Assessment and Empowerment

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Abstract

Indigenous knowledge around the world is based on prevailing cultures, worldviews and paradigms. Initially assessments involved simple collection and inventory with little attention paid to the environment or to interrelationships between different components of the system. Especially when undertaken in areas where access was difficult, such assessments more often than not resulted in loss and damage to the local environment, as well as changes in local customs and socio-economic structure. Over time however, assessment techniques have evolved to the point where a great deal of importance is paid to treating indigenous cultures sensitively and to controlling ecological damage. This sensitivity often arises from a fear that knowledge may be lost if the locally prevailing world view is disturbed in any way, and this factor unfortunately, in many cases, supersedes any other interest in the cultures concerned.

This paper, by making overt the biases inherent in assessments, shows that impacts on the local community – ranging from the loss of local customs, rituals and practices to the loss of local knowledge – cannot be avoided if principles of democracy, equity and non-sexist development are to be adhered to. It will examine recent studies involving women in biodiversity conservation, since the view of women as keepers of the local environment and ecology is common in present day community development thinking. Although this thinking has good intentions, it may assign a value to women's labor that is restrictive in terms of gender roles, and directs women into activities that enforce gender discrimination.

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Introduction

The worlds of development and environmentalism have for some time now been deeply entwined. This has been due to two factors; one, the work of academics and environmentalists demonstrating that development, both rural and urban, which does not incorporate environmental protection, will not be sustainable. The second factor was the more forward-looking economists realizing that development based only on the old fashioned "sources and sinks" notion of the environment is not likely to succeed, either as a commercial venture or as a state supported project. There are two "kinds" of knowledge required in this intertwining: The knowledge and understanding of the environment in itself, that is, knowledge of biological, geological, hydrological and ecological processes, and second, the knowledge of the relationships of people – local, regional and global – to the environment. These two are increasingly seen as different facets of a single issue, since it is beginning to be understood that there are no peoples who have not had to react to their environment, and very few environments which have not been impacted upon by human beings.

The need for knowledge calls for "assessments", which implies the acquiring of qualitative or quantitative knowledge. Assessment is the act of acquiring knowledge about a state of a particular area, it may be a physical (an eco-region) or conceptual (like estimating the state of art of a particular scientific field) area. This paper deals with field assessments, specifically those used for natural resource management, such as rural development, agriculture, conservation and protected area design and planning.

The notion of development implies some sort of "progress". Project outcome is expected to ensure that "things are better than they were before." In this, no matter how relativistic one may be, certain social, moral and political issues are considered fundamental – health, hygiene, decrease in child mortality, access to representation, democracy, equity, transparency and accountability in governance, individual privacy, sexual and racial equality to list a few. This is not to deny that these terms are problematic, as is the notion of development itself. However in general, it is possible to allow that these concepts are not necessarily absolute terms but provide a positive direction, since development is no longer seen as pure economic growth. These concepts are usually the primary focus in any endeavour; for example, no project, even if it could guarantee the ecological integrity of an ecosystem, would be funded if it were known to promote slavery or sexism. Such projects which do manage to get off the ground are usually disguised and sold as nationalism or economic utilitarianism, where for the betterment of many, some may have to suffer.

The idea that things, post project, should be better implies that people should have more choices than they did earlier. These choices may pertain to the use of environmental resources, enhanced participation in the daily life of the community, and choice in education and gender roles, to name a few. This political process which increases choices is termed as "empowerment".

The problem lies in the fact that acts of assessment, undertaken for no matter what reason, may not always be compatible with the concept of empowerment.

Assessments and local knowledge

We will restrict this discussion to only field assessments where necessarily some interaction takes place with local people. This interaction may be personal and regular as is the case when local people are used to monitor a particular activity or site, are part of a research team, or possibly are educators themselves. It may be sporadic yet personal like when local people are used as guides for spatial or temporal in situ zoological and botanical information, or where their own habits and management of resources are studied using information provided by them. Another common situation is when locals are used only for manual labor because of their knowledge of, and habituation to, the local terrain. Finally, a field assessment may be impersonal, for instance when the local population itself is studied [Liu 1999, Toledo 2003, Chatterjee *et al*, 2000]. The information collection itself may range from cataloguing and mapping to collecting folk tales with biological resonances.

All such assessments depend on what is commonly known as local or traditional knowledge (henceforth, TK), whether it be simply pertaining to daily chores or complex non-western, scientific, comprehensive and cohesive explanatory systems. Though earlier such knowledge was not considered of any significance, in more recent thinking, TK, especially traditional environmental knowledge, has become mainstream in development programmes. A part of the latest development-environment thinking, it is carried along by buzz words like bottom-up approach, grassroots movement, participatory management, PRA (participatory rural appraisal), PLA (participatory learning and action) and CBC (community based conservation). Even the much touted notion of "decentralization" implies that local people best know how to manage their resources, be it water, forests or wildlife. The trendyness of these ideas and practices is reinforced by the funding they attract. Obviously these are ideas whose time has come. The general trend is that, local communities and their wealth of local knowledge are seen as "the heroes of resource conservation, rather than villains of resource depletion that they were earlier." [p 9, Agarwal 1997]

This discussion does not denigrate these notions. These are valid practices, and with hindsight it seems surprising that they took so long to arrive. The history and politics of development and environmentalism is a well-researched area and even a brief review is beyond the scope of this paper. However, what is of concern is that while acquiring, accumulating and making use of local, traditional knowledge, very little attention is paid to the political location of that knowledge.

Western formal knowledge or "science" is one knowledge system among many which developed as humans tried to order, make sense of and use the universe around them. Although in most places, TK exists alongside Western science, its ontology and epistemology differs and therefore it is usually presented in opposition to Western science. TK can range from what are called "old wives' tales" to extremely complex, formal and codified systems, for example, the Indian medical knowledge system of Ayurveda. In between, there exist innumerable local traditions and habits – from local farming knowledge to dietary habits. Although TK can and is taught formally, one of the hallmarks of this constantly evolving system is that it is transmitted orally, often from generation to generation.

Like Western science, TK is a theoretically complete system of know-how, practices and representations that are developed and then kept alive by their possessors' interaction with the natural environment. These sets of understandings, interpretations and scientific meanings encompassing language, naming and classification systems, ways of using resources, rituals, customs, spirituality and a worldview are not isolated, but part of a cultural system. Often, social mores of a culture are a practical way of expressing that traditional knowledge. TK also buffers societies against rapid social change and guards against the loss of useful practices. It is both theoretical and empirical, with the theoretical basis obvious only to those who need to deal with it. Everyday practitioners of TK, who can get on with their lives using its practical aspects rarely worry about the theory. However, there are constant feedbacks within TK, from practice to theory and vice-versa; so for example, old wives' tales may support creation myths as much as they will ensure that a new mother knows when to wean her child. In towns and rural areas, away from the larger, westernized metropolises present in most of the developing world, TK is the basis for practices that inform and govern day to day life. The knowledge is functional and includes practices such as hunting, agriculture and animal husbandry, food processing, water management, primary health care and adaptation to environmental vagaries. These are the practices which make survival possible, whether it is on the Scottish isles or the Gangetic plains.

However, just like most practitioners of Western science, even in TK, knowledge of one field does not immediately give knowledge of another. For example, a local person with medicinal knowledge of local plant species would not necessarily have an understanding of traditional farming practices in the region. Further, he/she would not necessarily know the theoretical underpinnings or the actual historical and local origins of the medicinal knowledge.

What makes traditional knowledge in resource management valuable for conservationist and development practitioners is that it has been found to be practicable over generations, thus proving its sustainability. TK practices seemingly made it possible for people to survive for generations without degrading their environment and live off the land in a sustainable fashion. In fact pure ecological theory may not actually help in providing prescriptive normative methodologies, and this is one of the areas where traditional knowledge comes into its own. The knowledge of local communities has been found to be extremely important for long-term observations of ecosystem dynamics [Gadgil 1999] and system reactions to disturbances.

This also means that TK is location specific and generated by the set of experiences of a particular group of people in a particular place and time, and exists by virtue of its position in a culture. A practice is always linked to other practices, which are in turn held together by theory, even if this theory is only expressed in a ritual form. It is often not possible to tease out different strands, let alone separate out "facts" of these theories/rituals. One cannot tease out the rational from the irrational, the technical from the non-technical, as a standard text describes it:

> "Rules regarding resource use are embedded in cultural and religious systems which give them a strong legitimacy, going beyond scientific/ecological arguments. For example, sacred groves often protect important catchments or resource banks (an ecological function), but are protected as the homes of ancestors or deities (a cultural function or justification.) Building conservation strategies upon LCK [local community knowledge] therefore ensures far better acceptance strategies." [pp 29-30, Kothari *et al* 1998]

Here LCK refers to local community knowledge and it is this embedding of TK in the "local" that makes it so valuable. The text goes on to state:

> "…[T]he range of LCK is often astounding; it incorporates information, attitudes, values, skills and practices concerning a high diversity of biological resource." [p 30, Kothari *et al* 1998]

And further,

> "Since all parts of society are intricately linked with LCK, much like a rainforest, a change in one part can have a chain affect on others." [p 30, Kothari *et al* 1998]

These are the central themes of TK: holism and sustainability. Both make it attractive to those who would blame Western science for the destruction of the environment through its supposed reductionism and for the failings of the material urban consumerist model it advances. In effect, the view is that well-understood, documented and actively used TK can lead to both poverty reduction and conservation, all the while allowing people to retain their cultural identity.

One official (government supported) handbook designed for indigenous people in Canada put the differences between Western science and indigenous knowledge in the following way:

Table 1: Differences between Science and Indigenous Knowledge

Factor	*Science*	**Indigenous Knowledge**
How approached	Compartmental	Holistic
How communicated	Written	Oral
How taught	Lectures, theories	Observations, experience
How explained	Theory, "value free"	Spiritual, social values

Source: Brascoupé Simon and Mann Howard 2001

Documentation, use, support and, where necessary, revival of TK is seen as being particularly urgent right now since this knowledge seems to be dying out. This is because Western science-based attitudes tend to dominate thinking on environmental policy, with the concept of development defined in inappropriate, Western terms. To add insult to injury, this "development" often seems to exclude local communities from truly participating in the very development meant for them.

TK is in danger of disappearing not only due to the influence of such global processes, but also because the capacity and facilities needed to document, evaluate, validate, protect and disseminate such knowledge are often lacking. More often than not, developing countries prefer to devote their energies to promoting Western science rather than TK, which is seen as a "backward" or "superstitious" way of life.

In recent times, however, traditional knowledge is being used more frequently in conservation and development programmes around the world. It is now an integral part of mainstream thinking in areas such as watershed management and protected area planning. In conservation programmes the use of TK was initially used, not for its validity and usefulness, but because the Western (read north American) idea of wilderness spaces empty of people was not considered feasible in Asia, Africa and south America; local people had to be

involved because those protected areas were their homes and backyards. In the field of development, TK was incorporated because benefits from development projects just did not seem to be filtering down to the poorer people, no matter how much theory insisted that they should.

Political location of traditional knowledge

There are however problems with this process of using and incorporating TK. Some stem from classic debates in the philosophy of science, of what counts as a valid theory, whether two sciences, two epistemologies can actually exist side by side, whether an intra-systemic validation is necessary, whether one is to be subsumed into another, how assessments are to move from the descriptive to the prescriptive. There are also political questions regarding appropriation of TK, and ownership and benefits; questions asking how the information will be used. These issues are important, and debates surrounding them inform much actual ground level work. However, there is a more insidious question – if such assessment procedures that study, are based on, or use, TK go against the notion of development itself?

Initially such assessments involved basic collection and inventorisation, with little attention paid to interrelationships between different components of a system, including humans. Especially when undertaken in areas difficult to access, assessments more often than not resulted in loss and damage to the local environment, and often in changes in local customs and socio-economic structure. Over time, however, and for the reasons outlined above, assessment techniques have evolved to the point where a great deal of importance is now given to treating indigenous cultures with sensitivity, including customs, rituals and artifacts. This sensitivity arises from a fear that knowledge may be lost if the locally prevailing world view is disturbed in any way; a fear that arises from the much celebrated, holistic, "non-reductionistic" nature of TK. Moving on from this sensitivity, the present position is that local people must be partners in all knowledge gathering activity, and that the knowledge gathered is theirs to use along with any benefits that may accrue from both, the knowledge gathering process as well as from the final project results, meaning the use the TK is put to.

The worry here is that if earlier development activities were tantamount to saying that "unless you become like us in science, industry and society, you are not good enough", now what is being said is that "no matter what you do, you are good enough". This seems to be the position of extreme relativism, where all is permissible because it originates from, and fits into a particular society; a view held by those who romanticize the goodness of the traditional and can see nothing to the contrary. An allied position also assumes that good resource management is in some way connected with issues of democracy and equity. Unfortunately, there is no sufficient and necessary relationship between the ideals of development and those of environmental integrity, conservation or sustainability.

While rejecting any kind of cultural imperialism, it can still be allowed that some basic values are deemed to be fundamental. For example, it is generally acknowledged that racism and sexism are negative values. In fact, consensus overwhelmingly insists that certain aspects of cultures be allowed to die out. Many traditional customs and rituals (like human sacrifice) are considered illegal in various countries. Reasons based on history, politics and even ecology may explain the presence of customs, rituals and survival strategies, but this may not be enough to justify their continuance.

If one escapes the patronizing vision of indigenous societies as being uniformly benign and homogenous, it must be acknowledged that like all societies, even these are not devoid of competing interests and inequitable distribution of resources and benefits. The existence of the rich or elite and the poor or less powerful people with dynamic power relationships between the two groups is as common as in other societies. There are also derived powers, stemming from elected positions, patronage and caste systems, as also from systems of corruption. The values and TK of such people can, in an assessment, be seen as the values of the entire community as a whole. However this is not true in reality: any one group of people of that community reflects the values of that group, not of the community.

It is now well understood that a simple "entity" like a "forest" may have different meanings to different persons, communities and societies. Even within the deceptively homogeneous settings of a village or forest department or company boardroom, a rich landowner has a different view of local ecology than a landless labourer, a senior forest official than the forest guard, a woman than a man, a bush meat hunter than a farmer whose crops have been menaced by wild animals, and so on. Singling out any one view and giving it importance invariably has a political significance.

Methods of gathering information may seem apolitical, but what are these methods? Participatory rural appraisals? Hiring local guides? Examining and recording the collections of local medical practitioners and healers? All such methodologies impact on local populations in political ways. Consider the case of a person from a tribal community hired as a guide because of his or her knowledge of medicinal plants. This person is valuable because of the knowledge he or she possesses. Some possible interactions and their social effects can be listed:

- The very fact that an outsider seeks his/her views will change the person's position in the society, perhaps move it upwards, in the social order.
- If a salary is being paid to him/her, it will change financial relationships and show others that the person has something worth compensating.
- The local person might have given up time from daily chores, again outlining the knowledge's importance.
- If the local person chooses not to work with the project, the project will either find someone else, or will shut down.
- One particular guide may be considered difficult and another one chosen instead.
- Occasionally, the local person may suddenly start getting attention after earlier being ignored or derided. For example, an elder whose healing skills were ignored as more and more villagers preferred an allopathic doctor.
- He/she may suddenly be sought after, if say a project to encourage traditional medicine began getting attention, possibly from the state, when previously state machinery was geared to eradicate local practices.
- The science he/she practices, which was ignored earlier, would itself become important now.
- Dramatic changes may follow depending upon how that knowledge is used. For instance, financial benefits may come to the person or the village if the knowledge develops into a commercial venture.
- Because of this one person's knowledge, local "scientific facts" may be seemingly validated by the press and other media.

In any given situation, possessors of knowledge stand in a particular relationship with others in their community. In most cases systems of traditional local medicine are based upon well-

defined social and sexual class structures. Attention can give or take away power, to/from the person and the group he or she belongs to, that is the group which owns that knowledge. This is in fact a political situation where recognition causes some change in prestige and social position of an individual. This change in prestige and the resulting perturbations in local power structures is a political act. Any intervention for the purposes of assessment is an intervention into this dynamic system, which will affect the whole.

Now, within this scenario, what would happen if the possessor of that knowledge belonged to a community whose way of life involved using slave labour? Or belonged to a subjugated group whose views are never solicited in local political decision-making? In the first case, the sudden attention may be deemed negative, while in the second, positive. Yet in the second case the fact that a spotlight has been shone on a situation and moved on without comment validates that system. It is an intervention that preserves the status quo. In any given community – or tribe or village – there may in fact be many TK's, and only some of them may have been granted importance by an assessment exercise. In the process, attention may be taken away from more politically progressive groups. Assessors can at best be a contributing factor in legitimizing the political status quo allowing structures that may be regressive the attention that they should not be given. At worst, they can themselves become part of a process creating and maintaining these regressive structures.

Even if it were possible to isolate bits of knowledge out of the social fabric of beliefs and rituals and arrange them into clean little slots of anthropological disciplines to be studied as separate entities, a further problem may arise. Theory and logical mechanisms used to arrive at empirical knowledge are not commonly known and are usually preserved in the hands of specialists or just lost to time. Rituals, social practices and resource management are based on and derived from (often unknowingly) the same theoretical structures. Traditional knowledge cannot be divorced from the worldview of the community that possesses and uses it, and therefore, using that knowledge signifies tacit support, if not approval, of the ontology and epistemology in which it lies embedded. That is, unless it is made clear that this is not so.

In traditional societies, access to knowledge can be based on an individual's affiliation with a particular group. Distribution of knowledge is not even in a population and is dictated by various criteria. Besides age, other criteria may include sex, race (ethnic subgroups), caste, class, physical ability, language and political hierarchy. Training required to gain knowledge may be dependent upon sex, race, caste, class, physical ability and language coupled with historical patterns of exclusion. A typical example can be found in the Indian system of Ayurveda. The Ezhavas are a low caste community located primarily in a southern Indian state Kerala. Their knowledge of medicinal values of plants in local tropical forests is commonly acclaimed and they are often consulted for medical advice and treatment by people of higher castes and the rich and the elite, who otherwise would not entertain their presence. However, Ezhavas traditionally have not had access to the actual body of codified ayurvedic texts, available for study only to those belonging to the literate Brahmin caste by birth. Can an external researcher use Ezhavas skills and knowledge without in some way supporting the caste system? The researcher's fear may be that if he/she denounces the caste system, the doors of the Brahmins may be closed to him/her. The researcher would be seen as encouraging the destruction of a system on which Brahmins' livelihood and hierarchical position depend. On the other hand, the Ezhavas may also close their doors because by seemingly supporting their escape from an entrenched oppressive system, the researcher is actually depriving them of Brahmins' patronage which they need for their daily existence. A

different reason for shutting out the researcher could be that the Ezhavas may perceive this as a threat to the whole of the Hindu religion to which the caste system belongs.

This example brings out another dimension of the politics of TK – that of the knowledge base of the disenfranchised. Many groups are knowledgeable about environmental resources because they are not allowed access to knowledge of anything else. It is precisely because of their exclusion from the dominant system of resource access and management that they are compelled to develop alternate knowledge. If the bottom line for survival in any community is the husbanding of resources, those without access to these resources are forced to seek out ways to procure alternate resources. Therefore, they develop a knowledge base different from that of the dominant group, a knowledge more obviously connected to their surrounding ecosystems because of dependence on it. For example, disenfranchised or outsider groups (e.g. squatters or lower castes) often have to make do with poorer quality of food, fibre and fuel, and to meet these needs they usually have access only to species that are of very low economic value to anyone else. However, in such cases it is important to not mistake poverty for choice or the lack of power for ecological understanding. As Baviskar says about the much discussed *adivasis* in India;

> The identification of adivasi natural resource use with ecological wisdom ignores a complex history of subjugation that has left adivasis impoverished, forced to expand cultivation by clearing forest slopes. Adivasis can, at best, be described as 'environmentalists by default' [p 6, Baviskar 1998]

Therefore, care needs to be taken to not support the politics of exclusion by giving recognition and validity to knowledge systems possessed by the otherwise powerless without acknowledging their positions in society. Another brief example may illustrate this point: In India (as elsewhere) sacred groves are increasingly seen as a way to foster biodiversity conservation. Researchers often point out how sacred groves evolved historically, how they were used and how they are often localized "biodiversity hotspots" which fit well into local customs and traditions. Yet rarely, if ever, is the question asked, "Sacred to whom?" One sacred grove in the Indian state of Maharashtra was started in a spot commemorating the place where a woman committed sati (a practice wherein a widowed woman commits suicide by throwing herself on her husband's funeral pyre). Since then the location itself has been considered holy resulting in the creation of a small temple and the surrounding sacred grove. Yet the practice of sati is outlawed by the Indian government, so should this site and its sacredness be allowed to continue? Another common practice is that women are prohibited from entering a sacred grove or worshipping there because they are considered unclean or impure; the restrictions may be total or apply when they are menstruating. [For example, Swaminathan 1998, acknowledges such problems, but more usual are statements like Sinha and Maikhuir, 1998 (p 298), who give examples of women's exclusion from sacred groves but then oddly go on to say that the rituals associated with the grove they are studying "…foster social integration, equality and conviviality..."]

WID, WED and weeds

The subject of women and their relationship with the environment is another area where the problems of carrying out assessments in an apolitical manner become obvious. Over the years, there have been many shifts in how women have been factored into development policies. Initially the fact that there may be a connection between sex, gender and

development/environment was simply ignored. Then came the concept of WID (Women in Development) followed by WED (Women, Environment and Development) with a slight digression into eco-feminism. Eco-feminism saw men's exploitation of women as similar to his exploitation of nature with similar destructive effects and postulated that women had a non-exploitative, nurturing relationship with nature. Though still alive in academia this view does not seem to inform development and environmental policies any longer.

The women and environment school sees women's gender role as environmental managers (as opposed to nurturers) because of their immediate dependence on environmental goods and services. Hence WED demands different development and environmental programmes for women from men, whose gender allowed them other roles too. This view is termed as the women in development view (WID). The Women, Environment and Development (WED) view is based on asking gender questions throughout any development process. While WID and eco-feminism 'fix' women's roles, WED — a more recent ideology — considers gender as a social and variable creation, compared to the earlier two. For example, WID (and eco-feminism) would like to give recognition to and increase women's participation in activities such as conservation and watershed development, and design specific programs to make it possible. But WED would take the next step of questioning the existing model of participation and would be willing to change unequal gender relations. So though all three views use a resource management link between women and environment, it is only in WED that local politics becomes important in any definitive sense.

Another way of observing this evolution in viewing women is through tracing images of women in the last few decades. In the early 1980's, there was a great deal of emphasis on women as victims of environmental degradation and the image of women having to walk miles to collect water was everywhere. They had to walk these miles because of deforestation and other watershed destroying economic activities. By 1990, the image had changed to 'women planting trees' showing women as efficient environmental conservers and managers. The images always derive from the "fact" that most often in rural areas women usually perform subsistence activities concerned with ensuring that their families have a home, enough to eat and are healthy; they are concerned with food, fuel, fibre, and fodder and their interaction with their environment is on a daily basis. This is to be compared with men's activities which are commercial and more concerned with market economics.

Thankfully because of these changing views development planning has become gender sensitive (at least on paper), there are quotas for women in local level institutions and their participation has increased at various stages. Yet assessments continue to take into account gender roles without acknowledging the political reality in which they are embedded. For example, women's use of natural resources is considered non-consumptive and for subsistence only, and thus sustainable, while men's use is seen as exploitative and market-driven. This understanding based on assessments however ignores the gendered aspects of land ownership, inheritance rules, and access to the commons. Empowerment as a concept in the sustainable development debate unfortunately referred only to securing sustainable access to 'gendered' natural resources, not escaping those subsistence roles which true empowerment would do, for example introduce women into the 'male' market economy. Women got the weeds while men got the crops. Very often women recognize when they are being disempowered, and in some situations they may retaliate; there are examples where rural women's groups have destroyed seedlings and trampled plantations, giving lie to the nurturer and manager image. [See for example Rocheleau and Edmunds 1997] Furthermore, "Women may be locked into natural resource dependence through particular relationships

and see their interests lie in moving into other livelihood activities, as they see men do." [p 7, Leach 2003] Consider a thought experiment: during a PRA exercise a woman refuses to volunteer information and says that this is because "I do not want to be recognized for such work; my daughters will also be forced to do it. I would prefer such knowledge to be lost." What is the "correct" reaction to this?

An example of the problematic nature of assessment in this regard can be found in the studies that document the various ways women in a particular area in Africa use their knowledge of the surrounding environment to overcome lack of access to food, both calories and other nutrients. This lack of access is due to their different social food allocation based on them being women; food allocation criteria includes factors like sex-based food taboos; restrictions on what they may eat during pregnancy or lactation; women may be also be trained to show restraint in eating and give the best food to men or allow them to eat first. A particular aspect of this is that the women mentioned in the study have knowledge of particular plants which may have medicinal properties that counteract the affects (supposed or real) of not following those taboos, and also counteract, in limited ways, those nutritional deficits. [Bentley *et al* 1999] The researcher seems to be in a position of having to say "Show us how you survive, but we actually don't want you to live like this." An assessment ignoring these factors and highlighting their understanding of nature will only assist in giving value to those exclusionary practices. Those not included in the assessment – be it men in the area or other women – may see the attention given to the knowledge bearing practices employed to deal with lack of food as approval of these practices.

Another example of the lack of power implicit in women's knowledge of resources is their dependence on the commons. In fact it is not just the commons as it is usually understood, but the interstitial spaces that they depend on. These are spaces neither owned nor managed by men, and are generally seen as valueless.

> "Such spaces could include the bush growing along roadside and fence lines, the small garden plots next to the house, the interstices above, below and between men's trees and crops or the 'degraded' land found on steep, wooded hillsides or in overgrown erosion gullies. Resources such as fuel wood, medicinal plants, wild foods, and grasses for weaving and thatching are found in these spaces, and are often critical to women's efforts to meet their personal, household, and community responsibilities." [p 1355, Rocheleau and Edmunds 1997]

Since traditionally women have usufruct rights rather than real ownership, the traditional knowledge possessed by them and valued by researchers is the knowledge of how to survive when nothing really belongs to you and can be taken away at any moment.

The experiences of one of the authors (MC) while participating in several assessments for the maintenance of a protected wetland in northern India – the Keoladeo National Park (KNP) – and its surrounding areas, illustrate how assessments remain superficially apolitical. In this they validated the changes, positive and negative, that the creation of the park brought into the lives of women, without assisting in changing their gender roles. Originally a man-made wetland located in the Gangetic plains, KNP was declared a Ramsar Site in 1981 and a National Park in 1982. The identification of KNP as a high biodiversity zone and a park made it out of bounds for local resource users in the interest of conservation and tourism. As a result, neighbouring villages dependent upon the park for fodder, fuel and food and the vetevaria roots – used to extract perfumed oil – were severely hit. Within a few years villages had to shift from predominantly herding economies to agriculture and trade-dominated economies.

Studies of the park and the villages surrounding it abound. These were done to assess and monitor everything from the ecology of the park, endangered species, population impact, tourism potential, park-people interactions, bird, plant and water conservation tactics to the local park derived economy. The assessors ranged from local NGOs to large international conservation organizations.

Assessments aimed at successful management of KNP by concerned authorities however have failed to interact with women of the neighbouring villages in any politically empowering way. A glimpse into the present state of affairs around the park, located in the northern Indian state of Rajasthan, is instructive. Traditionally, women of the area keep their faces covered in front of outsiders, especially male outsiders. When included in an assessment exercise (usually on the insistence of the outsiders), women sit in a corner in huddled groups with covered faces. While men sit both on *charpoys* (rope beds) and the floor, no woman would be seen sitting on a higher seat than a man in public. As it is, women as a group in the state of Rajasthan – India's most arid state — are often at the lowest economic and social strata. They do not attend group discussions and seldom participate in political decision-making. Female infanticide is not unknown and neither are child marriages: the youngest bride encountered was a ten year old; economic compulsions forced the parents to marry off both their juvenile daughters. And further more; there is no homogeneity, no uniformity, which can be painted into a pretty static picture of "woman": The castes/tribes which populate the villages around the park include the Gujjars (graziers), Mallahs (originally fisherfolk), Jatav (land owners), Kumhars (Potters), Brahmin (religious leaders), Jat, Banjaras (nomads/gypsies), Kachis and Harijan (the lowest castes). Women of each of these groups have different requirements and responses to resource scarcity and resource management, influenced by the kind of work the family does as a unit. Very generally speaking, women of the 'higher' castes and/or wealthier families tackle tasks within the immediate vicinity of the homestead, while those of the lower castes/ poorer households venture out for resources.

Ordinary conversations outside assessment procedures carried out with village women separately from men, however, yield delightful results, including passionate discussions and male bashing. Although the development of the national park at their doorstep was equated with indirect benefits like rising education levels as children were sent to schools instead of the wetlands for grazing cattle or collecting fodder; and improved milk yield of buffaloes due to nutritious stall feeding, women also talked about their greatly increased workload. When herding and dairying was the main source of livelihood, men were responsible for it. With the formation of the KNP, herding gave way to stall feeding, and became a woman's task. Men either took up agriculture activity or entered some trade. Women's workload increased by approximately 6 hours per day — spent in (often illegally from the park) collecting and chopping fodder, feeding, watering and washing cattle. In the most economically backward village in the area (*Banjaron ka Nangla*, (village of the gypsies), old and single women with no family or other economic means of support depended upon the seasonal digging of the roots of vetevaria grass in an area of the wetlands now out of bounds within the park. This pushed an already destitute group of women to abject poverty (WWF 1996). Women of lower castes and the poorer families of other villages continue to "poach" the National Park area for fuel wood, fodder and thatching material.

Unfortunately even now, assessments, for example economic ones, usually concentrate on the overall efficiency in resource allocation and tend to neglect equity concerns. Costs and

benefits felt by different groups are aggregated into one net figure without considering gender, differing levels of income, wealth and opportunity. Men of the villages have adjusted to jobs in the tourism sector, trade or agriculture. Many have been taken in by the park administration to drive cycle rickshaws for the tourists in the park, as part of labour force, or as forest guards. Women meanwhile cope with increased workloads, increased physical insecurity because of the distance they now have to walk for fodder and to defecate, and harassment at the hands of powerful park guards as they try to gain illegal access to the park's resources. This suggests that incorporating indigenous knowledge and practice – including women's expertise – into conservation is no guarantee that women will benefit, unless the terms of their participation in a project are also addressed. There is also the feeling that women do not understand economic activity because of their focus on subsistence, though this fact may in reality be an assumption, since some cases point to just the contrary. [See for example, p 4, Flintan 2003, Vol 3, which states that rural woman are quite knowledgeable about economic/financial value of the environment as much as, or even more than, they are about its survival value.]

The gender focus of environmental policies and programmes has generally been limited to improving women's living conditions (ensuring access to fuel and fodder), without addressing the problematic power structures within households and communities. In other words, few assessments pay attention to women's 'strategic needs' concentrating only on the 'practical needs'. While it is necessary to address practical needs, these remain only pre-conditions for women's empowerment since their participation was "actually conservative of their subordinate position" [p 8, Leach 2003]. Empowerment of women, say as potential leaders in conservation efforts, would mean assuring them long-term rights over resources, and gender sensitizing the wider rural and institutional leadership so that it becomes more responsive to women's strategic needs and aspirations for herself at the level of assessment itself. Development policies are now realizing that communities are internally differentiated by gender, socio-economic class, ethnicity, and age. Assessment procedures also need to acknowledge this and act on the fact that such political differentiations exist. Focusing on an 'undifferentiated community' or 'women' isolated from power structures will not serve the purpose of equality. In KNP, assuming that the park has to remain, assuming that more information is needed to manage the park, how can information be collected that challenges, questions and then changes the position of women? Perhaps the simplest resort would be for the assessors to make clear that that their studies are not going to make their lives any better and in any case not going to influence government policy in any direction useful for them. [For example see Wiber 2002 who suggests this.] And then see what kind of information is forthcoming.

Conclusion

Most rural communities have a system of traditional management of natural resources. These traditional management practices usually result in the maintenance of ecological integrity of the local environment. Recording and using information about these practices is particularly valuable as they represent a form of resource management beneficial both to the community and the environment in which it is located. Traditional knowledge is seen as wise, non-exploitative and sustainable. At present there are worries about the disappearance and erosion of this knowledge and practices based on it, due to state interference and the introduction of Western science concepts. These worries are also highlighted due to developmental and commercial interests (e.g. ethno-botanical material for the pharmaceutical industry), and the fear that these future benefits would not be realized if TK was lost.

Communities also have systems of repression and oppression, and ways to demarcate insiders from outsiders – distinguishing those who belong from those who do not. Often these two systems are related in many ways. It is those who do not belong to dominant groups and the poorest members of a community who directly live off the immediate surrounding environments and therefore have the most functional knowledge of it. However, the poor are kept poor because of political reasons and their knowledge is that of the disenfranchised. In any community, there may be two distinct types of oppressive practices: 1) Oppression because of cultural/religious practices; and 2) Oppression because of social position, like class, or gender, which may or may not be reinforced by (1). Both these types of oppressive practices are linked to resource management tactics and strategies. Local environmental integrity may be maintained due to lack of power to change it: if they do not own the trees, they cannot cut them. If the right to own land is denied, the commons has to meet all their present and future needs. If they cannot participate in the local market economy, subsistence has to meet their needs.

Yet, as long as the ultimate interest is not commercial, the entire notion of TK and participatory methods of assessment appear to have assumed a high moral status by just involving local populations. This is due to the understanding of outsiders, who view some communities as "natural", implying that they are "facets of the local environment" and not social constructs. Or if they are accepted as social constructs, then the time frame is shifted to the evolutionary and it is accepted that the community survives because of the fitness of its environmental practices. Yet, there is agency involved. People make choices to use, build or preserve such knowledge. The notion of the Edenic and the politically innocent native takes this agency away. In the words of Arun Agarwal:

> "Many theorists of the commons similarly valorise the 'little community' to the point where it seems that life in these communities is untouched by political manoeuvres; that local populations know best; and that there would be no victims if only the state stopped intervening into local contexts." [p 7, Agarwal 1997]

Can a position be maintained that those who carry out assessments do not have a political view? That they are in the field solely to learn about the population's relationship to its environment? No, context is important in all such systems. No traditional knowledge exists or is dynamically maintained in isolation. Traditional knowledge includes techniques, tools, nomenclature, identification and culture. These are essential parts of the package. Some parts may manifest themselves as traditional environmental knowledge, but the other manifestation is oppressive social structures. Both manifestations are grounded in multiple domains and epistemologies.

Yet openly decontextualizing such knowledge may be beneficial in the political sense but negative in the sense of scientific knowledge. There may be fear that access to information will be closed and walls built up if researchers demand social changes and try to change social structures. Assessment procedures, therefore may deny them empowering choices by maintaining the status quo. But on the other hand giving them this choice may be detrimental to the local environment. We do not want such resource management practices to die out, but the forgetting of such practices may also be the forgetting of older patterns of oppression, so that it can be said loud and clear that they have no place in the modern world.

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