

Re-evaluating Relevance: Intellectual Property Rights and Women's Traditional Environmental Knowledge

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The women's caucus believes that valuing and applying women's Traditional Environmental Knowledge (TEK) in its specific contexts is of vital importance for moving towards the preservation of the world's biodiversity. Women's TEK could also bring valuable insights for the advancement of health sciences. However, many groups and individuals, emphasize the economic value of TEK. Therefore, any discussion of TEK would not be complete without mentioning the recent move towards an international Intellectual Property Rights (IPR) regime, as elaborated in the General Agreement on Tariffs and Trade (GATT), that aims to regulate the trade in biological knowledge as a commodity. We maintain that the preservation of biodiversity is essential to human survival into the 21st century and is of particular importance to the lives of rural women of the South. However, we believe that the current IPR regime will do little for protecting and compensating the integrity of women's TEK, their communities and ultimately biodiversity.

The erosion of biodiversity constitutes an immense cultural loss and women, as bearers of knowledge and as main food producers and caregivers in most communities, have a major stake in the conservation of the basis of their livelihood and that of their families. Throughout the years, indigenous and rural men and women have developed different yet complementary knowledge systems, which need to be recognised and valued in the quest for sustainable development.

Traditional Environmental Knowledge has been defined as: "a body of knowledge built by a group of people through generations living in close contact with nature. It includes a system of classification, a set of empirical observations about the local environment, and a system of self-management that governs resource use" (Johnson 1992: 4). TEK is socially-differentiated according to gender, age, occupation, socio-economic status, religion, and other factors. It is therefore inappropriate to generalise about indigenous or traditional knowledge without making proper distinctions. Of particular interest here, the gender-specific division of labour, property rights, decision-making processes and perceptions of the environment all shape the local knowledge, use and management of natural resources. Rocheleau (1996) talks of the boundaries of knowledge as being neither fixed nor independent, further saying that they "extend well beyond the confines of botany and agriculture, and well into the domain of practical political economy" (p. 14). While it is context-bound, TEK cannot be examined in isolation from broader economic and global processes. Issues of gender, environment and development are closely interrelated and constantly shaped and re-shaped by ideologies and cannot be addressed independently.

The loss of biodiversity, for instance, affects women in a particular way and impacts on their daily lives, as well as on future lives and livelihoods. The richer and more diverse the forest, the easier it is for women to provide their family with the firewood and other resources they need, and the more time they have for other, possibly income-generating, activities. Conversely, deforestation may lead to water scarcity which in turn results in women having to walk further for water (Maag 1997). This erosion of biodiversity is accompanied by the disappearance of TEK which is, in itself, not only an immense cultural loss for the world but also a tragedy for the people who "depend upon the integrity of their knowledge systems for their cultural and even physical survival" (Dutfield 1999:11).

In recent years, there has been increasing interest in TEK, particularly in relation to medicinal plants. In ecological terms, this phenomenon has paralleled the increased awareness of the threat of deforestation. In terms of economics, there are various incentives to conserve TEK. Patrick Maundu lists potential uses of this knowledge: "to identify resources which can be used for the benefit of the community; to provide information of importance for commerce or the advancement of science (alternative technology); to offer solutions to common problems within the community. Furthermore, it can be used in such areas as conservation, medicine, the production of new drugs, the development

of new crops, the timber industry, pest control, nutrition and food processing, and the development of new farming systems." (1995: 5).

The perceived economic value of TEK in relation to scientific developments, has helped provide the impetus to create a global intellectual property rights (IPRs) regime, which, it is said, will increase the incentives to innovate and exchange ideas, while contributing to the documentation and preservation of TEK and biodiversity (Swanson, 1995; Brush, 1993; Cunningham, 1999). However, there is a well-founded worry that the men and women who have generated and are now sharing their knowledge, particularly indigenous peoples from the South, are not and cannot receive proper recognition or compensation for their contributions under the current IPR regime (Dutfield, 1997; 1999a; 1999b; Brush, 1993; Brown, 1998). Indeed, its very Western conceptual foundation may well contribute to the erosion of TEK, biodiversity and collective forms of producing knowledge.

Currently, the major supporting argument claims that a strong IPR system "which temporarily excludes knowledge from the public domain will result in the long-term increase in the public domain" (Dutfield, 1999: 8). In other words, the IPRs are 'a public good' because they are considered to be efficient mechanisms to stimulate innovation and the exchange of ideas (Brush, 1993; Swanson, 1995). These arguments, however are based on two fundamental assumptions about the nature of the individual and society that stem from a Western philosophical tradition that:

1. there are two diametrically opposed domains: that of the 'private' domain, that entails individual ownership versus the 'public' which is open and free for all (Dutfield, 1999).
2. Individuals need an economic incentive to innovate ('The economic man' model of neo-classical economic theory (Nelson, 1998)).

These assumptions are highly problematic when contextualized within the historical realities of local communities who have developed knowledge systems about their environment over long periods of time. Let us deal first with assumption number one. Western thought conceives of collective knowledge as public knowledge. It follows that if it belongs to no single individual it can be 'privatized' or commoditized and owned. However, Dutfield (1999) has pointed out that we need to re-evaluate this public/private dichotomy and recognize that a number of property regimes exist and are recognized as private domains within different local communities. Therefore, commoditization, by outsiders, of the knowledge held in these different private domains (that are often not commoditized) must be considered unjust without proper compensation. At present, there are no legal mechanisms that recognize the existence of more than one private sphere (Dutfield, 1999).

This brings us to the second point. Research shows that individuals and local communities have been innovating for centuries without requiring monetary incentives as such (Shiva, 1993; Khalil, 1995). The increasing monetarization of local communities may in fact have negative consequences for the community, its knowledge and for the surrounding biodiversity; which contradicts the assumption that placing an economic value on TEK will provide an incentive to preserve and support its dissemination. Julie Cruikshank (199) argues, "differences among communities unequally endowed...can be used to generate hierarchy and inequality and to set communities in competition with one another for shrinking resources" (Cruikshank, 199: 66). Similarly, Mohammed Khalil (1996) argues that assigning monetary value to limited resources through IPRs may ultimately threaten biodiversity:

In this respect, impoverished communities, in their urge to survive...[can come to see] the exploitation of biodiversity as a road to fortune. These forces are acting cumulatively on any limited efforts to conserve biodiversity (Khalil, 1996: 235).

The collaborative history that underlies the development of TEK within communities and throughout regions with similar knowledge traditions, can thus be reversed as local communities learn to value their environment only by its market price.

Questioning these assumptions is important in order to move towards a more equitable way of fostering and applying TEK, and particularly women's TEK. However, it is also necessary to point out some other problems that local communities face when confronted with an international IPRs system.

Most basically the current patent system is practically inaccessible to indigenous peoples and communities, primarily because of their lack of funds, but also because often they have not received the education that is necessary to manoeuvre within the extremely complex legalities of the patent

system. This makes it even more inaccessible for women as they are often at a social and economic disadvantage compared to men.

Furthermore, even if there were to be some other form of compensation provided besides the patent system, at the collective level or even individual level, it would be difficult to attribute 'ownership' to a particular local group, particularly when a product is widely used throughout a region (Brush: 1993).

Finally, there is no strong international legal agreement that deals with IPRs and biodiversity conservation that will ensure that indigenous peoples all over the world will be able to obtain full control over their territory and their resources from corporations or nation-states. It is true that Article 1.2 in both the International Covenant of Economic, Social and Cultural Rights, and the International Covenant of Civil and Political Rights grants that "all peoples may, for their own ends, freely dispose of their natural wealth and resources" (Dutfield, 1997:27). However, Article 15 of the Convention on Biological Diversity (CBD) granted *sovereign rights* to States over natural and genetic resources, and the Trade-Related Aspects of Intellectual Property Rights (TRIPS) "does not easily allow countries to prohibit the patenting of life-forms, whether on moral or other grounds" (Dutfield, 1997 27). Ultimately, the legal instruments that will regulate IPRs are potentially threatening to indigenous peoples and to biodiversity conservation, particularly in countries where indigenous peoples, other local groups and their environments do not enjoy significant legal rights under national legislation.

Recommendations

In recognising that there are no appropriate frameworks to protect indigenous peoples and biodiversity from exploitation under the current IPR system, we call on the CSD to:

1. Halt all patenting of biological resources that are used by indigenous peoples until the rights of indigenous peoples over their knowledge and resources is recognized by all national governments (Khalil, 1995; Workshop, 1999).
2. Begin promoting research in partnership with local communities that will explore the potential of non-patent IPRs, and make the results of these studies widely available and accessible to local communities (Dutfield, 1999b).
3. Support the bottom-up development of IK registers such that can ensure that IK is not pirated, and ensure that these are owned locally (Dutfield, 1999b).

In accordance with our statement that women's traditional environmental knowledge is of vital importance to the preservation of both biological and cultural diversity, we also hope that the CSD will take the following measures:

1. Recognise traditional knowledge as a 'gendered science', which would help "legitimise and strengthen rural women's and men's separate, shared and interlocking knowledge as tools to shape their own futures" (Wangari *et al.* 1996:150).
2. Ensure that women are not simply 'added' to the Convention on Biodiversity but rather that biodiversity is redefined in broader, more inclusive and fluid terms. This "implies a definition based on the diverse experiences and the distinct sciences of many different groups" (Rocheleau 1995: 10).
3. Address the different structural positions of women and men and the question of access and control of resources (including land) as shaping the use of resources and the systems of traditional ecological knowledge.
4. Advocate the 'cultivation of diversity' through decentralisation and local democratic control (Shiva 1997: 119).
5. Rectify the gender bias in many organisations and programs working with IK/TEK.
6. Create a network of supporting institutions in which women would have a voice;
7. Allow for alternative development models based on IK/TEK and which focus on diversity and locality rather than on technological progress and the domination of nature.
8. Consult community members to determine the ways in which IK/TEK could best benefit them.

9. Fund projects which focus on capacity-building for local people and encourage the utilisation and conservation of IK/TEK;

Conclusions

It is our hope that these recommendations will be implemented as soon as possible given the urgency of preserving biological and cultural diversity which is quickly disappearing with deforestation and the passing of elders in indigenous communities. These efforts, however, will only succeed if the contributions of men and women are valued and they are considered as rightful partners in the conservation of diversity.

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