

## **GENDER AND TRADITIONAL KNOWLEDGE IN PRACTICE IN TAMIL NADU, INDIA**

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Traditional Knowledge (TK) has existed for as long as human society has existed, but it is only in recent decades that it has been recognised and defined as such by the scholarly and scientific community. Over the last quarter century, the focus on people's participation in the research and development process began to build a parallel appreciation for traditional ways of doing and learning. Outsiders came to recognise that community evolved strategies of meeting such diverse needs as health, food production, and water security were not only adequate, but perhaps even more effective than 'objective' scientific research, especially in the local context (Berkes, 1993). The current emphasis on indigenous, local and environmental knowledge has sprung from this more general awakening to the value of traditional knowledge. However, being able to determine what the terminology really refers to is the first challenge of being able to effectively access and use TK in research and development work at all levels, locally, nationally and internationally.

Both the instinctive adaptation of TK that takes places over just a few years, as well as the more stable body of knowledge transferred from generation to generation, can be valuable in a given process of research and action. However, current day knowledge is sometimes undervalued or dismissed by social science researchers, who see it as inauthentic compared to older forms of knowledge. In cases where this more recently evolved type of knowledge, generally referred to as local knowledge (LK) (Berkes, 1999), is considered as valuable and is brought forward along with TK or Traditional Ecological Knowledge (TEK). The main issue, however, is essentially whether or not the knowledge is still relevant or useful in the current local context.

The utility factor contributes to the valuation of traditional knowledge as a legitimate area of research and exploration as well as a tool for future development and community action. The adaptability of traditional knowledge to the circumstances it faces should also not be taken as an automatic assumption that the people involved in the research and project/ action will 'naturally' be able to adapt to any situation they are put in with relative ease

(Wavey, 1993). While there may be elements of truth to the levels of adaptability demonstrated by people, it is certainly not the case that traditional societies can simply be moved around and relocated without concern, as happens too frequently in the name of development.

This term has sometimes been taken to refer solely to tribal or First Nations populations, discounting the fact that other local peoples may also possess valuable insights and understandings. In fact, the interpretation of the term indigenous can eliminate from consideration the knowledge of people who are migrants to the area, as they would be considered non-native or non-indigenous populations. In many parts of the world, this effectively restricts recognition of women's roles in traditional knowledge generation, possession, and transmission. In the Thevaram Basin, Kambam Valley, Tamil Nadu, and indeed in India generally, this is a consequence of the fact that women usually migrate after marriage to their husband's locale and are therefore not usually native to the area they inhabit for the majority of their life.

### **The Purpose, the Study Area, and the TEK**

This paper examines the findings of a study of TEK, in the Thevaram Basin of Tamil Nadu, India. The study was conducted during March 1999-March 2001. A Canadian intern on the project has focused her entire attention on Women and TEK, during August 1999-October 2000 (Tummon, 2001) towards her Masters' research. This research has used participatory approach and its methods to recording TEK, besides interview methods. A great deal has been learned about the existence and practice of TEK in Thevaram basin, especially in five villages – Bodi Ammapatti, Maniampatti, Pottipuram, Rasingapuram and Silamalai – of Theni district and this paper reports on a small part of this research for wider audience.

The five villages are in the rainshadow of the Western Ghats and are affected by desertification, dunes, encroachment and drifts occupying an area of 12,000 ha. The villages have a population of nearly 80,000, spread over 18 hamlets under five village panchayats. Although the people are very enterprising, more than half of them are under poverty. The villages are a veritable case of natural resources and environment management, requiring restoration of the environment through improving bio-diversity and prospects of rainfall, which almost always fails.

## **Traditional Ecological Knowledge in Practice in the Thevaram Basin, Tamil Nadu**

In the interview process, women spoke more about traditional practices such as the customary medicines used to treat minor illnesses and more serious problems like snakebites. A few of them also mentioned a traditional connection between the environment and spiritual beliefs, an integrated perspective characteristic of 'sacred ecology' (Berkes, 1999). In particular, one *pooja* (prayer ceremony) was described wherein the community asks for rainfall and better weather conditions for their crops. In this particular *pooja*, offerings used to be made and prayers would be said at a community gathering, in order to ensure good conditions for all people living in the village. This example offers a sharp contrast to the lack of community activities and events that are now taking place in the study area. The gendered discussion in the following pages turn to four areas of concern, namely: land, water, winds and destiny.

### **1. Land: Soil Quality Improvement Information**

Interestingly men, more than women, 58.2 per cent as compared to 48.0 per cent, indicated that there was a body of traditional knowledge relating to soil quality improvement strategies (Table 1). When questioned regarding their sources of information on soil quality improvement tactics, 42.5 per cent of the women indicated that neighbours were their main source, with 39.2 per cent relying on their own knowledge. Men predominantly (58.0 per cent) relied upon their own understandings as well, with only 32.6 per cent relying on neighbours. Male respondents were nearly as likely to get information from relatives (5.1 per cent) as from government officials (4.3 per cent) while women went to relatives (15.0 per cent) much more often than to government officers (3.3 per cent).

In the literature on traditional knowledge, it is women who are often privileged as being the keepers of traditions, particularly when it comes to information about the environment (Hausler, 1992). In this case, however, the activity in question, soil improvement, is one for which men are generally traditionally responsible. Women have little input into the soil improvement process, in fact, even their labour is little utilised in this process as most of the work is done with cattle, carts and ploughs.

Table 1: Sources of Information on Soil Quality Improvement Strategies among Villagers of the Thevaram Basin

Soil Quality Improvement	Traditional Knowledge % (#)		Sources of Information % (#)	
Female	Yes	48.0 (60)	Neighbours	42.5 (51)
	No	52.0 (65)	Relations	15.0 (18)
Male			Government	3.3 (4)
			Own Experience	39.2 (47)
	Yes	58.2 (82)	Neighbours	32.6 (45)
	No	41.8 (60)	Relations	5.1 (7)
		Government	4.3 (6)	
		Own Experience	58.0 (80)	
Total	266 responses		258 responses	

Sources: Field Survey 1999-2000.

These findings on sources of information also reflect traditional domains of interaction between people, in particular, the gendered aspects of such contacts. Women, whose traditional domain is in the home, tend to have more contact and communication with neighbours and relations than men and, as a result, consider sources of information from these familiar domains as most important. Men, in contrast, have more outside interaction, especially with officials in various capacities. As a result, they are as likely to go outside for information as they are to get information from family members. Also, the traditional gender positioning of the male as the head of the household helps to consolidate the fact that they rely first on their own knowledge and then later on others outside the family structure. They express a high degree of confidence and pride in their ability to make decisions and take actions of their own accord. In this way, participation has been both an end in itself as well as a means towards action (Goulet, 1989).

Also,

- There is general agreement that the land is good, but that the quality of the soil has markedly decreased over the years.
- Soil improvement strategies are becoming more expensive and less effective due to the long-term effects of chemical fertilizers and pesticides on the land.
- Traditional land reclamation methods are discounted as a viable agricultural improvement strategy because of prohibitive time and labour costs as well as a sense of futility in that they are not lasting measures, but rather, temporary interventions.

## 2. Water: Water Management Strategies

Both men and women had equally mixed responses to questions of knowledge and use of the *theppam*, a traditional water management and irrigation strategy. Overall, 51.5 per cent of respondents reported having knowledge of the *theppam* structure while 48.5 per cent reported not having any understanding or information about it at all (Table 2). The use of the more modern technique of motor or pumpset, however, is more prevalent than the *theppam*, with 60.3 per cent of women and 67.4 per cent of men making use of these machines to obtain the water required to meet their daily needs, be they agricultural or otherwise.

Table 2: Use of Traditional Vs. Modern Water Management Strategies in the Thevaram Basin

Water Management Strategies	Use of <i>Theppam</i> % (#)		Use of Motor/ Pumpset % (#)	
Female	Yes	54.1 (53)	Yes	60.3 (73)
	No	45.9 (45)	No	39.7 (48)
Male	Yes	48.9 (65)	Yes	67.4 (97)
	No	51.1 (68)	No	32.6 (47)
Total	Yes	51.5 (118)	Yes	63.9 (170)
	No	48.5 (113)	No	36.1 (95)
	231 responses		265 responses	

Source: Field Survey 1999-2000.

A *theppam* is essentially a small scale holding tank for water in agricultural areas. It is usually constructed by digging up the earth to make the desired size tank, and then lining the structure with silt (*karambai*) to seal it and prevent water from percolating through. The *theppam* is usually located adjacent to the pumpset and is generally filled with water overnight, while the electricity is working. Then, the next day, the lands are irrigated not only with the use of the pumpset, but also with the water from the *theppam* that is released into the fields through a system of field channels. This practice improves irrigation efficiency as it speeds up the process and also allows more water to be available for release into the fields than would be possible using the pumpset alone. As electricity is not always available or reliable, the storing of water for irrigation also serves a very practical purpose.

Since the *theppam* is a micro-level, locally evolved strategy, its usage and reputation is fairly limited and varies widely from village to village depending on their particular circumstances. According to farmers interviewed about it, knowledge of the *theppam* as a water management practice has been diffused primarily by chance observation and word of

mouth rather than through more formal extension methods like technical and skills training (Oakley and Garforth, 1985). This fact has also probably contributed to the almost fifty - fifty split in responses between whether or not people know of and/ or use the structure. The use of a motor and pumpset to meet water needs reflects the widespread adaptation of new technology, for those that have the money or access to credit to implement such practices. In particular, the practice of digging very deep bore wells, has arisen in the study area as a response to the lowered water table and the need to have deeper and more reliable sources of water all year round.

Also:

- Rainfall in the area is much lower now than in the past, causing a moderate level of water scarcity although the quality of the water remains relatively good.
- Traditional water management strategies such as the *theppam* are less widely known and less utilised than more recent strategies like the pumpset and the bore well, due to lack of dissemination of information and lack of interest in traditional practices.

### 3. Winds: Awareness and Participation in Wind Prevention Strategies

While a majority of the people of the villages, approximately 55 per cent, was quite aware of strategies to overcome the effects of the high winds, such as tree planting and shelter belt and hedge construction, there was some discrepancy between women's knowledge and men's knowledge. Familiarity with the strategies of planting hedges and shelterbelts was almost on par among women. However, between women and men, knowledge of the planting of shelterbelts was higher among male respondents (81.3 per cent) than among females (62.9 per cent) (Table 3).

Table 3: Awareness of Wind Prevention Strategies in the Villages of the Thevaram Basin

Wind Prevention	Awareness of general strategies % (#)	Knowledge of planting hedges % (#)	Knowledge of constructing shelterbelts % (#)
Female	57.3 (67)	62.7 (94)	62.9 (88)
Male	52.5 (72)	74.0 (111)	81.3 (122)
Total	139 positive responses	205 positive responses	210 positive responses

Source: Field Survey 1999-2000.

The discrepancy between women and men's awareness of different wind prevention strategies has to do not only with the traditional gender division of labour, but also with the perception of hedge planting as being simple or easy work. In other words, it is work that is presently done or could conceivably be done by women. In contrast, the construction of shelterbelts, staggered rows of varied species of trees, situated in a particular way as to break the wind, are considered to require more technical expertise and thus are more of a male task and responsibility. In fact, historically, shelterbelts in this area have been the domain and responsibility of males, particularly of government extension workers. The local people themselves, rather than being involved in initiating and promoting shelterbelts on their own, have simply been hired to carry out some of the manual labour associated with the projects, including planting and "watching" over the trees.

Also:

- High winds still continue to disrupt daily activities in the study area, however, they are perceived to be more moderate now than in the past.
- The majority of people are aware of environmental strategies for wind prevention such as hedge building and shelterbelt construction, even if they do not have direct experience of them.
- People feel as if they do not have the expertise, nor the time and land available to take up hedge and shelterbelt initiatives of their own, instead, they feel that the government should reestablish an appropriate scheme.

### **Gender Analysis Matrices**

A crucial element of the research was using the information gathered to guide and shape a community action plan for development. The Gender Analysis Matrix (GAM) developed by Parker (1993) under the auspices of UNIFEM was selected as a prime tool for use in the research, since it directs the attention of the participants towards the gendered aspects of action. The matrix is broken down to examine impacts on labour (activities), time, resources and culture, and their implications for women, men, the household and the larger community. The structure of the categories is based on the assumption that different sectors of the community will be impacted differently by development initiatives (Parker, 1993). In contrast to the other methods used in the research, which focus on the present and past of the community, the gender analysis matrix focuses on the future. It takes the form of a chart

(Table 4) that works from the objectives or proposed activities of a project and analyses them, in a group setting, to gain a consensus on the possible outcomes or impacts of the proposal.

*Table 4: Sample Gender Analysis Matrix on Shelterbelt Construction*

	<b>Labour</b>	<b>Time</b>	<b>Resources</b>	<b>Culture</b>
<b>Women</b>	Planting trees, watering, look-ing after trees until grown, making fences	8 a.m. to 2 p.m. 25 Rs. daily salary	Pot for water-ing, knife for weeding, good path to get to the area	Good results for village
<b>Men</b>	Digging up the ground, making bunds, packing sand around plants, write petitions- gov't	6 a.m. to 1 p.m. 70 - 80 Rs. Daily salary	Implements for digging & packing sand, unity of village people, educat-ion for writing petitions	N/A
<b>Household</b>	Those in joint families have support, those living separate-ly don't get any help	4 p.m. to 6 p.m. (cooking time – only if living in own house)	Provisions for cooking	Workload in-creases if living separately from family home, increase stress
<b>Community</b>	Provide salary for workers, select the labourers, give new ideas	Supervising the labourers	Money & ability to select labourers with-out favouritism	People will fight if not selected for work, conflict if there are not good results

**Source: Field Survey 1999-2000.**

The gender analysis matrix provides a forum for examining the interconnected nature of humans with their environment. As well, it reflects the notion that elements of community such as labour, time, resources and culture, are all an integral part of understanding how an ecosystem as a whole functions and how community members could most effectively operate in the context of their local situation.

A gender analysis matrix also explicitly addresses how different groups, because of their different social roles and responsibilities, could have different experiences of a given strategy. Thus, it allows community members to consider what the implications are for possible projects before actually doing them.

In this way, it can help to avoid the all too common situation of a community or group investing time, energy and resources into a development project and then later encountering unforeseen problems inherent in the process. It is recognised that there will always be challenges, changes and unknowns in any strategy, but they can at least be thought through to



a degree in advance and prepared for more adequately. The use of gender analysis matrices can thus provide valuable lessons for everyone involved in the process, development workers, extension agents, researchers and community members.

#### **4. Destiny Perspective of the People of the Thevaram Basin**

The destiny perspective, influenced by the predominant Hindu religious perspective, and cultural values of "adjustment", removes any need or utility for people to be proactive, since their future is already laid out for them. Their strength of character is in accepting their position in life without trying to change it or make a difference. Fate and determinism play a strong part in people's conceptions of themselves and their lot in life, with a high value being placed on the ability of the individual to adjust to the difficulties they face, rather than challenging or taking action to make changes in their situations.

#### **Summary**

Traditional ecological knowledge (TEK), while it is acknowledged to exist, is no longer deemed useful or relevant because of the vastly different environmental conditions under which people are now living as compared to the past. It is shown in this study that the men and women of the five Theni villages do use TEK, not as devised but in an improvised way. They are knowledgeable and use their knowledge in resolving resources related problems. TEK, if refined and revived, can be used in resources and environmental management of the area, where desertification has been on the increase in the last decade or more.

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