

Understanding Research Excellence at IDRC: Final Report

By Zenda Ofir and Tom Schwandt, December 2012

IDRC's [Strategic Evaluation on Research Excellence](#) aims to define and articulate what research excellence means in a research for development context, analyze tools and approaches for evaluating research excellence, and identify innovations that could be tested. The first phase of the strategic evaluation consisted of reviewing existing literature as well as internal and external practice on research excellence. In addition to this output, three others were produced in the first phase: *Review of Key Debates* (Méndez), *Review of Existing Frameworks* (Coryn et al.), and *Southern Researcher Perspectives* (Singh et al.).

Purpose and Process of the Study

This study is one segment of IDRC's strategic evaluation exploring approaches for evaluating research excellence. The aim of the evaluation is to identify resources and tools that will assist IDRC in its efforts to better assess, monitor, and strengthen the quality of the research it funds. The primary intended users of this study are IDRC program staff and the Corporate Strategy and Evaluation Division (CSED; formerly the Evaluation Unit); secondary users are IDRC's senior management and Board of Governors. The strategic evaluation includes separate studies: a comprehensive literature review on defining and measuring excellence in research; a study of Southern research partners' views of research excellence; a review of existing research excellence frameworks and an analysis of key issues and trends; and this study of perceptions and practices of research excellence within IDRC.

The objective of this study is to understand how IDRC staff view research excellence and to explore related issues, specifically:

- different definitions and understandings of research excellence that may exist across IDRC;
- models, frameworks, and approaches used by program staff for evaluating research excellence;
- tradeoffs and strategies involved in balancing competing research objectives; and
- frameworks and/or models judged as best suited for assessing research excellence at IDRC.

Illustrative comments on the significance of the study as understood by IDRC respondents

"It is a very relevant study. "Research excellence" is a buzzword, but there is no collective thinking about it. With the recent changes in IDRC, it is becoming more important to be explicit about it."

"It is a more explicit treatment of research excellence, and this is very much needed... [we need] some type of framework, and some parameters that anchor the concepts."

"The debate about research excellence is important. People have views of it that are context-specific. The focus on impact evaluation and [the views of] Gates, DfID and other important partners are also driving a focus on the topic."

"... Part of the research excellence equation is that it has to help make the case [to Canadian stakeholders] that research for development is essential for aid effectiveness in a concrete and practical way.... It is imperative for IDRC to contribute to new thinking [in Canada] about research excellence."

"We need to understand the 'invisible steps' that lead to research excellence. What is the process that we should follow?"

"The study will be very valuable because of the ongoing tension between research excellence and research capacity building."

"Unless we have a framework for research excellence that we can propose and explain, such assessments will be dictated from outside."

The study was focused through a set of review questions (see Annex 1) designed in consultation with CSED and a small Evaluation Advisory Committee (EAC) of IDRC staff. Data sources included a desk review and semi-structured interviews. The authors examined a variety of internal documents, including the statement of corporate strategy, several external reviews of project portfolios, the literature review prepared by the Evaluation Unit, and a suite of project reporting tools. In addition, they extensively examined the literatures that discuss the definition and measurement of research excellence, use, and impact.

The authors interviewed a purposive sample of 38 IDRC staff members (see Annex 2), including vice-presidents, directors, program leaders, and program specialists across four program areas of the organization—Agriculture and Environment (AE), Global Health Policy (GHP), Science and Innovation (SI), and Social and Economic Policy (SEP)—as well as from the Donor Partnership Division (DPD) and the Corporate Strategy and Regional Management Branch (CSRM). The sample was chosen in consultation with members of CSED. The intent was not to achieve a statistically representative sample, but to secure a wide and rich range of views. The interviewees were selected based on a range of factors, including current program and program area, length of time with IDRC, and gender. Data were also collected on their discipline, the type of research in their portfolio, their key funding partners, and their type of research grantees. (Further information on methodology can be found in Annex 2.)

The first section of this report provides an overview of where research excellence fits within IDRC's mandate of supporting research for development (R4D) and highlights the internal and external forces that shape this positioning. Section two examines the diverse understandings of research excellence within the Centre and perceptions of what can realistically be assessed. The third section examines the internal and external drivers that influence the pluralism of views on research excellence that exist at IDRC. Section four highlights existing practices in the assessment of research excellence. The fifth and final section lays out key issues that IDRC will need to take into account in order to develop appropriate frameworks and approaches for assessing research excellence.

I. Situating the Study: Research Excellence in Context

A review of the literature on evaluating research excellence, commissioned by CSED, offered three salient conclusions:

- “The development field is facing reduced funding and [increased pressures to demonstrate] accountability, results-based management, and value-for-money. This has, invariably, resulted in an increased focus by research institutions and research funding agencies on the quality of research produced. Evaluation of research excellence and the debates around peer review, bibliometrics, and impact as a dimension of excellence are, therefore, growing in prominence in the [R4D] field.”
- “There is no single definition, standard, or method for research excellence evaluation. Rather, there are many definitions for both research and excellence [T]here is no agreement on the quality dimensions that should be used to evaluate research, and there are large debates around the mechanisms used to evaluate research excellence.”
- “Excellence means different things to different people...suggesting a need for multi-layered and multi-dimensional evaluation approaches.”¹

Research excellence is a contested term because it acquires meaning only in context. For example, in the Research Excellence Framework for assessing the quality of UK higher education institutions, excellence is virtually synonymous with scientific productivity judged in terms of research articles or funded projects. For newly developing researchers and research institutions, excellence is often as much about understanding the broad obligations of being a scientist (what is commonly discussed under the heading of scientific integrity or the professional conduct of research) as much as it is about the scientific merit of research. For the International Institute for Environment and Development,² research excellence is about solving real-world

¹ E. Méndez, “What’s in Good?” IDRC Evaluation Unit, n.d.

² “Towards Excellence: Policy and Action Research for Sustainable Development.” Available at <http://pubs.iied.org/G03432.html>

IDRC's Grants-Plus Business Model

"IDRC takes a 'grants-plus' approach that builds opportunity, engagement, and access for our grantees. We don't only provide financial support—we're also a peer, mentor, and adviser. We engage with grantees in framing research problems, improving research designs, and choosing methodologies. Our staff and funded researchers work as peers to contribute new ideas and theories, influence practice and policy, and strengthen research networks."

(Source: [Who Can Apply](#), IDRC Website)

problems. In a national policy perspective, excellence in research is concerned with the development of institutions producing projects and publications and the impact, openness to interactions and collaborations, and innovativeness of those institutions.³

It is common to assume that what is considered excellent in research is what the peer review process has deemed so. However, just who constitutes that community of peers and the institutional norms, expectations, and missions that the community operates under vary widely. If the community is more or less that of a research institution that produces scientific knowledge, then we may readily point to empirical frameworks for understanding the excellence of research in those institutions in terms of their productivity (e.g., citation rates, journal impact factors, patents and patent citations, etc.). However, if the community of peers extends well into the ecology of institutions that use scientific knowledge to pursue solutions to social problems (e.g., the complex health care delivery system), we have little reason to believe that measures of research excellence in terms of scientific productivity in the former community will automatically signify improved outcomes in the latter community.⁴

Because the meaning of research excellence is significantly contextual, understanding research excellence within IDRC requires awareness and appreciation of IDRC's mission, the kind of R4D work it engages in and promotes, its own internal ways of working, and the external environment in which it operates.

Mission

As an organization, IDRC operates not as a research institution but as a funder of research with a grants-plus philosophy. In its corporate strategy, IDRC claims it will strive for "excellence" in research, defined as "methodologically sound, evidence-based, and scientifi-

³ Rémi Barré, "Indicators of Research Excellence." Expert Group on the Measurement of Innovation, October 8, 2011. Available at http://ec.europa.eu/commission_2010-2014/geoghegan-quinn/hlp/documents/20120309-hlp-research-excellence_en.pdf

⁴ Daniel Sarewitz, Institutional ecology and the social outcomes of scientific research (pp. 337-348) in K. H. Fealing, J.I. Lane, J.H. Marburger III, & S.S. Shipp (Eds.), *The Science of Science Policy: A Handbook*. Stanford, CA: Stanford University Press, 2011.

cally valid.”⁵ Yet, these commonplace criteria of scientific merit acquire specific meaning in view of the characteristics of IDRC as an institution with a particular mission and perspective on research.

Key characteristics are that IDRC:

- is an R4D funder and, as such, regards locally-generated knowledge and innovation as critical to the growth and progress of low and middle income countries (LMICs);
- seeks not simply to generate new knowledge useful for development but often to build new fields of knowledge;
- undertakes this mission across disparate fields of application (i.e., agriculture and the environment; science, technology, and innovation; social and economic policy; health and health systems) involving multiple disciplines, theoretical frameworks, and research methodologies;
- aims to build research capacity of both individual researchers and research organizations in developing countries, often through long-term investments;
- endeavors to enable its research partners to influence policy and practice and build constituencies for change;
- is not simply a research funder but, under its grants-plus philosophy, is also a research partner and advisor engaging with grant recipients throughout the research process as mentor, advisor, or peer as well as a broker that facilitates the development of research networks, research-to-policy linkages, and access to resources.

In sum, IDRC promotes a form of research that is problem-focused, solution-oriented, innovative, policy relevant, often team-based, and characteristically multi- and interdisciplinary.

Internal environment

How research excellence is understood within IDRC relates directly to its own internal ways of working that include procedures, policies, established practices, and routines as well as cultural norms. IDRC is a largely decentralized organization placing high value on freedom, flexibility, and autonomy. The socio-dynamics of working with IDRC, including the composition of groups (local or geographically dispersed), the nature of group interactions, the means of interaction (technologically mediated, face-to-face), and so on influence the way research excellence is actually operationalized and acted upon within the organization. IDRC also pursues its mission amidst several creative tensions within the organization, as noted in a previous report by Patrizi and Patton.⁶ (This is discussed further in section 4.)

⁵ IDRC, *Innovating for Development: Strategic Framework 2010-2015*.

⁶ Patricia Patrizi & Michael Quinn Patton, “[Learning from doing: Reflecting on IDRC’s strategy in action](#),” February 20, 2009.

External environment

IDRC pursues its corporate mission in the context of working with a variety of organizations that share interests in R4D (but not necessarily IDRC's business model), including government agencies, granting councils, and philanthropic foundations. Through its various forms of collaboration with these organizations, IDRC invariably encounters how these partners define and measure research excellence.

IDRC operates within a particular political economy that influences priorities, directions, and policies on R4D. Within this framework, the beliefs and practices of influential external organizations will influence IDRC's perceptions and positioning around research excellence, and IDRC's own stance will, in turn, influence the beliefs and practices of these organizations.

We did not undertake a study of IDRC's mission or strategy and the way it navigates within this political economy of R4D. However, in interviews with our respondents it was clear that there are issues and concerns in this external environment that may be influencing the way IDRC thinks about research excellence. For example, one such issue includes the consequences of the broad concern in the donor world for metrics that demonstrate (social) return on investment, or "value-for-money." This growing press for demonstrating readily-measurable results within pre-determined, short-term timeframes⁷ can, in turn, lead to IDRC choosing to work with higher caliber, more established organizations as Southern research partners, placing less emphasis on cultivating capacity building and relying more heavily on competitive grant-making processes. Heightened attention to demonstrating return on investment can increase the demand for highly-qualified IDRC staff capable of designing a competitive program of research with a strong likelihood of producing such returns.

Another issue concerns the views and incentives of IDRC's Southern partners with respect to research excellence and how that has an impact on IDRC's efforts to define and promote research excellence.

II. Current Understandings of Research Excellence at IDRC

Multiple definitions of research excellence

There is a plurality of views on what comprises research excellence across IDRC. When asked if there were differences within IDRC in how research excellence is understood and judged, respondents were almost evenly divided in positive and negative responses. There is something like a shared view of research excellence across the organization, but that shared view

⁷ The press to demonstrate results of research projects in pre-determined and short time frames often means that the 'result' of capacity building is ignored—it is neither easily measurable nor something that occurs in a relatively short time frame.

Illustrative comments on the meaning of research excellence as understood by IDRC respondents

“Research quality and research excellence are not the same. Excellence has to involve the whole process from research conceptualization through research management, publication, and use. Quality refers to research that pushes the knowledge boundaries in a given field.”

“At the center of ‘excellence’ is rigor. ‘Ethics’ is part of rigor.”

“Research excellence includes everything— ethics, scientific merit, relevance, use, influence, and impact.”

“Research excellence is a project driving cutting-edge research.”

“In the first place when talking about research you talk about robust, rigorous research. It must have credibility, be taken seriously, and use rigorous methods. The first aspect is therefore technical quality, from the proposal stage to dissemination.”

“Relevance is important because IDRC deals with development.”

“We have no fixed definition of research excellence and determine it on a case-by-case basis, judging it against the purpose of the project, how well it is likely to enable partners to achieve their objectives, and expectations from the type of research.”

is more or less a dialogue about what research excellence is rather than an agreed-upon definition. As one respondent noted, *“We may not all be on the same page but we are in the same book.”*

The following list highlights the range of perspectives among IDRC staff, from the most to the least agreed-upon:

1. *Research excellence as technical quality or scientific merit:* We encountered definitions of research excellence that focused exclusively on matters of the *scientific merit* of research (e.g., “methodologically sound, evidence-based, and scientifically valid” as noted in IDRC’s Strategic Framework 2010-2015). These are criteria that are difficult to dispute in any field of scientific endeavor. For nearly all interviewees, research excellence is minimally equivalent to the technical quality of research or scientific merit as understood (and judged) by all researchers who conduct empirical work aimed at social and economic problem solving across the disciplines and fields of practice, including health care, education, economics, social organization, agriculture, and others. Yet a very small number of interviewees equated research excellence with scientific merit *only*.
2. *Research excellence as research effectiveness:* Many held that research excellence ought to be distinguished from what would broadly be regarded as research effectiveness that includes research use, impact, influence, relevance, and so on. A majority of those inter-

viewed were of the opinion that research excellence includes (or ought to include) issues of use, influence, policy relevance, “relevance for development,” actionable knowledge, or impact.

3. *Research excellence as process excellence*: For a minority (but still significant number) of interviewees, research excellence refers to not so much an end-state as to excellence in the entire process of research—from problem identification and definition, to research design, involvement of relevant partners, research management, and dissemination that ensures reach, visibility, and use of the research.
4. *Research excellence as innovation*: Only a few interviewees explicitly included novel work or innovation as an important dimension of research excellence. This is possibly underestimated (although this was not investigated) because interviewees may have regarded it as implicit in the notion of research. Where prompted, all agreed that this was crucial for research excellence (with one or two emphasizing it as *the* most important dimension). However, interviewees also pointed out nuances in defining “trail-blazing” research, given the different levels of novel or innovative approaches found in, for example, the development of a new field of research compared to addressing a gap by building on an existing body of work in the same context, or applying existing knowledge in a new context. For these interviewees, IDRC’s readiness to take risks in areas where others might fear to tread was seen as a critical part of its charge, and one that needs to be reflected as an aspect of research excellence in at least some of its grants.

Additional considerations

There are three important additional considerations that affect how research excellence is defined and, eventually, assessed.

- The *unit of analysis* for determining research excellence is critical. Research excellence at a minimum has to be defined and assessed at the project level. It will remain the key unit of analysis, yet consideration should be given to whether IDRC may in future want to assess research excellence at the program portfolio, program area, or IDRC mission levels. This will require a “cascade” model with clear connections between research excellence criteria, indicators, and/or ratings at the different levels.
- Research excellence is not the same as *project excellence*. Project excellence includes efficient and effective project management by grantees and can include non-research aspects of projects (e.g., capacity building within the research group). It also includes elements of excellence that derive from value IDRC adds through its grants-plus approach, including, inter alia, mentoring and providing research advice.

- The *ethical conduct of the research* was often noted by interviewees as an integral part of research excellence. In part, this may be due to the fact that IDRC has recently put into place an Advisory Committee on Research Ethics and to the fact that its Corporate Principles of Research Ethics emphasizes that research not conforming to ethical principles is considered to be of low quality.⁸ Yet exactly what constitutes ethical conduct is no simple matter. Many interviewees were at pains to point out that, in an IDRC grant, this involves considerations beyond what would normally be assessed by Human Subjects committees—namely, it must involve attention to values such as transparency, equity, respect for stakeholder power and voice, and ownership of the research agenda, process, and results. Some interviewees also regarded the Canadian Institutes for Health Research’s definition of “ethically-sound” knowledge translation as an important consideration in this regard.

Concluding comments: Distinguishing the spheres of control, influence and interest⁹

The following three-fold distinction is a useful device for representing, understanding, and appraising the collective view on research excellence that we heard from respondents (see Figure 1 on page 10):

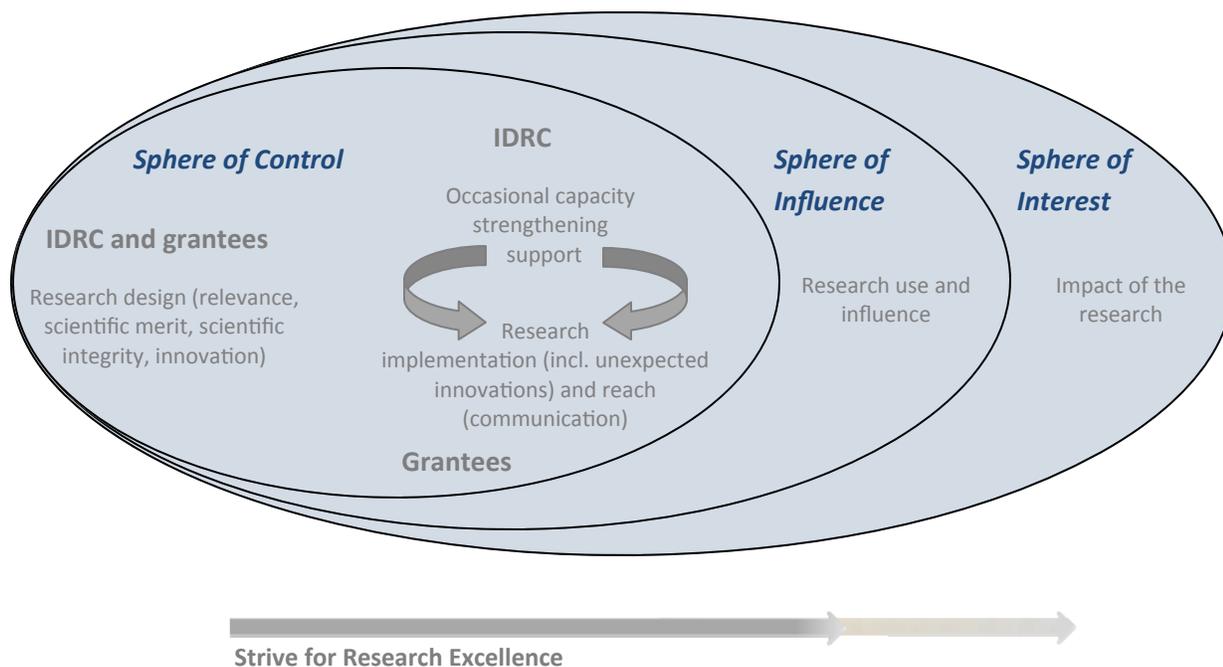
- Sphere of *control* refers to matters over which IDRC staff members have some say. Through interaction during the conceptualization, proposal assessment, and refinement stage, IDRC staff and grantees share control over the research design. During the implementation stage, grantees are responsible for the research. IDRC program officers sometimes contribute to, and in a few cases may even be responsible for, the design and implementation of mechanisms to strengthen the capacities of grantees, including in the communication of their research.
- Sphere of *influence* relates to changes in insight, relationships, and behavior among users of the research—e.g., researchers, development practitioners, the media, policy makers—as a result of, or influenced by, the combined contributions of IDRC staff and their grantees. IDRC staff actions can exert some influence but not determine outcomes (these are matters traditionally referred to as the “use” and/or “influence”¹⁰ of research that include, but are not limited to, policy change).

⁸ See <http://www.idrc.ca/EN/AboutUs/WhatWeDo/Pages/Research-ethics.aspx>

⁹ Based on a presentation, “Outcome Mapping: Complexity & Aid” July 9, 2008 by Simon Hearn at the Overseas Development Institute. Available at http://www.odi.org.uk/results.asp?cx=007617177086193497200%3Av07dt6qsd_i&q=sphere+of+control&sa.x=0&sa.y=0&cof=FORID%3A11

¹⁰ Note that “use” and “influence” of research are not the same. Research that is used can have different degrees and types of influence.

Figure 1. Spheres of Control, Influence, and Interest¹¹



- Sphere of *interest* refers to socio-economic, political, and environmental trends and end-states (e.g., poverty reduction as a result of policy change). These are matters traditionally referred to as “impact.”

These three spheres relate to each other but are distinct, as shown in Figure 1 on page 10.

Control. Nearly all respondents were inclined to view research excellence as *primarily* about the sphere of control. In this arena, IDRC can help ensure research excellence by establishing that research is problem-focused, solution-oriented, innovative, novel, either reflecting a conscious effort to take a risk and long-term view or to avoid risk, and oriented to systemic change. It can take steps to ensure that the research has scientific merit (i.e., is methodologically sound, based on sufficient and strong empirical evidence, well-argued, etc.) and scientific integrity (i.e., is ethically responsible).

In the sphere of control, IDRC can also employ procedures to help strengthen researchers’ capacities during implementation of the research in order to enhance the likelihood that the research will be used or will be influential. It stands to reason that if research is not well

¹¹ The perspectives for IDRC program officers and for IDRC grantees can also be shown in separate diagrams. This will be in line with conventional funder support models. This diagram combines the two in an effort to show the implications of the “grants-plus” approach. The authors acknowledge that IDRC staff with more intimate knowledge of how this works on a day-to-day basis might want to adjust elements or split it into two different diagrams.

done, it makes little sense to be concerned with the spheres of influence or interest. Of course, not even well-executed research guarantees policy or practitioner relevance or use.

In the sphere of control, IDRC staff can also take steps to ensure that the research it funds is *relevant*. For most respondents, *relevance* meant the importance and timeliness of solutions to development problems as understood and needed by local stakeholders (versus what is considered important to a discipline or sub-discipline).

Influence. While acknowledging that research excellence lies largely in what we here call the sphere of control, a majority of respondents were also concerned that the research that IDRC funds at least yields results with strong potential for use and influence. Yet, given that influence depends heavily on the work of research partners (stakeholder-owned and -driven research) as well as the relationships and interactions that unfold between multiple partners in a research endeavor (including potential users), IDRC staff cannot directly control the use and influence of the research that it supports. They can, however, attempt to move research projects in the direction of influence by supporting researchers, strengthening their capacities, and encouraging various means of communicating and disseminating research.

It is relevant here to note that the very phenomenon of *research use/utilization* in both policy and practice is poorly understood empirically and theoretically. We know very little about the relative value of different strategies—such as brokering, translation, and linkage and exchange models—in bridging research to policy and practice.¹² There is no satisfactory, well-warranted general theory of use (or of policy making, for that matter). A recent statement by 50 influential scientists, policy makers, and practitioners interested in the science-policy connection identified 40 significant, unanswered questions about what use entails.¹³ A recent review of the literature of knowledge exchange strategies concluded that an effective design depends on a detailed analysis of the context in which those strategies are to be deployed.¹⁴

Finally, the worldwide movement emphasizing evidence-based policy and practice has done little to further our understanding of the *use* of scientific knowledge because it is almost exclusively focused on improving the *production* of scientific knowledge.

Interest. This is an even more long-term result of IDRC-funded research over which control is minimal. Interventions unfold in open systems, and are often accompanied by emergent, unexplained, and unpredictable system effects (both positive and negative) involving multiple

¹² For example, see for e.g., K. Prewitt, T. Schwandt, & M. Straf, *Using science as evidence in public policy*. Washington, DC: National Academies Press, 2012.

¹³ W.J. Sutherland, et al., A collaboratively-derived science-policy research agenda. *PLoS One*, 7(3), March 2012.

¹⁴ D. Contandriopoulos, et al., Knowledge exchange processes in organizations and policy arenas: A narrative systematic review of the literature. *The Milbank Quarterly*, 88(4), 2010: 444–483.

individual and institutional actors. Defining and measuring research impact or its social value in these complex systems is an even more complicated matter than measuring use and influence.

In the past few years, there has been considerable discussion in the R4D community about measuring impact as return on investment and the very significant measurement challenges faced in such an undertaking.¹⁵ It is one thing (within the sphere of control) to, for example, develop measures of indicators of the scientific quality of health research that IDRC funds in the Global Health Research Initiative (GHRI) program. It is quite another to develop measures of the social impact of that research on the health care system in an LMIC.

III. Drivers and Influences Shaping Research Excellence at IDRC

The pluralism of views on research excellence within IDRC is not necessarily surprising. The term is ambiguous—it can refer to scientific relevance (quality as judged by some group of specific discipline-based peers) as well as to social relevance (quality as judged in terms of the significance of the problem addressed as understood by key stakeholders). It can refer to the achievement of criteria internal to the production of scientific knowledge (e.g., validity, accuracy, objectivity, and transparency of procedures). It can also refer to the achievement of criteria external to the scientific enterprise (e.g., use, impact, and relevance).

Furthermore, knowledge-producing organizations (including universities, think tanks, and not-for-profit research firms) and the communities of researchers that exist outside of IDRC are unclear about research excellence. Traditional, discipline-based academic communities have one view;¹⁶ various organizations of researchers engaged in development work have other views; researchers working in multi- and interdisciplinary-settings have yet other views; funders have multiple views, with some embracing traditional scientific criteria and others more concerned with “excellence” as impact measured in terms of social return on investment; and so on. Moreover, potential users of the research—policy makers, practitioners, and user communities—have different notions of the nature of research excellence and the importance of this concept in their decision making processes.

¹⁵ See, for example, C. Wood, & D. Leighton, *Measuring social value: The gap between policy and practice*. London: Demos, 2010, and M. Tuan, “Measuring and/or estimating social value creation: Insights into eight integrated cost approaches” (2008), prepared for the Gates Foundation. Available at <http://www.gatesfoundation.org/Learning/Documents/WWL-report-measuring-estimating-social-value-creation.pdf>

¹⁶ Even with academic communities that seemingly share a commitment to a given methodology, there is significant dispute over what constitutes excellent research. Consider, for example, the very vigorous debate over what constitutes excellence in determining causal impact of interventions between defenders of randomized controlled field trials and econometricians who employ statistical methods and non-randomized designs, as well as the debate between experimentalists and those committed to realist models of evaluation.

Illustrative responses by IDRC respondents to questions about influences on research excellence

“How we work and with whom is unique and we need to factor that into our assessment of research excellence.”

“[My views of research excellence] are highly influenced by the team I work with and the Evaluation Unit—their values, culture—and with engagement with colleagues.”

“One’s field/discipline establishes one’s notion of research quality and rigor—even if it might adjust over time.”

“I grew up in a trans-disciplinary environment where they are still trying to establish proper methodologies and measures for scholarly research.”

“I believe in the perspectives of people who live the realities they are studying.”

However, there are other reasons more specific to IDRC that help explain the pluralism of views on research excellence. Interviewees were given an opportunity to rate (and elaborate on) a number of factors that have shaped their understanding of research excellence. Consolidation and analysis of the ratings confirmed multiple influences, with the highest ratings fairly consistently given to (a) the values and culture of IDRC; (b) an individual’s particular field of work in IDRC; and (c) an individual’s discipline. Influences owing to the views of IDRC colleagues and Southern (rather than Northern) research partners had a somewhat less but still significant influence. IDRC corporate documentation that spells out strategic directions, the views of funding partners, and other external factors were seen as much less influential for research excellence assessments.

The influence of the internal context

IDRC attracts staff who have a strong belief in, and commitment to, IDRC’s broad values, including: the importance of R4D; working to “effect positive change in the social, economic, environmental, and political conditions of the poor, marginalized, or otherwise excluded peoples of developing countries” (IDRC Strategic Framework 2010-2015); being flexible and learning oriented; cultivating multi-disciplinarity; finding innovative solutions to problems; and building research capacity in developing countries.

Furthermore, IDRC funds R4D across a variety of different types of problem areas involving multiple disciplines and methods of research. The organization is fairly decentralized and does not impose strict protocols. Staff have varied and sometimes eclectic academic and field-of-practice backgrounds and there does not appear to be a dominant view of the ‘best’

research methodology across the organization.¹⁷ IDRC staff members are individuals with diverse expertise and backgrounds who have freedom, flexibility, and autonomy in their work. This both cultivates respect for (or at least tolerance of) different views on what constitutes research excellence, speaks to the culture of openness that characterizes the organization, and, of course, makes for a culture where a diversity of views is likely to flourish.

In this respect, understandings of research excellence at IDRC are significantly influenced by conversations among its members, particularly within teams under a program area. According to some of those who have been at IDRC for a long time, their notions around research excellence have evolved as the organization evolved. The disciplinary backgrounds that staff members bring to IDRC influence the way each thinks about research excellence, and the interaction of these staff members creates dialogue about the meaning of research excellence. In addition, because much of the work that IDRC funds is multi- and perhaps inter- or trans-disciplinary, and also has to balance academic notions of research with real-world application, staff members have learned how to cross intellectual boundaries and views of research excellence wedded to disciplinary perspectives. The strong focus on capacity strengthening through the grants-plus approach has also made them more understanding of the need to think about research excellence in terms of a trajectory, rather than as an end-state that cannot be immediately met.

Many interviewees pointed to the important influence of the Evaluation Unit (now CSED) in shaping their thinking about research excellence through the documents it makes available and the learning organization approach it fosters. Interviewees pointed in particular to the value of the recent round of external program reviews. They also found the Centre's approved suite of project-level monitoring and assessment tools (e.g., Project Identification Memos (PIMs), Project Approval Documents (PADs), Project Monitoring Reports (PMRs), trip reports, and Project Completion Reports (PCRs)) very useful. In contrast, corporate documents such as the Strategic Framework and even program prospectuses were not seen as providing guidance to understanding research excellence. They were instead seen as pointing to the "big picture" of what the organization and programs are about.

Finally, it is worth noting that the tensions within IDRC related to realizing its values contribute to the 'fuzziness' and plurality we observed in the definitions of research excellence. Tensions identified in the interviews echoed those noted by Patrizi & Patton in their 2009 report on strategy at IDRC, in particular those related to:

¹⁷ A slight majority of those interviewed held doctoral degrees; others held terminal master's degrees. A very wide range of disciplinary backgrounds and fields of study were represented, including public health, sociology, environmental science, anthropology, epidemiology, communications, political science, nutrition, business administration, engineering, information systems, international law, finance, and economics.

- capacity and having policy influence (e.g., research versus influencing capacities; peer review merit versus locally relevant research);
- audience priority (e.g., international versus local stakeholders; policy elites versus needy beneficiaries);
- macro and micro (e.g., long-term versus short-term results); and
- the unit of impact (e.g., individuals versus institutions; knowledge outcomes versus institutional outcomes).

The influence of grantees

There is a range of perspectives on the extent to which the practical considerations of those working on the ground in developing countries should affect how research excellence is viewed and assessed. Some interviewees noted that researchers in developing countries often have the same views of research excellence as their developed country counterparts, given that they frequently earned their degrees from the same institutions. On the other hand, many interviewees referred to the importance of respecting the views, and working within the realities, of their developing country grant recipients. The close interaction between (most) IDRC staff and their grantees in developing countries contributes to shifts in expectations of research excellence given pervasive challenges around institutional support and the lack of infrastructure, the absence of incentives for research, and the often fragile and insecure contexts for research. The often lengthy preparation periods and the network modality within which many projects operate also influence the development of shared understandings of research-related issues among IDRC staff and among researchers from the global North and South.

The influence of funding partners

As noted above, some funders embrace traditional criteria of scientific merit or technical quality while others focus more on the influence and impact of the research. In many cases, funding partners are involved at the level of IDRC projects rather than programs. Understandably, in such cases other funders' influence is less than in circumstances where IDRC works with funding partners directly at a program level.

Experiences in terms of the latter are mixed. As could be expected, the influence of a funding partner appears to depend on a combination of its financial "clout" in the partnership, the extent of its engagement with IDRC in identifying and assessing potential grantees, and the strength of its views on, and expectations of, research excellence. Although the nature of the influence of IDRC's funding partners was not further interrogated, several interviewees indicated that in the past at least two of IDRC's major funding partners had been perceived as too "logframe" oriented, "rigid" and/or "quantitative" in their approaches to planning for and assessing performance and outcomes.

The influence of the external context

Many comments throughout the interviews showed an awareness that IDRC is likely to come under increasing pressure to defend and better articulate its stance on research excellence. There is broad understanding that IDRC operates in a milieu that is under significant strain. Resources in many parts of the world have become scarcer and development assistance funding is suffering. As a result, there is a strong pressure on funding agencies to demonstrate clear, measurable impacts at the societal level. This is often impossible for researchers and research funding agencies, in spite of the merit and potential influence and impact of their contributions. This is even more so difficult for organizations such as IDRC where capacity building is a critical component of their missions. In the research arena, the challenges of identifying credible work and measuring impact are also complicated by the increasing use of new and often open source technologies for information dissemination and communication.

Concluding comments: Leveraging internal and external factors in developing a shared understanding of research excellence

In sum, given that IDRC (a) is a research-funding organization with a strong organizational culture derived from its mission; (b) operates in a milieu that includes direct and indirect contact with many different types of research- and policy-oriented organizations; (c) engages in many kinds of research and development activities across a variety of problem areas, disciplines, and geographic areas; and (d) draws its personnel from all of these arenas, it is not surprising or even disturbing that IDRC reflects multiple and contested views of research excellence.

The issues addressed above focus primarily on those factors that have contributed the potential to facilitate a shared understanding of research excellence at IDRC. It is equally important to understand the obstacles. Most interviewees felt that there was considerable (although not necessarily sufficient) synergy within teams in their understanding of research excellence as a result of frequent interaction—in particular during the proposal stage of a project, when working with the suite of project assessment and monitoring documents, in program-specific discussions, and during the external program reviews. However, interviewees did not report feeling this synergy across the organization as a whole in spite of annual learning events and other opportunities to discuss matters across program boundaries.

Other obstacles that emerged from discussions included: (a) external pressure to adhere to conventional views and measurement of research excellence or to move towards a particular view of research impact and how to measure it, particularly as promoted by some influential (potential) funding partners; (b) reluctance among staff members to move out of different

(discipline-based or otherwise) comfort zones that define success in the research or scholarship means, and how to measure it; and (c) the time, resources, and effort needed to share, debate, and understand issues across (geographic, program, disciplinary) boundaries, and to the required depth to be transformative.

Within the evolving milieu in which it operates, IDRC has to continue to position itself nimbly in order to remain relevant, visible, effective, and influential as a unique R4D funder. Any significant shifts in IDRC as a result of its strategic positioning—for example, aligning with influential donor partners on the issue of measuring research impact, or moving toward more competitive modes of funding at the expense of a grants-plus approach¹⁸— are likely to have a marked effect on staff members' view of, and approach to, research excellence.

Conversely, IDRC's current niche in the external environment will increasingly demand a strong defense of its position on (and practices to achieve) research excellence that will depend, in part, on a shared IDRC strategic vision of research excellence.

IV. Assessing Research Excellence at IDRC

Consistency in Assessment Practices

Given the multiple views of research excellence at IDRC, its decentralized approach, and the fact that it funds many different kinds of research projects, it is to be expected that research excellence assessment practices would not be consistent or systematically applied across program areas. The review found a range of practices determined by how a particular team:

- defines or views research excellence and related concepts such as rigor and impact;
- defends its work in view of external pressures such as industry interests or influential funders;
- evolves its programming modalities;
- responds to strategic end-of-term evaluation findings;
- perceives the credibility and applicability of methods such as external peer review and measures such as bibliometrics in view of the realities and requirements of R4D;

¹⁸ This potential tension may need to be further interrogated. Some interviewees argued convincingly that an increasing emphasis on competitive processes may privilege (i) established groups known to perform, at the expense of newer groups that may need more nurturing yet have greater potential for important contributions; (ii) teams applying under a researcher with a strong reputation (in particular from the North) at the expense of (potential) leaders in the South who cannot compete, or may not have conventional profiles as research leaders; and (iii) groups taking less risk in order to maximize productivity, at the expense of those interested in breaking new ground in difficult areas of work.

Illustrative comments from respondents on how research excellence is assessed

“The reviewers and researchers have to understand the economic, social, and political contexts in which the research is to be used, otherwise the reviews are out of context.”

“Monitoring visits help build capacity. On the other hand, [the visits] lack consistency in what is looked at or captured - even if templates are clear.”

“We are trying to please partners who have to demonstrate why they are funding this research. For this purpose ... [names of partners]... will not find our approach useful as they use rigid logframes and demand hard data. They are numbers oriented, and there is no time for qualitative, forensic work. Instead, the complexity of the [funding] partnership led to lots of not-very-helpful indicators, and resources are focused on counting.”

“We use external reviewers so that we do not get caught in our internal culture. But we have found that IDRC reviewers are generally more rigorous and strict than [our] external reviewers.”

“It is important to recognize the effect of people not working in their mother tongue.... The question is what is really important – publications, or good research that has impact? ...We need to accept the limits of what can be done.”

“IDRC has to have ways to follow up after the end of projects, as lots of outputs emerge only later.... On the other hand, many do not publish as the incentives are not there.”

“In the past we focused on individual projects, but more recently we realized we need to focus more on outcomes, especially in groups of projects, or portfolios. We are now more deliberate about them, also thinking of themes to link them together.”

- balances the different tensions inherent in IDRC operations; and,
- wishes to demonstrate “intellectual rigor” in line with academic conventions (such as the use of SMART indicators).¹⁹

Some respondents were also influenced by a recent Think Tank Initiative (TTI) study that indicated that peer reviewed journal publications strengthen the credibility of research among potential users, including policy makers.

Trajectories towards research excellence: Balancing the achievement of research excellence with research capacity building

Some respondents judge research excellence in terms of progress towards building needed (research) capacities. Starting points will influence endpoints, and some programs prefer to

¹⁹ Performance indicators are usually designed to be Specific, Measurable, Attainable, Relevant, and Time bound.

work with process rather than a pre-determined endpoint (i.e., output or outcome). Criteria may therefore differ from the beginning to the end of the project as a result of the research capacity building trajectory.

A number of interviewees reinforced the need for a clear yet nuanced approach to defining, implementing, and measuring capacity building, and maintaining a balance between research excellence, research capacity building, and the use of the research. They pointed out that there are many pitfalls in a system that is too simplistic, for example counting team outputs without sufficient understanding of the context. How well capacities are built is usually not tracked and it is therefore challenging to know whether desired transfer of skills, for example through mentoring, has taken place. Northern researchers, although often with higher profiles or better reputations in a field of research, may not be as knowledgeable when engaging with R4D and hence may not be good mentors, and so on.

Stage and level of assessment

There are also a number of common elements, particularly with respect to the level and stage at which assessments are done. All teams have a strong focus on rigorous assessment of proposals and thus on the research design during the conceptualization stage, with significantly less attention to systematic monitoring to inform strategic and operational grant or program decisions during or after implementation. There is an almost exclusive emphasis on the project rather than the program (portfolio) as unit of analysis, with only some attention to outputs. Nearly all use the approved suite of project-level monitoring and assessment tools (PIMs, PADs, PMRs, trip reports, and PCRs), although some have additional or adjusted instruments for their specific purposes. There appears to be no systematic long-term longitudinal tracking of outputs or outcomes after a project has ended, and many interviewees noted the difficulty of assessing outcomes with often long causal pathways in complex contexts. Self-reporting by partners without external verification tends to be the norm unless relevant external evaluations are commissioned.

The use of assessment

The emphasis on assessing research quality at the conceptualization stage helps IDRC staff ensure that supported projects are both relevant to local problem solving and aligned with their program objectives as well as implemented in such a way that they have a high chance of being successful. It is less clear that the complementary activities—ongoing progress and performance monitoring—are systematic, strategic, and rigorous enough to serve management purposes, or whether teams engage in adaptive management that facilitates the strategic management and improvement of program portfolios. Peer learning and mentoring as part of capacity strengthening appear to be the main purpose of network interactions and events. Annual meetings in only a few programs focus on thematic synthesis, usually within a program portfolio rather than across programs.

The round of external program reviews implemented by the Evaluation Unit in 2009/2010 received significant praise for their utility. Many interviewees noted that these reviews, which combined learning-based self-assessment opportunities with an external review, forced them to focus and to grapple in a more systematic manner with their achievements and outcomes at the project level, and to integrate at the thematic or program level.²⁰ These evaluations also sensitized them to gaps, data requirements, the need for clear formulation of outcomes and measures of progress and success, and the difficulties in synthesizing across large portfolios of projects when systems had not been set in place for this purpose.

Assessment approaches

The use of peers is the mainstay of assessment practices at IDRC, applied in a variety of formats that include internal peer review or a mixture of internal and external peer review; peer learning within communities of practice; and more systematic mentoring or “peer assist.”

The internal peer review of concept papers and proposals is common practice. As there is some concern about the rigor of these processes when working with responsive or solicited (i.e., not competitive) proposals, teams implement a variety of mechanisms to ensure that they strengthen research capacities, yet at the same time avoid perceptions of “buddy networks.” These include lengthy (sometimes up to a year) iterative processes of planning with applicants based on review by a number of team members at different levels of seniority, expertise, and experience, sometimes located in different regions; and consultation with specialists from other IDRC programs or, occasionally, senior staff up to the level of vice-president.

No program uses external peer review exclusively. However, this means of assessing research quality is extensively used in competitive processes²¹ and when cooperating with program-level funding partners, often using their peer review panels. The results remain controversial. Several interviewees reported internal peer review processes as stricter and/or more credible, in part as a result of IDRC staff’s familiarity with their program portfolios, expertise in development research, and experience in development contexts.

Monitoring is based on a variety of peer support mechanisms. A majority of interviewees confirmed the use of (usually annual) review meetings where the network of researchers and often also external reference groups act as “critical friends” for improvement and consolidation of thematic work. Together with the monitoring progress and trip reports, these provide the basis for project monitoring. Some programs put specific publications or contributions in

²⁰ The nature of their influence at this level was not further explored.

²¹ For example, the Challenge Fund program with five competitive processes receives around 500 applications and uses 50 mostly external reviewers.

the public domain through the Internet or at conferences in order to solicit peer feedback before their finalization. Others also have end-of-term workshops that include a larger variety of stakeholders and potential users of the research results.

The combination of external peer review panels with self-evaluation – an approach used for the external program reviews – was noted by several interviewees as a particularly useful assessment approach. At the same time, external trends are forcing some programs to seek a clearer stance on impact evaluation, especially where funding partners are interested in “independent” assessments of “lives saved” or similar quantifiable societal impacts.

Assessment activities do not normally engage potential users outside the research community, but there are exceptions where key decision and policy makers are included. For example, in a competitive call, the Governance, Security, and Justice program (GSJ) used an external committee with researchers and policy experts who reviewed the technical merit and policy relevance. Before the call was made, Canadian and international policymakers were asked to assess a mapping study that was used to help formulate the key research questions. In West Africa, the assessment of proposals solicited through the Governance for Equity in Health Systems (GEHS) program’s competitive process included key regional decision makers in order to bring them into the field of work, which was seen as having significant potential to inform regional development initiatives.

Assessment criteria

Nearly all programs included in the interviews use the PAD, sometimes in conjunction with a tailor-made set of criteria for concept note and proposal assessment. Criteria may therefore differ by program. They focus at a minimum on scientific merit and usually include ethical conduct. Weights and even sometimes criteria may differ for other key aspects usually assessed, such as the track record and potential of the team and its leadership, the level and type of innovation, proposed strategies for collaboration and communication, and potential for desired outcomes in line with program objectives.

Interviewees’ responses highlighted their sensitivity to context in the application of criteria for assessing proposals, progress, outputs, and outcomes. Yet with the front-loading of attention to research excellence at the proposal stage, it was also clear that such criteria are often not rigorously applied during the monitoring stages. In the past, this has resulted in a scramble for data for the self-assessment reports written by the program as part of the external program reviews.

The following key factors influence the type and weight of the assessment criteria:

1. *The type of project.* Outputs and outcomes, and how they are measured, need to be coherent with the project objectives. In-depth case study projects, say, will be assessed quite differently from network-based projects that facilitate exchange, learning, and capacity building.

2. *The type of research, and its expected use and audience.* For example, applied or policy research will demand greater demonstration that it intends to reach, or has reached, target audiences (or has been used/is influential), while a focus on innovation might need demonstration of product development and scaling.
3. *The maturity of the field.* Exploratory research in an emerging area of work—a completely new field, or new in a specific country or region—might be more positively assessed at the proposal stage and accepted as a higher risk investment. Expectations of performance will also change over time as the field matures.
4. *The type of researcher and his/her organizational context, project role, and North/South location.* NGOs and practitioners, academics, think-tanks, government bodies, and community groups all have different capacities, strengths, and roles in a project. There are also specific efforts to focus on younger rather than more experienced researchers. All of these influence expectations of contributions to performance. Assessment thus needs to be sensitive to role and capacity differences.
5. *The unit of analysis.* As noted in section 3, the assessment of research excellence will normally be done at the grant/project level, but may require synthesis at the program portfolio (or even higher) level. This may require additional criteria.
6. *The research context.* Some interviewees emphasized the importance of ensuring that measures do not disadvantage research that is done under difficult circumstances (e.g., in fragile or data poor contexts).
7. *Notions about “academic performance” in R4D: Achieving recognition in traditional “academic” settings.* Some team members noted that it is often important to publish in discipline-based, peer-reviewed journals in order to retain or enhance their profile in their academic discipline. However, others noted that this practice runs afoul of efforts to publish multi-, trans-, or interdisciplinary work not readily accepted by many high-profile journals within a given discipline.
8. *Programming modality.* Different programming modalities affect the way in which research excellence is assessed. For example, interviewees confirmed that higher-quality proposals and performance are expected from projects identified through competitive processes. Competitive processes with explicit criteria and weighting schemes for peer review tend to leave less room for interpretation and shaping a project over time. Dissertation award recipients in the Economy and Environment Program for Southeast Asia (EEPSEA) are expected to address important policy topics with higher expectations of rigor than recipients of small grants for exploratory projects by low-income country researchers.

9. *Trajectories towards research excellence.* As noted earlier in this chapter, research excellence may need to be judged in terms of the progress made on a trajectory towards a desired endpoint (or even without an explicit endpoint in mind). This will be especially pertinent in grants with a strong research capacity building focus. Criteria may differ from the beginning to the end of the project.

Assessment tools

Where staff mentioned planning, project appraisal, and monitoring tools, reference was made almost exclusively to aspects of outcome mapping²² or the recently revised assessment/reporting suite (PIMs, PADs, PMRs, trip reports, and PCRs). The suite enables reporting of primarily qualitative information (a marked departure from the ubiquitous use of log frames and indicator lists for reporting in the aid world). Interviewees found the various templates very useful, but not sufficient for research excellence assessment needs. The PIM and especially the PAD provide ample opportunity for a narrative about, and classification of, the project for management purposes. The PMRs, trip reports, and PCRs are excellent for the facilitation of learning and linking of progress and achievements to desired outcomes through narrative reporting. However, although the PCR requests a list and assessment of research outputs, there is no guidance on what constitutes “quality,”²³ while evidence of use, influence, and impact is anecdotal and self-reported.

Funding partnerships sometimes dictate special tools, several of which are used for competitive proposal assessment (e.g., GEHS uses GHRI peer review guidelines). Several programs are developing tailor-made approaches for proposal assessment (e.g. GEHS, Ecosystems for Human Health (Ecohealth), GHRI) and monitoring of outcomes (e.g. Ecohealth Program Level Outcome Tracking, Climate Change and Water (CCW), GEHS). At least one past program (Acacia) used developmental evaluation for monitoring purposes. Metrics—both conventional (e.g., citations, impact factors, conferences, media quotes, and anecdotes) and alternatives (e.g., tracking of websites, Facebook, blogs, and Twitter²⁴)—are receiving attention (Information & Networks (I&N), GHRI, GSJ) in an effort to overcome shortcomings in the applicability of conventional measures to R4D. However, these efforts are few and ad hoc,

²² Outcome mapping was referenced by only a few, far fewer than the assessment/reporting suite.

²³ This was also noted as a problem during the external program reviews at the end of the last programming cycle.

²⁴ I&N are the most deeply engaged, studying the “alternative metrics manifesto” and aspects such as understanding the potential of, for example, “connection metrics,” the real world use of research on social networks, crowdsourcing versus expert perception, power relations in the scientific endeavor, open source publishing, and how to distinguish between valid and influential research. GEHS is also developing a monitoring framework consisting of several components: peer review journals, Google analytics, references, citation analyses, peer review; tracking the extent to which work has been picked up in the media and through channels that policy and decision makers are likely to use; and also trying to understand the political economy of decision making, the degree to which evidence drives decision making, and understanding the demand side for just-in-time delivery. They also intend to develop a suite of tools to measure impact.

without significant central IDRC support. Some interviewees noted that they had neither the inclination nor time to develop new systems for assessing research excellence suitable for their purposes.

Concluding comments

Unsurprisingly, since research excellence in IDRC is not uniformly defined, approaches for assessing it are not uniform and consistently applied across the organization. A range of assessment practices are used, almost exclusively aimed at project-level appraisal and monitoring,²⁵ but without a common or shared sense of what comprises research excellence. Project assessments – of which research excellence forms part – are essentially “frontloaded.” That is, there is a strong emphasis on project appraisal and refinement during project conceptualization and development, thus ensuring that projects are designed as well as possible to increase the chance that they will yield excellent (research) results. The hands-on management reflected in the grants-plus approach, and the range of mechanisms to build research capacity and promote learning, support what is essentially a *process orientation* to achieving and measuring progress and performance (including towards research excellence) based on IDRC’s sphere of control (see Figure 1 on page 10).

This is a useful approach given the complex context in which IDRC has to define and work with research excellence, where conventional ways of measurement and their utility for R4D are increasingly questioned. However, several important aspects need to be strengthened to ensure that IDRC is sufficiently rigorous, accountable, and able to tell a convincing “performance story” with respect to research excellence—at the project, program, and organizational level—as its context evolves.

The dimensions, criteria, and indicators for research excellence within the sphere of control (e.g. relevance, innovation, scientific merit, scientific integrity, and reach) are also not clearly articulated in assessment templates. The narrative nature of the reporting provides assessment “stories” that are complex, with insufficient guidance on how to achieve coherence and synthesis within and across projects in program portfolios. Information therefore remains fragmented and under-used for adaptive management purposes.

V. Key Issues in Moving Forward

This study revealed that IDRC has a plurality of views of what research excellence is and how it should be accomplished that are shaped by both internal and external influences. Interviewees are well aware that research excellence can be judged at the proposal stage through competitive, peer-review governed processes. They are aware that research excellence can be narrowly defined in terms of output-based, academic-discipline-influenced

²⁵ Strategic studies and evaluations are conducted under the auspices of either the programs or CSED.

measures (including peer review, publishing in top-tier journals, and citation analyses). They are equally aware of the criticisms and shortcomings as well as the advantages of these ways of viewing research excellence. They are attentive to the view that research excellence is not solely determined by a process of initial vetting of proposals or a final appraisal of research products, but is also developed through a process of expert consultation with research partners in the conceptualization and design of a research project that will lead to actions and outcomes appropriate to the state of development of that research project. They are also aware that while research excellence may involve a minimum expectation of technical quality or scientific merit, achievement of that alone cannot ensure excellence in R4D. Interviewees were clear in their belief that while discussions within a project or program area often are fruitful and informative in developing an understanding of research excellence, there was less of an organization-wide, strategic understanding of the notion.

What this signals is that there is merit in developing a shared set of guidelines that make allowances for multiple understandings of research excellence and assist staff in making intelligent choices among criteria depending on the context, purpose of the research, and other important variables. Such guidelines would be useful in the development of IDRC-funded research as well as in the external appraisal of that research. To achieve actionable knowledge in this respect, additional work on the following issues is necessary.

1. Defining research quality in terms of both (a) scientific merit and (b) scientific integrity

There is an apparent need to develop an IDRC-shared understanding of *research quality* in terms of both *scientific merit* and *scientific integrity* as a basic requirement for the research IDRC funds and cultivates, regardless of novelty or innovativeness of the problem solving approach, the level of sophistication of research partners it might work with, the kinds of social problems that research is designed to address, or whether the project in question is primarily about capacity building or solving problems through additional research based on extant empirical work. In developing this basic requirement for research excellence, it will be most helpful to consider not only what qualifies as evidence of excellence but also what is *not* excellent.

Such an understanding can serve formative goals (clearly communicating IDRC's perspective with Southern research partners in developing projects and cultivating relationships), monitoring and evaluation objectives (determining whether scientific merit and scientific integrity were achieved at the end of a project), and be a grounds for clear communication with potential donors as IDRC enters into shared ventures.

- a. *Scientific merit* can itself be a contested term when it is reduced to a matter of debating the superiority of one methodology over another in view of its intended uses. But, at a meta-level, all serious researchers engaged in R4D, regardless of their preferences for experimental or observational studies (and whether they engage in action research, clinical research, survey research, field studies, or laboratory studies) would agree that, minimal-

ly, scientific merit signifies that:

- research problems are addressed in significant ways that may include being novel or innovative in the approach to the problem and/or possible solutions;
- evidence/justification was provided for a research question/purpose directly targeted at solving a local problem and involving local stakeholders in problem/question formulation;
- there was systematically gathered and analyzed empirical evidence to address the problem;
- there was a clear and apparent relationship between evidence gathered and conclusions reached/claims made; and
- there were steps taken to address bias control.

b. *Scientific integrity* is a necessary component of research quality. It signifies that quality is not solely confined to technical matters related to research conceptualization, data gathering and analysis, and reporting, but also importantly involves ethical behavior, intellectual integrity, open communication, trust, and personal responsibility. Minimally, assessing scientific integrity involves clear evidence of attention to the following considerations:²⁶

- ethical issues in situ related to the protection of human subjects in recruitment of participants into studies and during data gathering;
- the professional conduct of research (e.g., authorship, data preservation, transparency, ownership of data, plagiarism, fabrication and falsification of data, etc.);
- the processes and outcomes of research as it involves and has an impact on vulnerable and marginalized populations;
- whether there are conflicts of interest in the conduct of research; and
- fiscal responsibility.

As with all matters of evaluation of social behavior, the decisions required on both scientific merit and integrity are judgments, not calculations. However, by specifying what is expected in these two areas, IDRC program officers, program specialists, and individuals contracted to perform external program reviews can be provided with a set of guidelines that will help to uniformly direct their work.

²⁶ See for example, Committee on Science, Engineering, and Public Policy, *On Being a Scientist: A Guide to Responsible Conduct in Research: Third Edition*. Washington, DC: National Academies Press, 2009. See also the website of the International Development Ethics Association <http://www.development-ethics.org/>

2. Developing an understanding of research excellence as a process of monitoring knowledge development

In addition to developing a shared understanding of what research quality entails, IDRC would benefit from conceiving of research excellence as a dynamic concept—an ongoing accomplishment rather than something achieved “once and for all.” Research excellence is something towards which stakeholders in an IDRC project (grant) or project portfolio can strive. Research excellence will thus have a “path”—a certain *trajectory depending on context*. Considerable work is necessary to develop this idea, but it requires the creation of a set of heuristics or guidelines that direct attention to research products or accomplishments appropriate to specific sets of research circumstances including the following:²⁷

- the purpose and expected use(s) and audiences for the research – for example, whether the envisaged users are practitioners or policymakers;
- the maturity of the research in a given area as it bears on the problem being investigated;
- the extent of innovation and the degree of risk taken in formulating and implementing a new untested area of work;
- the fragility of the external environment in which the research takes place and the degree of risk taken when formulating and/or implementing the research in such a context;
- the level of preparation of partners (including all aspects of the maturity of research infrastructure of research partnering organizations);
- The extent of required teamwork/collaboration in the problem solving and means of communication within a research team;
- the extent of the multi-disciplinarity required to address a problem; and
- whether the research is, more or less, exploratory and aimed at problem diagnosis or, more or less, building on an existing diagnosis to propose a solution.

This second requirement involves assessing appropriate outputs that are markers of research excellence given various stages of research program maturity and progress. Because of the dangers of reifying measures and the fact that over time measures become the end in view rather than simply an indicator of what one is trying to understand, it is not wise to attach

²⁷ Such circumstances related to research excellence trajectories can roughly be grouped into “capacities” (related to the level of preparation for different tasks), “internal context” (related to the research itself), and “external context” (related to the environment in which the research takes place). It might be worth exploring how these concepts can be expanded to help establish broad frameworks within which such guidelines could be constructed. The potential of this idea may be further explored in the next phase of the strategic evaluation.

metrics to each of these outputs, but rather to offer a set of guidelines for appraisal in the form of “*If X is the case, then look for Y.*” Guidelines of this kind are found, for example, in the criteria for meta-evaluation developed by the Joint Committee on Standards for Educational Evaluation.²⁸

3. Considering the spheres of influence and impact

Furthermore, as a result of internal as well as external pressures, programs and projects continue to grapple with how to assess progress and achievements in the spheres of influence and impact where causal pathways tend to be complex and unpredictable, and contributions to change slow to emerge—often after research support has ended. Success in these two spheres is desirable rather than essential for research excellence, but IDRC staff and research partners can be encouraged to do, where feasible, more special studies to track the use, influence, and impact of their research. This will require long-term and specialized tracking that focuses on extensive verification of IDRC’s contributions.²⁹

As external studies—especially in the spheres of influence and interest—will likely remain limited in number, IDRC’s grantees need to be encouraged and, where feasible, incentivized to take ownership of credible monitoring procedures that can produce dependable data useful for learning about evidence-influenced approaches to policies, practices, and technological developments.

In line with IDRC’s use-focused approach to research funding, strengthening processes aimed at assessing the utility of the research—providing it with the best chance to be used by intended (or unintended) audiences—is a prerequisite for success in its spheres of influence and impact. This implies an ongoing focus on the relevance of the research and on the many context-dependent ways to reach potential users.

4. Remaining flexible and responsive to strategic needs

These considerations raise the issue of whether research excellence should be assessed not only at the product/output or project level, but also at the program portfolio (and even higher) level. Yet, the authors recognize that it is a complicated matter to design a programming strategy that encourages a mixture of projects in a program portfolio, each with different characteristics and at different levels of excellence depending on their starting points and trajectories and, subsequently, to determine what counts as “success” at each level.

²⁸ Joint Committee on Standards for Educational Evaluation, *The Program Evaluation Standards*. Newbury Park, CA: Sage Publications, 2011.

²⁹ Through studies that use process tracing, contribution analysis, and related methods, as well as extensive triangulation.

Finally, the tensions inherent in IDRC's approach to its mission³⁰ are responsible for most, if not all, of the tensions staff experience when making decisions about research excellence assessment approaches. They will therefore continue with their balancing act and trade-offs to ensure research excellence as an endpoint amidst a range of factors influencing each trajectory. This also means that strategic shifts as IDRC strategies³¹ evolve will require flexible and responsive research excellence assessment systems that continue to inform and support IDRC's position and niche in the global research and research funding landscape.

³⁰ As noted earlier, these tensions were defined in a 2009 report on IDRC's strategy by Patrizi and Patton as a series of issues that follow from the pursuit in an organization of "multiple and competing values, ends and benefits, (and which) inevitably gives rise to challenges about how to achieve balance."

³¹Such shifts could include, for example, increasing use of the competitive modality; grants to larger or more established groups; risk-aversion; pressure to align with convention by using readily quantifiable (yet overly simplistic) quality indicators; or less emphasis on the grants-plus approach.

Annex 1. Guiding Review Questions

Key Issues	Review Questions
1. Defining research excellence (RE) at IDRC	<p>1.1 How do IDRC staff understand and define research excellence? What are the key characteristics?</p> <p>1.2 Are there differences within IDRC in how research excellence is understood and judged? If so, what are the reasons? What propagates differences?</p> <p>1.3 What drives IDRC staff understanding of research excellence? What factors (inside and outside IDRC) inhibit or contribute to their perceptions about ‘what counts’ as research excellence?</p>
2. Approaches to assessing RE in IDRC	<p>2.1 What criteria, frameworks and models are being used by IDRC staff to assess and measure research excellence in IDRC grantee organizations? From where are these derived?</p> <p>2.2 For what purposes have these criteria, frameworks, and models been used?</p> <p>2.3 What are staff perceptions about the relevance and effectiveness of these frameworks or models (opportunities, limits, concerns about use)?</p> <p>2.4 Who do staff think should be involved in assessing research excellence (e.g., producers and users), and why?</p> <p>2.5 What has been tried and rejected?</p>
3. Consistency and synergies in assessing RE in IDRC	<p>3.1 To what extent do staff believe that grantees agree with their definition(s) and assessment approaches?</p> <p>3.2 Do IDRC staff apply different criteria for research excellence under different circumstances (depending on, for example, types of research partners; types of research; or ex-ante proposals compared to ex-post outputs)?</p> <p>3.3 Do staff perceive differences in the quality of research outputs from different programming modalities? Are there differences in the criteria used?</p>

Annex 1. Guiding Review Questions (continued)

Key Issues	Review Questions
4. Managing (potential) tensions related to RE at IDRC	<p>4.1 How do staff view the relationships between research capacity building, quality of research, and use of influence of research? How does this influence their definition and assessment of research excellence?</p> <p>4.2 How do staff manage (perceived) tensions between high quality research and research capacity development?</p> <p>4.3 Do staff distinguish between considerations of methodological soundness/scientific validity and other considerations such as relevance, originality and uptake or use? If so, how?</p>
5. Frameworks and models for RE at IDRC	<p>5.1 What are the implications of internal and external frameworks and models—and any related and relevant theories of change—for IDRC practice? What frameworks and models are most appropriate for use by IDRC?</p>

Annex 2. Persons Interviewed and Sampling Details

Last name	First name	Location	Position	Program Area	Program Initiative
Faminow	Merle	Regional	Program Manager	AE	AFS
Redwood	Mark	HQ	Program Leader	AE	CCW
Lebel	Jean	HQ	Director	AE	AE (PPB)
Charron	Dominique	HQ	Program Leader	AE	Ecohealth
Mallee	Hein	Regional	Senior Program Specialist	AE	Ecohealth
Sanchez	Andres	HQ	Senior Program Specialist	AE	Ecohealth
Francisco	Herminia	Regional	Director, EEPSEA	AE	EE
Medhora	Rohinton	HQ	Vice-President	PPB	Corporate
Lauchlan	Munro	HQ	Vice-President	CSRM	Corporate
McGurk	Stephen	Regional	Regional Director	CSRM	Corporate
Touré	Kathryn	Regional	Regional Director	CSRM	Corporate
Schwartz	David	HQ	Director	DPD (PPB)	Corporate
Gorman Vélez	Maggie	HQ	Project and Partnership Officer	DPD	DPD
Clarke	Michael	HQ	Director	GHP	Corporate
Godt	Sue	Regional	Program Officer	GHP	GEHS
Mhatre	Sharmila	HQ	Program Leader	GHP	GEHS
Sinha	Chaitali	HQ	Senior Program Officer	GHP	GEHS
Daibes	Ibrahim	HQ	Senior Program Specialist	GHP	GHRI
Gagnon	Diane	HQ	Program Leader	GHP	GHRI

Annex 2. Persons Interviewed and Sampling Details (continued)

Last name	First name	Location	Position	Program Area	Program Initiative
Geneau	Robert	HQ	Senior Program Specialist	GHP	NCDP
Hallen	Greg	HQ	Program Leader	GHP	NCDP
Leppan	Wardie	HQ	Senior Program Specialist	GHP	NCDP
Weston	Ann	HQ	Director	SID (PPB)	Corporate
Faruqui	Naser	HQ	Director	SI (PPB)	Corporate
Elder	Laurent	HQ	Program Leader	SI	I&N
Fourati	Khaled	Regional	Senior Program Officer	SI	I&N
Smith	Matthew	HQ	Program Officer	SI	I&N
Tulus	Frank	HQ	Senior Program Officer, BMGF	SI	I&N
Camara	Alioune	Regional	Senior Program Specialist	SI	IID
Emdon	Heloise	HQ	Program Leader	SI	IID
O'Brien	David	HQ	Senior Program Specialist	SI	Challenge Fund
Szabo	Sue	HQ	Director	SEP (PPB)	Corporate
De Boer	John	HQ	Program Leader	SEP	GSJ
Gottsbacher	Markus	HQ	Senior Program Officer	SEP	GSJ
Singh	Navsharan	Regional	Senior Program Specialist	SEP	GSJ
De Haan	Arjan	HQ	Program Leader	SEP	SIG
Rodriguez	Edgard	HQ	Senior Program Specialist	SEP	SIG
Taylor	Peter	HQ	Senior Program Specialist	SEP	TTI

Nearly all interviewees received the questions ahead of time and program staff (including program officers, senior program officers, and senior program specialists) also had an opportunity to provide some additional information by email that could not be covered during the (on average) 1.25-hour-long interviews.

Table 1 provides a breakdown of interviewees' location across the organization. Table 2 provides information on the gender distribution of interviewees and their tenure at IDRC.

Table 1. Distribution of interviewees across the organization

Program Area	Program Staff	Program Leader	Director	Regional Director	Vice-President	Total n	Total %
AE	3	3	1			7	18%
GHP	5	3	1			9	24%
SEP	4	2	1			7	18%
SI	5	2	1			8	21%
SID			1			1	3%
DPD	1		1			2	5%
CSRM				2	1	3	8%
PPB					1	1	3%
Total n	18	10	6	2	2	38	100%
Total %	47%	26%	16%	5%	5%	100%	

Table 2. Distribution of participants by tenure at IDRC and gender

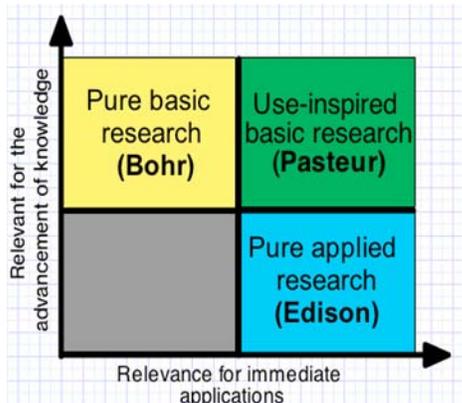
Time at	Female	Male	Total	Female %	Male %	Total %
< 1 year	1	2	3	8%	8%	8%
1-5 years	7	19	26	59%	73%	68%
>5 years	4	5	9	33%	19%	24%
Total %	12	26	38	100%	100%	100%

Information provided by interviewees was treated confidentially (responses are not identified by respondent in this report). Preliminary findings were shared with CSED and discussed at a meeting held in early September 2012 at IDRC with members of the EAC and other staff invited by CSED. CSED also reviewed a preliminary version of this report.

Seventeen of the interviewees who were in control of specific research portfolios characterized them as:

- primarily use-inspired and to a lesser extent applied, with only three indicating a basic research component (for definitions used, see Annex 3);
- almost entirely multi-disciplinary (or inter/trans-disciplinary), with only one indicating a mostly mono-disciplinary portfolio;
- mostly non-competitive solicitation, with only five using primarily competitive funding modalities; and
- almost exclusively using mixed methods approaches, with five indicating some emphasis on quantitative methods and another five some emphasis on qualitative methods.

Annex 3. Pasteur's Quadrant



As conceptualized by Stokes³², scientific research can be classified based on two dimensions – (i) whether it advances human knowledge by seeking a fundamental understanding of nature, or (ii) whether it is primarily motivated by the need to solve immediate problems. The result is three distinct classes of research:

- Pure basic research (exemplified by the work of Niels Bohr, early 20th century atomic physicist);
- Pure applied research (exemplified by the work of Thomas Edison, inventor); and
- Use-inspired basic research (exemplified by the work of Louis Pasteur, pioneering 19th century chemist and microbiologist).

Twenty-two of the IDRC staff interviewed for this study and in control of research portfolios were provided with a set of supplementary questions by email. This included the following summary, which they were asked to use to classify their research portfolio:

"Pasteur's Quadrant: three categories of research based on two binary dimensions. First, a quest for fundamental understanding, and second, a consideration of use:

- *The work of the theoretical physicist, Niels Bohr, exemplifies the quadrant in which researchers search for fundamental knowledge, with little concern for application.*
- *The research of Louis Pasteur, whose studies of bacteriology were carried out at the behest of the French wine industry, characterizes the work of scientists who, like Bohr, search for fundamental knowledge, but unlike Bohr, select their questions and methods based on potential relevance to real world problems.*
- *The work of Thomas Edison, whose practical inventions define the 20th century, exemplifies the work of scientists whose stock and trade is problem solution. They cannibalize whatever basic and craft knowledge is available, and conduct fundamental research when necessary, with choices of action and investment driven by the goal of solving the problem at hand as quickly and efficiently as possible."*

³²Donald E. Stokes (1997). *Pasteur's Quadrant – Basic Science and Technological Innovation*, Brookings Institution Press. Quoted in a blog post on Open Education Research, written on January 18, 2009. Extracted on 20 May 2012 from <http://openeducationresearch.org/2009/01/pasteurs-and-edisons-quadrants/>

Annex 4. Acronyms

AE	Agriculture and Environment
AFS	Agriculture and Food Security
CCW	Climate Change and Water
CSED	Corporate Strategy and Evaluation Division
CSRM	Corporate Strategy and Regional Management
DPD	Donor Partnerships Division
EAC	Evaluation Advisory Committee
Ecohealth	Ecosystems and Human Health
EEPSEA	Economy and Environment Program for Southeast Asia
GEHS	Governance for Equity in Health Systems
GHP	Global Health Policy
GHRI	Global Health Research Initiative
GSJ	Governance, Security, and Justice
I&N	Information and Networks
LMIC	Low and middle income countries
NCDP	Non-Communicable Disease Prevention
PAD	Project Approval Document
PMR	Project Monitoring Report
PIM	Project Identification Memo
PPB	Programs and Partnership Branch
R4D	Research for development
SEP	Social and Economic Policy
SI	Science and Innovation
SID	Special Initiatives Division
SIG	Supporting Inclusive Growth
TTI	Think Tank Initiative