Annual Report

Community-Based Watershed Planning and Early Restoration Actions in Babeldaob Targeted Watershed Areas CRI-R2R-1

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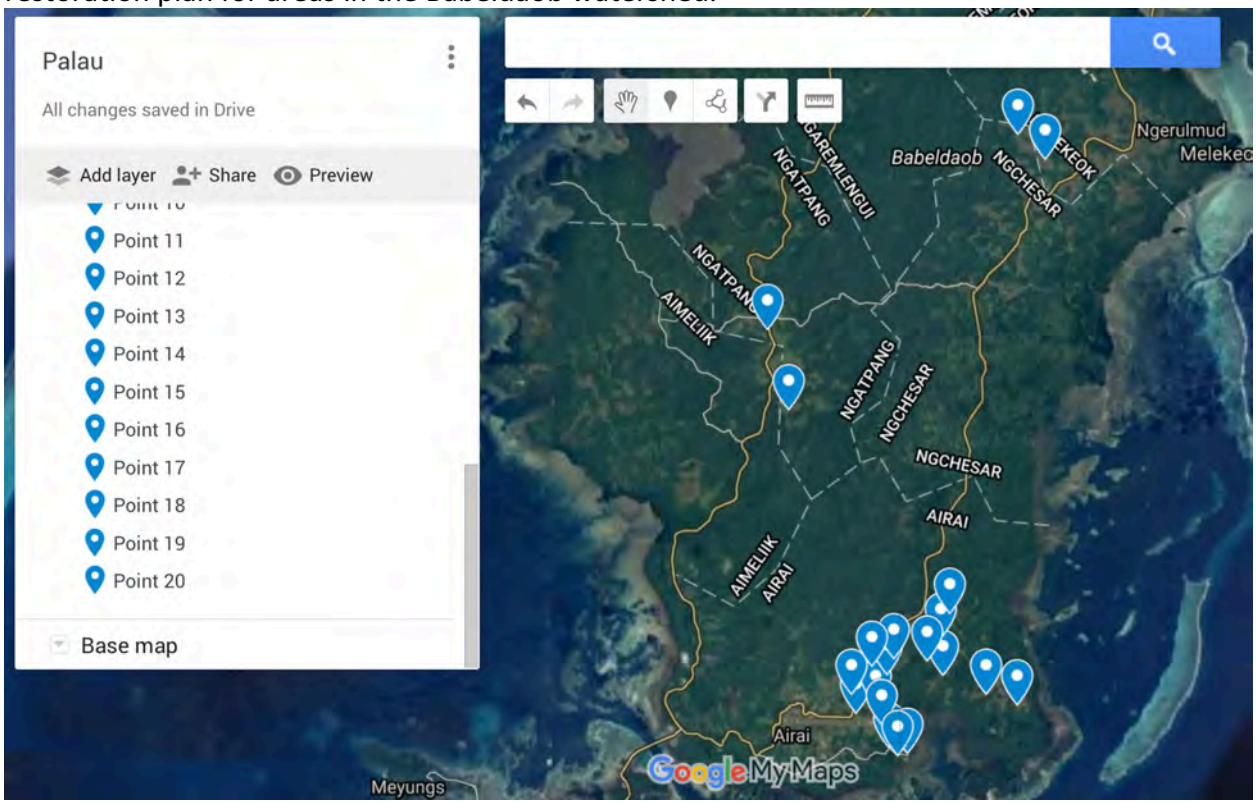
Progress

We began by assembling existing GIS datasets and existing watershed and coral reef reports – these include Digital Elevation Models (DEMs), Land use, orthophotos, watershed layers, vegetation and soils. We also reviewed coral reef and watershed reports include reports by Palau International Coral Reef Center (PICRC) and Palau Conservation Society.

We prioritized sites and visited many potential restoration sites for assessment of restoration potential including those associated with land clearing, urbanization and agriculture. We visited over 20 sites when we visited Palau and assessed them with project partners. After completing a number of projects with partners we will hold a restoration roundtable and develop a restoration plan for areas in the Babeldaob watershed.



Ridge to Reefs visited Palau in June 2018 and met with many project partners and began identifying potential restoration projects in the Babeldaob watershed. The project partners we met with included Palau Conservation Society, USDA-NRCS and the US Embassy, The Nature Conservancy, Ebiil Society, Naardock Nature Reserve. We also identified some early action projects including the restoration of Taro fields, the use of Taro fields as erosion and sediment control practices and for food security, low-cost Hydroseeding methods specific to Palau, the restoration of degraded soils using rotational grazing and biochar, vetiver treatment systems for piggery effluent as well as the need for functioning wood chippers for proper management of dry litter piggeries. Other priorities that we identified included slope stabilization adjacent to roadways using vetiver or a combination of vetiver, native species and Hydroseeding.

The immediate projects that we will be pursuing include: 1) working with Palau Conservation Society to restore inactive native Taro patches for sediment retention and nutrient processing (1-2 projects are in planning depending on final costs etc); 2) RTR is working on low cost practical methods for applying Hydroseeding to bare soil areas in Palau as increased development in Babeldaob is problematic for coral reefs and results in large areas of bare soil and runoff; 3) developing a vetiver treatment system for piggeries with overflow effluent on island; 4) Road Runoff control measures in new road construction using rolling dips, and sediment trap lemongrass and vetiver.

Figure 1. Visiting Taro fields in Palau with Palau Conservation Society which have historically protected coral reefs from upstream land based impacts

Figure 2. Bare soils adjacent to a new development area in need of additional stabilization efforts including low cost Hydroseeding methods

Figure 3. Location for rolling dip and sediment trap to reduce runoff volume and sediment transport on new development roads in Babeldaob (below is the restoration concept)

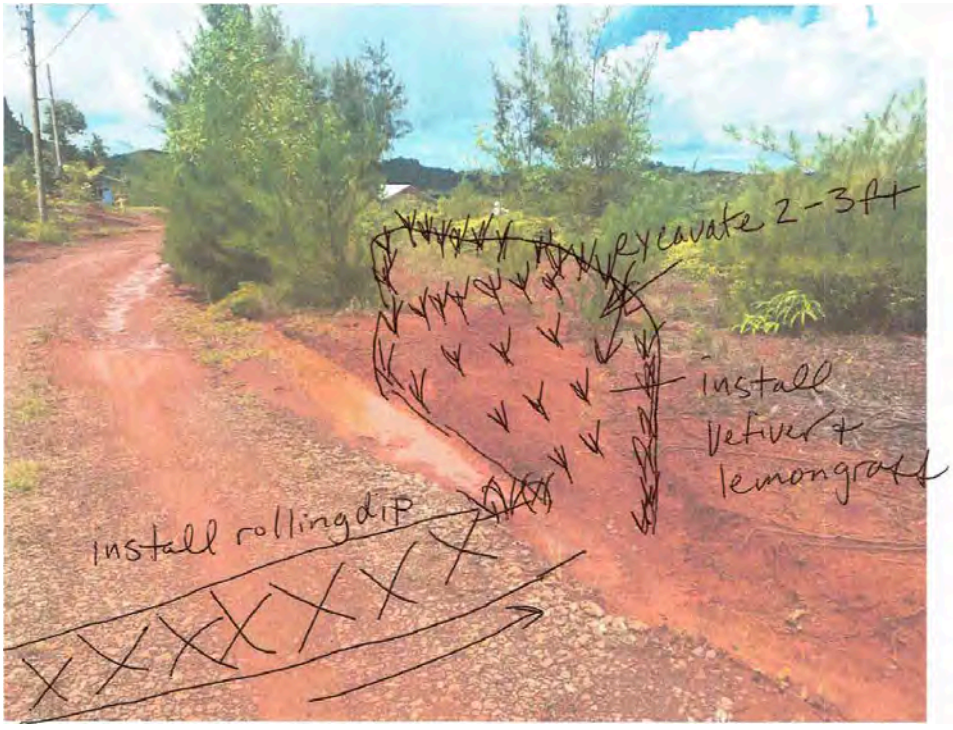


Figure 5. Eroding slopes adjacent to the Compact Road in Palau are a priority for stabilization

Figure 6. Piggery in Babeldaob and effluent gathering on the site with potential for surface water losses

Figure 7. Vetiver treatment system for a piggery in American Samoa – similar to what is proposed for one of the Palau piggeries