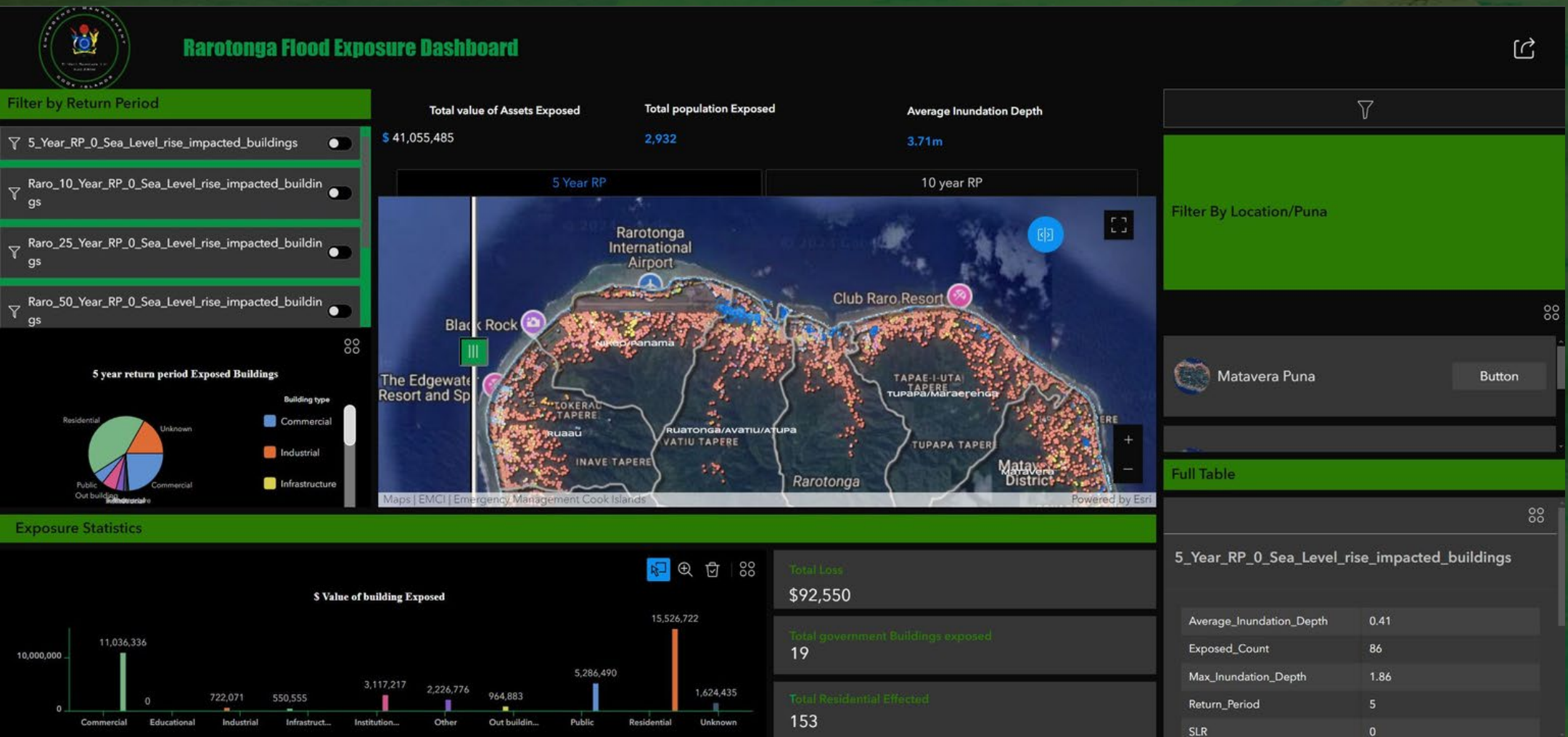
International Esri Special Achievement in GIS award San Diego, USA 2024

Over 100 users government wide on geoportal system



RISK FINANCING AND EXPOSURE MODELLING

- Utilising satellite/remote sensing & LiDAR for exposure modelling
- Model outputs: Coastal inundation risk zones, estimated financial losses under different scenarios, estimated evacuations
- Direct applications: Informs national adaptation plans, guides zoning & future infrastructure planning, strengthens disaster financing implications
- Forecast based financing





CONCLUSION & WAY FORWARD

- SATELLITE DATA IS AN INTEGRAL PART OF OUR DISASTER RESILIENCE OPERATIONS
- KEY OUTCOMES: STRONGER EARLY WARNING SYSTEMS, EVIDENCE BASED POLICY & PLANNING, IMPROVED POST -DISASTER LOGISTICS AS WELL AS ENHANCED RECOVERY AND RECONSTRUCTION
- FUTURE DIRECTIONS: DIGITAL TWIN DEVELOPMENT, ENHANCE REGIONAL DATA SHARING, SECURE SUSTAINABLE FINANCING FOR RESILIENCE TECHNOLOGIES
- CALL TO ACTION: PARTNERSHIP & SUPPORT TO ADVANCED MITIGATION TOOLS AND INFRASTRUCTURE TO COMPLIMENT ADVANCED TECHNOLOGY



MEITAKI MAATA

“DIVERSITY IS HAVING A SEAT AT THE TABLE,
Inclusion is having a voice,
and Belonging is having that voice be heard, to ensure
that no one is left behind”.