

# Manoomin Conservation with Tribal Ojibwe Partners

## BUILD RELATIONSHIPS WITH COMMUNITY PARTNERS & EXECUTE A PROJECT TOGETHER & SUSTAIN YOUR PARTNERSHIPS

***This case study focuses on a collaborative partnership between the Georgia Tech Ka Moamoa Lab and Indigenous Ojibwe communities focused on the conservation of manoomin (wild rice) to promote environmental sustainability and Indigenous sovereignty through shared knowledge and mutual respect.***

Contributed by:

Josiah Hester, Associate Professor of Interactive Computing and Computer Science @ Georgia Tech

Alex Cabral, Postdoctoral Researcher, Ka Moamoa lab @ Georgia Tech

Eric Greenlee, Graduate Research Assistant, Ka Moamoa lab @ Georgia Tech

Our team has been working since 2019 to build partnerships with Indigenous Ojibwe communities in the Western Great Lakes region of the United States. Our mutual goals center largely around the conservation of manoomin, the Ojibwe word for the wild rice that is central to both Ojibwe diet and culture, and how such conservation projects can promote Indigenous sovereignty. While funding has ebbed and flowed over the 5 years since we have formed this partnership, our commitment to strengthening relationships with these partners has remained steadfast. In the process of designing sensors together, we share knowledge that allows us to weave together new roles for technology with traditional ecological knowledge.



Participants from a community workshop on manoomin (wild rice) with several Ojibwe Tribes.  
Credit: Pam Silas

The partnership model of working **with** partners, rather than the client model of working **for** partners, has earned us grace and understanding when systems inevitably don't work as intended the first time. This patience allows us to "work at the speed of trust" and not rush through a process that is meant to be both socially and environmentally sustainable. One student on the project spent 3 months shadowing and learning from partner Tribal Natural Resource groups before we began exploring a technical solution, further promoting goal alignment and the weaving together of ways of knowing.

### LESSON LEARNED

"Establish partnerships through individual relationships and cement partnerships with community relationships. Often the best way to start a project is with a motivated individual partner, someone we may refer to as a "champion" of the project. Once a relationship is established and all parties agree to keep pursuing a relationship together, it is important to build capacity among all organizations and to institutionalize the relationships so that the entire project no longer hinges on a single person or relationship. Of course, the individual relationships remain important and powerful, but they should not be the sole governance structure holding the project together."

These partners have become not only our trusted advisors on valuable directions for our research, but also our friends. To new members of our team, we stress the importance of participating in cultural activities that have no direct link to our research projects. For example, for the past several years we have participated in the Healing Circle Run, an event that connects 10 tribes together by providing opportunities to pray for healing for all members of our human and non-human communities.

While the run and the Powwows that follow do not lead to publications or new sensor deployments, they allow us to bring our whole selves to the project and engage with partners as equals, each side bringing something to the table to allow us to build something greater than the sum of our parts.

Even before projects had been funded, we try to value partners' time investment by providing technical advice and support. In this instance, we provided low-cost wildlife cameras that capture context on natural landscapes when partners are unable to be there in person.

While we explore conventional and creative funding opportunities for Tribally-driven conservation priorities, we continue to find small ways to make ourselves useful, perhaps by looking over the specifications of a drone prior to a partner's purchase or showing how ChatGPT could be helpful in summarizing an extensive report. These experiences of prolonged and authentic partner engagement not only contribute to professional success, allowing us to pursue ambitious projects we could not conceive of alone, but are also deeply personally rewarding.

One of our teammates even served as the best man in a partner's recent wedding! And while we recognize that every relationship is unique and not every researcher will have the privilege to support efforts not directly tied to a paper, we have found it incredibly centering and motivating.

---

## LESSON LEARNED

"As much as you are comfortable with, bring your whole self to the table. A good way to address historic or ongoing power imbalances is to be vulnerable and transparent with partners, replacing the transactional "this-for-that" model with a genuinely co-envisioned project. Novel ideas that neither party could have imagined will likely emerge on their own, and partners will understand you as a person with tangible goals and give you more grace if you fall short."

---



Deploying the first iteration of our Makak buoy to sense manoomin (wild rice) with a partner from the Great Lakes Indian Fish and Wildlife Commission (GLIFWC)  
Credit: Eric Greenlee

## Principles in Action

- » **C2 - Learning Mindset:** Work with community partners, not for them; be humble and learn from partners as experts and innovators.
- » **F3 - Capacity Building:** Provide technical assistance, technology, and infrastructure which should ultimately strengthen community relationships and power. Prioritize community preferences regarding the use and ownership of all data, tools, and resources.
- » **G2 - Connectivity:** Maintain communication and connection to partners in between projects and funding cycles so as to build long-term, trusting relationships.

By weaving together multiple worldviews and knowledge systems over several years before pursuing any design decisions, we provided ourselves with a structure to authentically design systems together and to work at a pace sustainable for our partner organizations.

We approach strengthening community relationships and power primarily through the lens of Indigenous sovereignty. Our partners have legally-enforceable treaty rights to interact with the land in the way they deem good, but sometimes lack the data or infrastructure to

contest the power grabs of corporations and other governments. As much as possible, we work within existing governance frameworks, scaling the impact of project partners with technology. Additionally, prior to deploying long-term sensing infrastructure, we create data agreements with Tribal partners to settle on management and sharing practices. Recognizing that each Tribe is a sovereign nation, we negotiate with each Tribe individually while trying to settle on general principles and practices that are agreeable across relationships.

**Related Resources:**

- [Community-Driven Mobile and Ubiquitous Computing](#)
- [Researchers and Ojibwe to use environmental data to strengthen tribal sovereignty](#)