

Exploring the Opportunities and Challenges of Implementing Open Research Strategies within Development Institutions



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Acronyms

DMP	Data Management Plan
IDRC	International Development Research Centre
IKS	Indigenous Knowledge Systems
OCAP	Ownership, Access, Control and Possession
OCSDNet	Open and Collaborative Science in Development Network
RIO	Research Ideas and Outcomes Journal

Executive Summary

The development and implementation of a data management plan (DMPs) was investigated as a sub-project of the Empowering Indigenous Peoples and Knowledge Systems in Climate Change and Intellectual Property Rights project, with a special attention to indigenous knowledge issues. Through developing DMPs practical aspects relating to required, support, challenges encountered whilst carrying out the audit, and challenges related to storage and management of DMPs have been documented. The DMP will be published as an open access paper in the Research Ideas and Outcomes on-line journal. Preliminary findings were shared during a joint panel session at SciDataCon, 11-13 September 2016. An interesting finding is that as a result of working through DMPs and exploring data openness we decided not to share data relating to indigenous peoples and their knowledge on philosophical grounds. This is because the working assumption of data as objects ignores indigenous peoples' context and history and also the relationships and entanglements associated with the research process and the resultant 'data'.

The Research Problem

The "Exploring the opportunities and challenges of implementing open research strategies within development institutions" project was a research project which investigated open data policies in the specific context of development research institutions. The project included eight International Development Research Centre (IDRC) grantees as case studies, each of whom agreed to develop and consider implementing open data management and sharing plans, and to provide reflections on the process.

Natural Justice's "Empowering Indigenous Peoples and Knowledge Systems in Climate Change and Intellectual Property Rights" project, which is part of the "Open and Collaborative Science in Development Network" (OCSDNet) programme, was selected as one of the case studies. This project included partnering with indigenous communities, two universities and researching issues related to indigenous knowledge systems (IKS). The focus of our participation in the open data pilot was to (i) test and refine implementation guidelines for development research funders' open research data policies; and (ii) examine specific ethical and implementation issues related to IKS.

All the participating case study projects focused on the following research questions:

1. What types of support, both financial and technical, are required by IDRC partners to implement open access data management plans effectively?
2. What challenges do IDRC partners face with regard to carrying out data audits?
3. What challenges do IDRC partners face with regard to the storage and maintenance of research data?

Synthesis of Research Results and Development Outcomes

As indicated, our project was a case study in a larger programme, thus below we provide a synthesis of our findings in response to the guiding research questions.

1. What types of support, both financial and technical, are required by IDRC partners to implement open access data management plans effectively?
 - Access to an expert: in our case this would preferably be an indigenous person who is an expert on IKS issues, possibly an academic, who could highlight key issues from an indigenous perspective (alternatively finance to access such expertise for their input).
 - Access to a legal expert with knowledge of international instruments related to human rights and IKS also national laws relating to IKS (alternatively finance to access such expertise for their input).
 - Advice on internet security issues – which software, platforms, repositories are these and which are recommended?
 - A short, accessible resource on norms and emerging issues in the open data field, understanding current open data norms is useful, and also grantees should be encouraged to critically consider existing structures and norms and engage with these. Assumptions should be questioned, e.g. researchers assume their institutional ethics procedures are all that is required to address ethics issues. We have found that this is clearly not the case relating to researching with indigenous peoples and IKS.
2. What challenges do IDRC partners face with regard to carrying out data audits?
 - The working assumption of data audits is that data can be broken down into easily identifiable 'objects' e.g. interview transcripts, images, coded analysis, etc. This approach makes the 'data' transportable, de-contextualised information. Managing 'data' as objects can lead to losing the context of the information. However, it is the very histories, and context of indigenous peoples that need to be recognised and engaged with during all parts of the research processes.
 - As researchers, our concern is that indigenous 'data' is not just the object, such as an interview audio, it is the set of relationships they sit in. Indeed, indigenous peoples histories and context cannot be dis-entangled from the 'data'.
 - Regards researching with indigenous peoples, free, prior and informed consent (FPIC) is an international human rights norm regards projects or activities that will impact them. FPIC would need to be conducted with communities prior to any decisions regards making data open, and in particular ensuring that the 'informed' element is attained requires a deep and nuanced understanding of indigenous rights, national legislation, intellectual property rights issues and an ability to consider not only the present, but also potential future scenarios and implications of sharing IKS openly.
3. What challenges do IDRC partners face with regard to the storage and maintenance of research data?
 - Ethical research practices with indigenous communities should strive towards Ownership, Access, Control and Possession (OCAP) of indigenous information and data by participating communities – thus the storage and maintenance

infrastructure, resources, and capacity of participating communities needs to be considered.

- Security – to ensure that the stipulations of the interviewee consent forms are met.
- Maintenance: Post-project storage and management capacity.
- Storage and management needs to be agreed up-front, so that all those participating in the research are aware of implications and timeframes.

The research findings are feeding into the Empowering Indigenous Peoples and Knowledge Systems in Climate Change and Intellectual Property Rights” project, and in particular discussions on the community-researcher contracts approach. They are contributing towards a much deeper understanding of open data issues, especially regards to ethical and legal issues.

An interesting finding is that as a result of the research exploring data openness we decided not to share data on philosophical grounds as the working assumption of data as objects ignores the context and history of indigenous peoples in which the data is situated and the relationships and entanglements associated with the research. Research processes with indigenous peoples should strive towards ownership, control, access and possession (OCAP) by indigenous communities, and they must be supported to make well-informed decisions regards if, and how their data is shared openly. To ensure ‘informed’ decisions are reached, expert ethical and legal advice may be required and this should be provided by neutral actors.

Methodology

Our project and others in the Open Data Pilot used a common methodology to ensure our findings were comparable across projects. We used data inventories and data management plans (DMP), these provided frameworks for our considerations regards the implications of open data policies.

The data inventory provided a simple framework to consider the data outputs that our project produced. The Portage Network¹ provided the template for the DMP, the document is stored in the cloud, we have relatively reliable and fast internet speeds in South Africa, so this was suitable for us. Portage’s framework provided a good basis to assist us to think through in a logical manner, the steps involved in storing and managing open data, sections related to ethical, legal and intellectual property issues, were particularly relevant to our project. The disadvantage of Portage was that for those new to the DMP, one could not view all the sections in their entirety initially, rather one had to fill in sections and then move forwards.

Project Outputs

In terms of our individual case study, the project outputs are summarised below:

- i. Presentation of the project, it’s aims and motivations for data sharing at the orientation workshop and discussions of the issues and challenges associated with data sharing around IKS. Presentation attached (Annexure A).

¹ The Portage Network is dedicated to the shared stewardship of research data in Canada, available at <https://portagenetwork.ca/>

- ii. Development of Data Management Plan (DMP). The DMP is planned to be published in the online journal Research Ideas and Outcomes (RIO). Prof. Neylon is assisting Cath Traynor to finalize and submit. We aim to submit for publication by the end of February 2017.

Professor Neylon produced an 'Interim Report on Data Inventories and DMPs', which includes some insights from the project, available at

https://docs.google.com/document/d/1SiThGC5_LJoPpJNUgY4nscSJXbg4s1iZn4yJeS6rl/edit

- iii. Presentation - one of 3 case studies to present at the 'Data Sharing in a Development Context: Initial Findings from the IDRC Data Sharing Pilot' session at SciDataCon, 11-13 September 2016.

A description of the full panel session is available at

<http://www.scidatacon.org/2016/sessions/56/>

A summary of our project presentation is available at

<http://www.scidatacon.org/2016/sessions/56/paper/271/>

The project presentation is attached (Annexure B).

- iv. Presentation on findings at the final meeting of the IDRC Data Sharing Pilot and contribution to discussions. The final presentation is attached (Annexure C).

Regards sharing of research data from the Empowering Indigenous Peoples and Knowledge Systems in Climate Change and Intellectual Property Rights project: our approach considered key implications of making the data open and these are discussed in detail in our DMP.

Problems and Challenges

Ethics has been a key concern of this project as well as the larger Empowering Indigenous Peoples and Knowledge Systems in Climate Change and Intellectual Property Rights project. Our approach has been to engage in a critical manner and explore issues and reflect upon these. Thus, this project has been a work-in-progress, critically engaging on issues, with the aim to develop ways forwards. We have found that in some cases university policies can act as barriers to ensuring the rights of indigenous peoples are met in research processes, and that their ethics processes may not adequately take into account the particular context of indigenous peoples.

Administrative Reflections and Recommendations

Regards administration, in this instance IDRC used an intermediary organisation to administer our grant, this related in delays regards negotiating and signing the contract and distribution of funds at the start of the project. IDRC should allow extra time when intermediary organisations are used and for the content of contracts to be negotiated between all parties prior to the start of activities, as the inclusion of an additional institution adds another layer of complexity. On the positive side, the intermediary organisation was already administering our main grant, and thus financial reporting processes were streamlined, as we were familiar with their reporting requirements and processes.

Empowering Indigenous Peoples and Knowledge Systems Related to Climate Change and Intellectual Property Rights

Background & Motivation

- NJ legal advisor to National KhoiSan Council
- Shared interests in climate change, it's impacts and
- communities self-determination
- UNFCCC Guidelines for IK in climate change adaptation vague & assumed IK open



Project Aims

- Examines processes of open and collaborative science related to indigenous peoples knowledge, climate change, and intellectual property
- Challenges fully open practices and processes in context of IK in
- climate change adaptation
- References UNFCCC Guidelines, national laws and policies, and customary norms
- Develops a Critical Participatory Action Research Methodology
- Includes capacity building element for indigenous youth and advocacy

Motivation for Data Sharing Programme

- Opportunity to work through the 'open'
- aspect regards IK data
- Consider ethical challenges given university ethics procedures, IK laws & policies & NJs role as legal advisor
- Expert guidance
- Share & learn with open data practitioners
- Inform policy – partners & IDRC

Should Data be Shared?: Situated Openness and Struggles over Indigenous Peoples' Knowledge, Climate Change, and Research Contracts in South Africa

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Background

A multi-institutional research group initiated a project to examine how indigenous peoples articulate the effects of climate change in South Africa

Research team

Natural Justice (NPO-SA)

Indiana University (USA)

University of Cape Town (SA)

Griqua and Nama peoples (SA)

Competing Needs

Confronted by competing needs to share and not share data and findings

- Funders required researchers to explore data sharing, and report findings through open access publications and creative common licences
- Given histories of colonisation and the taking of indigenous knowledge (IK) , Griqua and Nama sought to negotiate access to their communities, their knowledge, and how research would be conducted and used

Our Response

IRB/REC offered potential opportunity to formalise and strengthen collaboration between academics and IPs:

- IPs listed as researchers as well as human subjects; IRB requirements burdensome
- Provided historical background to recognize IPs knowledge as structured by histories of colonisation – rejected as ‘superfluous’
- Adherence to normative standards of IRB and not going beyond it

Our Response

Developed 'Community-Researcher Contracts',
to:

- Make research institutions more accountable to communities
- Adhere to international and national laws on IK
- Ensure FPIC
- Recognize Griqua/Nama as rightful owners of IK

Researcher Response (cont.)

- Address the collective element of IK
- Document expected outputs and gain consent for them
- Negotiate fair and equal beneficiation
- To explore ownership, copyright and IPR issues related to IK and expected new knowledge arising from the research

Challenges

International law: deals with IK in a fragmented fashion
- lack of clarity of what is required in practice (Savaresi,

Research Paper Series No. 2016/16)

National Law: dynamic; individual & communal aspects of IK not comprehensively addressed - tensions; IK protected if put into SAs NRS

Legal jurisdiction: USA not signatory to CBD; what national laws govern the contract?

Ensuring confidential information/sacred knowledge is not put into the public domain

Identifying what needs to be negotiated, and the process for negotiation

“Contextualised data”

Research has made us think differently about notions of open data;

- IK related ‘data’ – deeply contextualised, it is entangled in culture, histories and politics – want to capture in context – sharing can decontextualise the ‘data’

“Situated Openness”

We take a more critical approach embracing what we loosely call “situated openness”

A way of doing research that assumes knowledge production is situated within particular historical, political, and socio-cultural relations

Considers open and shared knowledge practices can democratize knowledge, while recognizes that such notions are embedded in colonial histories that explicitly deployed openness as a way to legitimate the taking of indigenous peoples’ knowledge

Aim to develop practices that are more responsive to hierarchies of power and inequality – research may involve simultaneous modes of being open, closed, sharing , and restrictive

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- IDRC "Exploring the opportunities and challenges to implementing open research strategies within development institutions"



Empowering Indigenous Peoples and Knowledge Systems Related to Climate Change and Intellectual Property Rights: Reflections on Open Data Requirements

Dr. Cath Traynor

2016 / 12/1

IDRC Data Sharing Pilot Wrap-Up Workshop 1-2 December,
2016, Ottawa, Canada

Project Context

Indigenous Peoples Histories
Colonization
Apartheid
Lands and knowledge 'free' for the
taking: *Terra Nullis*
*Student movements #RhodesMustFall
and #FeesMustFall*



Mr. Jan Stephens,
Indigenous Griqua &
Former Pastoralist



Map of South Africa showing Locations
of Community Partners

- Critically engaged in 'open and collaborative science' concepts;
- The research process: ethics requirements & accountability of researchers and their institutions to indigenous peoples
 - International and national laws and policies on IK
 - 'Community-Researcher Contracts' - private law – what protection does this offer communities sharing their IK?

The DMP Process: Key Points

- Focus on indigenous Knowledge ‘data’
- Open data not **planned** at the start of the research process – we have **consent** to share results – *not data*.
- **Sharing & Re-Use**: Issues – population small – anonymisation impossible? IK is **collectively** held – IRB/REC ‘ICDs’ working assumption is that knowledge is individually held.
- **End User License**: ‘ICDs’ – limit access. Community-Researcher Contracts to specify who hold IPR.
- **Ethics & Legal Compliance**: Community consent required. IPR issues. FPIC – risks – especially future. SA IKS Policy and new Act.

What Went Well?

- DMP Logical, helps think-through open data process – if we were to share data
- It breaks down ‘data’ into nice manageable objects...
- Useful for project management
- Useful for thinking beyond end of the project
- Prompts one to consider ethical, legal issues and end-user license

Challenges

- Working assumption of data as objects – ignores the context and histories in which IKS ‘data’ is situated
- FPIC – deep understanding of the risks of sharing IK now and in the future – how to ensure fully ‘informed’?
- Legal issues: SA progressive IKS policy and pending Act, but – only applicable within SA and SA citizens and legal institutional affiliations. Protections outside of SA vary, e.g. CBD
- Numerous contracts (institutions, individuals) need to be in agreement and all need to state ‘open data’ upfront

Lessons Learned

- Default open data policy – possible COI – PM/PI contractually obliged to employer & funder – not communities!
- Default open data policy – responsibility falls on PM/PI – sufficient knowledge and skills concerns implications of making IKS open? – complex legal and ethical issues
- Consent – individual *and* communal required
- Default open data – an external imposition upon IPs – goes against self-determination, data sovereignty & ownership, control, access and possession (OCAP) many IPs claiming
- IPS and their IKS should be exempted from open data default positions.
- Policies should aim at redress and benefit for IPs.

