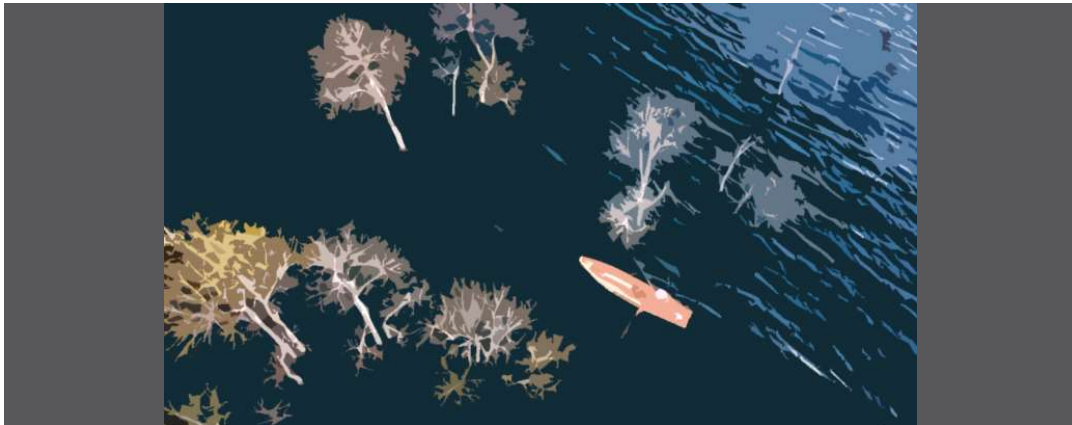


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## Data sovereignty in community-based environmental monitoring



Indigenous communities are an essential source of environmental information and knowledge, but using such knowledge in scientific monitoring may aggravate colonial injustices. A research team, coordinated by ICREA Research Professor Victoria Reyes-García, is working on making research conducted with indigenous communities more ethical and having the principles of indigenous data sovereignty applied in research monitoring programmes.

Credit: Quang Nguyen Vinh

Indigenous peoples and local communities have environmental knowledge systems that are fed by different sources of information stemming from their communities' often long histories of place-based living. Such information allows them to monitor environmental status and steward territories and resources. The rapid spread of mobile devices and digital platforms has accelerated the possibility of applying such knowledge to scientific monitoring, particularly in remote areas difficult and expensive to access for scientists. Community-based monitoring is increasingly proposed as a way to improve scientific understanding of biodiversity status and trends, land-use changes, habitat loss, local uses of plants and animals, drivers of environmental change, and the presence of pollution or invasive species, among other things.

However, when community-based monitoring is led by external researchers, this can often create challenges or harmful impacts to those communities, consequently aggravating colonial or historical injustices around data collection, right to knowledge, privacy, etc.

Indigenous peoples have unique rights over their knowledge (article 31 of the United Nations Declaration on the Rights of Indigenous Peoples). Recognizing the inherent rights of Indigenous peoples to govern the collection, ownership, access and use of data related to their land and cultural heritage, and ensuring these rights are met in the context of community and environmental monitoring, can contribute to redressing such historical injustices for Indigenous peoples as well as for local communities.

Indigenous data sovereignty (IDS) has been defined as “Indigenous people's rights to control data from and about their communities and lands, articulating both individual and collective rights to data access and to privacy” (Carroll et al. 2021: 300). In this article, we share various examples from around the world ranging from institutional and organizational-level mechanisms and guidelines to make research with Indigenous communities more ethical, to environmental monitoring initiatives that have applied Indigenous data sovereignty principles in their monitoring applications or programs. These efforts are especially important in a time when open data, which could aggravate concerns around privacy and sovereignty, has become a trend across many research institutions.

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### **References**

Victoria Reyes-García et al. **Data Sovereignty in Community-Based Environmental Monitoring: Toward Equitable Environmental Data Governance**, *BioScience*, Volume 72, Issue 8, August 2022, Pages 714–717, <https://doi.org/10.1093/biosci/biac048>

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