COMMUNICATING RESEARCH FOR IMPACT AND ACCOUNTABILITY

What do we do with our research when it is complete? Publish the results in a peer-reviewed journal and knock off the donor report. Then begin anew – on to the next paying project. This well-entrenched model generally ignores communicating with governmental decision-makers as well as communities at the site of the research. The prevailing pattern creates a chasm between where knowledge is generated and where it is needed. Like logging and mining, such an extractive approach to research rarely leads to positive ecological or livelihood outcomes where the work was conducted.

Some of this stems from the fact that scientists are generally measured, and thus moulded, according to one overarching parameter – their publication record. Scientists are trained to produce science, and rewarded for making their findings available through international scientific journals. While the peer-review system is a cornerstone of modern science and critically important as an assurance of scientific quality, the present emphasis on quantity of publications may undermine quality, innovation and risk-taking in research. Critics contend that current incentive structures trigger performance anxiety, leading to short-cuts, reduced amount of time spent in field research, superficiality and stagnation in science.

In research involving forest resources, especially NWFPs, such trends are particularly disturbing. Why? One reason is that local people are often more knowledgeable about forest resources than scientists, and in-depth field research is necessary to understand complex management systems. Cultural practices are also linked with natural resource use, and the insights of forest-reliant people are fundamentally important to conservation and development. Furthermore, on an ethical level, what does it signify to take information and knowledge from struggling forest communities and not give back? Frustration with the lack of impact of research and the missing links between knowledge and action have led to calls for a more discerning analysis of how researchers communicate and disseminate their findings.

Disenchantment among donors, communities, conservationists and researchers

Researchers cite lack of time, funds and training as routine obstacles to sharing research. Communicating science to civil society in an accessible language is also considered damaging to one's professional reputation. Institutional incentives remain firm to engage in linear, top-down communication of results that, in turn, guarantees positive performance measurement in research and academia. Such a surfeit of publishing has made scant progress in ameliorating impoverishment, either of human communities or ecosystems. Such a wide gulf between knowledge and action has led to what some term a "biodiversity tragedy in progress".

An insightful study of 2 202 written texts relating to conservation and natural resource management over a 450–year period in Peru discovered that less than 1 percent was directed at lay people or students. Summarizing what the authors of the study find to be "dysfunction in the tropical literature", it is concluded that "written accounts of tropical biology and conservation reach a tiny fraction of their potential audience ...

One cannot hope for the advance of tropical conservation and science while shrugging one's shoulders at the vastly inefficient way tropical biologists generate and share information."

Today, rural communities are fatigued and donors disenchanted by the revolving door of projects without concrete results. In response, development practitioners, civil society organizations and scientists are questioning the "trickle-down and translate" models of research and dissemination. Trickle down embodies a belief that communication is a hierarchic one-way process, with little or no input from the users of the research, whether these constitute the government, industry or community. New models of research examine not only with whom we share results, but also the process itself, with the goal of increasing equity along the chain from research design to dissemination. Participatory paradigms recognize the capacity of ordinary people to create knowledge – not only scientists, but also farmers, hunters and forest gatherers.

To improve the conservation and development outcomes of bioculturally related research, the links between culture, communication and natural resource use need to be better recognized. To begin with, researchers need to be forthright when proposing research topics. Have they been to the proposed site? Is the question of relevance local, national or regional? What outputs are planned? Who is the anticipated audience? What communication channels will be used to disseminate the research? Although these are rudimentary questions, researchers often lack the training and the communication skills needed to identify impact pathways and use them. Discussed below are some of the challenges and opportunities for improving communication and giving increased attention to culture in natural resource and NWFP-related research.

Training for relevance and accountability

First, the common practice of developing research questions and projects in areas geographically and conceptually distant from the site of research can result in studies of little relevance at the local level. As a result, conservation and development projects may serve limited and/or self-serving aims – a graduate degree, a publication or a project output. In addition frequently to having minimal local relevance, projects addressing the interface of people and natural resource use are often intrusive. Homes are entered without invitation, rounds of questions asked, incomes and diets pried into and communal areas entered and surveyed. After the last round of data entry has taken place, villagers are accustomed to glimpse researchers' backs as they leave with data-filled notebooks and household surveys. Where does accountability lie?

Significant gains have been made involving company–community partnerships regarding benefit sharing and prior informed consent. However, the intrusive nature of project teams and graduate students entering communities to conduct research has received less attention. Right now, thousands of researcher scientists, graduate students and project consultants are working within rural communities on natural resource-related issues. Of these, how many will leave anything of use behind?

Recently, the need to bridge the gulf between knowledge and action and to be more accountable to local people, policy-makers and civil society has been highlighted by students, academics and conservationists. Professors and students are calling for greater equity in research processes and products. To improve relationships between local communities and researchers, students will need improved training in equitable research processes that move beyond prior informed consent. When working closely with communities on issues of local relevance, consent to someone else's agenda is insufficient. Local people in the vicinity of research need to participate more fully in research design and agenda setting.

To achieve this, proposal conception and development in natural resource-related themes need attention. Timetables set by academic advisers or donors should not require researchers to submit fully fledged proposals prior to minimal understanding or even a visit to research sites. Initial drafts of project proposals involving local communities are better left as rough sketches. These can later be delineated in the field with local constituents, rather than be invented and belaboured far from the research site to meet institutional requirements or to appease bureaucratic mind-sets.

Shrinking amounts of field time need to expand. The recent tendency for field work to consist of a series of multistakeholder workshops or modelling seminars is no substitute for immersion in complex ecosystems and cultures. Fleeting field time can result in misleading analysis, leading to theoretical abstraction that can do more harm than good. Theories are built and tested upon empirical evidence. Students and researchers benefit from substantial time living in and among rural communities and the plants and animals they rely upon.

Culturally attuned research and communication

Communication was formerly viewed as a top-down, linear process, with knowledge conveyed by experts to the uninformed. Today, the flow of information is recognized as a complex, interactive, multidirectional exchange or "shared learning". Interactive communication is now conceived as a means to maximize the impact of research on development. New approaches to communication in the health sector, where lives are literally at stake, offer useful lessons. In the field of health care, uptake pathways are clearly defined and the need for interaction and dialogue with affected communities widely recognized. Researchers working in environmentally related fields have lagged behind but are also recognizing that more attention to communication, local knowledge systems and culture is needed.

Cultural practices and traditional knowledge systems have customarily remained unrecognized and/or underappreciated by natural resource scientists. When perceived by outsiders, cultures have often been belittled and the embedded beliefs, myths and rituals disparaged by rationalist scientists. Theoretical advances in communication and development indicate the need for integration of various knowledge systems. However, for key issues such as land rights and deforestation, cultural concerns remain peripheral and lacking in application.

Research in the social sciences indicates that attention to cultural context and diverse knowledge systems can improve the research process and uptake. Recent interest from conservation biologists in political science, psychology, social issues, communication and education offers hopeful signs of growing interdisciplinary collaboration.

Since the 1990s, after the signing of the Convention on Biological Diversity, work has been under way to improve socio-economic and environmental justice for traditional peoples. Theoretical and practical progress is evident in the development of agreements for prior informed consent and more equitable benefit sharing, and in strengthened codes of ethics and protection of intellectual property rights. These mechanisms represent significant milestones towards more equitable relationships that respect the cultures and traditional knowledge of communities.

Actors that help move information from where it is generated to where it is needed – often known as knowledge brokers or boundary organizations – also play a critical role. Knowledge brokers help to prevent the costly practice of reinventing the wheel, as they "search out knowledge, synthesize research and scan for best practices and examples from outside their organizations", according to the Canadian Health Services Research Foundation. Although fundamental to an impact-oriented approach, the critical networking capabilities, flexibility and linking functions they perform are often undetected, undervalued and/or actively discouraged by performance measurement systems at research institutes. To increase the potential for impact from research, such organizations should seek out and encourage individuals who demonstrate these skills.

A serious argument against researchers' engagement in communicating results is that they are already stretched too thin. Proposal writing, donor engagements, impact assessments and bureaucratic duties already occupy too much of scientists' time. Clearly, not all research is suitable or relevant to share with non-scientific audiences. In addition, not all researchers have sufficient skills or inclination to engage in targeted communication of research results. However, for impact to occur, recognition of the critical role that some researchers and research organizations play in communicating results to key audiences will be needed. As one author states, the primary activity "must remain the expansion of knowledge ... but the link to policy and action calls for expanding the scope of activities and approaches".

Challenges and opportunities of communicating research

Information is "sticky" – it tends to stay where it is generated. In research, this often means that research findings and analysis remain confined to the ivory tower. For information to have a wider impact than its initial focus, a variety of dissemination and communication methods needs to be employed, linked closely to user needs. Embracing all users – of different economic classes, cultures and educational levels – constitutes a challenge as well as an impact opportunity for researchers.

A central challenge is that one in five people in the world are functionally non-literate. This figure rises to nearly four out of five in some remote regions – regions that may often have scant access to formal education but high biodiversity. If local knowledge is valued, as stated by the Conventions on Biological Diversity and Climate Change, then communication with land and resource stewards will need to move from rhetoric to an integral part of project planning and execution.

Reaching people of all educational levels and economic classes through the use of relevant information and appropriate communication channels has been spearheaded by pioneers such as the Brazilian education theorist Paulo Freire. Popular education and communication theories affirm that research and dissemination strategies that appreciate culture and local knowledge systems are more likely to succeed than conventional projects. Innovative public education is burgeoning in Latin America and Africa, particularly in the health and social service sectors. Radio, theatre, dance, puppetry, comics and video are proving to be highly successful in raising awareness, changing behaviour and improving livelihoods.

As researchers attempt to share their findings with a range of stakeholders, they will be confronted with basic "translation" challenges. For example, how to convey simply the economic and ecological trade-offs between sales of timber and non-timber forest products to inform negotiations of forest communities? How to make graphs of variable fruit production and seasonal prices comprehensible to villagers? How to ensure that women, the elderly and the marginalized are both understood and heard? Published descriptions of endeavours to share research with local users are uncommon in academia. As more scientists invest time in conveying research through various means to diverse audiences, their experiences can be useful to inform other researchers and students.

Close to the site of research, efforts to share results in culturally compelling ways such as illustrated books, comics, theatre and video, are more likely to be embraced by marginalized populations and civil society. By contrast, scientists may deride research shared through such means as not "legitimate". However, the "translation" work that goes into making research accessible to a range of audiences is considerable and when done well, the product should not be a "dumbed-down" version, but one whose rigour is enhanced through a thorough process of review by a combination of both scientists and end-users. Farmers, foragers and hunters sustain their families over a lifetime, using the animals and plants that researchers study over a relatively fleeting time frame. If given the chance, such local experts can offer astute and critical reviews of research, honing the analysis with decades of first-hand knowledge. Ideally, scientists will complement local knowledge with socio-economic, ecological and policy analysis unavailable at the local level.

Conclusion

The gap in communication between scientists and local people is part of a well-ingrained professional culture and remains because of institutional incentive structures and personal reward systems in academia. Current performance measurement systems discourage communication to audiences other than scientists. As a result, equity at the research site and broader impact for civil society may be disregarded. The underaddressed problem of low researcher accountability at the study site is compounded by accelerated project time frames, unrealistic donor requirements, financial constraints and the chronic push to move on to the next paying project.

Lessons to tackle this problem in natural resource-related research can be gleaned from the health and social service sectors that have confronted the gap in communication between knowledge generation and application over the last three decades. As in the health sector, there is now rising recognition in the natural sciences that research is socially embedded and that this has implications for research design and dissemination.

To make their research more accountable, scientists working on issues related to the interface of people and natural resource use are posing questions such as: Is the research relevant and to whom? Have a range of stakeholders been involved in the research process and at what stage? Does the research pay sufficient attention to local culture and locally defined needs? What outputs and impact pathways are planned? Are there potential partners engaged in communication and/or popular education who can collaborate in sharing the research?

For an impact-oriented communication paradigm to take hold, research institutions will need to create incentives that support production of an expanded range of outputs and broader dissemination to targeted audiences. Scientists and research organizations will need to distinguish between high citation ratings (i.e. "impact factor") and actual conservation and development impacts on the ground. Lessons can then be gleaned from rigorous evaluation of research and communication strategies and their impacts on forests and forest-reliant families. (*Contributed by*: Patricia Shanley, Ph.D., Senior Scientist, Center for International Forestry Research [CIFOR], PO Box 0113 BOCBD, Bogor 16000, Indonesia. E-mail: p.shanley@cgiar.org; www.cifor.cgiar.org)

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