

COMMONS FORUM *Commentary*

Knowledge for Commons Management: A Commons for the Commons

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Knowledge about a commons is a public good that has to be created and shared by the commoners so that they have the information they need to make and enforce operational rules and manage conflicts. On many commons people do different kinds of activities and the knowledge that results is also different. When these different experiences are mixed with different interests coming to an agreement on how to proceed can be very difficult. A fishery is a commons where developing a shared picture of what is happening to the fish is one of the toughest aspects of participatory management. For the past seven years most of my work has involved using tools from the sociologies of science and knowledge to try to understand this problem. I have learned that it brings to diverse groups similar kinds of difficulty and pain.

Knowledge is always a community product and communities have different knowledge cultures with different ideas about what it means to “know” something. In commons management we sometime use as shorthand the idea that there are two basic knowledge cultures, i.e., the Western scientific and informal “local ecological knowledge” (LEK). There are actually many different knowledge cultures - among scientists and local communities alike. Sometimes these knowledge cultures attach to geographical communities, but they also attach to different professions or fields of inquiry. These communities “socially construct” nature differently.

Recognizing that knowledge is a community product, that different communities have different ideas about valid knowledge, and construct different pictures of nature does not mean we have to believe that facts about nature are impossible to establish as true. When asked how history would interpret the beginnings of the First World War, the French Prime Minister Georges Clemenceau famously replied: “One thing is for certain: they will not say that Belgium invaded Germany.” The physical movements of troops and unleashing of weapons were facts in nature, not shared meanings. Clemenceau is reminding us that, while history is all about meaning and interpretation - indeed, every trigger was pulled because someone decided to do so based on their understanding of the situation - the truth of facts can also be very consequential.

In fisheries, large segments of the main stakeholders have acknowledged that fisheries face a global crisis. Most stakeholders have endorsed the “precautionary principle” that when knowledge of the stocks is uncertain the response should err on the side of caution. Most stakeholders have also endorsed the participatory approach that acknowledges that without cooperation through participation this commons is not going to be sustained.

But stakeholders have had a great deal of difficulty deciding how precaution and participation can be done. The majority of conflicts around fisheries take the form of arguments about the facts, even when the underlying conflict is about something else. Under the precautionary approach a common understanding of nature does not require an unattainable consensus, but, under the participatory approach, it does need to be common enough so that responses will not be continually blocked by disagreement. The only time we

seem to be able come close to such a common picture is when everyone more or less agrees that an important stock has collapsed entirely. Clemenceau might call this the fisheries equivalent of an invasion.

The underlying problem is transparency and accountability. Only when stakeholders account for how they know what they say they know is there a possibility of moving toward a common picture. There are two major problems. Obviously, what stakeholders say is coloured by their own activities, financial interests and concerns. The other is the difficulty of translating stakeholder knowledge into a form that can be accounted for in a transparent fashion.

The issue of interests arises for all stakeholders, including scientists and government management agencies. All stakeholders are going to select a certain set of facts as relevant. None of this is necessarily dishonest, everyone's tasks and problems help define their picture of nature. The response to this problem is not to try to privilege one stakeholder group as the carrier of 'objective' information, because the other stakeholders will not long accept this. Nor should we decide that it is impossible to create a common picture of the resource and reject cooperative management in favour of a pure political game where only the winner's picture counts. In the end cooperation is needed for effective management. The response that is left is to attempt to describe the activities and interests of the different stakeholders and how they influence their perception of the resource. This is another way to increase transparency and help them consider things they may not see in their own day to day activities.

The greater difficulty is that different stakeholders and the different knowledge cultures hold different *forms* of knowledge. One important distinction is between *tacit* and *discursive* knowledge. Tacit knowledge is knowledge that is not (easily) expressed, usually based on skills and experience. Gisli Pálsson's studies of boat captains show that they find it hard to explain why they know things because their knowledge comes from immersion in the everyday world. We often think of tacit knowledge in respect to fishers, but scientists rely heavily on tacit knowledge to accomplish their tasks. Because scientists report their results following formal conventions, the tacit underpinnings of their knowledge remains hidden until it is subjected to intense questioning such as during a legal proceeding.

A second critical distinction is between *oral* and *written* knowledge. Walter Ong has written a wonderful book describing the implications of these forms of communication. His many insights include such observations as: oral information is organized in flatter hierarchies than written information and involves fewer categories; because oral information is not stored in a durable form, a much smaller amount of information is preserved and this store tends to be conservative in content; and, oral information is less abstracted from the day-to-day and tends to be related to the immediate and concrete.

A third distinction is between *anecdotal* and *systematic* information. This applies to data, i.e. a set of individual observations, rather than to knowledge, which requires an understanding of the processes that link the observations. Systematic data is gathered by specific procedures. Its purpose is to link scale levels. It is a way to package information at one level so that processes happening at a higher level can be understood. Anecdotal means that the observation cannot be used to characterize phenomena at higher scale levels. It is not a reference to the validity of the information, although the word is often incorrectly used that way.

These different forms of knowledge are important because of the close link between knowledge and power. When it comes to participating in the give and take of participatory management, holding tacit, oral, or anecdotal knowledge rather than discursive, written, or systematic knowledge can mean real disadvantages. These disadvantages are not based on the knowledge being invalid nor on the unexamined assumptions of others about its validity, although such biases certainly play a part. They arise because discursive, written, and systematic information is easier to apply to the practical problems of managing complex, multiple-scale, multi-stakeholder commons.

Several authors have described how incorporating LEK in both scholarship and management changes that knowledge. Petter Holm, drawing on Latour, describes processes of “purification” in LEK fisheries research, in which many kinds of supposed beliefs, speculations, hopes and exaggerations are stripped away transforming it into a discourse that can ‘hold its own’ in scientific debates. Arun Agrawal argues that LEK can be changed so much that it becomes unrecognizable to the resource users. The intention of empowering local communities by mobilizing their knowledge does the opposite as the knowledge is transformed, alienated and even distorted as it loses its coherence out of context. This problem cannot simply be ignored, however, because unless we are talking about a very small and simple commons, any given local community is required to account to both other communities and other parties with legitimate interests for how they know what they say they know.

Interestingly, research on fisheries scientists has found similar patterns. The way fisheries scientists assess fish stocks in actual practice has real similarities with the way fishers assess them. The scientists analyse their statistical data and make practised judgements based on their knowledge and experience, a great deal of which is in fact skill-based and tacit. In a recent study, European fisheries scientists told us of the great frustration they experience as they are being asked to assess fish stocks and give answers in specific forms when the information they are working with is extremely uncertain. Many scientists are experiencing a form of anomie arising from having the results of their efforts disembedded from the culture of their scientific community and changed into something they no longer can identify with as “science”. Our attitude survey of scientists shows that this experience has a significant, negative impact on job satisfaction. In another study in the United States we found that even when the scientists and the fishers were in agreement about what was happening with a fish stock the official description that the management institutions required them to make was actually different from the one everyone agreed on.

Many scientists are calling for more discussion among stakeholders. They recognize first that they are not the only experts in the process and second that the uncertainty of the marine environment means that no single form of expertise has the right, or even adequate, answers. If the exclusive role of scientists is to offer up to the political process the “objectively real” for all to see and make decisions about, then scientists will continue to be forced to create something in which they do not believe.

Rather than asking the scientists to be less than what they understand “scientist” to mean, perhaps we need to ask them to be more, but as facilitators rather than answer providers. In some ways, scientists are the transparency experts, they know what it means to explain how they know what they know. They have a lot of experience in changing their own tacit, skill-based knowledge into clear discursive claims, though to play the role I am suggesting they would have to acknowledge that this is what they are doing. Scientists can help, and I have observed cases in which they are helping, to facilitate interactions between stakeholders in respect to building a common picture of the marine environment suitable for practical management. This is a much more realistic role than being The Experts who tell the other stakeholders how it is. Such facilitation can go a long way towards building the institutions for the knowledge commons we need to care for the commons we share in nature.

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For further reading:

Walter J. Ong, 1982. *Orality and Literacy: The Technologizing of the Word*. New Accents Series. London and New York: Methuen.

Agrawal, Arun 1995. “Dismantling the Divide Between Indigenous and Scientific Knowledge” *Development and Change* 26: 413-439

Holm, P. 2003 "Crossing the border: On the relationship between science and fishermen's knowledge in a resource management context" *MAST*, 2 (1): 5-33.