Legal mechanisms and environmental data governance: Questions to start the conversation

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Currently, formal legal mechanisms are not widely used by data stewards who collect, use, and share community-generated environmental data. There are often barriers to their application: since these tools are still emerging and newly used in this space, there are not many case studies to learn from, or tools to spur collaboration. It can be costly to hire legal support, and without examples of existing proofs of concept, it can be difficult to justify the financial cost.

Yet the applications of legal mechanisms, such as those listed below, could be hugely beneficial for projects using and sharing community-generated environmental data. These legal mechanisms and tools can support safer and easier sharing of data, which in turn, could support movement toward advocacy, research, or sensemaking goals.

**LEGAL MECHANISMS**

**COLLABORATIVE RESEARCH AGREEMENTS**

“A type of agreement, often created by a university, government agency or laboratory, designed for a specific research project implemented by two or more parties, and outlines materials or expertise each party brings to the research project, and [the] anticipated contribution of each” (National Institutes of Health)

Examples include: terms for sharing of confidential information and data; a simplified research plan

**CONTRACTS**

"Extremely flexible legal tools; a set of legal terms that govern what can and cannot be done [with data]. A contract creates obligations between the operator of a project and their [sic] users“ (Keith Porcaro, Building a Fisherman-first Data Ecosystem)

Contracts are an umbrella term for other legal mechanisms; many mechanisms listed here include some contractual language

**DATA SHARING AGREEMENTS**

This category includes conditional use agreements and community use agreements; “Formal contracts that detail what data is being shared and the appropriate use for the data” (USGS)

Examples include: this data sharing agreement template from the National Estuarine Research Reserve System Science Collaborative or this geospatial data sharing agreement from the Pennsylvania state government

**DATA LICENCES**

"A legal arrangement between the creator of the data and the end-user, or the place the data will be deposited, specifying what users can do with the data" (How to Fair)

Examples include: Creative Commons licenses, the Kaitiakitanga License

**DATA TRUSTS**

“A structure whereby data is placed under the control of a board of trustees with a fiduciary responsibility to look after the interests of the beneficiaries - you, me, society” (Anouk Ruhaak, Data Trusts: Why, What and How)

Examples can be found in the Data Stewardship Literature Catalog
This list is designed to facilitate the start of conversations between stakeholders in any community science or data project about the use of legal mechanisms to support environmental data sharing. Stakeholders who could be involved in conversations using this resource include community data stewards, interested community members, legal or intermediary organizations working to support data projects, and research collaborators. Individual projects and stewards should decide who is involved in various aspects of collaborative examination. This list is also designed for data projects who want to reflect on if and how to use legal mechanisms to support data sharing and management.

The following questions were generated during an Environmental Data Lab, hosted by OEDP, focused on the legal layer of data governance. Detailed documentation of the Lab can be found here, and participants who were a part of the Lab are listed at the end of this resource.

PURPOSES & GOALS
Understanding the project's very basic goals for their data usage is foundational to any conversation about the integration of legal mechanisms, as specific goals can warrant the use of specific mechanisms.

- What is the purpose of using this data? What problem are you trying to solve with data?
- Where is the data coming from? What is it about?
- Does the purpose or goal vary among involved stakeholders? If so, how?

PEOPLE INVOLVED & PROJECT CAPACITY
Understanding the social aspect of any data project can often reveal the incentives for participation, the history of the people involved and their interaction with data, and what capacity is available that may expand or limit a project's efficacy.

- Who are the main stakeholders and what are their roles?
- Who owns the data?
- How does each stakeholder benefit from their participation?
- How might community members want to be involved? What tools are already in place to engage the broader community?
- How are decisions typically made in the community or about this project?
- Have you utilized legal mechanisms before? If so, what were they and how did it go?
- Have other communities used this tool or mechanism before? If so, are there lessons available from similar endeavors?
- With whom would you like to share data?
- Are there power dynamics or political levers involved with sharing or using the data? If so, what are they and how do they affect the purpose of your data use?
- What are the pressing (policy) issues to be addressed? Who are the relevant actors involved in those issues (e.g., city, county, or state agencies and offices)?
- What resources do you have for designing and executing a particular legal mechanism? (e.g., people with legal or technical expertise, skill sets, computing power, financial resources)?
**ACCESSIBILITY**

Accessibility is a broad category that includes how open or closed the data is, the formats in which they are available, and potential conditional uses. It is critical to understand who should have access to the data, and in what capacities, to establish the appropriate legal mechanism that shares, protects, or stores data.

- What are the conditions of access (e.g., do you have to contribute data to be able to access the dataset?)
- In which formats and through what interfaces will the data be available?
- Can you allow queries from users without sharing the data itself?
- What kind of visualizations are possible with the interface?

**RISK**

Data holds value, and oftentimes, this can include personal or sensitive information about the project's community members or property. Managing risk can be a central reason why a data project may opt for integrating legal mechanisms into their data stewardship.

- What are the risks or liabilities of sharing the data? What concerns do you have about this data being misused?
- Is it important to restrict certain uses or users of the data?
- Are there tools or risk assessments that can be used to support an inventory (at the onset of the project or on an ongoing basis) to assess risk, opportunity, and impact?
- What kinds of risk mitigation measures are currently in place?
- Does the data contain personally identifiable information or locations? If so, what level of anonymization or de-identification is needed, and is that possible with the type of data in consideration?
- What should happen if data usage changes along the way (e.g., if you want to collaborate with another collective/organization)?

**STORAGE**

Asking questions about storage is necessary to understand certain aspects of technical capacity, maintenance, and the related costs, and is inherently linked to questions about project timelines.

- Where is the data housed? Will this change over time?
- How will you handle data decay and documenting provenance?
- How long should this information be kept?
- What happens after the current funding runs out?

As mentioned in the introduction, this list of questions is merely the beginning of collaboration and is meant to spur conversations on how legal mechanisms could support the priorities of community data projects. Those conversations will hopefully determine: what kinds of legal interventions are needed, if any; how mechanisms and interventions can support existing governance structures; and the resources necessary for next steps. As a partner resource to this list, OEDP is developing case studies on how different answers to these questions could indicate compatibility with a particular legal mechanism.
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