

Applying Indigenous Knowledge in the Comprehensive Everglades Restoration Plan (CERP)

Committee on Independent Scientific Review of
Everglades Restoration Progress (CISRERP)

Helen Regan

University of California Riverside



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National Academies Staff

Stephanie Johnson

Noel Walters

Emily Bermudez

Sam Kraft

Entire CISRERP Committee

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NATIONAL
ACADEMIES

Sciences
Engineering
Medicine

Progress Toward Restoring the Everglades

The Tenth Biennial Review - 2024



Consensus Study Report

Brief Historical Context

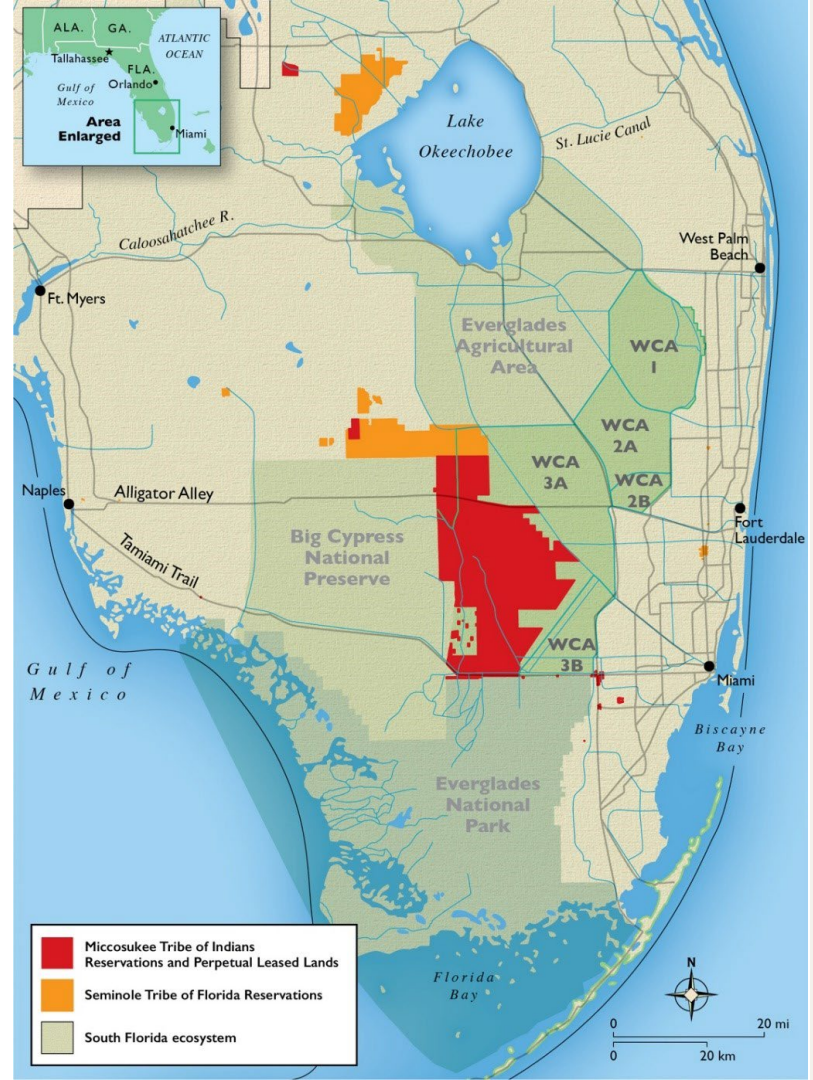
The Florida Everglades are the unceded homelands of the Miccosukee and Seminole Tribes

The Seminole and Miccosukee Tribes now inhabit a fraction of their historical homelands

Tribes permitted to hunt, fish, and trap on a subsistence basis and perform traditional tribal ceremonies within the Big Cypress National preserve including

The Seminole and Miccosukee Tribes are recognized as sovereign, domestic dependent nations

The Everglades are part of the Miccosukee and Seminole Tribes' identities, as locations for spiritual, traditional, kinship, and cultural connections and activities,



Significance of Tree Islands

The Native peoples of the Florida Everglades have deep connections to tree islands:

- To grow crops and find food
- For medicines and fibre
- Materials for shelter and canoes
- Refuge and protection against disease, slavery, massacre, and expulsion by colonizers, and later as retreat from displacement.

Tree islands are among the most vulnerable landscape features to hydrological changes

At least 70 percent of tree island land cover has been lost from the Everglades since 1940



Indigenous Knowledge

A “body of observations, oral and written knowledge, innovations, practices, and beliefs” about the natural world gained through lived experience

Indigenous Knowledge

- spans longer timeframes than western science
- based on intensive (e.g., daily) observations
- enhance understanding of ecosystems and deviations from baseline conditions
- provides insights that complement western science.



Best Practices for Meaningful Engagement

- Involve Tribal members in planning, research, and monitoring efforts, with funding where necessary.
- Foster co-stewardship and co-production of knowledge to support restoration and priorities of value to the Tribes.
- Encourage participation by Tribal members in planning and participation in meeting agendas.
- Provide opportunities for the Miccosukee and Seminole tribes to share knowledge in culturally sensitive ways.
- Create data-sharing agreements that center Indigenous data sovereignty and governance.
- Engagement is not outcome-based and will not necessarily result in Indigenous peoples agreeing with or supporting the intentions or goals of the project.

Data Sovereignty and Governance

COLLECTIVE BENEFIT

Data ecosystems designed and function in ways that enable Indigenous Peoples to derive benefit.

AUTHORITY TO CONTROL

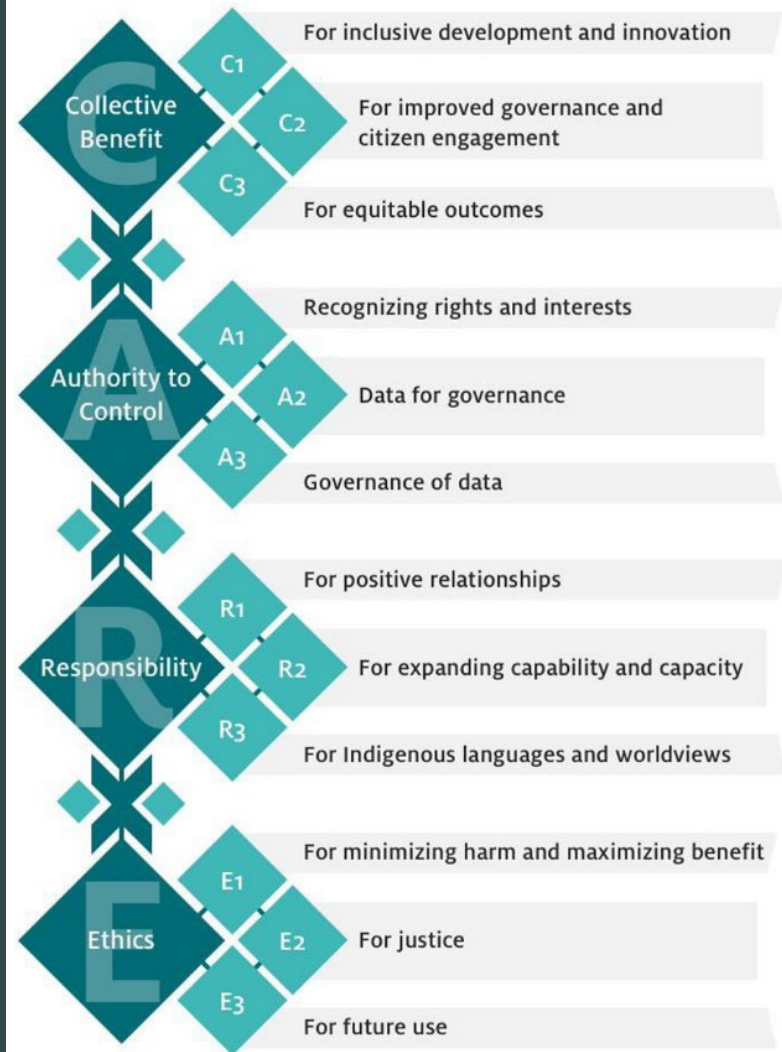
Indigenous Peoples' rights and interests in Indigenous data must be recognized and their authority to control such data be empowered.

RESPONSIBILITY

Those working with Indigenous data have a responsibility to share how those data are used to support Indigenous peoples' self-determination and collective benefit.

ETHICS

Indigenous peoples' rights and well-being should be the primary concern across data life cycle and the data ecosystem.



Example: Miccosukee Tribe Peer Review Process

Perceived challenges in reconciling Evidence Act and Information Quality Act with Indigenous ways of knowing and data sovereignty

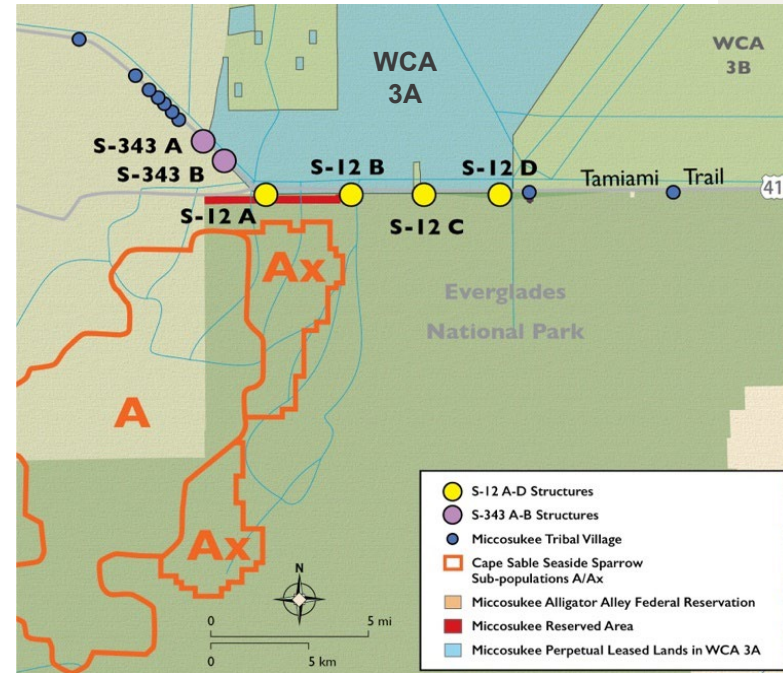
Procedure for collecting and presenting Indigenous Knowledge broadly ensures that Indigenous Knowledge can be considered consistent with the IQA

Involved the Tribe's Everglades Advisory Committee, representing the consensus view of the Tribe on environmental matters.

Centers primacy of Indigenous data sovereignty and governance while providing a mechanism for "verification but not reproduction by agency officials."

Used to inform a change in operations of the S-12A and S-12B gates

Ornstein, E. R. 2024. Indigenous Knowledge as evidence in federal rule-making. *University of Miami Law Review* 78(2):409,



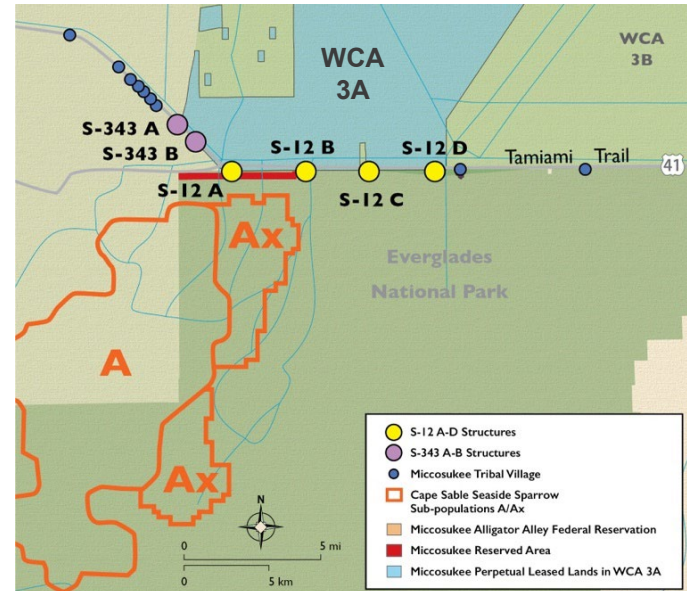
Application of Indigenous Knowledge (IK)

Consistent, meaningful engagement between CERP agencies and Tribes necessary for IK to be understood and applied.

Progress has recently been made to improve the quality of tribal engagement and cooperation

- WERP
- S-12A/B temporary deviations in 2023

Many other opportunities to apply IK for the benefit of both CERP and Tribes.



Actions to Enhance Application of IK

Training for all agency staff who interact with Tribal members

Ensure that opportunities for collaboration are not lost because of staffing resource constraints

Miccosukee internal peer review process facilitates consideration of IK in restoration

