COMMONS FORUM *RESPONSE*

Response to: Knowledge for Commons Management: A Commons for the Commons, by Doug Wilson

Integrating Knowledge of Forest Management

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Doug Wilson discusses fisheries, fishers and fishery scientists, but his insights into the typical dichotomy of local/traditional versus scientific knowledge applies to many fields, especially forests, forest workers and forest scientists. His juxtaposition of tacit and discursive, oral and written, and anecdotal and systematic forms of knowledge offers finer distinctions of the two types often provided. From the perspective of someone working primarily on forest management in the United States, I'd like to add another layer to the discussion: many people in forested areas in fact defy the dichotomy by holding and using virtually all these forms of knowledge simultaneously.

In looking at whether and how local ecological knowledge gets incorporated into monitoring of and research on forest management, I've seen the line between scientists, managers and "locals" blurred quite a bit. In many areas of the U.S., retired U.S. Forest Service personnel and other private forestry professionals, both managers and scientists, are also valuable members of a local community. These and other local people may have longterm, tacit, oral and anecdotal knowledge of their forests, and are also educated and/or scientifically trained in the Western science traditions of discursive, written and systematic knowledge. Hence, a number of people involved in forest management hold and use all of the above forms of knowledge. The same could be said of many people in fisheries, range management, agriculture and even urban planning, though these fields are not my focus here. These "local scientists," who hold a broad range of different forms of knowledge, play an important role in the many communities collaborating around forest management on private or public lands. Examples include a retired technician from the U.S. Forest Service who is a volunteer for the community wildfire protection committee, a local private consulting forester who is on the advisory committee for the collaborative stewardship project, or a Native American forestry department manager who has an advanced degree and extensive traditional ecological knowledge handed down through generations. In these cases, the difference between conventional scientific knowledge and local knowledge becomes harder to distinguish. This is important when agencies, foundations and other organizations increasingly require "local stakeholders" or "local knowledge" to be incorporated into forest management projects and plans.

These local scientists have their feet in both worlds; they form a third category that bridges the gap between conventional scientists and "locals". This has at least two consequences. First, in relation to Doug's suggestion that scientists become facilitators, it might make it easier for a scientist to facilitate the conceptualization of how the ecological system works when everyone in the room can speak the same techno-scientific language of public agencies and scientific journals. Secondly, it may also mean that those local people who are not as able to cross the boundaries between the two worlds, who don't have the discursive, written, systematic knowledge of the ecosystem, are even further marginalized and left out of any discussion of forest management. In a system in which agencies and other organizations oftentimes require that a "quota" of local stakeholders be involved in a forest management project or plan, those locals who have conventional scientific training may more easily fill the slots, further excluding those with the less powerful forms of knowledge. For example, a landscape assessment project in Oregon was initiated and completed by a local community group, and is now being used to scope projects by the U.S.

Forest Service. The project is a testament to how locals and local knowledge can produce useful science for agency forest management. However, most of the people that completed the project were well-trained former or current professionals in the natural resources field. Does this mean that their local knowledge was less "local" or tacit, or that their project does not therefore include local knowledge? I don't think so. But it may mean that some other valuable local knowledge was left out.

Take the case of the thousands of non-timber forest product (NTFP, also called non-wood forest product) harvesters in the Pacific Northwest who spend ten months of the year harvesting shrub and fern foliage used in floral bouquets around the world. They gain access to large areas of private timber and public lands through permits or leases, and then sell what they've picked at a piece-rate to wholesalers for between $25-$100 per day. These harvesters (like the many other forest workers who plant tree seedlings, thin stands and do other forest restoration work) have extensive ecological knowledge of the forest, timber management practices and the impacts of their own harvesting. They (like many other forest workers) are also primarily immigrant or migrant workers from Latin America and Southeast Asia who often speak little English and have very little formal education. While there are active debates about whether these NTFP harvesters should be considered "local", the real issue is that they have knowledge of the forest that the professionally trained and educated scientists and managers don't have because of their livelihood activities.

There are also a variety of forest technicians, private landowners, and retired forest professionals who have lived and worked in these forests for generations and may fall into the third category described above, with their feet in both worlds. These people can be great assets to efforts to aggregate knowledge of the forest ecosystem and effects of management, and are much more accessible for scientists and managers to gain local knowledge or public input. But they don't often have the knowledge of overstory-understory relationships and impacts of NTFP harvest that the forest workers have. As managers and scientists try to catch up in their understanding of the impacts of the rapidly intensifying harvest of many species, harvester knowledge should be integrated into the body of information used to manage public and private forests.

With this in mind, what is the role of the local scientists, the people who combine the knowledge forms of conventional scientists and locals? They may either help facilitate the communication between scientists and (in this case) harvesters, or instead provide a barrier between them such that those with tacit, oral and anecdotal knowledge are even more excluded from forest management and science activities. An example of a person who chose the facilitator role is a local retired forest technician, who has also harvested NTFPs in the region for 50 years and helped to found a harvester association. This association helps primarily Latino harvesters negotiate for access to land and collaborate with ecologists. As one of the collaborating ecologists, I worked with the association founder and other harvesters to design experiments studying the impact of different harvest levels on the commercial and biological productivity of a particular NTFP species. We arrived at an experimental design and results that could not have been achieved by only working with forest professionals or ecologists because the harvest treatments and commercial productivity measurements more accurately reflected harvest conditions. This would not have been possible without the association founder.

The harvester example also reflects the issue raised by Doug as to the role of scientists in helping to integrate the many forms of knowledge. Many scientists do not have the needed skill-set for facilitating meetings of stakeholders with conflicting values or inconsistent understanding of an ecosystem. However, some training during graduate school, or even in the form of mid-career workshops, could build scientists' awareness of and respect for ALL the forms of knowledge and all the different groups of local people who hold that knowledge. Of course, some groups may not want to contribute their local knowledge to a project for a variety of reasons, and may be wary of the project or the organization running it. The important thing is that all the groups of local people are informed about the forest

management project or plan and can decide whether to participate and add their knowledge or not, in whatever form it is held. In fortunate situations, then, conventional scientists with these improved skills can partner with local scientists who have both conventional scientific and local ecological knowledge. Together they can reach out and facilitate ways to include people who hold less powerful but important forms of knowledge, such as harvesters, other forest workers, non-English speakers, some Native American groups, and those of low socioeconomic status. By partnering with the local scientists who have their feet in both worlds, conventional scientists may be better able to collaborate with those who's knowledge is often overlooked.

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