Quality of Research for Development Workshop: Insights and Way Forward
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CGIAR

Independent Science and Partnership Council

BACKGROUND AND CONTEXT

Discussions leading up to and during the recent CGIAR Reform highlighted the number of committees (e.g. Board and CRP Science Committees plus ISPC and IEA) involved in the oversight of CGIAR research and their differing definitions of "science quality". It was suggested that the ISPC was in the best position to facilitate System-wide agreement on the nature and assessment of quality of science, which was broadened to address Quality of Research for Development (QoR4D). This was done acknowledging that CGIAR and its donors are concerned with both the quality of the programs and the likelihood of delivery. The approach adopted was to establish a small working group on QoR4D with representation from Centers, CRPs and the IEA. This working group commissioned a survey of current practice on research management and leadership across Centers and planned a workshop to learn of good practice from outside the CGIAR. The workshop was held at FAO HQ, Rome, Italy on 06-07 February 2017.

There were 22 invited participants at the two-day workshop, including five people who participated virtually. The agenda was designed to maximize participation and engagement through facilitated breakout group discussions on both days in addition to a limited number of invited talks. Participant expectations, at the start of the workshop, included recognition of a common sense of purpose – how do we define QoR4D and how can it be assessed; better understanding of the terminology, particularly the concepts of "science" and "relevance"; improved appreciation of what quality of science means along the spectrum from basic to applied research; to develop a frame of reference for QoR4D across the CGIAR that gives guidance at different levels but without burdening the Centers and CRPs; and, to use that tool (a) internally to better implement agreed strategies, and (b) externally to demonstrate to donors that there is a commitment to strengthening QoR4D at all levels within the System.

Presentations over the two days of the workshop considered the use and abuse of metrics, limits of utility of simple metrics, trade-offs, different ways of considering relevance (principles to align re-

search with the strategy of the CGIAR - what is core business, in-house versus partnerships, outsourcing), what does a supportive enabling environment for quality research look like, and current practice within the CGIAR - learning lessons from CRP evaluations on science quality assessment, and summaries of current practice within some Centers submitted by DDG-Rs.

PANEL DISCUSSION

A panel discussion on best practice for assessing research quality took place on the second day of the workshop. Panelists included Yusuf Abubakar, former Executive Secretary of the Agricultural Research Council of Nigeria and three panel members who participated virtually (Steven Hill, Head of Research Policy, Research, Innovation and Skills at Higher Education Funding Council for England; Brian Keating, former Executive Director, Agriculture Food & Health, CSIRO, Australia; Marion Guillou, Chair, Agreenium Board of Directors and formerly CEO of INRA, France). In addition to reflections based on their experiences, panelists were asked to address questions that workshop participants identified at the end of Day 1.

Steven Hill reflected on the Research Excellence Framework (REF), the current system for assessing the quality of research in UK higher education institutions that looks across all disciplines focusing on expert and peer review as the core of the process. A pilot study was carried out in 2008 examining the extent to which metrics could be used in REF2014, and in 2014, an expert panel chaired by James Wilsdon (University of Sussex) was commissioned to investigate potential uses and limitations of research metrics and indicators. This report[1], published in 2015, identified a number of issues with research metrics including large variation across disciplines (citation counts are less useful as one moves away from the core sciences), citation-based measures are often a poor proxy of research quality and that inappropriate indicators can create perverse incentives. REF2014 (distinct from earlier evaluations)

introduced the assessment of broader societal impact, i.e. quality of research not just based on academic rigor but also on its impact on the beneficiaries of research and the non-academic community. The REF2014 impact case studies are available at *http://impact.ref.ac.uk/CaseStudies.*

Brian Keating reflected on the introduction of "engagement" as a measure within CSIRO saying that it is an essential step along the road to impact. He stated that the CGIAR conducts "problem-oriented research in complex systems", and although quality case studies of impact are not easy to obtain and come at a cost, they are incredibly useful. A systemic approach to quality of science, relevance and impact is needed that builds on existing processes and adds value. He concluded by indicating that the intent is for a research quality framework that can serve both the needs of Centers and CRPs in their efforts directed towards actually achieving the desired quality research, and external parties (such as donors, IEA, etc.) who are looking for independent and auditable assurance on research appropriateness and quality. Marion Guillou emphasized that INRA recognizes two different types of research - curiosity driven and targeted, as well as the importance of identifying and working with one's audience to understand the locks in the transformation process. Yusuf Abubakar gave an overview of the research system in Nigeria that in spite of being quite large has been relatively inefficient and ineffective. This has been primarily due to too many governing bodies and the research projects being disjointed and supply-driven. A reform of the governance structure is currently ongoing, structured along the models of ICAR (India) and Embrapa (Brazil). He concluded by highlighting the fact that unless there are strong NARS (National Agricultural Research Systems) in Africa, it will be very difficult to achieve impact at scale.

In the ensuing discussion, panelists considered the CGIAR's comparative advantage along the R4D spectrum. The CGIAR is seen as a trusted advisor and has a unique integrating role since it functions at the interface with NARS, Advanced Research In-

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1   http://www.hefce.ac.uk/media/HEFCE,2014/Content/Pubs/Independentresearch/2015/The,Metric,Tide/2015_metric_tide.pdf

stitutes, the private sector, governments and development agencies. There are big global challenges that have a science foundation and the CGIAR would be well placed to demonstrate an upscale solution pathway with the right partners in some exemplar situations. The panelists touched upon the balance between demand-led and supply-push research as well as the timescale for impact. There was also some discussion on how to address the problems associated with time lag and the immediacy issue of policy without losing quality of science. Finally the panelists were unanimous that the term "grey literature" was unfortunate and implies that the publication did not go through some kind of quality assessment, and that perhaps translational literature would be more appropriate. Papers (including multi-disciplinary consensus papers, policy briefs, reviews prepared for policy-makers, industry newsletters, newspaper articles, etc.) not published in traditional venues often have content that leads to fundamental insights and practical applications, and are part of the tracking pathway to impact.

QoR4D IN THE CGIAR CONTEXT

At the end of the two days, there was consensus that QoR4D in the CGIAR context should be viewed as an integrated whole of four key elements: relevance, credibility, legitimacy and effectiveness (adapted from Belcher et al., 2016[2,3]) that could be the basis for a common approach across the System.

1. Relevance refers to the importance, significance and usefulness of the research objectives, processes and findings to the problem context and to society, and CGIAR's comparative advantage to address the problems. It incorporates strategic stakeholder engagement along the AR4D continuum, explicit impact pathways, original and socially relevant research aligned to national and regional priorities, as well as the CGIAR SRF and SDGs. It also recognizes the importance of International Public Goods (IPGs).

2. Credibility refers to the quality of science and implies that the research findings are robust and sources of knowledge are dependable. This includes clear demonstration of the adequacy of the data and the methods used to procure the data, and clearly presented and logical interpretation of findings. It also recognizes the importance of good scientific practice such as peer review.

3. Legitimacy means that the research process is fair and ethical and perceived as such. This encompasses the ethical and fair representation of all involved and consideration of interests and perspectives of intended users. It suggests transparency/ lack of conflict of interest, recognition of responsibilities that go with public funding, genuine recognition of partners' contributions as well as partnerships built on trust.

4. Effectiveness signifies that research generates knowledge, products and services that stimulate actions that address the problem and contribute to solutions and innovations. It incorporates dynamic theories of change underpinned by assumptions for how change happens for effects to occur. It takes into consideration negative unintended consequences of research, appropriate implementation and effective communication. It also relates to leadership, capacity development and a supportive enabling environment for quality research.

WAY FORWARD

Next steps include preparing a consultation document describing what the working group is trying to achieve with regards to QoR4D and a draft frame of reference (that will include a glossary) to be shared with all the constituencies. The objective is to develop a collaboratively designed and owned frame of reference which could be presented to donors at the next System Council meeting in May 2017 before being finalized in September 2017.

2   Belcher, B.M., Rasmussen, K.E., Kemshaw, M.R. & Zornes, D.A. (2016). Defining and assessing research quality in a transdisciplinary context. *Res. Eval.* **25**, 1-17.

3   Cash, D.W., Clark. W.C., Alcock, F., Dickson, N.M., Eckley, N., Guston, D.H., Jaeger, J. & Mitchell, R.B. (2003). Knowledge systems for sustainable development. *Proc Natl Acad Sci USA* **100**, 8086-8091.