Dear Reviewer,

Thank you for your comments. Responses (in blue) are written below the respective comments (in black).

***COMMENT**: Add a mention regarding "considerations for Indigenous Data Sovereignty need to be addressed" and reference to the CARE principles around line 75 in the text. https://www.gida-global.org/careprinciples https://doi.org/10.5334/dsj-2020-043.*

RESPONSE: We plan to revise the text to the following (**new text in bold**): "For example, ensuring broad participation and codesign with interested parties (i.e., stakeholders, organizations, agencies, landowners, land managers, rights holders, and the public), **including considerations for Indigenous Data Sovereignty (Carroll et al, 2022),** remains a key limitation for distributed data generation (Molla et al., 2025; Muraina and Jimoh, 2022)."

We will also add, in Section 3, the following: "Decisions around sharing of data and outcomes must be made with intentionality, particularly with regard to Indigenous Data Sovereignty where application of the CARE principles (Collective Benefit, Authority to Control, Responsibility, and Ethics) may be appropriate (Carroll et al. 2020; Jennings et al., 2023)."

***COMMENT**: The FAIR principles are first referred to in line 96 of the text. The reference that is included in line 367 should be included here instead.*

RESPONSE: Thank you. This will be corrected.

***COMMENT**: Line 218: Add more background describing workshop participation, structure and outcomes and how they were used to inform the best practices section findings for context.*

RESPONSE: We plan to revise the text to the following (**new text in bold**): "In this section, we provide best practices gleaned from the perspectives of **23** attendees of a **half-day** virtual workshop held in 2025, as well as from assessing common successful approaches across over 35 distributed data generation efforts. **Attendees were from academic, government, and industry sectors, with their research generally focused on distributed data generation in biogeochemical and environmental domains. The workshop included flash talks, whole group discussions, and smaller breakout group discussions, each with varying outputs such as free-form text notes as well as polls, which ultimately led to a synthesis that informed these best practices. It is important to note that both the workshop attendees and the assessed data generation efforts are geographically biased, with many from the United States, which informs the perspectives represented.**

***COMMENT**: Line 259: Mention the need for depositing data in "trusted community repositories" and add a reference to the Trust principles for repositories https://www.nature.com/articles/s41597-020-0486-7*

RESPONSE: We plan to add a reference to the TRUST principles with the following revision (new text in bold): “Centralized and relational data repositories, **including community repositories that ascribe to the TRUST Principles (Lin et al., 2020)**, can further aid in data findability and scientific discovery (Chu et al., 2023). **Making data FAIR is not enough: repositories must also demonstrate that they can securely preserve data, maintain its integrity, and keep it accessible over time through transparent, user-focused, and reliable technology (Lin et al., 2020).**"

***COMMENT**: Line 367: Provide a brief description or reference to what you characterize as “AI-readiness of these data”? For example the ESIP AI-readiness checklist, https://doi.org/10.6084/m9.figshare.19983722*

RESPONSE: We plan to revise this sentence to provide more information about what we characterize as “AI-ready”. Revised text will include the following description: “Briefly, we define AI-ready data as data that are well-structured, follow recognised standards, use consistent meanings, and clearly document its sources, limitations, and any necessary anonymisation (Majithia et al. 2026). To be AI-ready, data must also come with machine-readable metadata describing data contents, provenance, bias, and usage conditions, and be easy to access and track through suitable portals and version control (Majithia et al. 2026).”

***COMMENT**: General comment: Change all https links to websites to formal citations and/or DOIs where possible. Non DOI links may rot over time and become unusable.*

RESPONSE: Thank you for this suggestion. We will review all the website links and revise to formal citations or DOIs where possible.