

Power, Structure, Gender Relations and Community-Based Conservation: The Cawswe Study of the Sariska Region, Rajasthan, India

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Abstract

Most current community development projects have a built in gender component. Despite the WID, WED and GAD schools of thought there is still however a long way to go in order to effectively implement these principles in conservation projects. Merely getting women a place on the policy-making agenda is not enough, especially if it comes at the cost of promoting a simplistic and often wildly inaccurate picture of gender-environment relations. This article analyses the repercussions of community-based conservation on women in terms of use, access, and control of natural resources. The area chosen is the Sariska region of Rajasthan, India. The article analyses also the role of women inside the Gram Sabbha, which is the village institution used at community level for the management of natural resources. A distinction is made between the different groups of women. The issue of women's empowerment and its importance in community-based conservation will also be discussed.

Keywords: gender and power relations, management natural resources, forest conservation, India

Introduction

Over the last two decades, a growing consensus has emerged among both the academia and the development institutions on the need to experiment with new ways to work with local communities on efforts to improve the management of natural resources. The conservation/development interface poses new challenges for dealing with a multiplicity of stakeholders and social players operating at different levels and with diverging degrees of power. These dynamics lead to a constant different types of negotiation over the outcomes of conservation and development initiatives. Not only are rural communities facing off with government agencies, business interests, and non-governmental organizations, but within the communities themselves there are also significant differences in interests, perspectives, and power. It is within rural households and communities that gender differences are most apparent.

In addition to emphasising the need for more “bottom-up” or “participatory” approaches to development, many development planners and donor agencies have

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become increasingly aware of the gender-specific nature of environmental degradation. In contrast to the 1950s and 1960s when traditional top-down, male-dominated development discourses left little space for either gender or environmental concerns, the current emphasis on “sustainable development” has placed both issues at the forefront of the development agenda. Two important factors which explain this shift in development thinking have been the growing awareness/popularity of the environmental movement of the early 1970s and the establishment of “women in development” (WID) approaches. These former highlight major gender inequalities in divisions of labour, access to natural resources, wage rates, participation in decision making, health and education (Cornwall, 2003, Braidotti et al. 1994).

By the mid-1980s environmental concerns had focused attention on the idea that women, as the main victims of environmental degradation, would be the most appropriate contributors to protect the environment (Agarwal, 1997, Braidotti et al., 1994, Joekes et al., 1994). As development projects have become more concerned with environmental sustainability, conservationists have begun to recognize the need to work for the benefit of local communities. A number of researchers pinpointed the important role played by that many women in developing countries play in community-based resource management and emphasised the need for development planners to factor their input into such schemes (Cecski, 2000).

This concept played an important role in the emergence of a “women, environment and development”(WED) perspective which emphasises a “special” relationship between women and the environment (Braidotti et al. 1994, Joekes et al., 1994). In a more radical and alternative development the idea of the special women-environment link gained support among certain neo-populist and eco-feminist writers seeking a more appropriate and environmentally sensitive route to development (Shiva, 1988, Escobar, 1997).

Although rarely explicitly acknowledged as such, much of this work is characterised by a strong political ecology core, notably in its attempts to de-construct the idea of the innate placed women-nature link by examining the wider socio-cultural factors that have traditionally placed women in close contact with the natural environment. A major argument has been that to further the understanding of gender-specific responses to environmental problems it is necessary to look beyond the idea of a “special link” with nature towards an examination of wider inequalities in gender divisions of labour, property and power. Research is needed to assess how realistic such an approach is, under what conditions, and to what extent, gender differentiates goals, values, power and resource use practices among user groups.

Nevertheless, this idea of the “special” women-environment link has been greeted with much scepticism among a number of academics working in the development field because of misleading simplicity and political naiveté (Cornwall, 2004, Braidotti et al. 1994, Leach, et al. 1999). Of particular concern are WED’s treatment of women as a unitary category making no distinction between class, caste, region, ethnicity, age or marital status (Martin, 2004, Locke, 1999). To encourage a closer examination of gender-environment relationships, proponents of “gender analysis” (Jackson et al., 1999) and “feminist environmentalism” (Agarwal, 1997) perspectives have called for the

replacement of the WED by more robust “gender and development” (GAD)² and “gender, environment and development (GED) perspectives.

Women could constitute key potential allies in conservation strategies based on sustainable livelihoods for local communities (Larson and Robot, 2004, Gibson et al., 2000). This approach, which is more holistic, has been advocated as an alternative to market-oriented concepts and strategies, because it focuses on the quality of life and ecosystem over the long term, and both market and non-market values.

According to Rocheleau et al. (1996), the multiplicity of women’s roles (producer, reproducer, and consumer) leads them to integrate complex systems instead of specializing. For this reason, women may be more attentive to the ecosystem as a whole. In many situations, women’s responsibility for family subsistence and health causes them to focus more on livelihood systems and on the environment, as opposed to the more commercial orientation of men who are primarily involved in market-oriented endeavours (Paolisso et al., 2002; Rocheleau et al. 1996).

While gender has long been recognized as a key variable to be addressed in development work, gender analysis within conservation efforts has only just begun. Gender is among the key variables which distinguish groups of resource users. Yet even conservationists who are pro community-based approaches do not always recognize the relevance of gender in user groups nor how those differences might be relevant to the implementation of conservation programs (Reed, 2000; Gray, 2002). Until recently, most empirical studies of gender issues in natural resource management focus on agricultural examples, rather than on conservation (Casey and Paolisso 1996; Feldstein and Poats 1989; Poats, Schmink and Spring 1988). Since natural resource use is only part of the social complex that defines a community and its gender-differentiated groups, an understanding of their dynamics requires an analysis of the broader historical and social context (Leach, 2007).

Although the term “political ecology” has been applied in various ways, most applications share a common concern for the socio-economic, political and ideological structures that influence the interaction of human groups and the natural environment (Bryant, 2002; Peet and Walls, 1996). This approach views all decisions about resource use as behaviours that are embedded in an overlapping matrix of social and natural systems. The emphasis is on understanding the opportunities, constraints, incentives and disincentives that influence the decisions made by individual players or groups. In political ecology the gender based approach focuses on the material and ideological roots of gender relations (Agarwal 1997), including gendered sciences; gendered rights and responsibilities ; and gendered participation in organizations and political activity (Rocheleau, Thomas-Slayter, and Wangari 1996).

The growing recognition of the women’s important role in grass-roots projects is not yet reflected in strategies to influence policy, institutions, and organizational

²Unlike WED, which considers wider gender inequities as beyond its limit, GAD rejects the idea of a special, unvarying women-environment link on the basis either of biology or the nature of women’s work. Instead, emphasis on the environment, where it is “seen merely as part of general entitlement and capabilities ascribed to individuals by social relations of gender, class and so on “ (Joeke et al., 1994). Particular attention is focused on intra-household inequalities in access to resources and the importance of bargaining between women over the divisions of responsibilities.

partnerships for conservation and development. Still less have conservation initiatives adopted more fundamental analyses of gender relations and their implications for natural resource use and management.

It has often been the case that women are marginalised in community-based conservation projects, the benefits being enjoyed by the more accessible and powerful members of the communities – the men (Goldman, 2003, Agrawal, 2001, Locke, 1999).

Baviskar (2001) demonstrates how the women continue in general to play a limited role in the conservation programs in India where, since the publication of the National Forest Policy (1988), the government has endorsed the need to involve local people in forest-related planning. Further support for this trend has been made possible by the initiation of externally donor aided large-scale Forestry Projects in different States by donors which maintain a strong participatory and in theory gender-sensitive emphasis: a position that has been strengthened by criticism of the failure of many JFM (Joint Forest Management) programmes to encourage women's membership on forest protection committees (Khare et al., 2000).

In most cases, the newly-formed forest management strategies are only superficially gender sensitive as they are formulated with little reference to the realities and concerns of women at grass-roots level (Burns, et al., 2001, Agarwal, 2001). As Locke affirms, the general view on women in national level policy-making is "*an undifferentiated and marginalised category whose inclusion merits a clause*" (Locke, 1999). The role of women in village committees contemplated by Indian conservation programmes is often not clearly defined: although almost all State government orders prescribe a certain minimum number of women representatives in the managing council of the village forest protection committee, there is often no similar minimum number in the "general body" committee. This is a potentially problematic scenario given that the power of women in the executive committee is likely to be seriously ineffective from the lack of a significant female presence on the "general body" committee (Gibson et al., 2000, Cornwall, 2003, Locke, 1999).

Even though difficulties in the implementation of an effective participation of women in the management of natural resources still remain, some progress has however been made during the last years. A number of case studies illustrate examples of projects which successfully managed to integrate women's participation in the decision processes and functioning mechanisms of self-governing institutions for forestry and water management (Dikito-Wachtmeister, 2001).

The Self-Employed Women's Association in *India* (SEWA) focussed on gaining access to water for productive enterprises, which are often part of the so-called self-employed workers segment. Today more than 93% of all workers in India are considered self-employed workers, more than half of whom are women (Makiko, 2004). SEWA has helped selected areas in India to develop plastic-lined ponds for water conservation, with technical support and training provided by the Foundation for Public Interest (FPI). Local women are now managing their own village ponds, including all book-keeping and accounts. In eight villages of the Banaskantha district of Gujarat, women have formed their own water committees. Through these they undertake contour binding, building checkdams, repair of village ponds and other water conservation related construction.

In *Morocco*, the Rural Water Supply and Sanitation Project of the World Bank aimed at reducing the burden of girls "who were traditionally involved in fetching water"

in order to improve their school attendance. In the six provinces where the project is based, it was found that girls' school attendance increased by 20% over in four years, attributed in part to the fact that girls spent less time fetching water. It was also found that convenient access to safe water reduced the time spent fetching water by women and young girls by 50 to 90% (World Bank, 2003).

In *Nigeria*, the construction of a tourist resort on the Obudu plateau led to deforestation and exacerbated pre-existing pressures on water resources and the environment, such as overgrazing and unsustainable agricultural practices. The local Becheve women complained about wasted time in collecting water, poor quality and quantity of water and poor family health. Consequently, the Nigerian Conservation Foundation (NCF) started a Watershed Management Project on the Obudu plateau in 1999, and encouraged women to get involved in the project. As a consequence, the time used for collecting water was considerably reduced and allowed women to spend more time on income generating activities like farming and marketing. Moreover the women's healthcare burden was reduced, with a 45% reduction in cases of diarrhoea in 2004 (Majekodunmi, forthcoming).

These examples highlight the importance of the active engagement of women in the policy and project formulation process itself, which facilitates building upon women's initiatives and struggles while strengthening gender-equal democratization of self-governing community forestry institutions (Baviskar, 2004, Bergh, 2004).

This paper seeks to give a contribution to these emerging initiatives of community-based natural resources management programs which actively involve women by describing a gender conservation effort in the Indian Sariska Tiger Reserve. This case study has been chosen as it represents a successful example of grass-roots conservation carried out with the substantial contribution of women.

Based on the field evidence, my argument is that the active participation of women in community organizations and their empowerment is a prerequisite to allow the woman to become a beneficiary of community-based conservation. Without this empowerment, the conservation initiatives could reinforce the inequalities inside the village society and increase the gender conflicts. This study case shows that community-based conservation initiatives can facilitate the women empowerment process if coupled with other ad-hoc development interventions.

The paper is structured in two sections. The first section sets out the case study data on gender and community-based conservation, the second section discusses the case and provides some conclusions.

Methodology

Field studies took place between October- December 2001 and February-April 2007 at the periphery of the Sariska Tiger Reserve in three villages.

In addition to participant observation of forest resource use practices through living in the villages for three months, 32 semi-structured interviews were carried out amongst women living in the villages located at the periphery of the reserve. The interviewees have been selected using a snow-ball technique and on the base of parameters such as age, caste, marital status and economic condition, this last element being measured on the basis of the average budget available at household level. The women interviewed aged 20 to 52 years and all belonged to the lower castes of *Gujjar*

and *Meena*. This last element is explicable by the fact that the conservation initiative, organized by a local NGO, e.g. Tharun Bharat Sangh, aimed to primarily involve the most vulnerable sections of the village society.

In order to reduce the pitfalls associated with this method, the sample has been completed with a number of women randomly selected in the households of the villages under study. The interviews (45 minutes to one hour each) consisted of structured and semi-structured components. On the one hand, structured questions aimed to collect quantitative data, such as income generation, household budgets and saving sparing capacity. On the other hand, semi-structured questions aimed to assess the point of view and the evaluation of the interviewees about the social and ecological outcomes of conservation initiatives, their degree of participation in village organizations and their process of empowerment. The three dimensions of women's participation included in the study have consisted in analysing (i) whether women were members of the protection committee, (ii) whether women participated in meetings of forest protection committees (iii) whether women participated in decision-making processes and benefited from positive outcomes derived from the management of natural resources.

The data obtained from individual interviews have been complemented and validity has been checked by carrying out two group interviews. These latter consisted of 6 participants each, selected among the women not previously interviewed.

In an attempt to compensate for the lack of cultural and linguistic background that can only come from long-term engagement with a particular community, three local translators belonging to the same caste of the interviewees have been hired. Two of them, recruited with the support of the local NGO Tharun Bharat Sangh, were field workers with previous professional experience among the villagers. Aware of the fact that translation from different backgrounds may help facilitate access to different social groups, an English speaking villager has been recruited. To avoid the gender difficulties that may arise when a male interpreter approaches women, this translators were females. Moreover, to protect the privacy of the respondents, particular attention has been paid in order to ensure that interpreters who assisted with translation lived in different villages of those of the interviewees. All the interviews were recorded with their permission of the interviewed and transcribed in the local vernacular. These scripts were subsequently translated into in English and the two versions were compared in order to triangulate the data.

Results

The Sariska Tiger Reserve, declared a protected area in since 1978, lies in the Alwar district of the northern Indian state of Rajasthan, in the Thanagazi block zone and covers an area of 866 sq km. Pre-independence, the forests within the Reserve were part of the erstwhile Alwar State and considered a hunting reserve for the local *Maharaja*. After independence, in 1955, these woodland areas were registered as a State reserve. Later, in 1975, in order to achieve the most effective conservation of wildlife, some forest areas contiguous to the reserve were also incorporated in the Sariska Reserve and have become officially protected areas. The rural population, about 600 inhabitants, dwell inside and at the periphery of the reserve and exercise their traditional rights of use over the forest, which is subject to the reserve authorities management. In the past, the dense forests located in what is now the periphery of the reserve, represented an integral part of the local rural economy. In the 1930s, they became gradually depleted when the colonial

government abolished the communal rights to forest land and allowed timber companies to exploit the forest (Forest Survey of India, 1997). The lack of tree cover in the Aravalli mountains near the Sariska reserve to trap the moisture resulted in rain water swiftly flowing away during monsoons leading to rapid soil erosion. Consequently, local bodies of water progressively dried out and the groundwater level fell.

An important ecological transformation has been wrought in this area over the last 15 years, through local communities initiating forest conservation measures at the periphery and around the Sariska reserve. Helping them in this transformation is the NGO *Tarun Bharat Sangh* (TBS), set up in the mid 1980s for rural development and environmental conservation work. TBS activities include water and forest conservation, rural education and health. In particular, these conservation initiatives have been centred on traditional water harvesting structures used in the past, the *johads*³.

In Sariska the women made the first important contribution to the conservation of resources of the forest. In Gopalpura village after the extreme drought in the area, the women, being the only adults inhabiting the village after the massive emigration of the men towards the big cities, offered to work on the construction of the *johads* in their village. The results were important because the dams held water for 3 months after the monsoons during the first year, for 6 months during the second and all year around during the third. This success encouraged and motivated the women of Sariska to commit themselves to similar constructions.

The women in the villages, with the support of the TBS, have built numerous structures around the sanctuary as well as inside the reserve itself. The community based resources management initiative has had considerable success. Currently, the work of the TBS covers 700 villages in the Alwar district, and parts of the Jaipur and Sawai Madhopur districts. In these areas, nearly 7,000 water bodies of varying sizes have been either newly created or restored. Although the construction of the new *johads* and the restoration of those fallen into obsolescence represents the main activity of the TBS, this activity constitutes just a part of the strategy of the restoration of the local ecosystem in Sariska. For the ecosystem's regeneration, the development of traditional water storage structures has been used as a starting point in order to carry out reforestation in forest areas both on private and community land.

The women in the villages have also given an important contribution to plant an area of about 5,000 hectares around the reserve, a number that approximately corresponds to 6% of the surface of the whole reserve. The improvement of soil quality, a consequence of the conservation in Sariska, has resulted in an increase in land productivity and the extension of agricultural activities in the region. Before these initiatives, in the village of Bhaonta-Kolyala, 140 of the total 221 hectares, that is to say more than half, were classified under the category of *banjar bhumi* (non-cultivable plots

³ The *johad* is a crescent-shaped earthen embankment approximately 5 m deep, with an area of 100-200 sqm, which is built across a sloping catchment to capture the surface run-off water which then percolates into the soil increasing the ground water. This traditional water harvesting system had been built in Rajasthan for hundreds of years but many fell into disrepair during the 20th century due to the increasing role of the state in water management and the consequent weakening of village-level water management institutions and practices.

of land). Now, more than half of the uncultivated land has been regenerated and become cultivable land.

The restoration of the ecosystems in Sariska has had repercussions of socio-economic order on women, mostly through the reduction of rural migration towards the big cities. In the past years, the shortage of resources in Sariska had triggered a process of disintegration of the local communities while pushing the villagers to emigrate towards the cities, increasing the economic and social vulnerability of the women inside the villages.

In Sariska the phenomenon of migration was mainly determined by the progressive shortage of arable lands due to population growth. The interdiction to practice agricultural activities imposed by the authority after the area was declared a protected zone compounded the bad effects of the prolonged drought which hit the area in 1986-1987.

The emigration of farmers from Sariska not only caused changes in the domestic structure and in domestic roles but also affected the division of work and the ways of using the work-force. The result was a considerable increase in farm work for women thereby resulting in less availability for domestic tasks and care of children. The women in the absence of husbands had to take on greater responsibilities. These households directed by women were especially vulnerable to seasonal tensions in the poorest segments of the farming population and their survival depended entirely on their access to the resources of the collective property.

The large areas were difficult for women to work and rarely accessible by a lack of liquidities, so they had to keep on cultivating smaller parcels of lands which were less productive. The shortage in agricultural labour for some households was caused in the long-term by the ageing of the work-force, generating a decline in food production and a deterioration in the living conditions of the farmers.

Some activities were transferred on to aged people and to young girls. This last aspect had important repercussions on future fertility and on the level of education. As their younger sisters assumed these functions inside the family, the elder girls were pushed to get married or to find work in the city. In the Thanagazi block, during the severe drought in the years 1985-1987, the rate of school attendance was lower than 3% (Down to Earth, 2001).

The restoration of the local ecosystems in Sariska has had positive consequences on the daily living conditions of women. The increase of the underground water level has reduced considerably the time and the efforts which were previously necessary to fetch the water.

Although these positive effects on women's lives have been confirmed by the interviewees, the positive effects of community-based conservation in communities where gender inequality is rampant, run the risk of being mitigated by the increase of the burden on working women. The cost could be disproportionate if their needs are not taken into account. It is important to underline that, even with a greater availability of water and fodder close to the village, the workload for women is not decreased. From the field investigations it is clear that for many women of the villages the workload is such that they can hardly consider further occupations. Two thirds of the women interviewed, especially those who are married with several children and those whose family possesses land and livestock, emphasised how their tasks have increased enormously

after the implementation of the community-based conservation initiatives. In this respect, a 24 years old woman who has three children declared:

“Everyday I have to start on daily basis before the sun rises ..that is the way it is.... Now our situation is not as bad as before.. In the past we had to walk a lot and carry very heavy weights.. At the present, our daily conditions are harsh too: since there is more water, we have had to cultivate a bigger extension of land. The number of domestic animals owned by our family has also increased: consequently, our work load with the husbandry and the buffalo has augmented and we hardly have a moment of rest ... “.

In order to enhance the positive effects of community-based conservation and to let the women be included between the beneficiaries, a more equitable division of tasks between the genders is essential.

The role of women in the village institutions

In Sariska, the *Gram Sabbha*, a community institution, has been created by the villagers to manage their natural resources. This local body, composed of all the households in the village, meets once every month and makes collective decisions according to the principle of majority.

Despite the links that unite the women to the forest, many factors make it difficult for the women to take an active part in the village committees. The most obvious is the workload assigned to the women which in effect prevents them attending the meetings of the *Gram Sabbha*. The women take on the care of the children and the supply of water, fodder and wood. In addition, they dedicate a substantial part of their time to agricultural activity.

It is still considered improper, from a cultural point of view, for women to attend meetings where the male presence is predominant. This is in accordance with the lower status of women within these tribal societies. The opinions expressed by the men at the time of the meetings are generally considered as the expression of the whole household. For this reason some villagers feel that, since the men participate in the *Gram Sabbha* meetings, it is not necessary for the women to attend them. However, it is evident from the interviews carried out that the number of women who discuss the *Gram Sabbha* decisions with their husbands is negligible. The women are rarely informed about the decisions taken and about the topics discussed.

The women who have participated in the *Gram Sabbha* meetings have in fact become discouraged. Their opinions and suggestions were not taken seriously taken into account by the *Gram Sabbha*. This hinders true common action at village level on the management and the use of the forests. As a woman explains:

"I attended just three or four meetings. My suggestions have never been taken into consideration. No one listened to me. I am illiterate and I am therefore incapable of saying what appeared in the official account of the meeting. Someone told me that my recommendations would be examined but that it was necessary to sign the register first. I believe that my ideas didn't interest them".

The problem of increasing the participation of women in village institutions has to be factored into the complex socio-cultural system existing in rural areas. In Sariska, the extended family functions like a social group that works to survive and promote their well-being. This family system is organised according to a strict division of work and well-established domestic roles and relationships. These are based on the hierarchical principles of age and gender: the older men are identified with power and authority. In the rural social hierarchy, the young woman generally occupies one of the lowest ranks; her status will improve only when she gives birth to a son, as this contributes to the continuity of the lineage. Even then she will remain subject to the authority of the men in the family. This vision of the family in Indian traditional society often prevents the women from taking an active part in public fora and expressing their ideas as men are allowed to (Adhikari et al., 2004., Bondi and Davidson, 2004).

It is important to underline that women's marginalization is not one-dimensional i.e. caused only by gender. It is, instead, an outcome of the intersection of the subordination conferred by caste, class and ethnicity, as well as gender (Agarwal 1997; Agrawal and Gibson 2001).

This is especially so in Indian villages, which are highly stratified by caste, class, ethnicity and gender. In Indian rural contexts, therefore, women are likely to be disadvantaged additionally because of their caste and class locations. The higher the stratification of society, the more layers upon women, and hence the more difficult it is for them to be involved in participatory processes. Gender inequality limits actual participation even when women are not formally excluded. The means by which women are excluded may echo and reinforce hegemonic gender norms, as well as replicate patterns of gendered exclusion that have wider resonance (Larson and Ribot, 2004).

Protective measures for forest conservation and their impact on women

Several women in the villages, especially the younger ones who are traditionally in charge of the daily tasks in the forests (collection of woods, fodder etc..) have estimated that some protective measures of the forest, such as the interdiction of the cutting of wood or grazing, have exacerbated the difficulties in their daily work. This problem concerns in particular a category of women: the daughters-in-law. These latter, being younger and having a lower status within their in-law family, are those who take on the domestic provision in forest products. Yet, the achievement of this task often causes some conflicts and misunderstandings within the households. Indeed, it is sometimes difficult to provide for the domestic needs of biomass, while respecting the rules of forest utilisation decided by the *Gram Sabbha*.

The majority of the female population of Sariska agreed that it is necessary to have some restrictions in the use of the forest. Despite this, from the interviews it results clear, however, that the women have a dilemma. The young women are considered responsible for the infringements of the forest use regulations, because they are responsible for the biomass supply of their household. Yet it is the men who have set the rules and the women who have to obey them. There is a definite hierarchy: the daughters-in-law are in charge of assuring that the family's needs are met. The involvement of the other family members remains limited and the daughters-in-law have little option other than to manage the available resources to meet the needs of the households.

The reality however is more complex, as the following remark from a young woman in an individual interview when asked her opinion about the involvement of women on forest conservation indicates:

"Very few young women talk about the protection of the forests. It's especially the men who approach these questions. They tell their wives not to go to forest but they go there all the same because it is necessary to feed the livestock. This sometimes has negative consequences on the forest".

Seemingly minor and well-intentioned restrictions reflecting the collective decisions of all-male bodies have had unintended negative consequences for women. Another interesting example of power imbalances and collective use regulations is represented by a community in the village of Devri. Here the *Gram Sabha* instituted a rule stipulating that only one member of each village household could access the protected common area per day. This restriction was designed to promote equity by erasing distinctions between households differentiated by caste-based occupational specializations, class and socio-economic status and family size. However, it forced many households to make tough daily decisions between typically male productive activities like timber harvesting, on one hand, and typically female reproductive activities like firewood collection, on the other. Owing to power imbalances within households, women were often forced to travel outside the community to perform these unavoidable daily chores.

Potential conflicts among the local forest users hindering conservation initiatives and gender equality

The risk exists in the long-term of setting a dynamic of conflict that could endanger the conservation initiatives and accentuate the inequality between the genders. In certain villages the women who did not share the decision to reforest the community lands adopted boycott actions.

An older women who is a member of a *Gram Sabha* commented on this respect:

"good results in community-based conservation are not always easily obtained as often the women that take part in the reforestation actions do not work effectively... They plant the new trees but they do not care about the protection they need. Often these new plants are eaten by the cattle... It has happened in the past as well that the women gave the small trees which should have been planted to the cattle to eat...".

A more careful consideration of the needs of women in the community institutions could reduce these actions of boycotting the regulations on the basis that their working conditions are made worse by them. A more egalitarian representation of the women could help to effect more realistic regulations for the use of forest biomass in the forests. These regulations, while very important for the effective conservation in the long term, would in some cases be too rigorous to meet all the community needs. As a young woman from the caste of Gujjar underlines it:

"It would be good if the women took an active part in the meetings of the Gram Sabha because it's them that have to go in to the forest and look for the fodder for the livestock. The men don't seem to understand where the fodder and the wood for the fire come from.... "

Promoting women's participation and empowerment in village organisations

It is extremely important to encourage the women to play a major role in the management of the natural resources and to reinforce their position in the process of decision making within the village institutions through a process of empowerment. This complex and delicate process could possibly be enhanced through the constitution of feminine organizations.

Martin (2004) points to the embeddedness of the actor in social networks as a source for his social standing. Women's groups could increase the bargaining power and the confidence of women to engage in the public realm.

In the village of Bhanta-Kolyala, an assembly (*Mahila Mangal Dal*) only attended by the women has been constituted. Mili Devi, one of the active members of the *Mahila Mangal Dal* explains:

"The constitution of an institution for women only doesn't represent in my opinion an attempt to separate the men from the women but rather to help the latter to express better their potential and to fearlessly come out of isolation".

According to a local leader:

"The constitution of a women only assembly wants to assure an active mobilization of these latter in order to achieve a greater democracy at village institutional level".

In some villages of the region like Dhirora, Barleta, Bheekampura and Gopalpura, the creation of *Mahila Mangal Dal* has increased solidarity and sharing amongst the women. Those assemblies originally promoted by TBS to facilitate the participation of women in community-based conservation initiatives, have also provided a forum to fight other problems such as domestic violence and the dowry system. Within these groups, thanks to the intervention of TBS activists, the women can benefit from training opportunities (education, hygiene, etc.) necessary for the improvement of their living conditions. Thus, the creation of these groups has strengthened the capacity to improve in terms of literacy, health, and leadership. These women, while becoming aware that they can provide both for their own needs and those of their children, have in some cases increased their sense of autonomy and their capacity to make the decisions which affect them.

The progressive awareness of their capacities and their role will allow women to express themselves within the community in a more effective way. Talking in public allows them to acquire more confidence and self-esteem. Attending the meetings represents for the women a giant step since most of them leave their home only for work purposes. Nevertheless, for most women this process of leaving their households to

attend the meetings has not been easy. In many rural societies, attempts to control women's movements outside the home further constrain their autonomy (Agrawal, 2001). As a middle-aged woman, who has been is a member of *Mahila Mangal Dal* for since a few years recalled it during an individual interview:

“at the beginning my husband was very cross with me and he ordered me to remain at home and look after the housework, instead of going out and meeting the other women. If I was late in cooking his dinner after a meeting, he used to beat me up”

The weekly meetings between the women in the organisation of microcredit programs which take place in the *Mahila Mangal Dal* encourage solidarity among the women who can feel more confident in sharing ideas and debating their problems.

Improving the literacy of women is essential to promote their participation in village institutions and empower them. There is a high rate of illiteracy amongst the women, in particular the older ones, but this trend has started to decline over the last few years. Literacy would be important for women in order to be able to read and understand the regulations in the *Gram Sabbha* registers and the minutes of the meetings. This would reduce the risk of the women being misled.

Some ad hoc measures should be adopted in order to enhance the empowerment process of a particular category of women, which is at present highly discriminated: the widows. At the moment the widows are widely marginalized, being considered by the villagers to bring great misfortune. Indeed, there is the belief that a widow is indirectly responsible for her husband's death as she wasn't able to keep the soul of the deceased in the world of the living. Due to this cultural belief and to their low socio-economic status, widows' participation in community-based conservation is hindered and they are excluded from the benefit-sharing mechanisms.

The efforts of TBS activists to encourage the inclusion of widows in the *Gram Sabbha* meetings have encountered had strong resistance from other members of the community.

In some villages the process of empowerment has been enhanced by their active involvement in conservation initiatives, which has given them an increased legitimacy and status within the community. A woman in Devri village stated:

"before our place was at home; but during the drought the elderly men in the village realized that the women could make a contribution in the construction of the johads. In our village most of the work for the construction of the johads has been entrusted to the women. The things go better for the women and the elders begin to recognize their importance and their contribution for the whole community".

Such a process of empowerment could be one of the social results of the economic benefits derived from community-based conservation initiatives. Supplementary incomes from the increase of the agricultural and livestock productivity could boost domestic enterprises. In this region, there is a traditional practice locally known as *pallu*, which consists of entrusting the woman with the household money. This

means that the woman has a discretionary role over the family's expenditure. In this zone, the incomes from the agricultural activities go to the men, while those from livestock breeding go to the women.

Conclusive remarks

Relationships between genders affect hierarchies of access, use and control of resources, resulting in different needs, perceptions and priorities (Nussbaum, 2001). Gender relations are an aspect of broader social relations and, like all social relations, are constituted through the rules, norms and practices by which resources are allocated, tasks and responsibilities are assigned, value is given and power is mobilised (Bray et al., 2003, Gray, 2002). Any interventions made through community-based conservation are likely to create different impacts on for men and women and lead to deliver varying costs and benefits for the two groups.

Without robust planning processes to focus attention on the resource use patterns of women, community-based conservation can result in a worsening, rather than an improvement of their working conditions. As Sariska has shown, the community-based conservation can substantially affect the workload of women. The closure of common lands for reforestation initiatives and the establishment of use restrictions lead often to the loss of biomass. This problem of the reduced access to the resources is particularly acute in cases where there are limited common lands around the villages and where the community is highly stratified. The increase in the workload of women needs to be taken into account and a more equal task division between genders needs to be promoted through effective women participation in decision making within the village institutions.

Agarwal highlights how the ability of many Indian women to both act on their environmental concerns and put their ecological knowledge into practice is often severely restricted by cultural restrictions on their mobility and participation in the public decision-making forum (Agarwal, 1997, Nussbaum, 2001). Particular attention must be paid to the role of women in patriarchal systems (Agarwal 2001; Prokopy, 2004; Leach et al., 1999). In Sariska, traditional beliefs (such as the one concerning the widows) can lead to the marginalisation of women and can constitute obstacles to effective women participation in benefit sharing derived from community-based conservation initiatives. They can also trigger social inequities amongst community members.

The case study of Sariska highlights the importance of women in the decision-making process, fact that is too often limited. Too often women's needs are ignored or are subordinated to those of the men. This could undermine the feminine participation in village institutions such as the *Gram Sabbha*. The contribution of the women could be underestimated thereby reducing the "democratic" functioning mechanism of this institution. The contribution of women, too often limited to the practical implementation of the conservation actions, the women's contribution should be expressed inside the community institutions when establishing objectives and benefit sharing criteria. A careful consideration of gender equity in the benefit sharing criteria in village institutions is essential to assure the sustainability of women participation in community based conservation initiatives, such as the one in Sariska.

As Sariska case study shows, the gender focus of environmental policies and programmes should not been limited to improving women's living conditions (ex. ensuring access to fuel and fodder) but should address the problematic power structures

within households and communities. While it is necessary to address practical needs, these remain only preconditions for women's empowerment since their participation is often "actually conservative of their subordinate position"(Leach, 2007).

As Sariska demonstrates, without this form of empowerment, the community-based conservation is likely to reinforce the gender inequalities. Here I do agree with Saraswati Raju (2006) when she states that women-centric models", such as the model of empowerment, do not work for social change "*unless the others models (essentially patriarchs-men), who are implicated in power production, are part of it ... Empowerment has to be linked with and placed in wider social and political structures rather than in contextual isolation was another realization with which tacit knowledge informed the grass-roots activities*".

Truly equitable and participatory initiatives in community-based conservation cannot simply accommodate themselves to existing gendered distributions of power and property within rural communities, but need to explicitly address patterns of gender inequality in access to and dependence on common property resources (Agarwal, 2001). This is unlikely to occur on a large scale unless affirmative steps to include women in village organizations are implemented.

If we accept that a gender focus is useful for conservation, how can gender analysis be used to empower local groups in the learning processes? How do we expect these learning processes to translate into changes in conservation practice? How are they related to empowerment of different groups in relation to community-based resource management? In keeping with the need to "level the playing field", gender-focused learning strategies may increase awareness of the importance of women and other groups being able to sit at the negotiating table (Jackson, 2000).

The progress towards women's full participation in environmental governance at the local level will probably be slow and incremental, building upon women's autonomous social movement organizing. To generalize gender equity in environmental governance in the future, the key will be to uncover 'ways in which women can institutionalise the few bargaining strengths they have, and in working out leverages and incentives that would ensure a voice and space for the most marginalised groups within decision-making processes' (Woodford-Berger, 2004). Inclusion of women in management of natural resources is compelling because such participation has the potential to lead to greater empowerment both within women's households and in the public life of their communities.

In Sariska the progressive awareness of women on their role in community-based conservation has reduced the feeling of isolation that accompanied their lack of power. In certain villages in the region, despite the predominance of the patriarchal family system which attributes a subordinate role to women, the community-based conservation initiatives have helped women to improve their social status and to become aware of their role within their communities. It is also interesting to note that these women's committees, formed with the aim of forest conservation and supported by local leaders, have extended their initial brief and are taking up other social reforms such as fight against dowries, early marriages etc. In this context it is important to underline all the complexity of intersectionality of gender oppression (Spivak, 1988, Sangtin Writers, Richa Nagar, 2006), in order to better understand the multiple ways in which various socially and culturally constructed categories interact on multiple levels to manifest

themselves as inequality in women's condition. I do agree with authors such as Collins (2000) and Mann and Huffman (2005) who highlight how models of oppression within society, such as those based on ethnicity, gender, caste, class do not act independently of one another; instead, these forms of oppression interrelate creating a system of oppression that reflects the "intersection" of multiple forms of discrimination.

In accordance with the WED school of thought as well as feminist political ecology theories, and particularly with authors such as Vandana Shiva, the Sariska case study shows that the women in rural areas have an important role to play in community-based conservation of resources and in promoting sustainable development. Their involvement in the community-based conservation is therefore not only important in order to obtain an effective management of natural resources but also to promote equity between the genders.

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