Bridging the Gap Between Policy and Research Infrastructure: Risk and Vulnerability Case Study

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Linking sound scientific data and conclusions to decision and policy support is not a trivial task, and the difficulty in achieving this has been highlighted more than a decade ago (Reid, 2004). There are several reasons why this is the case, inter alia:

1. The language, (vocabularies, framework, and heuristics) adopted by the research community in a specific discipline may not translate into meaningful implementation language (Preston et al., 2015);

2. The researchers may not be in a position of influence (which includes aspects such as writing policy briefs, undertaking personal initiatives, and building up public or industry concern and interest) (Fox and Sitkin, 2015);

3. The frequency, timing, and/or certainty associated with research output is at odds with decision and policy-making cycles. Research typically progresses until there is a defensible level of certainty in statistical assessment of a result, while policy decisions are often made within a regular cycle;

4. Scientists are not trained for, or measured by, the typical work required for decision and policy support: synthesis of scenarios and cost-benefits of such scenarios given sometimes significant uncertainty in the input data, and cross-disciplinary concerns that need to be balanced.

There is a significant expectation that research output, being increasingly open, standardised, and managed in formal research data infrastructure, will be useful to policy and decision makers without much additional intervention and modification. We believe that this is unlikely to be feasible in the majority of cases. For most instances, it will be necessary to provide a framework for the translation of scientific output into decision and policy support metrics or indicators at a frequency, with spatial and temporal resolution, and thematic coverage that suits the decision to be made.

Such frameworks exist, since the need has been identified - sometimes formally - such as the very detailed framework developed by IPCC for translating climate science into policy - (IPCC, 2007), or less formally - such as the move to develop Essential Biodiversity Variables, loosely designed to support Aichi Targets (Pereira et al., 2013) or the UN Sustainable Development Goals (UN, 2016).

In the paper, we examine a number of these frameworks, map them onto a generic framework for the translation of research output into policy and decision support, and discuss an example from the South African Risk and Vulnerability Atlas in detail.

References

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