Development and Trialing of a Procedure for the Identification of Priority Ridge to Reef Sites in the Solomon Islands
Process Overview

Soil, Climate, and Topographical Data (InVEST SDR Model)

Catchment Outlet Land Sea Linkage

Sediment Plume Model Ocean Current, Depth, Time

Spatial Prioritization for Interventions or Future Protection
~2,000 catchments and sub-catchments
Ranking by Total Sediment Export

Total Sediment Export (tons)
- 0 - 10,000
- 10,000 - 20,000
- 20,000 - 40,000
- 40,000 - 50,000
- 50,000 +
Ranking by Coral Cover Under Modeled Plume

- Catchment Boundaries
- Coral Cover

Distance: 0 1 2 4 Kilometers
Multi-tier Approach – Intra-Catchment Level
Reforest 32 ha of grassland
Reforest 32 ha of grassland
- 10% reduction in sediment export
Key Findings and Conclusions

- Multi-tier approach for R2R prioritization
  - Catchment identification
  - Specific sites for interventions/protection
- Models are not reality - assumptions can lead to misrepresentation
- Calibration and validation from field data are essential

- Sediment model (InVEST SDR) is supported by documentation, user forums, and datasets (user friendly)
- Plume models may require technical or GIS support to implement (workflow from this project)
- Input and final Interpretation from local stakeholders is key