



Principles of Quality Climate Change Adaptation

Principles in Action Presentation- Omar Gates

Q: Curious about how Tribal knowledge is used in creating climate prediction models: Does this help direct model parameterization or assessing outcomes? Both?

A: Hello Chris, and thank you for the question. GLISA does some modeling work at the University of Wisconsin-Madison, but I am uncertain about how they parameterize and initiate their model runs. During the presentation, I mentioned using the models data and information GLISA provided with Traditional Ecological Knowledges (TEKs) for the Tribal project work. The model analysis was used to complement the TEKs to show that these current changes can be possibly happen in the future. It would be great for models to incorporate Tribal knowledges so that more information can be present in the models' intial runs and projections.

Q: Omar, May I ask if you could give some examples on the two communications ?

A: Thank you for the question. Two-way communication is where you and your clients are working together throughout the process of your collaboration by giving feedback to information and resources provided. In my case, I would talk to partners to understand what their needs are for climate data and information. Once I provide the information requested, they would provide feedback about the usefulness of the material. I can provide additional information or curate more information that will be relevant to their work. This feedback loop helps in developing that two-way communication so that all parties are involved and satisfied with the end result of the work.

Q: Is favoring culturally-significant species contradictory to or in tension with a total ecosystems perspective? (Principles say safeguard people and nature)

A: Thank you for the question. My understanding of culturally-significant species is that these have been identified by the Tribal Nation as being culturally important to them. When doing their vulnerability assessments, Tirbal Nations identify the culturally-significant species as the ones that are the most sensitive and at risk in this changing climate. This doesn't necessary denounce the mentioned principle, and the cultural significance can be a way protect the most vulnerable species through prioritization.

Q: Omar are any communities in MI discussing being 'receiving' communities for climate refugees?

A: Thank you for the question. Although my expertise is not around climate migration, I am aware of the work that has been done with different organizations such as ASAP. I hope someone from ASAP can provide more information based on the Small Grant provided to them by GLISA on this work.

Q: Omar Gates -- Global Climate Models clued us in to climate change. How detailed/local are Regional Climate Models at this time? Need RCMs for local work

A: Thank you for the question. Regional Climate Models (RCMs) are downscaled versions of Global Climate Models (GCMs) that can provide information at finer resolutions. Depending on the application of the RCMs, a person could use statistically- or dynamically-downscaled RCMs to provide some guidance about future projections. However, bias is an issue that can skew the results of the RCM no matter what downscale method you use in your research. These biases can be inherited from the parent GCM due to factors such as its initialization or energy balance representation, and the amount of downscaling can determine the usability of the RCM because downscaling doesn't eliminate all biases. When using RCMs, it is best to use them as guiding information, and it is recommended to use local information to fill in the knowledge gaps where possible.

Q: Omar, regarding climate projection use, do you use scenarios to help make sense of the range of projections?

A: Thank you for the question. Yes, GLISA has a scenario planning process which helps others walk through the process of using climate projections in their work. The process focuses on the current work of clients and how they envision their efforts being useful based on a detailed climate scenario. GLISA uses the high emissions projection of the Representative Concentration Pathways (RCP8.5) for its work, but we have worked with other emissions scenarios based on the information available. Please feel free to look at our resource called "The Practitioners Guide to Climate Scenarios" on the GLISA website.