Participatory Scenario Planning to Assess the Effects of Future Climate and Land-Use Change on Groundwater Recharge, Tutuila American Samoa

Project Goals
Integrate climate information with management decisions to inform adaptation and island-scale planning by modeling future groundwater resources

Explore potential impacts of management decisions and climate change on water resource sustainability

Identify high priority areas and opportunities for adaptation and also potential barriers

Develop land use change scenarios and use to inform groundwater recharge modeling

Tutuila primary land uses

Conservation

Agriculture

Urbanized

Mixed-Use

Scenarios help us to:
- Consider plausible futures

- Rehearse protocols under possible future events

- Identify conditions that may help in strategizing or setting policy for uncertain future

- Highlight common themes or issues that cross multiple scenarios (i.e., infrastructure maintenance, better monitoring)

Scenarios do not predict the future!

New land use scenarios will be incorporated into an existing groundwater recharge model to assess the effects of future land-use change on water resources availability.

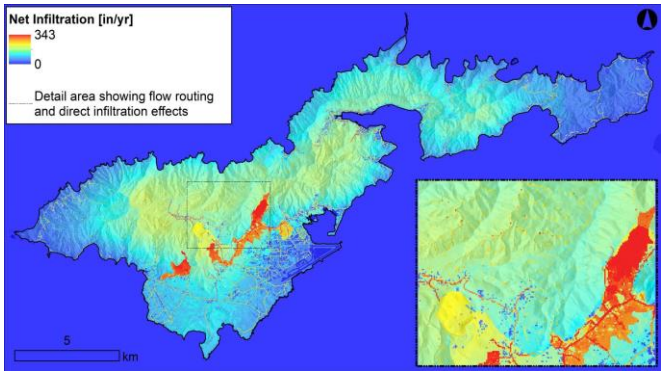

Figure 1: Existing model output showing spatially distributed groundwater recharge for Tutuila

We need your input!

We are assessing how climate change could directly impact the needs of water resource managers and other users. We are discussing with numerous local stakeholders to assess information needs, sources, ability of using that information, or barriers.

This project has the potential to enhance decision making about local water resource management in the face of an uncertain future

Fa'afetai Tele Lava for your time and contribution to this project! Please do not hesitate to contact us.

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The **UH Mānoa Water Resources Research Center** is focused on promoting understanding of critical state and regional water resource management and policy issues through research, community outreach, and public education.

The **Pacific Regional Integrated Sciences and Assessments (Pacific RISA)** program supports Pacific island and coastal communities in adapting to the impacts of climate variability and change.