

CASE STUDY AND REVIEW: DATA SOVERIGNTY IN COMMUNITY BASED ENVIRONMENTAL
MONITORING: TOWARD EQUITABLE ENVIRONMENTAL DATA GOVERNANCE

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Introduction:

The authors of the article, *Data Sovereignty in Community-Based Environmental Monitoring: Toward Equity Environmental Data Governance* aim to inform the reader of the issue of data sovereignty as it relates to indigenous populations. Stating there is a necessity for the management and governance of information for a specific nation state to reflect the “knowledge systems” of those who govern that state (Reyes-Garcia et al. 2022). It is imperative to consider application of data governance to populations outside of the traditional framework to circumvent any misappropriation of existing practices and belief systems. The authors discuss the complexity of indigenous policies, regulations, and culture, with hopes to increase data sovereignty and stewardship in access, use, and collection of data.

Data:

Environmental monitoring data, landscape mapping, and human rights issues are the primary data sources cited within the article for contest and understanding of application of data indigenous data sovereignty. The authors include MAPEO a mapping toolset created by the Digital Democracy and Indigenous peoples around the world, allows for users to “map their lands and collect evidence of environmental and human rights threats” (Reyes-Garcia et al. 2022). The authors cite MAPEO to provide a successful application of data stewardship and governance that ensure local ownership, exchange, and customization of data avoiding use of servers. Additionally, in Iceland an ice monitoring application, SIKU has been created to allow residents to access information regarding climate and environmental changes in indigenous communities. The authors suggest the Artic Eider Societies involvement in the applications creation is a documented improvement in environmental stewardship.

Relevance to Data Governance:

Data governance and Community-Based Environmental Monitoring are necessary to ensure proper handling of data throughout its lifecycle. The authors support the necessity for these concepts to be practiced and assert that “perpetuation of extractive knowledge practices often lead to Indigenous knowledge misuse or misappropriation” otherwise. This issue spans ethical and legal concerns as without

proper knowledge, representation, and informed rights of Indigenous data the potential misuse whether intentional or not, can lead to avoidable legal matters.

Relevant Legislation:

The authors do not focus on legislation, however include examples of organization “operationalization” of guidelines for interactions with Indigenous data (Reyes-Garcia et al. 2022). The Global Indigenous Data Alliance’s CARE (Collective benefit, Authority to control, Responsibility, and Ethics) and First Nations Information Governance Centre are examples of knowledge-based holders who own, control, possess, and dictate access to local data for their respective communities. The authors praise this value-based approach to data facilitation as proper recognition of Indigenous worldview and cultural context properly reflecting the core principles of Indigenous Data Sovereignty (IDS).

Data Governance Solution:

The authors provide the reader with an understanding of the areas of improvement for Indigenous data governance and stewardship. They suggest the voluntary nature of IDS practices are preventing Indigenous populations from enforcing their right to “assert their own sovereignty over data without seeking permission from nation-states” (Reyes-Garcia et al. 2022). To mitigate this, implementing Indigenous data requirements and regulations will increase IDS principle use and application ensuring “public accountability mechanisms” which encourage proper data governance (Reyes-Garcia et al. 2022). The potential hurdle is reflective of the reason we are at this point today. Garnering respect for Indigenous populations is an issue dating to the inception of most countries due to colonialism, the likelihood of application in practice seems low.

References

- Reyes-García, Victoria, Aien Tofighi-Niaki, Beau J Austin, Petra Benyei, Finn Danielsen, Álvaro Fernández-Llamazares, Aditi Sharma, Ramin Soleymani-Fard, and Maria Tengö. 2022. "Data Sovereignty in Community-Based Environmental Monitoring: Toward Equitable Environmental Data Governance." *Bioscience* 72, no. 8: 714–
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