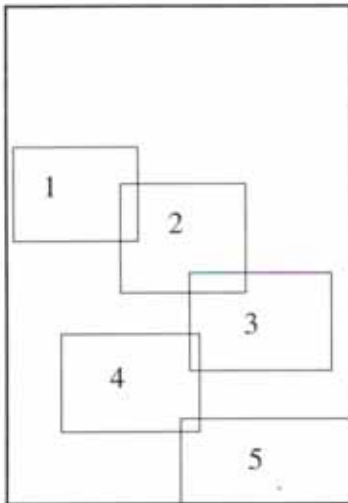


Gender and Social Inclusion for Sustainable Livelihoods



Front Cover



1. Shell crafts for livelihood (CCD)
2. Alternate temple offerings (ATREE)
3. Making brooms from hill grass (AGRAGAMEE)
4. Training in horticulture (CSGCA)
5. Women s tailoring company (GSGSK)

Back Cover



- 1 Woman friendly coconut climbing device (SEWA Kerala)

**Six Case Studies
on
Gender and Social Inclusion for
Sustainable Livelihoods**

Editor: Mina Swaminathan



**M.S. Swaminathan Research Foundation
Food and Agriculture Organisation**

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Preface

The mandate of the M.S.Swaminathan Foundation (MSSRF) has from the beginning emphasized social inclusion, expressed in terms of being "pro-poor, pro-woman and pro-nature", and this concern has been the guiding principle underlying all its programmes, especially in relation to livelihoods. The Foundation is also committed to the belief that science and technology, which are powerful drivers of the economy, can be harnessed to the cause of inclusive development.

Yet the history of the last sixty years shows that development in India has, as a whole, been uneven, and not socially neutral, as illustrated by current indicators of development. Today, with a growth rate reaching 10%, unprecedented in India's history, and paralleled by no other developing country, glaring gaps are revealed by human development indicators. For example, while India is positioned as a leader in the global scientific community, 46 percent of Indian children under five are malnourished, and these children also form the majority of the world's undernourished children. Similarly, levels of anaemia among women, infant mortality and maternal mortality, illiteracy, school drop-outs, children who have not completed elementary education, child labour, and several markers of gender equity, remain disturbingly high, and contribute to India's position as 126 among 177 countries of the world in the UN Human Development Report for 2006. At the same time, India produces many of the world's scientific and technological workers, and is a leader in several scientific fields, such as IT and satellite communications.. Clearly, social exclusion is still operating across the country.

To address these concerns, and to consider how S&T could be better harnessed towards sustainable livelihoods and inclusive goals, MSSRF held a Consultation in July 2007, with the support of the Department of Science and Technology and FAO-RAP at Bangkok, on the theme of "Technology Development and Delivery Models for Sustainable Livelihoods", involving a wide spectrum of participants. The aim was to explore current systems of technology dissemination to the resource-poor, study emerging models and delivery systems and analyse the key elements that make for a successful strategy, including use of ICT, in diverse sectors. The participants in this consultation included leading organizations in technology development, NGOs who have developed successful models reaching out to the resource-poor, financial institutions, PRIs(Panchayati Raj institutions or elected local bodies) KVKs(Krishi Vigyan Kendras or District Agricultural Science Centres) private educational institutions, Universities and other stakeholders. The proceedings of this Consultation are being published separately.

To focus on issues of inclusion, it was at first decided to devote one session specifically to this topic. But it soon became clear that this would be inadequate for in-depth analysis and discussion which could lead to an understanding of the constraints and possible approaches to overcome them. It was felt essential to provide more time for a deeper

exploration of the theme of inclusion. So a preliminary one-day brainstorming was held, with the support of FAO, at the end of June 2007, on the theme of "Strategies for Gender and Social Inclusion with regard to Technology and Sustainable Livelihoods" with a smaller group of non-governmental organisations, who had worked intensively with different categories of excluded groups in different sectors and with different approaches, and who would be able to share their successful strategies for social inclusion. Eight presentations were made at this meeting and discussed by a larger peer group, and a consolidated paper summarizing and commenting on their experiences was presented at the main Consultation in July.

Six of the participants in the brainstorming were able to write up the papers in greater depth, and these are presented here along with a comparative overview. It is hoped that this publication would contribute to an understanding of the perspectives, approaches, strategies, and methods used by these pioneers to achieve their goals, and to learn from their successes and failures. Above all, the case studies will cast light on the policy implications of an approach that genuinely strives towards an inclusive agenda for sustainable livelihoods. Only such policy changes can lead to "development for all".

On behalf of the Foundation, I would like express our deep gratitude, not only to the Department of Science and Technology, Government of India, and the Food and Agriculture Organisation's Regional Office for Asia and the Pacific at Bangkok for the financial support which made these two meetings possible, but also for the warm personal interest in both the planning and the outcomes shown by Dr.T. Ramaswami, Secretary, DST, and Dr. Revathi Balakrishnan, formerly Sr. Scientific Officer, Gender and Biodiversity, FAO-RAP Bangkok. I would also like to express my deep appreciation to each of the six authors, who took time out from their busy schedules to write up their experiences and document the achievements of their organizations in the form of these insightful and thought-provoking case studies. Last, but not least, I would like to thank my colleagues, Dr.Sudha Nair, Director, J.R.D. Tata Ecotechnology Centre, and Ms.Mina Swaminathan, Adviser-Education, Communication and Gender, for ably organising the two meetings, and to the latter, for putting together and editing this volume.

Achyut K. Gokhale
Executive Director

November, 2007

M.S.Swaminathan Research Foundation
Chennai

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Tribal Development and Conservation in a Wild Life Sanctuary

Siddappa Setty and Sushmita Mandal

For the last decade or more, the Ashoka Trust for Research in Ecology and the Environment (ATREE) has been engaged, along with its research activities, in an effort at promoting sustainable livelihoods of a tribal community, the *Soligas*. The objective was to do so within the constraints imposed by a wildlife sanctuary, which has however, also been the traditional home of the Soligas for a long time, and the strategy developed was to combine the insights and methods of scientific research with the traditional knowledge of the tribals.

Biligiri Rangaswamy Temple (BRT) Wildlife Sanctuary

The sanctuary (BRT) is oriented in a north-south direction covering an area of 540 sq. km in the southeast corner of Chamarajanagar district of Karnataka (Fig. 1). The western range has an undulating terrain, a network of valleys, slow west-flowing streams, and a number of hills, with an average elevation of about 1350 m. The eastern hills have an average elevation of about 1650 m, forming a high ridge. The sanctuary is divided into three administrative ranges: Yelandur, Chamarajanagara and Kollegal. BRT has a large diversity of vegetation types such as scrub, dry and moist deciduous forests, evergreen forests, *shola*¹ and high-altitude grasslands, supporting a rich variety of fauna. The forests form an important wildlife corridor between the Western Ghats and the Eastern Ghats, linking the largest populations of Asian elephant and tiger in southern India, with a total of 38 mammal, 278 bird, 22 reptile and 116 butterfly species. A preliminary survey of ants in BRT recorded 48

species, constituting about 8% of the total ant species in India. A recent survey of tigers² by DNA analysis of scat samples revealed 17 tigers, but the number is likely to be higher and the official figure is 28. The avifauna include seven endemic and several endangered species such as the yellow-throated bulbul (*Pycnonotus xantholaemus*), Nilgiri wood pigeon (*Columba elphinstonii*) and the rufous-bellied eagle (*Hieraetus kienererii*). BRT derives its name 'Biligiri' either from the white rock face of the major hill crowned with the temple of Lord Rangaswamy, or from the white mist and silver clouds covering the hills for most of the year.

The Malai Madeshwara Hills Reserve Forest is located at the eastern border of the state of Karnataka (Fig - 1), covering an area of 435 sq. km. The forest type comprises scrub, dry deciduous, moist deciduous and evergreen, with varying altitudes up to a high of 1514 above sea level. There is a unique *shola* forest at Ponnachi. Some of the important mammals reported here are elephant, gaur, sambar, barking deer, spotted deer, leopard and tiger. The Soligas and Lingayats who inhabit the area practise settled agriculture and supplement their income through minor forest produce. MM Hills reserve forest is named after the local deity Madappa. This temple was established in the 14th Century. MM Hills temple (*devasthanam*) and is under the patronage of the Government of Karnataka.

The Soliga Tribe

The Soligas, a hunter-gatherer/tribe, are the indigenous people of this area, who have traditionally resided in the forested regions of

¹ Shola is a type of high-altitude (between 1900-2200m) stunted evergreen forest found in southern India. Shola forests are usually separated from one another by undulating grassland.

² Dr. C. S. Raju (2005) Deputy Conservator of Forests, Karnataka (personal communication)

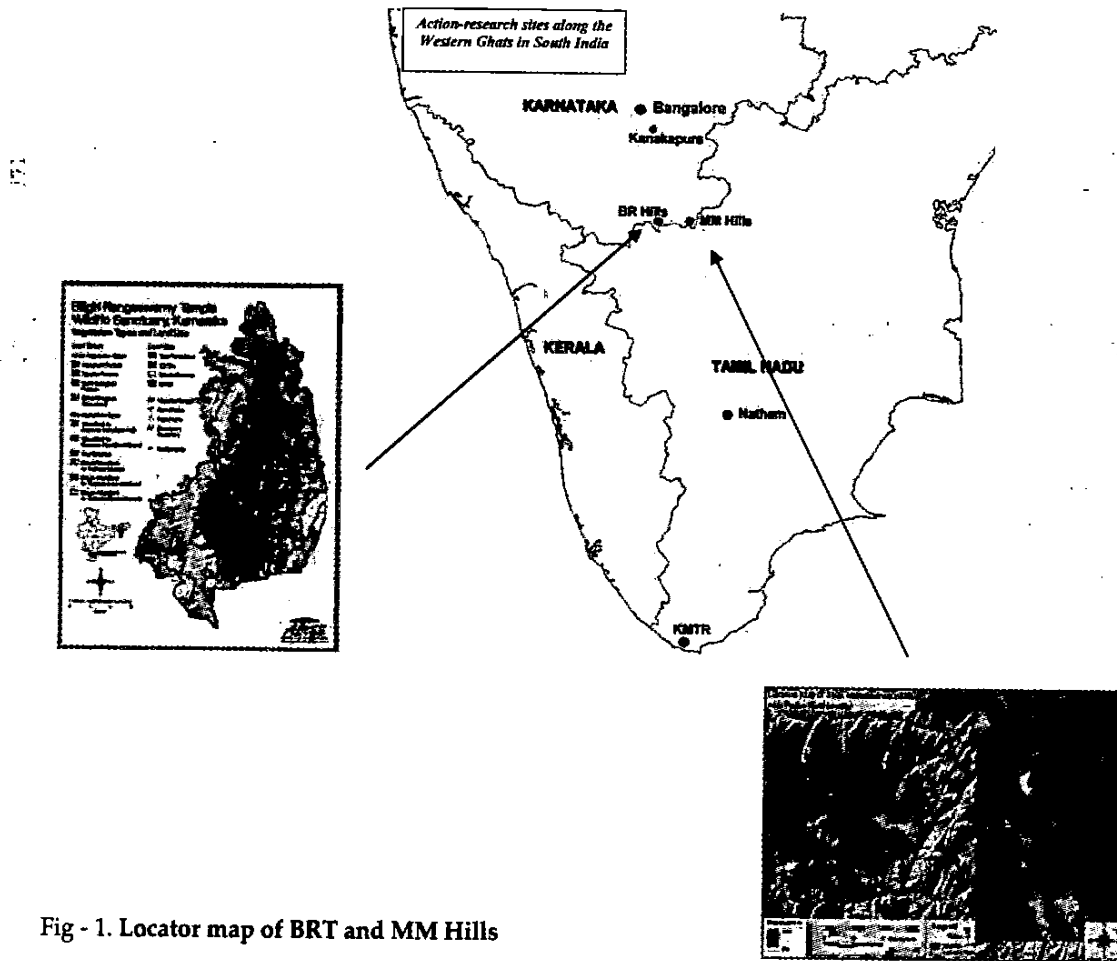


Fig - 1. Locator map of BRT and MM Hills

Yelandur, Chamarajanagar and Kollegal, including the sanctuary area and the adjacent reserve forest region. The people here are known to have co-existed with the forest and its wildlife for centuries. The Soligas are known for their rich traditional knowledge and cultural life linked with their natural surroundings. Until the middle of the last century, the Soligas practised shifting agriculture, which was banned when the area was declared a wildlife sanctuary in 1976. They are now settled in small villages, called *podus*, which may consist of up to 120 households. Many households practise settled agriculture on the lands around the *podus*. BRT has a total of 54 settlements, 2,304 households and a population of 12,500; while in MM Hills area there are approximately 3,200 households with a tribal population of around 20,000.

Though the Soligas practise agriculture, with the staple food crop being *ragi* or finger millet (*Eleusine*

coracana), land holdings are small and they depend on non-timber forest produce (NTFP) for subsistence. As a result of their dependence on and links with the forest, their traditional ecological knowledge is extensive and diverse.

The main crops are *ragi* and maize, and agriculture is entirely rain-fed. Land fertility has been reduced owing to topsoil erosion and deficient rainfall. They also traditionally made bamboo baskets and most of their cash income was derived from bamboo basket weaving. Indiscriminate industrial extraction of bamboo, mainly by pulp industries in the last six decades, has depleted most of the bamboo resources. To safeguard the remaining resources, the Forest Department put a ban on bamboo felling in 1972 and the *Soligas* lost their customary rights over these resources, thus leading to further economic marginalisation. Soliga dependence on NTFP for household income is extensive across BRT,

contributing over 60 percent of total cash income in the interior villages and about 30 percent in the fringe villages (Hegde et al 1996). Currently households in MM Hills derive nearly 16 percent of their total cash income from NTFPs.

Soligas' Traditional Ecological Knowledge

In attempts to understand and document Soligas' traditional knowledge, much information has been gathered that would not only lead to recognition of their knowledge but also strengthen advocacy for their collaboration in management of the BRT Sanctuary. Soligas can name as many as 107 species of trees, 11 of grasses and creepers, 13 types of fibers, 55 species of birds, 15 of snakes, 97 of insects, and 41 of other animal species (Kalpavriksh 2007). The forest classification scheme of the Soligas divides their surroundings into *kanu kadu* (evergreen and Shola forest), *mala kadu* (dry deciduous forest where animals and Soligas live), *nadu kadu* (scrub, open thorn forests) and *bole* (high altitude grass lands). Water sources are also included in their classification of forests. The Soligas have an intricate link with forests and forest resources. The forest is a place for them to live and celebrate their festivals, providing them with honey, fruits, tubers and roots to eat, as well as medicine. They have their own medicinal system, and traditional healers effectively treat common ailments, set fractured bones and even manage mental health problems. The Soligas use more than 300 herbs for treatment.

Conflict in Views

Soligas have their own views on forest fires. Soligas feel that today biodiversity in the site has declined, with weeds taking over the forest, thus negatively impacting on natural regeneration, while hemiparasites on *amla* (gooseberry) trees have increased, leading to decreased fruit productivity. When asked about the possible reasons for such changes, they say that earlier (before the declaration of the sanctuary) they used to manage the forest with controlled fire. By this, they are referring to the use of litter fires/wet fires in the month of December and January when there is still enough moisture left

to control the fires, and enough vegetation that does not let the fire spread but just about burns the grasses and dried leaves, thus paving the way for new vegetation to sprout with the first showers. This controlled fire prevented the growth of hemiparasites, weeds and ticks, but does not kill small seedlings, and provides fresh fodder for wildlife.

The Forest Department has been controlling fires after the area was declared as a wildlife sanctuary. The complete eradication of fire has led to increased biomass in the form of weeds, and now 75 percent of the forest is covered with *Lantana* in the dry deciduous forest of BRT wildlife sanctuary. As a result, the availability of fodder for wild animals has decreased; *amla* trees are dying due to hemiparasites, negatively affecting Soliga livelihoods. Most dangerous of all, the huge accumulation of biomass has led to canopy fires, which can kill both animals and adult trees, threaten forest regeneration and affect the overall health of the forest ecosystem.

The Beginnings of the Programme

In 1995, in collaboration with the VGKK³, ATREE initiated activities in BRT to set up an enterprise to increase *Soliga* income from the NTFP harvest. The primary objective was to enhance the returns from NTFPs by generating additional income through on-site processing and direct marketing, so that the profits are reaped by the Soligas rather than siphoned off by middlemen. It was expected that this would give the community a stake in conservation. Towards achieving this, a multi-pronged strategy was adopted that, on the one hand, set up an enterprise for honey and *amla* processing, and on the other, aimed to enhance the capacities of NTFP collectors to engage in sustainable harvest practices. To manage the enterprise, the Biligiri Soligara Kiru Aranya Uthpadana Samskarana Sangha, a cooperative body, was established in 1997.

In ATREE's experiences in technology development and delivery for sustainable livelihoods, the first strategy was the use of participatory resource monitoring (PRM henceforth) towards sustainable

³ VGKK: Vivekananda Girijan Kalyan Kendra, a non-government organization based in BRT, was founded in 1981 by Dr. H. Sudarshan for the upliftment of the Soligas in the region. VGKK has a long history of involvement in enhancing the health, education, and livelihoods of the Soligas.

harvest of *amla* which is one of the key NTFPs Soligas collect from the forest.

Participatory Resource Monitoring

A series of meetings was organized in the *podus* to make people aware of the importance of sustainable harvest practices and the need for resource monitoring, and identifying traditional knowledge of fruit production, extraction, and regeneration. The aim was to devise a format for recording observations, and to discuss follow-up procedures. Ultimately, understanding the Soliga knowledge system and collectively devising recording formats for observations to be made became true participatory methods. But such participatory practices were arrived at after initial years of a top-down approach to pedagogy, where community meetings were geared towards emphasizing certain conservation measures such as leaving a proportion of fruits on the tree, removing hemiparasites which can kill the trees and reduce fruit production, and not lopping large branches to obtain the fruits, as this can affect fruit production in the following years. These meetings at the same time elicited succinct accounts of observations that harvesters had made over the years. For example, the harvesters cited increased fluctuations in *amla* productivity over the years and the reasons attributed for this phenomenon were hemiparasite proliferation on the trees, in addition to low rainfall. They also pointed out that controlled, less-intense, ground fires reduced hemiparasite infestation, and did not affect fruit productivity, while maintaining that canopy fires do affect fruit productivity.

On to Participatory Estimation

Participatory estimation of fruit production was also undertaken. Initially this was done by a method that involved line transects of randomly selected sample plots by ATREE scientists, combined with visual estimation of fruit production by community harvesters. Over a one-year period, the community members suggested that the same could be done when they went to the forest to collect other NTFPs and fuelwood, rather than undertake separate transects for the same. Yearly resource productivity maps were drawn up based on visual estimates by individuals, who came to a consensus on the same. Such maps were prepared at the *podu* level, and each

of these single maps was integrated to arrive at a combined map of the entire forest range. These resource survey maps proved to be particularly useful as they enabled identification of areas where fruit production was high. Moreover, they enabled the processing unit to estimate, ahead of time, the amount of fruit that would be available for purchase, processing, and marketing in any given year. This information in turn allowed them to find a good trader to whom to sell the product. The maps also allowed harvesters to identify areas from which they should avoid harvesting, if they felt that those areas had been repeatedly over-harvested in the past. The second method involved a visual estimation of extraction rates at the forest level. The same harvesters who prepared *amla* fruit productivity estimation maps for their respective sites and years, also visually estimated the quantity of fruits extracted. Extraction levels were then marked on those same maps.

Branching Out

Processing and value addition activities have been undertaken for most of the NTFPs like *amla*, honey, soapnut and soapberry. The Soliga community, with VGKK supervision, is managing the processing unit. All the work including management and marketing is being undertaken by the Soliga community members, but the ownership is still with VGKK. Processed products are being sold locally and also to agencies in Bangalore and Mysore cities. The income from this activity is shared with the community as an incentive to conserve NTFP in the forest through monitoring and mapping.

In addition, awareness campaigns have been organized by ATREE and VGKK through dramas and folk art by the Soliga children and elders, in order to highlight conservation and natural resource management issues. Workshops were carried out to share the outcome of the PRM program with the community, training manuals prepared on PRM for use by the community enterprise unit, and capacity building activities continued (Setty, 2002). Community reactions to such efforts were also assessed through yearly meetings with community members after the harvest season.

While working on resource monitoring it was realized that LAMPS⁴, was the sole agent to whom

collectors sold the NTFP. The LAMPS management committee has seven directors from the Soliga community with its President from the Forest Department and Secretary from the Cooperative Department. All the decision-making meetings were dominated by the President and Secretary and not much importance was given to the other directors. It was found that the prices at which collectors sold the products to LAMPS were decided, not by the community members, but by the nominated members of the Forest Department and Cooperative Dept. Second, profit was not being distributed to the harvesters on a regular basis. Thus began a series of meetings with community members at the habitation level; to disseminate information, create awareness about their rights, question the basis of fixing prices, and partake in the profits that LAMPS got. LAMPS was restructured to improve management and ensure that harvesters got a fair price for their NTFPs. Capacity building trainings

were conducted for the directors, and as a result, changes have been brought about in three LAMPS.

Comparison of Results of PRM to Scientific Estimates

To assess the effectiveness of the PRM visual monitoring of fruit production levels, an independent, systematic estimate of fruit production was established. For this, ten transects of 1000 m long and 10 m wide each were established randomly in the same seven forest areas in which the visual estimates were made by the harvesters. Seven Soliga youth who had formal basic education participated in this exercise. The number of *amla* trees within each transect was recorded, and the number of fruits on each tree counted. This monitoring took place before fruit dispersal and before any harvesting by the Soligas. These values were used to extrapolate the total amount of fruit available for the entire area of 11,000 hectares. One hundred fruits from each forest

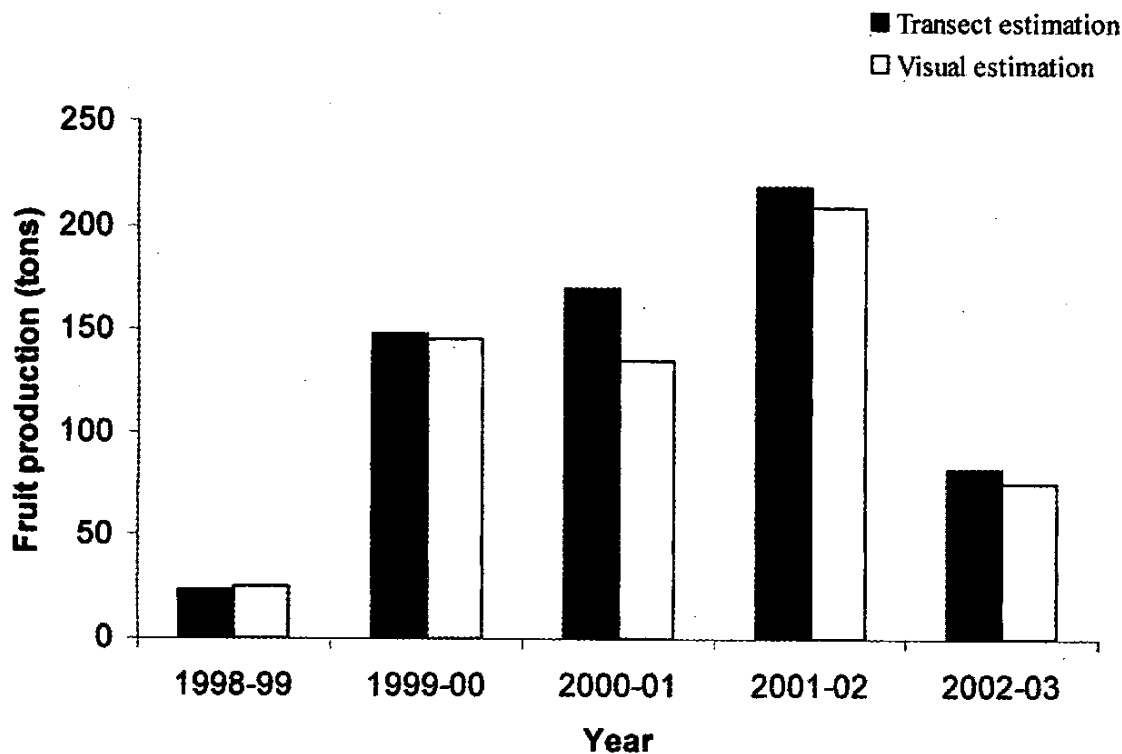


Fig - 2. Estimation of annual fruit production of *amla* based on visual estimations by harvesters versus scientific estimates.

⁴ LAMPS stands for Large-scale Adivasi Multi Purpose Society. These are state-sponsored institutions aimed to work toward helping tribals in marketing NTFP products for sustainable economic well-being.

were also selected randomly and weighed to get the average weight of the fruit and to estimate the harvest in tons for the entire forest range. Productivity estimation done by harvesters was compared with the productivity estimation done by scientists (Fig-2).

The visual estimates of *amla* fruit production made by the harvesters were very similar to those obtained using the scientific transect methods (Setty et al 2007). These results suggest that the visual methods are a good measure of actual fruit production and that this aspect of monitoring by the community is very effective, as well as more rapid and cheaper than information obtained by standard scientific methods. Fruit production for *amla* ranged from 35 to more than 200 tons per year for the 11,000 ha area, with fruit production levels in 2001 being more than three times greater than in 1998. Both sets of data illustrated the great variation in fruit production over time, and the importance of annual monitoring to predict in advance the amount of fruit available in any given year.

Institutionalizing Monitoring

Effective participatory monitoring systems involve the active participation and leadership of local harvesters at all stages and in all aspects of the monitoring program, including monitoring design, data collection and interpretation, as well as formulation and implementation of adaptive responses. One of the biggest challenges in PRM is ensuring this kind and nature of participation. In this case, there were different levels of enthusiasm and participation in different aspects of the participatory monitoring effort, with participation highest in those aspects of monitoring that provided the most immediate benefits to harvesters.

For example, estimates of annual fruit production rates are crucial for allowing harvesters to allocate the time for harvesting and to anticipate the pay-off. There was thus almost universal interest in this aspect of monitoring. In particular, nearly one hundred percent of participants welcomed the resource mapping exercise, which allowed for the identification of areas where fruit production was high, and for the processing unit to estimate the amount of fruit that would be available for marketing. Similarly, there are obvious direct

benefits to harvesters who use better harvesting techniques. Therefore there was good participation in reducing the cutting of main branches and decreasing hemiparasite loads on trees.

In contrast, changes in extraction rates can impact future productivity and harvest levels. Thus there was limited interest by harvesters in estimating extraction rates. Similarly, monitoring regeneration is a time-consuming activity, the benefits of which are likely to be seen only in the distant future. Consequently there was little interest in monitoring regeneration without compensation for time and effort. Indeed 75 percent of Soligas showed little enthusiasm for participating in the monitoring of regeneration during the evaluation in 1999. They expected economic compensation for transportation and food from the enterprise unit, to assess regeneration. This compensation was then agreed to by the enterprise unit.

Tenure Issues

In the case of the Soligas in BRT wildlife sanctuary, the low interest in estimating extraction rates and regeneration levels is a direct consequence of their uncertain tenure over their NTFP resources. There is little impetus for any harvesters to assess or reduce current harvest levels so as to ensure future yields, unless they have tenure over those resources, and therefore know that their current sacrifices will result in future pay-offs. In BRT, the resources are owned by the state, which grants rights to collect NTFPs on an annual basis. There are neither penalties for excessive harvesting, nor incentives for judicious use of resources. Only genuine user groups with tenure over resources can be in a position to provide incentives and make monitoring truly participatory.

Once the participatory monitoring protocols described above were developed and modified, they were transferred, in consultation with the Soliga community, to LAMPS enterprise units in 2003, which then started to cover the costs of monitoring by using a portion of the revenues from their NTFP sales. In theory, this kind of set up can be economically self-sufficient and allow for long-term monitoring for sustainability. However, in reality, without greater tenure over resources, it is questionable whether these groups can sustain

participatory monitoring. In addition, in 2005 the state (following a Supreme Court order banning the extraction of NTFP in Sanctuaries and National Parks) banned the collection of NTFP in the BRT Wildlife Sanctuary, placing everything from harvesting and monitoring to processing and marketing on hold. Collection of NTFP was banned in all wildlife sanctuaries in India and there was no exception for BRT.

Efforts over the past ten years illustrate some PRM techniques that have proved to be highly effective and accurate, and which can be easily adapted to other contexts. The work has also demonstrated the challenges involved in ensuring interest in monitoring rates of extraction and regeneration, both of which are important elements in any monitoring program. But developing these techniques will only be possible where harvesters have tenure over their resources.

Besides extensive work done on formalizing and institutionalizing PRM among Soligas in BRT, work has also been carried out in diversifying the basket of livelihood options, optimizing on current practices through better technological inputs to the communities. Most of such work has been carried out on a pilot basis to test the efficacy of the efforts before scaling them up in the future.

Agricultural Technologies to Increase Yields

Most of the agricultural practices followed by Soliga farmers in BRT Hills are organic and adopted from the shifting agriculture that they practised before the area was declared a sanctuary. Before that, Soligas used to do hunting, collection of NTFPs and grew crops only for subsistence, with shifting cultivation techniques. Currently Soliga farmers in the BRT own or lease 1-4 acres of land per household, on land allotted by the Forest Department for settled agriculture, and to grow fruit trees. Only a limited number have *pattas* (records of rights) for their land and they grow a diversity of crops such as finger millet, maize, red gram, mustard, amaranthus, field beans and other vegetables, along with wild trees. Agriculture is adapted to the subsistence needs of the farm families. Yields are low due to low soil fertility and soil erosion on sloping farmlands, while the

practices are more suited to shifting cultivation. Farmers also have to work under the constant threat of wildlife damage to crops.

Soliga farmers are mostly women, since women spend the bulk of their time on agricultural work, and very little on NTFP, while the opposite is true for men. Agricultural tasks are however shared between men and women; women are responsible for land preparation without animals (hoeing), sowing, planting, thinning, weeding, guarding the crops in the day time, harvesting, and seed storage and preservation. Men's activities are more seasonal in nature, focusing on ploughing with bullocks, bunding, sowing, and guarding the crops from wild life during the night. Above all, women are the custodians of seed, with special knowledge and skills, which have been documented. Also, they are the crucial decision-makers, not only about what to sow, but also about how to grow, and about each stage of the agricultural cycle, and men respect their knowledge. However, ATREE learnt about these gender roles only over a period of time. At first, mistakes were made, like focusing on the men and so working with the wrong gender! These were rectified by experience. Some time was wasted in the early stages, but gradually, with increasing understanding and mutual learning, this programme also became more participatory.

Simple 'organic' technologies are being introduced to farm families to increase yields, diversify the farms, and conserve soil and water, in order to improve the well-being of the people and strengthen the prospect of sustainable use of forest and land resources. The underlying assumption is that diversification of livelihoods will decrease direct dependence on forests through collection of NTFP. All interventions aim to strengthen on-farm capacities, improve sustainable traditional technologies, and build on-farm capacity to improve composting systems.

The Process

Introducing these technologies was based on a strategy of using on-farm trials for low-risk interventions, leaving high-risk interventions to field station trials. Low-risk interventions include the use of contour line sowing rather than broadcast sowing, improved access to traditional varieties of

seeds, and composting practices. The relatively high-risk interventions are to incorporate locally grafted high-yielding *amla* and related fruit trees, selecting high-yielding local crop varieties, and crop rotation⁵.

In the first year, line sowing, composting and seed conservation activities were introduced in capacity building meetings at the village. Mostly men attended these, since evenings are a busy time for women, when they do the main cooking. The men readily agreed to take up all these activities, but it was found that they were not properly implemented. Through follow up meetings, the major role of women in decision-making was understood. For example, women were against line sowing because they thought, first, that production would be reduced by leaving space between the seedlings and rows; and second, that thinning and maintaining space between the seedlings was not necessary, since close planting would minimize the growth of weeds. Working with the wrong gender led to one season being lost, but the new understanding meant that the new strategies were tried out from the second year onwards.

Arresting the loss of soil was felt to be the necessary first step in increasing yields, and line sowing across

the slope with appropriate contour drainage was tried out as the solution. ATREE worked with a few Soliga farmers with a range of acreage and slopes. Half their land was used for the experiment, while they cultivated the other half using traditional broadcast sowing. On-farm trials using row cropping showed 30 percent better yields to broadcast sowing in 21 farms (Bawa, K. S, Joseph, G and S. Setty. 2007). (Fig. 3) However, the variation in yields using either method was high from field to field, ranging from 100-1250 kg/acre, indicating a high degree of variation in soil productivity, and suggesting that there is potential to improve yields considerably by improving practices and building soils. Since introducing line sowing, more than 40 farmers (out of around 100), have adopted this system. However, some farmers reverted back to broadcast sowing for various reasons.

Current agriculture practices are low in input and subsequently low in output, so building on-farm capacity, especially to improve organic composting is essential. In future, experiments with complementary methods to diffuse farmer-friendly technologies to achieve both increasing livelihood and ecological sustainability will continue. There is much to be done in the agricultural sphere, and

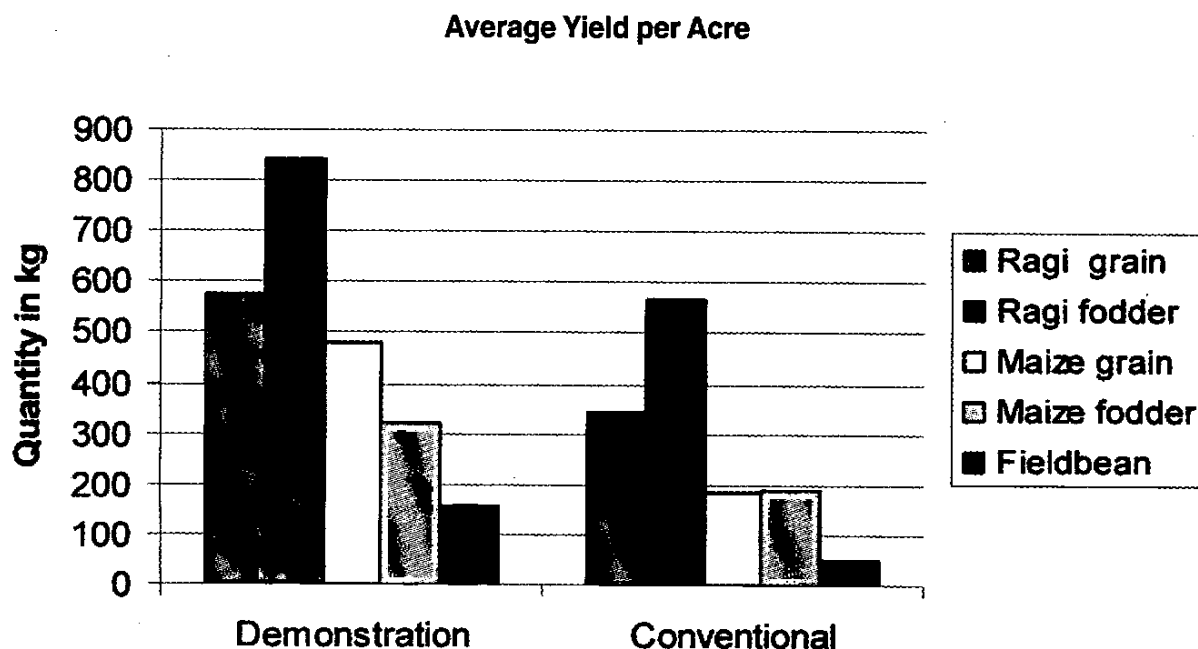


Fig - 3. Results of crop assessment

⁵ Soligas have been amazed to see the new grafted varieties and some have started growing these on their own land.

working with a farmer-led model will ensure that the entire livelihood—strategy of the farmers, as well as the entire system—from input, credit, storage, subsistence/cash needs, value addition, and marketing, is addressed.

Seed Conservation and Tree Growing

Towards conserving agro-biodiversity, efforts were also undertaken to establish seed banks in the settlements, not only to conserve seed varieties and strengthen diversity and quality, but also to make access decentralized. Systems were put in place with one centralized seed bank at ATREE, and six decentralized banks at the community level, so that community members could easily access seeds. In the process, the seed varieties Soligas have been cultivating, the traditional practices of seed conservation and the roles of women in agriculture have also been documented. In seed conservation activities, fifty-seven varieties of beans, twenty-one varieties of *ragi* (finger millet), five varieties of *jola* (corn), three varieties of *edda* (amaranthus) four varieties of *thogari* (red gram), five varieties of *sasuvae* (mustard), three varieties of *navanae* (fox millet) and six varieties of pumpkins were included. Including agricultural crops and vegetables, 151 varieties of seeds are being collected and preserved. The seeds are being stored using traditional preservation techniques. Awareness about the value of indigenous seed varieties is created by various means, especially through seed festivals.

In the early years of engagement with the Soligas, fuel wood trees were introduced in farmlands to augment their fuel wood needs, only to realize that the community members were not keen on such an intervention. They had hardly an acre of forest-leased land per family, and preferred fruit plants and high-value NTFPs to augment their cash incomes. Farmers were justifiably unwilling to reduce the open farm area needed for their *ragi*. Thus, from experience and interactions with farmers, arose the plan to introduce grafted seedlings, both to reduce the time to maturity and the canopy structure. Grafting as a technology was introduced through training in BAIF, and grafting of *amla* using rootstock and scions from BRT continues. During the current year, 7,200 seedlings of fruit-yielding species have been raised in ATREE's centralized nursery to distribute for

planting along the bunds and in degraded lands. Species were selected based on farmers' preferences.

Over time, to sustain the new practices, the capacities of community members, both men and women, in sowing techniques and varied methods of composting and raising seedlings have been strengthened. Capacity building on organic farming, sowing, nursery raising and composting has been carried out and 30-40 percent of the participants have been women. Now both men and women do vermicomposting, green composting, and nursery raising. Plans are afoot to develop manuals for such activities, aimed at explaining such techniques in simple language with plenty of illustrations, since literacy levels are low.

Alternative Temple Offerings

The alternative temple offerings project is being implemented in two temple areas, Malai Mahadeswara Hills (MM Hills) and Biligiri Rangaswamy Temple Wildlife Sanctuary (BRT). The project was initiated to create awareness about utilizing local/traditional crops for food and as *prasad* items, to build the capacity of women to prepare these items, and to generate supplementary income through the sale of these items in the temple area and beyond.

Fifty-six women's Self-Help Groups (SHGs) in 20 hamlets of M.M.Hills and twelve in BRT, have been formed, as part of ongoing interventions in the area to address conservation and livelihood issues, and this project was initiated and sustained through some of them. Groups located close to the temple precincts in both the areas were engaged for preparing the *prasad* kits. The kit consists of a 50 / 100 ml bottle of locally harvested honey, *laddus* made of amaranthus and Bengal gram/ finger millet, and seedlings of sacred tree species, packaged in cloth/ paper bags. The women were encouraged to use local resources and their traditional knowledge to decide on the *prasad* kit. Nearly fifty meetings were conducted to strengthen the participation of the Soligas in the project. A study was undertaken to assess their incomes and socio-economic status, to serve as a baseline to study the impact of the project in terms of income generation.

Decentralized nurseries for raising seedlings of native sacred species such as *Terminalia bellerica*, *Michelia champaca*, *Phyllanthus emblica* and *Ocimum sanctum* have been set up. Honey, locally harvested by the Soligas, was a part of the kit. Paper and cloth bags replaced plastic bags for packaging. Currently, SHGs have started selling the products around the temple complex, as well as supplying to shops. They also put up sales counters during the annual festivals near the temples, and on special occasions like folk festivals. Possibilities to sell traditional foods outside the forest area in nearby cities, (Mysore and Bangalore) and encouraging local schools to distribute amaranthus laddus to school children as part of the mid-day meal scheme are being explored.

Lantana: from Weed to Resource

Over several years, lantana (*lantana camera*) has emerged as one of the worst invasive species in the forest, displacing indigenous species and taking over acres of vegetation and forest land. ATREE began to explore the possibilities of utilizing lantana, which was so abundantly available in the landscape. Soon it was found that some communities in Anantpur and Chitoor districts of Andhra Pradesh used lantana to make baskets. Later, it was also discovered that the Himalayan Environmental Studies and Conservation Organisation (HESCO) was using lantana to make utility products. Over a period of time, with inputs from several quarters, lantana became a resource for making products like baskets, trays and furniture. Two French interns at ATREE were effective in transferring technology to the Soliga artisans like, for example, boiling the lantana stems to make them softer and easier to bend and shape into products. This simple technology (which the Soligas are still using) has contributed significantly to product quality and design, and is well adapted to the needs, resource availability and skills of the community.

With training provided and a constant search for better innovations in technology, more than 150 families are now utilizing lantana, which has contributed to a significant increase in employment days, by almost 50-60 percent. People engaged in this activity have benefited in terms of increased average monthly income to the tune of four times what they used to get earlier.

Conclusion

Working on issues of conservation with marginalized communities such as the Soligas within a Protected Area (PA) regime like the one in BRT sanctuary, throws up its own share of challenges. The efforts at PRM, and at transferring appropriate technologies, have all had their successes and difficulties. Along the way, there has been much learning, leading to changes in strategies and mid-course corrections. It became clear that a keener look at policy, and advocacy for a people-friendly policy, were needed, if these efforts were to be fruitful.

The ban on collection and processing of NTFP in sanctuaries and National Parks is a case in point. The work of years of participatory resource monitoring was stopped in one stroke, and has greatly disincorporated efforts that the Soligas had engaged themselves in during the last ten years. But such an effort can also be used to prove, based on results of the monitoring, that collection of NTFP like *amla* does not affect regeneration of the species, and that harvest levels in the case of BRT are well within sustainable limits. This provides a solid basis to argue for communities' collaboration in managing Parks, besides giving them the rights to harvest NTFPs. Further, security of tenure over resources is critical and would incentivise conservation; without such security, such efforts cannot be sustained. ATREE is working with other like-minded institutions (VGKK, Kalpavriksh) to draw up a co-management plan based on both scientific and traditional knowledge.

The enactment of the Forest Rights Act, besides undoing historical injustice by giving tribals rights to forest land, opens up opportunities to strengthen community efforts at conservation, and provides space for collaborative management, especially within a PA regime. ATREE is following up on these developments and intends to facilitate the processes of co-management in BRT sanctuary.

Institutionalizing efforts is yet another key issue that has to be based on principles of democracy and equity. No technology delivery system can succeed without being embedded in sustainable institutions. Having realized this in the course of work, ATREE is engaged in exploring institutions that can best

deal with making the reach wider and more sustainable and replicable over time. Institutions like LAMPS, and the Forest Department, are limited by their mandate, and more holistic, broad-based institutions are needed to take ahead the mandate of conservation and ensuring secure livelihoods for the tribal communities. There is, however, a major role to be played by specialized institutions like the

Forest Department and LAMPS, which need to be strengthened in order to provide platforms to enlist the participation of the tribals and the bureaucracy on an equal footing. Traditional Soliga institutions, (the *Kula* system) for instance have also been documented, and they too need to be strengthened to adapt to changing times and be relevant to today's conditions.

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Community Biodiversity Enterprises for Women's Empowerment

N. Muthu Velayudham, John Britto, M P Bala, Bhuvaneshwari Kannan and

In the year 1989, the Covenant Centre for Development was started and registered in 1993, to assist street children to earn a decent livelihood, instead of being beaten up by the police for crime. Soon it was realized that there was a need to reduce migration of rural children and families to cities for jobs. CCD (Covenant Centre for Development) then started promoting rural income generation programs for poverty alleviation, to help youth get local employment, and avoid moving to cities to dwell in slums. For industries were scarce in this backward dry plains region in the centre of the State, and no jobs were available in the dry season and summer, once farming was over after the monsoon.

The process began with incubation of over 620 women's self help groups (SHGs) that worked initially as saving and credit groups termed *kalasam* (meaning "pot" in Tamil), after the local deity. Their savings were rotated amongst members to meet consumption or emergency needs or finance a small business such as livestock purchase, a tailoring machine, or setting up a petty shop. Over the past ten years, CCD has helped these SHGs to save about Rs. 0.6 million and get loans of Rs. 40 million, and they have repaid to the tune of 95 percent. The women have also started various group income generation activities in the field of herbal medicines, energy and food, which will be summarized below, with comments on their impact on gender relations in the region.

Burden on Rural Women

Lack of farming activity during winter and summer (December to July) compels men in the Ramnad plains (Sivgangai, Madurai, Virudunagar, Dindigul and Theni districts) to migrate to cities for labor and petty jobs. For irrigation is poor, covering hardly

five percent of the farms, in an area with a semi-arid climate. Workers get paid better – about Rs. 100/- as construction labor or porters, and there is no caste discrimination, which is prevalent in villages. Hence, women or families also sometimes migrate to cities. Thus, seventy percent of the population is urban resident and thirty percent rural, almost the opposite of the respective figures for India as a whole.

Only women, children, and old people stay back in villages. They are bogged down by the problems of low income, hunger and water scarcity. Hence, thirty percent of families go to bed hungry or often eat only twice a day. Malnutrition is common, affecting over fifty percent of the children and anemia affects over thirty percent of the women.

The SHG movement has empowered women economically, but has also added a new work burden, such as attending group meetings, record keeping and the organized occupational activities of the group. Though women do seventy percent of the farm work, they earn little. About forty percent of the village population consists of landless laborers, who get hardly Rs.30/- per day as wages, which is half the prescribed Minimum Wage. This leaves nearly one-third of the families below the poverty line (BPL)-with no assets, poor savings, poor education and vulnerable to disaster. Droughts are common every 3-4 years, and then entire families may have to shift to the city.

Community Enterprise

CCD organized women self help groups into clusters of 5-6 neighboring groups from every 2-3 villages. About 8-10 such clusters i.e. about 50-60 SHGs associate in larger groups, termed federation (*Mahakalasam* in Tamil). The federation first accessed

bank loans for business purposes, and provided the security for repayment. It thus encouraged many activities - individual, family and group. Most of these are based on local resources and traditional skills (LRTS). These are easy to promote and easy to market as people know them, and there is already an existing demand. Later, CCD helped the federation to get "appropriate technology", in order to get high value, quality conscious (i.e. "niche") market access. The following formula is found to work today: LRTS+ Appropriate Technology = Market Access.

Traditional markets have changed ; rural markets are not remunerative, while urban markets demand quality standards not achievable by rural producers using traditional methods and norms alone. Such value addition also benefits the community by earning a higher price for the processed material than the raw commodity. For instance, herbal powder, even of *Tulsi* leaves, a cure against cough, fetches Rs. 50/- pr kg, while the leaves alone fetch only Rs. 9/-, and the powdering cost is not even Rs. 2-3/- per kg, with packing another half rupee. The ISI mark for quality assures a higher return.

To maintain high quality through regular monitoring and to deal with the urban markets, the community groups find professional managers useful, as the latter are trained in English, can book transport, phone the buyer agency and verify records. Hence, CCD formed business development service (BDS) teams amongst its staff to assist CBOs (Community Based Organisations) in various Community Based Enterprises (CBE). Now the formula is : CBO + BDS + Market Access = Community Enterprise

Community Herbal Enterprise

The majority of the women, mostly Dalit, used to collect and sell medicinal plants, including neem seeds, growing on fallow lands during the summer. Most of the women are landless labourers and collect from private farms, on which they have worked as labour during the agricultural season, and also from barren/waste lands belonging to the Panchayat. This was their only income source during the dry season, and they were often cheated by the traders on weight, price, or quality. Traders never disclosed the end use and price, and the women were unorganized, operating individually.

Traders often advanced money to them in an emergency and charged high interest rates or bought their herbal collection at low prices when they were in distress, keeping them in a debt trap.

CCD began by organizing the women gatherers into SHGs and encouraged them to take up collective marketing. This prevented a few individuals selling at lower than the negotiated price, so the buyers had to pay a higher price to the whole group. CCD also ensured direct supply to industry at higher price, due to the contacts provided by the Foundation for Revitalization of Local Health Traditions, (FRLHT), an NGO from Bangalore.

CCD set up the supply chain, from quality collection to industrial dispatch. The chain is comprised of rented village storehouses, local transport to build up a central warehouse, interstate transport to the buyer industry, cash recovery and advance payment to groups. CCD also provided weighing balances and moisture meters to each group and trained the SHGs in "good collection practices" (GCP) Set of Protocols (SOP).

The marketing firm was registered as "Gram Moolige Company Limited (GMCL), and the gatherer federation as Moolige Sekarippu matrum Segapudiar Sangalipu Kutam (MSMSSK, meaning herbal collector and cultivator groups' association). Today it ensures better income to 1,300 women regularly. The sales increased from 30 to 600 tons in 7 years and the turnover from Rs.13 to 80 lakh. Of this, ninety percent is from fifteen plant species collected from the wild, as cultivation is not found viable, and the wild options are cheap. Break-even was achieved in three years and the profit is five percent. Technology inputs here included micro-processing guidance and pharmacological research, besides safety tests and production processes.

About ten percent of the turnover consists of ready-to-use, OTC (Over the Counter) medicines. These are eight in number and used to cure primary healthcare complaints such as cough, fever, white discharge and joint pain. These remedies were collected and documented from local healers as home remedies, and standardized in the FRLHT laboratory. This helped also to get permission for commercial production from the Tamilnadu Govt. Department of Medicine.

In 2003, a processing centre with a modern pharmaceutical laboratory was set up with grants from the Sir Dorabaji Tata Trust and the Ford Foundation. The OTC medicines are now being sold through the SHG federations, who get up to thirty five percent commission. Their sales are gradually increasing, though allopathic medicines are cheap, as herbal medicines have few side effects, and lead to slow but long-term cure of the disease.

Good Food and Fiber Company-AHARAM

There is a widespread belief among rural people that their health is declining and diseases are rising, largely because of unhealthy, adulterated foods, mainly oil and pulses, that are supplied by the grocery shops. Hence, CCD encouraged SHGs to buy pulses, spices and oilseeds directly from farmers, micro-process them and sell to SHG members and neighbors. This saved SHG members five percent of their expenses and improved the quality of the food they ate. The program, named AHARAM (meaning "food" in Tamil) has been selling good quality low-cost food to 1,000 poor families around Madurai since 2004, worth Rs.30 lakh annually. The customers are provided free credit for two months, as local shopkeepers provide a similar facility but supply poor quality, adulterated groceries at high prices. About thirty percent of the raw materials are procured from the farmers, (pulses, millets, spices and oil) and processed and marketed by the SHGs, benefiting about 100 farmers and 100 women workers. The strategy is based on the traditional belief-*Unave marundaam* (meaning "food is medicine" in Tamil).

To promote agro-biodiversity conservation, CCD started farmers' field schools (FFS) teaching organic farming methods to about 1,500 farmers in the Ramnad plains. The farmers are also organized into groups and a federation. As market access is necessary for conservation, CCD registered the AHARAM Traditional Crop Producer Co.Ltd., with five federations holding Rs.1 lakh worth shares and sending their nominees to the Board of Directors. AHARAM company has supplied in bulk to industrial buyers- mango fruit to Parle Agro Co. which uses it to manufacture the famous "Fruti" juice. Birla Retail Co. has asked AHARAM to supply

tamarind pulp cakes, with no seed or fiber, in "brick" form. AHARAM's turnover during 2006 was Rs.4 million, with a profit of three percent, of which twenty five percent was from bulk sales.

Technology inputs here are local, traditional ethnic recipes, and organic farming techniques, practised by the earlier generation by default, as chemical inputs were not available then. Ethnic recipes are also collected and taught to SHGs to ensure family nutrition and health.

Clean, Green Energy Company

Rural women spend a lot of time and energy in fuelwood collection, which is getting both scarce and costly. The resulting kitchen smoke causes health hazards such as eye irritation, asthma and other respiratory diseases, while carbon emissions contribute to global warming. To promote clean and safe energy solutions in rural areas, CCD started Adharam Energy Private Limited (AEPL) in 2005 to partner with British Petroleum. AEPL has sold 15,000 smokeless stoves in Tamil Nadu and Maharashtra in 2006-07, in partnership with an NGO, Swayam Shikshan Prayog (SSP) working in central Maharashtra. Selling stoves and biomass pellets prepared from farm waste has provided a sustainable income source to about 100 rural women agents. This saves the customer women the drudgery of fuel wood collection, and the absence of smoke that causes indoor pollution and respiratory diseases has also reduced household carbon emissions by 70 percent. Interviews with some users showed that they saved 1-2 hours time daily for fuel collection, and had reduced complaints of asthma and eye irritation. A large scale impact study is planned.

British Petroleum initially asked CCD to take up LPG distribution, but rural markets were unsuitable for it, so CCD offered the "co-creation" model, proposed by The Next Practices (TNP) consultancy firm that guided the CCD-BP collaboration. Noting the extent of fuelwood usage in villages, BP then obtained the smokeless stove patent from the Indian Institute of Science (IISC) Bangalore. BP improved it and set up a fuel pellet making unit at Madurai. The fuel pellets are made up of agri-waste and cost Rs. 3/- daily per home. The steel stove costs Rs. 620/- and the sales commission is 5 percent or Rs. 30/-.

CCD has trained 60 women members of SHGs in stove maintenance and sales, in partnership with SSP and named them *Jyoti* (meaning "flame" in Tamil). The *Jyotis* have already sold 15,000 stoves in the pilot phase, and the target for the year 2007 is 1 lakh stoves, when break-even will be reached and profits will be earned thereafter. The technology inputs are the smokeless stove patented by Indian Institute of Science, but commercialized by the British Petroleum.

Coastal Enterprises

CCD promoted a community-owned coir company enterprise at Kanyakumari in 2005 to rehabilitate 500 coir workers affected by the Tsunami. Another 500 artisans (workers in shell crafts and palm fiber) have also been federated and helped with funds, training, tools and market access. Similarly, two federations consisting of 1,500 farmers and a federation of 1000 fisherwomen in Nagpattinam have also benefited. Another 500 women from Rameswaram sell shells to the Kanyakumari federation. They have also helped in mangrove forest conservation and plantation, besides sand dune conservation. Responsible fishing methods are also taught. Vivekanand Industrial Training College at Rameswaram has trained youth in boat engine repairing for a decent career. Technology inputs were provided by the Central Marine Fisheries Research Institute (CMFRI) of the Central Govt. for fish culture, and Upasana Design Studio for shell

and palm crafts. The Coir Board, Govt. of India provided free training courses (Table 1).

CCD is now training fifteen NGOs in eight other Indian states to benefit 10,000 coastal fisher people (www.ccd.org.in/cell) and 10,000 dryland farmers. AHARAM provides fair price market access for their produce such as mango, tamarind, maize, so that the farmers save ten-fifteen percent of their earnings earlier spent on transport and commissions. This venture is expanding to ten states in 2008-09 with support from the Tata Trust.

Constraints and Strategies

The greatest problem facing the enterprises is of working capital needed to procure raw materials at peak season, when the price is lowest. Later, the price increases and the profit margin is reduced. But since the profit margin is any way only three-five percent, and the business grosses thirty-fifty percent each year, the profit does not generate enough margin to make the extra procurement each year. For GMCL, CCD availed part of it from other project funds and returned it after the sales recovery. FRLHT also contributed some of it. However, for other enterprises it is a severe gap, difficult to overcome. AHARAM started with community funds and CCD money rotation from other projects, with no special funds. AEPL does not have a bulk purchase problem but the coastal business faces it often. Hence, revolving funds to the tune of fifty percent of the business capital are being drawn upon from grants, which cannot be a long-term solution.

Table 1- Community enterprises established by CCD

Activity	Enterprise	Format	Turn over Rs. Lakh/ year	Capital Rs. Lakh	Beneficiary numbers
Herbal medicine	GMCL MSMSSK	Pvt Co. Ltd., Trust	80	40	1,300 producers
Good food retail	AHARAM	Producer Company	40	10	1,700 producers
Clean energy	ADHARAM	Pvt. Ltd.	100	10	15,000 buyers 100 agents
Coir crafts	Bhagwatiamman	Trust	30	5	500 producers
Other crafts	Nanjilnatham	Society	10	2	500 producers
Microfinance	Kalasang Rural Finance	Section 25 IT Co.	100	60	15,000

Another problem is in meeting the high quality standards of niche markets. For instance, the color, texture, and shape preferences of urban buyers differ from that of rural customers which has shaped the craft of the producers. Hence, special design trainings have been provided to artisans by experts. A third problem is the brand loyalty of even rural customers. They often hesitate to buy oil produced by their own kith and kin, but flatly continue to buy a reputed branded product. Constant underlining is necessary among SHG members about the health and community employment benefits of local products, so that more and more people buy them and help others.

To ensure that project activities do not end after the funded project is over, all the five interventions have been registered as companies, to maintain the pressure of accountability and profitability.

Institutional Structure

The community enterprise represents a multi-institution collaboration, as indicated in Fig.1

The CBO consisting of women's self help groups works at both the producer and consumer i.e. "Prosumer"¹ends. The enterprise represents the business institution. management advice is provided by CCD, while community members implement activities accordingly. Later, they become self-sufficient, after adequate experience and enough contacts are gathered. Technology training is provided by expert Research and Development agencies, such as FRLHT or Coir

Board or Upasana Design Studio for herbs, coir or the crafts respectively. The donor provides the capital, including bank loans in some cases, which is returnable, unlike a grant.

Insights

Community enterprises cannot be completely self-sufficient, but continue to need help in business management, including buyers' contact, quality maintenance and accounting. When the business grows, these BDS expenses can be supported from the business turnover itself and the guiding NGO need not pay for it. Hence, the NGO can depute 4-5 of its skilled staff permanently to run the CBO, in consultation with and with the consent of the community. Logistic costs-supply chain management and BDS expenses are about ten percent, comparable to eight-nine percent worldwide, considered standard. However, these are lower than the Indian average of fifteen percent.

Women's Empowerment

The most obvious impact of the community enterprises is the economic enabling of the women. As the women earn Rs. 30-40/- daily, or about Rs. 1,000/- p.m., the family can rise above the poverty line, however measured. Hence, even if the men cannot bring or send money to villages, the women can run the home, with no need to be become indebted. Economic emancipation has left no space for hunger, as the families can buy and store food now, unlike the daily purchases which they needed earlier. This is most evident in coastal areas

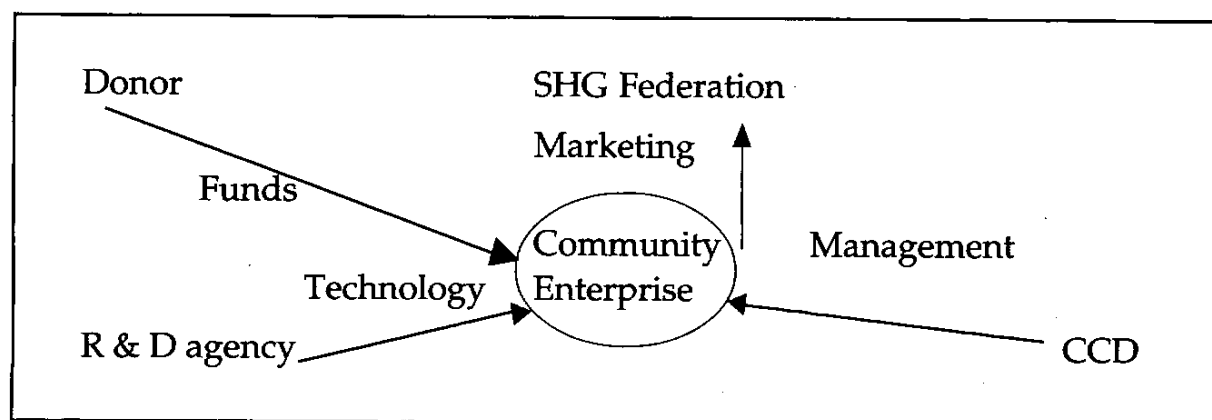


Fig. 1: Community enterprise as multi-stakeholder collaboration

¹ Toffler, Alvin. 1980. *The Third Wave*. William Morris & Co. New York.

AHARAM retailing has reduced food adulteration, and chemical residue-laden food, which has improved family health, and reduced diseases, and the woman has to spend less time and money on curing such ailments. The kitchen herbal gardens raised in over 10,000 homes also lead to better health, as the same herbs are used in home remedies.

Women are more vocal today and decide not only family matters, but also participate actively in the

social sphere. Huge confidence building is a major outcome of this enterprise-based empowerment. CCD is committed to replicating these successes across nine states with fifteen partners.

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Adharam Energy Pvt. Ltd. (AEPL) company to promote clean energy technology viz. smokeless stove, in partnership with British Petroleum (www.ccd.org.in/adharam, www.leadindia.org/Leaflet.pdf),

AHARAM company, Good Food and Fiber company, to promote healthy, nutritious, organic and ethnic diet(www.changemakers.net/journal/300508/displayfec.cfm?ID=76, www.ccd.org.in/aharam)

Coastal Ecosystem (conservation) and Livelihood (enterprise) network across east and west coasts of India (www.samanvaya.com/relief-work/update10.htm, www.ccd.org.in/cell).

FRLHT www.frlht.org.in

AEPL www.ccd.org.in/adharam

IISC www.iisc.org.in

SSP www.sspindia.org

CMFRI www.cmfri.org.in

CCD www.ccd.org.in/cell



Enterprise, Technology and Gender Equity

Sudha Soni

Gandhi Smarak Grama Seva Kendram (GSGSK) has been involved in grassroots level activities since its inception in 1958, in various sectors like health, education, women's empowerment, and leprosy eradication. It was in 1996 that GSGSK decided to enter into SHG - related activities. Why?

Why Self Help Groups ?

First, the socio-economic and political conditions that evolved over the early 1990s and from then on, caused much upheaval in the employment sector. People found it difficult to get work, especially in the traditional sectors like coir and agriculture. This, and the rise in the cost of living, forced people to manage their day-to-day life through credit and loans from money lenders. The lack of financial support from banks to individuals drove them to money lenders, charging very high rates of interest. About eighty percent of the population is already in the debt trap in the State. Though no studies have been conducted so far, enough empirical evidence exists about this aspect as a result of the organization's close association with rural communities in the area since 1958.

This experience with the community helped GSGSK realize the need for an alternative system that would free people in the region from the debt trap. Later, it was found from the application forms that the majority of loan applications were to clear debts and to recover pawned items. Almost 90 percent of them cited mounting debts as their reason for wanting loans, even at rates of interest varying from 36 percent to as high as 100 or 120 percent.

The second reason is GSGSK's deep commitment to Gandhiji's ideals of equal status for women. In keeping with this ideology, the organization believes that it is not possible to achieve true

progress if one half of the population, meaning women, is not mainstreamed. A country cannot be said to have progressed if fifty percent of its social capital is silent and dormant, excluded from mainstream activities, and for whom very often home is the final frontier. GSGSK believed women power needed to be awakened for any real progress to take place, for it is only when woman awakens that the society, and consequently the nation, awakens. But—she was unorganized. Homemakers do not have unions. In an era when even tortoise catchers have unions, home-makers, or housewives, as they are traditionally called, have no forum to share their thoughts, problems and opportunities. The SHGs of GSGSK were formed as a response to this social dilemma - to help women realize their full potential and avoid economic exploitation.

New Avenues for Credit

The phenomenon of charging high interest rates is known as "blade" in local parlance, and the SHGs of GSGSK were formed as an answer to this. To meet the demand for finance, it was decided to develop micromodels of banks giving rise to *Veedumuttathu oru Bank* or "a bank at your door step" concept. The SHGs formed for this purpose were small groups of twenty women who would practise thrift, open their own bank accounts, keep accounts, meet once in a week, and circulate loans among themselves at a nominal interest rate. The income thus generated was in turn pumped back into the funds of the particular SHG. The 'banks' thus formed became their rescuer to help them come out of their debt trap. The money that used to go to money lenders could now be siphoned back to their homes.

Soon the weekly and bi-weekly meetings of the SHGs became a platform for the women to share

their woes and views, talk about opportunities and explore possibilities. Various orientation sessions were held by GSGSK to help women realize their potential. For example, they thought that the work that they generally do at home, like managing poultry, tending to their cows, or taking care of cultivation, was just part of their 'housewifely' duty. They were made aware such the work was also trade-related, and that they too were proud contributors to the family economy in their own way. This instilled a new confidence in them to take up activities which they knew and convert them into enterprises.

The number of SHG groups went on increasing as more and more women realized its value. Realizing the potential of SHGs, the men followed suit, and exclusive men's groups, called the Yuva Swaraya Sangham (YSS) were formed. They were initially called youth SHGs because they were formed primarily to address the unemployment issue, but later, men of all ages joined.

Developing an Organizational Design

The Community Based Organisation (CBO) promoted by GSGSK has a three-tier structure - the SHGs at the primary level, the SHGs federated through Local Development Committees, LDCs and

MSS at the next level, and the LDCs federated through Village Development Committees (VDCs) and the MSS/VSS at the apex level (Fig1). These CBOs are primarily involved in microfinance, the organization having been built primarily around individuals interested in thrift and credit.

This structure ensured that the men's SHG groups called Yuva Swaraya Sangham (YSS) and the women's groups called the Swaraya Sahaya Sangham(SHG) were maintained as separate streams in the progressive movement upwards. Further, the design ensured that the voice of women was heard loud and clear, unhindered by any male dominant factors. Each level in the three tiers was so designed that it gave opportunity to its members not only to express themselves without any fear of their views and suggestions being turned down, but also encouraged them to emerge as leaders, moving progressively to the Sub Center level, where, in the Executive Committee as well as in the General Council, the number of women elected members was equal to that of men.

The Sub-Center is a subsidiary institution of GSGSK formed for the purpose of integrating, monitoring and effectively managing the various programmes GSGSK. Thirteen sub centers have been established

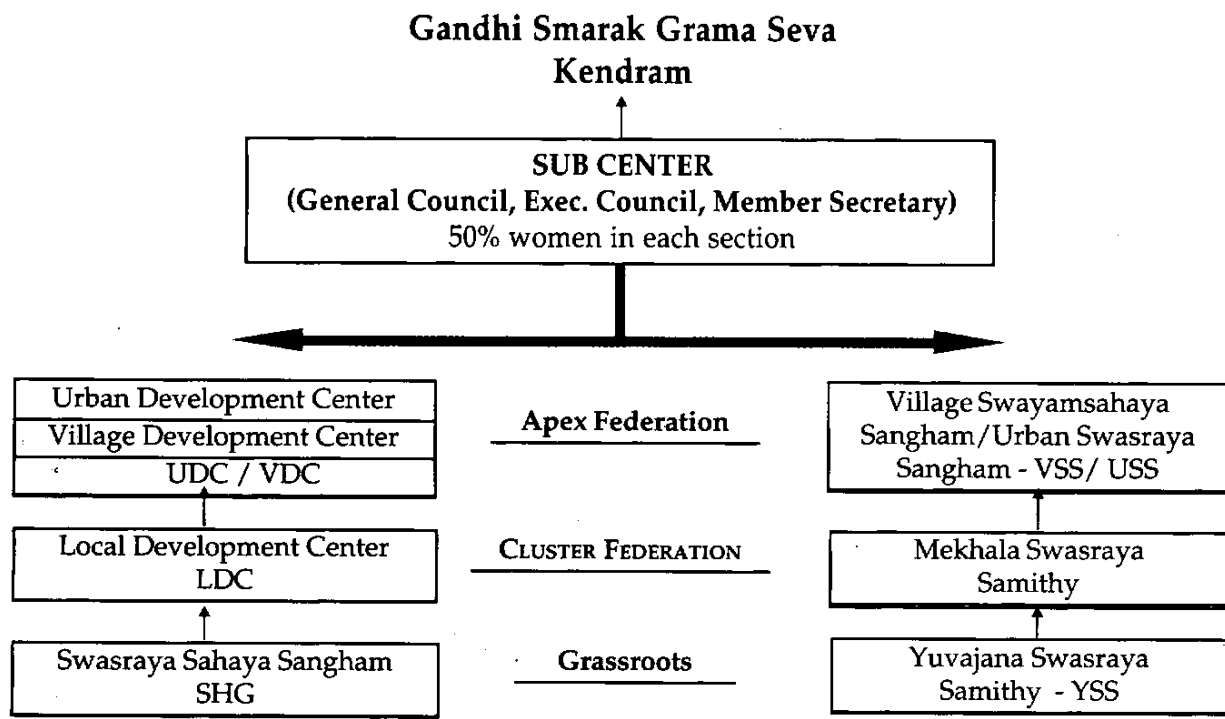


Fig. 1: Gandhi Smarak Grama Seva Kendram

across the District. The administrative system of the Sub Center consists of a General Council, an Executive Council and office bearers¹.

The SHG movement among women has been a driving force in building confidence among them and impelling women to participate in elections at the Panchayat and Municipality level and win them too. There are now 1745 SHGs out of a total of 3470 groups (both men's and women's groups) formed by GSGSK.

The Federation as an Evolved Unit

In this structure, the Cluster Federations and the Apex Federations are units of the CBO which are independent in their functioning, with their own elected committees to administer them. The committees at the respective levels ensure that proper repayments are made, community level activities undertaken, and issues and problems addressed. Just as families progress socially through the SHGs, the SHGs through their Federations find entry into the larger domain of a developed society. The Federations can achieve collectively all that an SHG could not have achieved independently. SHGs help in the sustainable development of an individual, while the Federations ensure the sustainable and self-reliant development of the SHGs. The SHGs renew, develop and make better the life of an individual, while the Federations ensure the development, democratization and betterment of the activities of the SHGs. While the SHGs through their 'bank at your door step' concept develop a new line of leaders and a new development culture, at the regional and the Panchayat level the Federations develop a new line of *janakeeya* or local level leadership with has a participatory and developmental perspective .

The SHGs become the initiators of development at the people's level, the Federations strengthen this development process and take it forward. The upward progression is such that the Cluster Federation meetings produce reports for the next higher level, that is, the Apex Federation. This progressive movement upward results in capacity building of individuals and groups to take on

responsibilities, hold offices, solve issues and problems, and in the long run become participants in the progress of society and finally the nation. A Coordinator and the area organizer of GSGSK participate in the meetings as members of the Executive Council.

As in any organizational set up, conflicts exist in these CBOs also. The SHG/YSS are formed of 20 people coming from different backgrounds and conflicts are bound to exist, and do exist. But the structural framework enables and ensures that solutions are found in an effective manner. A convener and joint convener have been elected democratically for overseeing decisions related to the functioning of the SHG/YSS. Decisions are taken and conflicts are resolved on a majority vote basis.

Joint Liability Groups or Trade Consortia and Clusters

In order to support livelihoods, GSGSK has created parallel structures called consortia, which have members drawn from various SHGs who are involved in the same kind of economic activity. This would mean an individual can be member of a particular SHG for her/his thrift and saving activity, while s/he can be a member of a consortium for her livelihood. These consortia are further federated as clusters. GSGSK has promoted consortia in a number of economic activities. The organization administers these CBOs, including both streams, through sub-centers operated by GSGSK staff. (Fig.2)

Evolving out of the SHGs are the trade-related groups, each called a Consortium. Consortia are evolved from among the SHGs, when people with similar trade interests come together with the common purpose of starting a microenterprise. For example, if among the different SHGs in a region, there are people who are interested in fish marketing, then such people (e.g. two from one group, five from another, one from yet another, and so on) come together and form a Consortium on fish-related enterprise. The minimum size of each consortium is ten members. A number of such consortia are federated to form a Cluster. In this manner GSGSK has developed Clusters in paddy,

¹ *The General Council consists of office bearers of the Apex Federation, three members suggested by the Managing Committee of GSGSK, and representatives of volunteers and animators. Nominated from this council are the Chairperson, Vice Chairperson and Treasurer. The Member Secretary is nominated by the GSGSK and is a full time worker. The Executive Council consists of a five member managing group of Chairperson, Vice Chairperson (both are Chairpersons of the Apex Body). Treasurer, Member Secretary and two conveners (represented by conveners of the Apex body)*

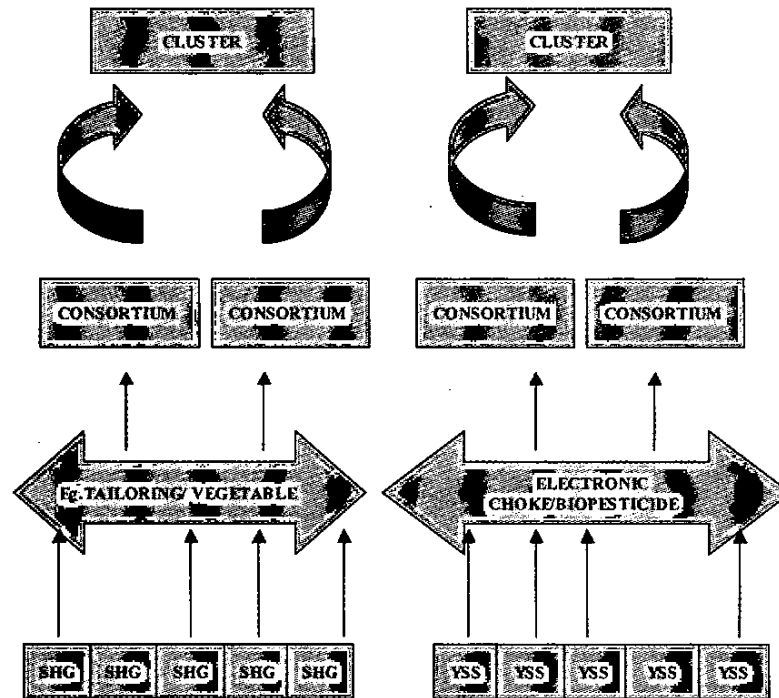


Fig. 2: Evolution of trade related groups

textile and tailoring, fish marketing and processing, coir and kora grass and egg production.

The particular manner in which the structure has been developed, first of the various thrift and credit groups, followed by the evolution of the trade-related clusters is in line with the stated objective of the organization to develop empowered groups of both women and men in a gender sensitive manner, and finally take it forward to create units of economic activity. Looking at the organization at a holistic level, it functions in two ways – on the one hand the Federations started as community-based units for the empowerment of women, and for mainstreaming gender in the developmental and other aspects of society, and on the other, the federated structures developed to promote trade-related enterprises. The emphasis is social empowerment in the former and economic empowerment in the latter.

The trade-related clusters and microenterprises arising out of them are based on the concept of equal opportunity, equal responsibility and equitable distribution of returns. Joint liability enables the group members to access capital. The joint liability groups or the trade-related consortia are structurally linked to the SHGs. This dual membership ensures financial discipline, since each individual is

monitored by two independent groups and this in turn augurs well for the success and sustainability of both the enterprise and the consortium. The joint liability groups are entrepreneurship-oriented and propel the development of the individual beyond his/her experiences in the SHG. Microenterprises develop out of the joint liability groups and a group enters into an economic activity beneficial to all.

The relationship of GSGK with the consortia is more like a guide and partner, assisting the enterprise in finding markets, financial planning and budgeting, and human resource management, the handholding process continuing till the enterprise shifts into profit mode. The funds released by the banks to the microenterprise are based on the linkage developed by GSGK, whereas in microfinance the funds are often released through GSGK. In the case of funds released for microfinance, the groups assess the needs of the members while practising thrift, which is the first stage in the group (SHG/YSS) formation. Based on various criteria developed to assess commitment and financial discipline, the applications forwarded to GSGK for loans are assessed. Various stages of assessment are done at various levels of the GSGK machinery before the application is forwarded to the bank for release of funds to GSGK for further disbursement to the

group. GSGSK plays a key role in sanctioning, disbursing and monitoring of loans given to groups, and has slowly empowered the groups in this manner. However, in the case of trade-related groups, the members have already been part of a group (SHG/YSS) and hence are aware of the mechanism of sanction and disbursement of loans and the procedures involved. Besides, GSGSK has already assessed them very thoroughly. Hence the amount required for a particular trade related cluster is directly given by the bank to the cluster and not through GSGK. These methods and structures have resulted in developing innovative partnerships for capacity building, and social and economic development

VASTRA

With this background, the story of one enterprise, VASTRA, an apparel unit, will be described in more detail, to illustrate both the problems and challenges on the one hand, and the way the constraints and barriers were tackled, on the other. VASTRA Garments Cluster Pvt. Ltd, Alappuzha, is an apparel company of women tailors with a total membership of 217 women in seventeen clusters. The consortia evolved from the SHGs formed into a primary CBO, a step forward towards social empowerment. The share capital of the company is Rs.1 lakh and it has received a loan of Rs.6.50 lakh from the State Bank of Travancore. The products launched by the company include salwar kameez, churidar, nighties, underskirts and kids' wear. The products are being marketed through two retail outlets and by network marketing. The total production of finished goods amounted to Rs.6.73 lakh during 2005-06. There is also a showroom attached to the production center, located in a prime locality in the town.

The apparel industry was a predominantly male-dominated sector till recently. The entry of women tailors has been a catalyst in the establishment of women-based enterprises in this sector. This exclusive women-based consortium was made possible because of the methodology that was adopted to develop structures to ensure the same. The efforts put in to create separate streams representing men and women in CBO development, as mentioned earlier, has resulted in creating confidence among women to venture into entrepreneurship, as in the case of VASTRA.

Some key points about the current status of the small-scale apparel and tailoring enterprises are:

- This sector ranks among the most rapidly declining occupations because of increases in imports, offshore assembly, productivity gains from automation, and new fabrics that do not need much processing.
- The earnings of most workers are low.
- Though predominantly male-dominated till recently, many women were involved who had learned tailoring and were working from home without much gain

Problems and Challenges

Raw Material - Acquiring raw material at a fair price is difficult, especially for women, as their efficacy in bargaining is very limited when it comes to mass production. VASTRA has been solving this problem in the case of uniform stitching, through orders received from the government sector.

Capital - The fact that the women did not own any property (in the majority of cases) was a factor that went against them while applying for loans directly. GSSGK was supportive in providing a linkage with the bank to start the venture, though at first the bank finance by itself was not sufficient.

Management capacity - Almost all the women came from interior rural backgrounds, had lived mostly home-bound lives and none had any previous experience in running an enterprise.

Technological know how - All of them were traditional tailors and did not have much experience in modern technological interventions like the 'Juki' machine, or intricate embroidery or designing machines. Another problem was the lack of adequate designing machines. No doubt, one can use one's own brains to create fantastic designs, but in that case there will be no appropriate machine to showcase the designs. Most of the machines in VASTRA are simple sewing machines compared to what is available to their more experienced counterparts in the town and around.

Market - The apparel industry is highly competitive and it is an uphill task for any newcomer to find his/her feet in this maze. It is necessary to have updated information on markets and market trends. The tailors' group did not have much idea about current market trends.

MIS - Even in an industry like the apparel and tailoring industry, it is essential to have information at different levels for different levels of management

decision-making, which can be described as strategic, tactical and operational. The women who joined in this venture were not knowledgeable about all MIS system, and neither was computer technology used for advancing their goals.

Social - Most of the women are from the rural sector, and the prevailing customs of the region are not in favour of women working late. Hence putting up stalls for exhibitions and working late to meet a deadline was difficult for them. This in turn affected the income level of women for whom income is based on piece-rate work. The other option was to take work home, which is what is being done now. But this results in the woman investing a large part of her time and money on travel, besides the burden of attending to her domestic chores as and when needed, as she is available at home.

Domestic demands - The demands the family places on a working woman are more applicable to women who take work home. Most times, she at home, but many a time business requires her to supply materials on time, putting great pressure on the woman tailor. Most husbands expect woman to do all the domestic chores irrespective of whether she has to complete her work sitting through the night or not. All this implies extra hard work and commitment to obligations. A very high proportion of men, particularly in Kerala, do not participate in household chores. The burden of housework is hence carried mostly by the female textile workers in these households. Sharing of housework among married couples is not very common.

Finding the Answers

But VASTRA was able to overcome many of these constraints and barriers.

Raw Material - The women formed themselves into groups and entrusted responsibilities to each to share the running of the enterprise. For raw materials, wholesale markets were contacted and women went to places as far as Bangalore and Coimbatore to purchase textiles at low prices.

Capital - In addition to the funds provided by the bank, the members managed capital by each contributing Rs.500/-forming a share capital of Rs.1,08,500. They also obtained an additional loan of Rs.8.5 lakhs from the bank, which they have been repaying regularly at Rs.6,000/ month.

Management - Following the formation of the company as a private limited one, a Managing Director was nominated to manage the day-to-day affairs, take care of the finances, and explore market opportunities. She was paid from company funds, and was assisted by others on a voluntary basis. The members of VASTRA were given management training, which included how to manage the day-to-day affairs of the company, accounts and marketing, by GSGSK. In order to streamline the work pattern, a Common Facility Center was also set up, with fifteen sewing machines, facility for packaging, an embroidery machine and storage space to hold bulk quantities of raw materials as well as finished goods. For women who find it convenient to work from home, bulk raw materials are collected from the Common Facility Centre and the required designs and patterns explained to them. The women take the work home and return the finished work within the time stipulated.

Market - As it is a community venture, VASTRA received a lot of goodwill and support from the market. They have been able to execute a District Administration order to the tune of Rs.8/- lakhs in the last one and a half years. Their 'distinctly feminine touch' has gone down well with their female clients and helped improve their market position, since many women customers feel uncomfortable with male tailors taking their measurements, and clients find it easier to discuss their design with a woman tailor than with a man. Women tailors take precise measurements, sometimes in separate trial rooms, and are thus able to make better-fitting clothes. As the women tailors are also, in a sense, users of similar garments, whether a blouse or a salwar kameez, they understand easily, when a woman client explains what she wants 'a loose stitch there and a tighter one there'. Women find it easier to discuss whether a particular style will be awkward or look too 'provocative' which is not so easily done with men tailors. Women clients from higher, middle and lower middle class families are now going to the centers themselves to place orders.

Technology - Identification of technology needs was undertaken and machineries ranging from sewing, laundry and support services segments were put in place. The 'Juki' machine was purchased and training given to women on its use. However, this machine, intended for large scale training, is

not being fully utilized. One reason is that it has to be used in the workshop, being too heavy to be carried home and back by the women, while many prefer to work at home for other reasons already mentioned, or are reluctant or unable to master the technology. There is also a fear of loss of earnings for women working in the cutting sections. Since the consortium has 217 members, they do not go as far as to risk the loss of earnings for some members. "The ideological problem women face in gaining full access to science and technology is perhaps more complex than we have heretofore acknowledged" (Wright, 1987: p. 17)

MIS - This is an area the group is still very weak on. They have not been able to realize the full potential of this technology so far in a modern business like the apparel industry.

Social - For women who cannot come to the Common Facility Center, a convenient option was worked out. They were allowed to carry the work home and complete it, as stipulated in the designs, which were explained to them in detail. There is still a long way to go before the question of women's double burden is satisfactorily solved by increased awareness, a gender-sensitive society and changed attitudes of men.

Support Services - The following government institutions have provided support through consultation and advice.

- District Industries Centre
- Small Industries Service Institute,
- Kerala Bureau of Industrial Promotion

The nature of support services have been satisfactory so far, probably because GSGSK has been associated with all these institutions for a long time. This proximity has enabled trouble-free services to the clusters, including training on various aspects like management and marketing, and inviting the VASTRA members for exposure and exchange programmes, through which they could educate themselves on various options and opportunities available in this sector.

References

Wright, Barbara Drygulski (1987), *Introduction*, in Barbara Drygulski Wright (ed.), *Women. Work and Technology: Transformations*, University of Michigan

GSGSK has been able to help in creating linkages with banks, thus providing access to one of the major hurdles in any business-finance. In addition, it has also provided further funds through lending from the organization itself to prop up the group at times of crisis. Training and capacity building are two other important inputs by GSGSK, which continues to be on the board as an ex-officio member, ensuring support to the organization in times of need. This handholding will continue till the organization is poised to take off on its own.

Though the take-off has been a great one for this fledgling organization, it has still not been able to address some of the most important areas of business quite so strongly as it ought to, especially technology and MIS. These are two areas that, if addressed properly, can take VASTRA far ahead. Also, child care facilities need to be developed near the common facility center so as to enable and encourage women to work from there, which would enable them to use new technology and increase their production. Women have come a long way, but there is still a long road to be traveled.

Insights

- Equitable and inclusive growth is the key to promoting economic and social development.
- Policies should be seriously revisited to make them more women-centric
- Banks should become more rural women-friendly.
- Women's constrained mobility limits access and such constraints are reflected in gender inequities in task load, health and income outcomes.
- Machinery for women should be designed so that end users find it easy to use.

Given motivation and supports on the financial and technological front, it is possible to awaken the women force to take part in the economic progress of the nation. "The most important part of it is having my destiny in my own hands". Serena said "I have authority to make whatever changes are necessary in order to succeed"

Using Technology for Women's Empowerment

P.S. Geethakutty

Development needs to be human-centered, which implies identification of the human and social contexts in which the tools of development are to be delivered and promoted among the ultimate users. The nation has learnt enough from the failure of the much worshipped approach based on the 'trickle down' theory; we have learned that the benefits of development will not simply be carried down to the poor by the rich, to the powerless by the powerful, and to the excluded by the included. If development is to reach the excluded and the unreached, they must also be counted, their priorities noted and their needs and constraints recognized. To be not vulnerable to poverty and to possess livelihoods which are not threatened, one should be capable, possess assets, and get opportunities. Do the rural poor, particularly rural poor women, have these securities ?

Micro-finance and Micro-credit as Tools

It would not be wrong if one were to describe the contemporary scene in rural development as one of micro-credit and micro-enterprise, as they are today considered and promoted, as the super *manthras* for empowering the poor, especially women. Many of the agencies engaged in the promotion of SHGs, both Governments and non-governmental groups, often give the impression that the SHG movement has successfully turned poor rural women into flourishing entrepreneurs. But the ground realities are different. Those at the grassroots know how much women still lack awareness, competitive knowledge of technology, and the skill required for any profitable productive work or enterprise; how much they lack productive resources of land and inputs like seed, electricity and water; how much they are handicapped without low-interest credit; how much they struggle

without markets and marketing support for their produce; how much they lack managerial capacity to run their enterprises effectively and how little benefit they gain from their hard labour. In initiating, running and sustaining productive micro-enterprises, the women SHGs and women's groups in rural India require the institutional support of R&D institutions, extension agencies, banks, local community organizations marketing co-operatives, rural infrastructure facilities and local governments. Women, of course, need technologies as well as well-coordinated support services from local institutions and agencies of development. But technology alone is not enough. This paper tries first to throw light on the problems and issues faced by rural women micro-entrepreneurs, and next to illustrate a model of institutional support evolved and put into action by the Centre for Studies on Gender Concerns in Agriculture (CSGCA) of Kerala Agricultural University (KAU), to promote the sustainability of livelihoods among women.

A Women-Only Scheme

The information and observations used in this paper are drawn from a previous study by the author of farm women engaged in farm-based micro-enterprises as part of a Central Govt.-supported programme. This evaluation study (Geethakutty, 2006) was conducted among 180 participants of the 30 groups formed by the Central Sector Scheme on Women in Agriculture Programme (CSSWIA) in Palakkad district of Kerala, during 2004-2005. The CSSWIA Programme is a Central Govt. sponsored programme implemented in 30 selected Panchayaths of the District of Palakkad from 1995 onwards. In each of the selected Panchayaths, one group each of 25 farm women was mobilised to work in SHG mode, and provided with support in

the form of technology training, technology demonstrations, farm implements, exhibitions, study tours and farm literature. There were totally 750 women participants.

Many positive outcomes of the programme such as increases in their level of social contact, time utilization pattern, and self-confidence were revealed by the evaluation. (Tables 1 and 2) Table 1 reveals that the CSSWIA Programme was perceived as useful by the participants and they rated the impact of the programme on creation of positive

attitudes towards farming, self confidence, social awareness, knowledge and skill in farming, social participation, leadership ability and income as major positive outcomes. From Table 2 it can be observed that about 40 percent of the respondents were able to derive monthly income through the programme activities in a range of Rs.250 to Rs.500. Table 3 indicates their self-rating of the impact of the programme—there have been changes in their general awareness, leadership ability, social participation, decision-making power, and freedom for mobility, due to their participation in the programme.

Table 1: Socio-economic and behavioural changes among the participants

(n=180)

Sl No	Particulars	Increased (2)		Decreased(1)		No change (0)	
		f	%	f	%	f	%
1.	Positive attitude towards farming	177	97	0	0	3	2
2.	Self confidence	177	97	0	0	3	2
3.	Knowledge in farming/and related enterprises	177	97	0	0	3	2
4.	Social awareness	176	97	1	0.5	3	2
5.	Knowledge & skill in farming	171	94	0	0	9	5
6.	Social participation	166	91	0	0	14	8
7.	Leadership Ability	155	85	0	0	25	14
8.	Income level (personal)	149	82	0	0	31	17
9.	Sharing of problems	138	76	8	4	34	19
10.	Social status and position	134	74	0	0	36	20
11.	Family income	132	72	0	0	48	26
12.	Savings	131	72	1	0.5	48	26
13.	Decision making involvement	122	67	18	10	40	22
14.	Better education for children	122	67	12	7	46	25
15.	Position in the family	121	67	1	0.5	58	32
16.	Employment opportunities	120	66	0	0	60	33
17.	Family solidarity	120	66	4	2	56	30
18.	Food production	110	60	7	4	63	35
19.	Living standard of family	106	58	0	0	74	41
20.	Leisure time	73	40	63	35	44	24
21.	Entertainment	93	51	17	9	70	38
22.	Work Burden	91	50	12	7	77	42
23.	Food availability In general	90	50	6	4	84	46
24.	Women in particular	85	47	6	4	89	49
25.	Wastage of money	17	9	69	38	94	51
26.	Wastage of time	14	8	75	41	91	50
27.	Food purchasal	42	23	62	34	76	41
28.	Domestic violence	35	19	28	15	117	64
29.	Health status	36	20	8	4	136	74
30.	Indebtness	4	2	24	13	152	84

Table 2: Additional individual income derived per month by participants after participation

(n=180)

Category	Frequency	Percentage
No income	24	13
<100	16	9
100-150	10	6
150-200	19	11
200-250	20	11
250-300	15	8
300-500	41	23
Above 500	35	19

Table 3. Extent of empowerment gained through CSWIA activities, as perceived by participants

(n=180)

Sl. No.	Particulars	Greatly (2)		Some what (1)		Not at all (0)		Total score	Rank
		f	%	f	%	f	%		
1.	Your general awareness about society and life is increased	84	46	96	53	0	0	264	1
2.	Your social participation is increased	85	47	93	51	2	1	263	2
3.	Your leadership ability is increased	79	43	100	55	1	0.5	258	3
4.	Your decision making ability is increased	79	43	99	54	2	1	257	4
5.	Your freedom for mobility is increased	70	38	101	56	9	5	241	5
6.	Your decision making freedom is improved	73	40	93	51	14	8	239	6
7.	Your freedom as a family member is increased	62	34	111	61	7	4	235	7
8.	Your freedom of expression is increased	63	35	95	52	22	12	221	8.5
9.	Your self identity as an individual is increased	59	32	103	57	18	10	221	8.5
10.	Your economic freedom is increased	57	31	102	56	21	12	216	10
11.	Your status as a family member is increased	54	30	102	56	24	13	210	11
12.	Your responsibility as head of the family is increased	46	25	90	50	44	24	182	12
13.	Your economic position is increased	31	17	76	41	73	40	138	13
14.	Your ownership of family assets is increased	17	9	34	19	29	16	68	14
15.	Your health is increased	21	12	37	20	22	12	79	15

Constraints

But if one takes an in-depth look into their enterprise-related activities and the related constraints in Tables 4&5 respectively, the true picture of the entrepreneurial levels developed or existing in the groups emerges. A glance at Table 4 will indicate that most of the activities taken up by the groups could not really be termed enterprises. First of all, not many group enterprises were evolved in the group even after 11 years of group

functioning. Among those group activities taken up by the group, most were of a seasonal nature—banana cultivation, vegetable cultivation and so on. It was also observed that no suitable technology/enterprise combination for sustainability of year-round income had been identified. A look into the marketing channels and means of marketing relied on by the members indicates the extent of lack of entrepreneurship among the participants and the

Table 4: Activities undertaken by participants at group and individual levels

(n=180)

Sl. No.	Type of activities	Group level (n=30)		Individual level (n=180)	
		f	%	f	%
I	Non farm activities				
1.	Soap, detergents and liquid blue making	9	30	8	4
2.	Candle making	2	7	3	2
3.	Textile shop	0	0	1	0.5
4.	Stationery shop	2	7	1	0.5
5.	Agarbathi making	0	0	1	0.5
6.	Tailoring	0	0	1	0.5
7.	Handicraft making	0	0	2	1
8.	Umbrella making	0	0	2	1
II	Farm activities				
1.	Azolla cultivation	2	7	11	6
2.	Mushroom cultivation	4	13	2	1
3.	Fruit and vegetable processing	2	7	2	1
4.	Vermicomposting	4	13	13	7
5.	Vegetable cultivation	10	33	22	12
6.	Banana cultivation	3	10	9	5
7.	Bush jasmine cultivation	5	17	19	11
8.	Medicinal plants cultivation	2	7	4	2
9.	Coleus cultivation	1	3	0	0
10.	Fodder cultivation	0	0	2	1
11.	Turmeric cultivation	1	3	0	0
12.	Ginger cultivation	0	0	3	2
13.	Vegetable seed production	0	0	1	1
14.	Nursery management	0	0	1	1
15.	Tapioca cultivation	0	0	3	2
16.	Safed musli cultivation	0	0	1	0.5
17.	Beekeeping	0	0	2	1
18.	Dairy farming	0	0	8	4
19.	Poultry farming	0	0	3	2
20.	Fish farming	1	3	1	0.5
21.	Goat farming	1	3	0	0
22.	Rabbitery	0	0	1	0.5
23.	Sericulture	0	0	1	0.5
24.	Food processing – kondattoms, pappads	9	30	13	7

lack of institutional support on the part of the development agencies to promote entrepreneurship among the women's groups (Table 5). The majority of participants were utilizing the products for home use, indicating lack of marketability of the produce, and of market orientation among the participants. With respect to those items which were sold, only two initiatives with their own selling units were reported. No collective activity of selling was reported. The majority is relying individually on door-to-door selling.

An analysis of their constraints further indicates the real issues involved in the lack of sustainability of enterprises (Table 6). The first seven items are enough to highlight the constraints to entrepreneurship in group activities—lack of market for the product, lack of marketing arrangements, lack of profit, price fluctuations, lack of business management skills, lack of technological skill and lack of guidance for running the enterprise. It is evident from the data that entrepreneurial competencies and support are lacking even in a well

Table 5: Marketing channels utilised by participants

(n=180)

Sl. No.	Particulars	Frequency	Percentage
1.	Opening own shops	4	2
2.	Selling through other shops	79	43
3.	Door to door selling	23	13
4.	Neighbouring houses	65	36
5.	Display in office vicinities/ Kudumbasree/ schools	4	2
6.	Participating in exhibitions	2	1
7.	Selling through local market	36	20
8.	Household use	148	81

Table 6: Major constraints faced by participants

(n=180)

Sl. No.	Constraints	Most important(3)		Important(2)		Less important(1)		Total score	Rank
		f	%	f	%	f	%		
1.	Lack of market for the products	141	78	25	14	14	8	910	1
2.	Lack of marketing arrangements	129	71	36	20	15	8	861	2
3.	Lack of profit	86	47	81	45	13	7	691	3
4.	Price fluctuations	48	26	111	61	21	12	531	4
5.	Lack of technological training	43	24	54	30	83	46	449	6
6.	Lack of business management training	50	28	82	45	48	26	512	5
7.	Scarcity of raw materials	32	18	58	32	90	50	398	13
8.	High cost of raw materials	36	20	54	30	90	50	414	12
9.	Lack of guidance for running the enterprise	36	20	84	46	60	33	444	7
10.	Lack of co-operation among members	20	11	51	28	109	60	331	16
11.	Lack of time	37	20	54	28	89	49	419	8
12.	Family problems and responsibilities	36	20	57	31	87	48	417	9
13.	Increased work load	37	20	51	28	92	50	416	10
14.	Poor health	21	12	31	17	128	70	316	17
15.	Lack of awareness	18	10	28	15	134	74	298	18
16.	Lack of land ownership	24	13	53	29	104	57	390	15
17.	Lack of capital	28	15	75	41	77	42	395	14
18.	Lack of credit facilities	32	18	75	41	73	40	415	11

co-ordinated women's SHG development programme. The constraints faced by women in taking up the enterprises can be highlighted from the standpoint of exclusion- women lack access to technological skill, managerial skill, capital, credit at low interest, land and other productive resources (like water, seed, fertilizers, electricity, subsidy and insurance,) the access to which in turn depends on ownership of the land or other assets, markets and marketing arrangements.

Tables 7 & 8 show how these women are constrained without ownership of and access to land, a very crucial resource for agriculture-based development interventions. About 5 percent of the women participants lacked any type of land access from their family. Coming to ownership, only about 29 percent of the participants had ownership of land and the majority of their families owned marginal-sized farm land only. For group activities of farming-vegetable, floriculture, fodder growing

Table 7. Family farm size of participants

(n=180)

Category	Frequency	Percentage
Nil	9	5
<1 acres		
i. upto 10 cents	13	7
ii. 10.1 - 25 cents		
iii. 25.1 - 50 cents	20	11
iv. 50.1 - 100 cents	40	22
Between 1-2 acres	48	27
Between 2-3 acres	22	12
> 3 acres	28	16

Table 8. Land ownership pattern among families of participants

(n=180)

Category	Frequency	Percentage
Male	115	64
Female	26	14
Joint	27	15
Nil	9	5

they were utilizing land available with any one of the group members. Some of the groups had also tried to lease in land on a group basis to take up rice farming and vegetable farming; but in such cases the continued availability of the land on lease from the owner had emerged as a serious constraint for legal reasons. Thus less than 30 percent of the women, though called "farm women" were in fact in a position to take up land-based activities.

These are some of the hard facts facing not only these women, but millions of rural poor women like them, who are being described in glowing terms as newly converted micro -entrepreneurs emerging from various SHG groups. Of course, the good intentions and the group mobilization built up by the various agencies must be appreciated. But micro-credit opportunity alone is not enough ; the hope kindled among these poor women has to be backed up with technological skills, resources, managerial skills, handholding support, and the services needed for initiating and running productive enterprises with sustainability.

A Model for Empowerment

It is here that a platform for networking of the stakeholders involved in the promotion of rural women in rural development should evolve, with the involvement of agencies and institutions meant

for the promotion of rural development (Fig. 1). As indicated in the figure, women-friendly technologies of agricultural universities and research institutes should reach the target groups, and their related field problems should also be fed back for timely solutions and modifications. Extension agencies and industrial promotion agencies also should be updated with modern/new technologies and these should result in interactive exchange of information between the target groups and development agencies. Local marketing and infrastructure agencies and farmers' /community organisations have to play an important role in providing the space and opportunity for sustaining the entrepreneurial efforts of the women. NABARD, and other banks in the locality must be major partners in the network to provide the required capital or credit and create financial support for women at low interest rates, with modified gender-sensitive loan sanction procedures. Most important are the participatory and collaborative initiatives of these agencies for the promotion of infrastructure to ensure marketing opportunities and sustainability of women's group efforts in any locality, through women-inclusive approaches.

Making the Model Work

A working model of empowerment of rural women through technology by such networking, that is

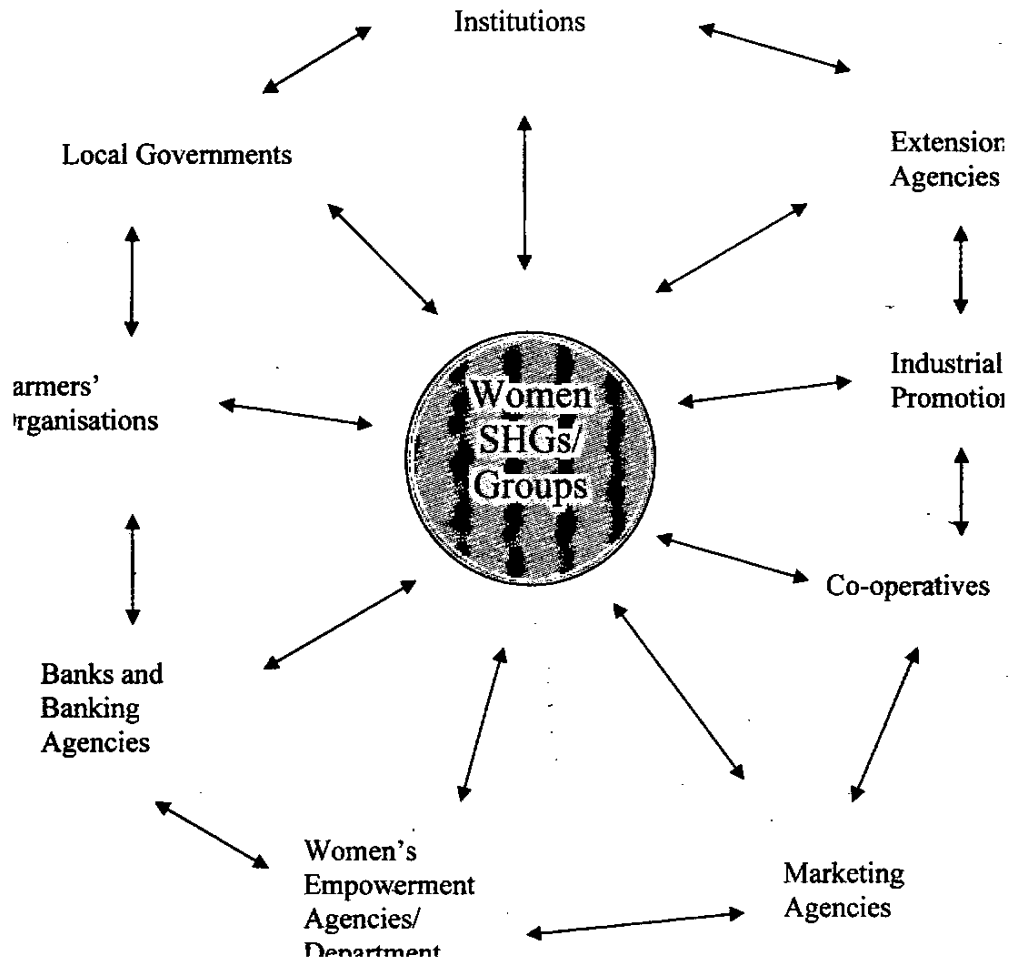


Fig. 1: A Model for Empowerment

being practised under the leadership of the CSGCA, KAU in this context in the local Panchayaths in Thrissur District, Kerala, is illustrated here as a potential model of institutionalised intervention. (Geethakutty, P.S. 2007)

Promotion of women-friendly farm technologies among women SHGs and groups was undertaken by the CSGCA of KAU from 2004 onwards, with the support of the Department of Biotechnology, Govt. of India. Intensive technology training for the women, along with training in business management, and handholding sessions with banking, marketing and input agencies, were special features of the capacity building. Sustainable models of women-run farm enterprises were supported as field demonstration units for the promotion of technologies in the rural areas. Monthly agro-clinics on various technologies among the practising and

potential entrepreneurs were conducted in the field on the basis of field problems. Fortnightly follow-up calls are still being carried out to check the post-training activities among the trainees and follow-up workshops and training on related topics/value addition are also being conducted. Further, guidance for assessing credit, market, and group function are being imparted. Local agencies of Banks, Panchayath, Agricultural Department, Khadi and Village Industries Commission, NABARD and NGOs are partners in this promotion of technologies among the women. About 45 units of women's groups are continuing their enterprises (floriculture, tissue culture, hardening of plants, poultry, flower value addition, vermin-composting, honey bee rearing, quail rearing, rabbit rearing, goat rearing and leaf plate making). These women are also being supported with counseling for taking up

Table 9: Bush jasmine cultivation

(n=25)

Sl. No	Aspects	Categories	Frequency (n)	Percentage (%)
1.	Area under bush jasmine cultivation(acres)	Less than 0.01 acre	16	64
		0.01-0.05 acre	8	32
		Above 0.05	1	4
2.	Number of plants	Less than 100	4	16
		101-500	20	80
		more than 501	1	4
3.	Flower bud yield per day	Less than 100	5	20
		101-250	9	36
		251-500	7	28
		Above 500	4	16
4.	Monthly income	No income	3	12
		Low (< Rs. 100)	6	24
		High(Above Rs.250)	5	20
5.	Average time spent on bush jasmine cultivation per day	Low (< 1 hour)	7	28
		Medium (1.1-2.5 hrs)	14	56
		High (above 2.5 hrs)	4	16
6.	Planting material is obtained from	Samiti	10	40
		Private nursery	5	20
		Krishi Bhavan	6	24
		Own	4	16
7.	Sale of planting material (monthly)	Low(<100)	5	20
		Medium (101-200)	3	12
		High (above 200)	1	4
		No sale	16	64
8.	Monthly income from the sale of planting material	Low(<Rs.500)	7	28
		Medium(Rs. 501-1000)	2	8
		High (above Rs.1000)	0	0
		No income	16	64
9.	Marketing done through samiti	Yes	4	16
		No	21	84
10.	Garland making practised	Yes	5	20
		No	20	80
11.	Decoration works	Yes	1	4
		No	24	96

suitable technology packages for year-round enterprises and production.(Tables 9,10,11,12.)

Sixty more groups of women are in the initial stage of taking up enterprises. Ground work for a collaborative and joint collection centre for flowers, a rural *haat* (for display and market), mobilisation of agencies for ensuring credit at low interest and without the usual formal difficulties, are being promoted. Mobilisation of the Development Departments to ensure quality inputs (seedlings/

seeds and land), and frequent interaction between the target groups and scientists are also held periodically by CSGCA. The local NABARD office and local Panchayaths are also actively engaged in this participatory approach.

The Outcomes

As part of this network mobilization, one of the women-run flower grower associations in Perinjanam Panchayath, Thrissur can be taken as a demonstration unit of group-based marketing

Table 10: Orchid cultivation

(n=19)

Sl. No.	Aspects	Category	Frequency (n)	Percentage(%)
1.	Area under orchid cultivation	0.01-0.02cent	7	57
1.		0.021-0.03	10	53
1.		0.03-0.05	2	10.2
2.	Number of plants	>100&100	10	53
1.		101-200	3	16
1.		201-300	3	16
1.		301-500	2	10.2
1.		501-1000	1	5.2
3.	Flower yield per week (Number)	11-20	4	21
1.		21-30	2	10.2
1.		31-50	2	10.2
1.		50-75	1	5.2
1.		75-100	1	5.2
4.	Monthly income(Rs)	50-250	4	21.05
1.		250-500	10	53
1.		500-1000	5	26.31
5.	Average time spent on orchid cultivation per day	1	5	26.31
1.		1-2	6	31.57
1.		2-3	8	42.10
6.	Marketing channel	Samithi	9	47.36
		Private	10	53

Table 11 : Anthurium cultivation

(n=31)

Sl. No.	Aspects	Category	Frequency (n)	Percentage(%)
1	Area under orchid cultivation	0.01-0.02cent	18	58.06
		0.021-0.03	5	16.12
		0.03-0.05	5	16.12
		0.051-0.10	3	9.67
2.	Number of plants	>100&100	16	21.61
		101-200	8	25.8
		201-300	6	19.35
		301-500	3	9.67
3.	Flower yield per week (no)	1-10	10	32.25
		11-20	5	16.12
		21-30	6	19.35
		31-50	5	16.12
		50-75	1	3.22
		75-100	1	3.22
4.	Monthly income(Rs)	50-250	10	32.25
		250-500	10	32.25
		500-1000	11	35.48
5.	Average time spent on orchid cultivation per day	1	13	41.93
		1-2	12	38.70
		2-3	6	19.35
6.	Marketing channel	Samithi	19	61.29
		Private	12	38.7

Table 12: Mushroom cultivation, Goat rearing, Quail rearing

N=75

Sl. No.	Aspects	Category	Frequency (n)	Percentage(%)
1	Mushroom cultivation	Yes	0	0
		No	75	100
2	Goat rearing	Yes	2	2.67
		No	73	97.33
3	Quail rearing	Yes	0	0
		No	75	100
4	Saree designing	Yes	0	0
		No	75	100
5	Vegetable cultivation	Yes	1	1.33
		No	74	98.66

arrangements, where risk and transaction costs of marketing to the members can be reduced. In this unit, there are about 140 women members who work as activity groups and grow bush jasmine in their household premises. This group has a flower collection center where all the members bring flower buds of jasmine, orchids, and anthurium every morning, and record their daily produce contribution. The pooled collection of flowers is sold as flower buds or as value-added products like garlands or flower arrangements. The members get the price of their produce on a monthly basis. CSGCA has selected this unit as a showcase of a successful model. This association helps the members to access technology and input at cheap rates, to reduce transportation costs and to avoid cheating by middlemen/traders. Such meaningful efforts of the stakeholder institutions can be evolved and promoted in any locality

A major question arising from this study is: who will bell the cat? in other words, who should take the lead in developing this platform and provide sustainability to the micro-enterprises of rural women? There is no single answer and no uniform pattern that can be pinpointed. Such innovative models can be highlighted as signposts to actions possible and needed on the part of the agents involved, governmental, NGO and private. A multiplicity of development efforts and multiple actors are needed for local adapted networking.

Learnings

The special features of this approach to women's empowerment may be identified as :

- Intensive skills training in technology and enterprise management to women's groups, with hands-on training in viable technologies for farm enterprises (like vegetable farming, poultry, rabbitry, dairying, food and vegetable processing, mushroom production, vermicompost, tissue culture, nursery management, bio-control agents production) and EDP training;
- Hand-holding support to foster liaison between women entrepreneurs and support services (like credit, market, and inputs)
- Agro-clinic and counseling support on field problems and group management
- Showcasing of role model units of women-run enterprises to motivate other women
- Consortium of stakeholders for women's empowerment.
- Technology incubation/demonstration unit at R&D Campus
- Sales promotion for the products of women's groups through rural collection centres.

The Role of S & T

In conclusion, it would be desirable to repeatedly ask the following questions in the context of the inclusion of rural women in technology development and delivery:

- Does S&T count and recognise women as clients ?
- Do technologies cater to the needs and constraints of women users?

- If there are technologies for women, are they available to women?
 - If the technologies reach women, do they benefit women?
- Further, technologies by themselves cannot provide sustainable enterprises to rural women. We must remember to:
- Engender the farmer, institutions/ organisations like co-operatives, watershed associations, and marketing co-operatives
 - Engender extension services like training, technology services, and counseling
 - Engender farmer support services like credit, information, and insurance
 - Engender access and control of productive resources like land, inputs, electricity, and water
 - Train research personnel to be gender-responsive, and to take up research and extension on problems and needs of women
 - Train and promote extension agencies to be gender-responsive and to support women with appropriate technologies and engendered extension services
 - Mould future cadres of agricultural development services to be gender-sensitive, through integration of a gender perspective in the undergraduate curriculum of agricultural colleges and universities.

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Chasing a Mirage: AGRAGAMEE's Efforts for Tribal Inclusion

Vidhya Das . . .

When AGRAGAMEE began work in the early 1980s¹ with tribal communities in Orissa, incredible examples of bondage and exploitation were found, and a community with an almost completely shattered self-image. It was this that impelled the organisation to take the first steps on the long and still-unfinished journey towards tribal inclusion in India's mainstream.

Paradigm and Perspectives

The paradigm and perspectives that AGRAGAMEE started with are simple, and have been stated many times over the years : that all human beings are born equal, and should have equal opportunities to survive, grow and develop. In a nut shell, they can be spelt out as :

- Social justice
- Self-reliance
- People's democracy
- Environmental justice, and
- Equality, liberty and fraternity.

The last has been AGRAGAMEE's motto. It sounds simple, until one begins to address the complex web of injustice and exploitation that has led people, especially the tribal people of this country, to the point of their destruction.

The Context

Tribal regions in Orissa are underdeveloped and neglected, and tribal communities, as also others, such as Scheduled Castes and Backward Castes, live in a perpetual state of insecurity of several kinds, including food, tenure, employment and income,

perhaps reflecting the state of all tribal regions and communities in this country. AGRAGAMEE's work in the tribal regions has served the crucial purpose of bringing to centre stage several problems and deprivations of the tribal communities, who form nearly a fourth of the population of the State. Development of the tribal regions in Orissa is not an impossible task, as there is both potential and scope. Tribal people, and the poor in general, have immense resources and resilience within themselves, which have enabled them to survive under some of the most difficult and trying circumstances; they also have a rich knowledge system born out of centuries of experience, which has helped nurture a diverse and rich ecosystem.

Present day development priorities however, have very consciously turned away from the needs and concerns of local communities, and prioritised private and foreign investment for industrial and infrastructure development. In an agricultural State like Orissa, with an abundance of natural resources, such an approach, combined with lack of concern for environmental checks and balances, has already become a recipe for disaster. Yet, the state hides behind the excuse that earlier efforts have not resulted in any tangible development of the tribal regions so far, and that this is now the only alternative. The rhetoric of development and foreign investment is now backed by a Resettlement and Rehabilitation Policy notified by the Government of Orissa, which promises to recognise the voice of the people. On the ground, this takes the form of placing armed police forces wherever such voices try to make themselves heard! Violence against and repression of tribal people is epitomised not just by

¹ Work began in 1981 under the banner of the Social Work and Research Centre(Orissa) and AGRAGAMEE was formally registered in April 1987.

the Kalinganagar incident (January, 2006) but by the whole pattern of responses by the administration in different districts to the situation of local communities as they struggle at the margins of survival. Thus, even as distress migration of people in the Kalahandi, Bolangir, and undivided Koraput (KBK) districts increases and the numbers go up into lakhs in any one season, the Government is too apathetic to put in place an effective programmes of employment generation. Even as sponge iron plants in Keonjhar pollute water sources, the government arrests women protesting against such defilement; progressive legislations like the PESA (Panchayat Extension to the Scheduled Areas Act) are misused by District Collectors to organise mock Gram Sabhas which sanctify destructive mining and industrial activities; as people protest, women, men, and even children are arrested and put behind bars in districts like Rayagada and Kalahandi, to make way for the Sterlite and Utkal Alumina International Ltd.

Opportunities and Threats

The policy is to open up Orissa for investment in mines, industries and commercial agriculture and forestry. Special Economic Zones are being proposed and promoted, but in so doing, not only are the livelihoods of local communities affected adversely, but entire eco-systems are destroyed, with major and complex river systems affected. Several groups have demonstrated the false premises on which environmental clearances have been given to corporates, and the shoddy methods adopted by the latter. Yet the Government continues to promote corporate sector interests despite protests and resistance almost all over the state. The question is: why, if corporatisation is the way to develop, don't people want it? The reason is perhaps that people do not want the impoverishment and marginalisation that follow the establishment of an industrial or mining unit in an area. The stories of badly implemented rehabilitation schemes have become the sad history of the tribal and rural people almost all over the country.

In such a context, even progressive legislations like the NREGA will solve little, unless the Government seeks to implement it by building on the resources of the local communities, and the rich natural resources of the state. At the time of writing, (mid 2007) implementation of the NREGA is far from

what it should be. Seven months into the scheme, few villages communities have received the job card. There is little understanding even amongst the Sarpanches and the Secretaries of Panchayats of the rules that govern the Act. The people know even less, and the voluntary nature of the Act, which is its primary strength, allowing the people to register, empowering them to demand and avail of employment, and providing cards to each family so that they know how much they are entitled to, is completely lost. The Act is treated like all other constitutional provisions: just so many more leaves added to an irrelevant and obsolete document.

Today, tribal Orissa epitomises acute poverty and hunger, displacement and distress migration, socio-economic and political exclusion, livelihood loss and food insecurity, declining quality of life and poor natural resource management. Nearly a fourth of Orissa's people, over 7 million in number, are tribal, and Orissa has the most number of 'Scheduled Tribes', 62 in all. Yet, the percentage of tribal population here shows steady decadal decline, and Districts with mainly tribal populations, like Koraput, Keonjhar and Mayurbhanj, have the highest rates of decline. The 'KBK' areas in particular are among the poorest in the world, presenting a complex picture of underdevelopment, resource degradation, socio-economic exploitation, a weak political role for tribals, and poor infrastructure.

Regional disparities within Orissa too are wide, between eastern coastal districts and southwest tribal regions, with coastal districts controlling the state's economic and political pulse as well as commanding a major share of resources. Investments in western and southern regions have been infrastructural and industrial, which have done little for human development there. This has resulted in the inland regions of the State remaining largely underdeveloped, with some of the worst human development indicators.

The Impact of 'Development'

In the tribal regions, 'development' itself has, in fact, been the worst enemy. The unique self-supportive relationship between the ecosystem and the socio-economic traditions of its people that sustained life here for centuries has been usurped by market-led

development, commercial excess and state apathy, with liberalisation, globalisation and privatisation following, so that the really poor find it hard to gain from either welfare or development.

Natural Resource Management in tribal regions is inextricably and ecologically linked to human securities of all types. Even now, traditional village governance systems have great operational strength. But over time, much of the tribal polity and social fabric has been eroded, control over land, forest and water usurped, and tribal self-reliance and self-esteem broken. Extractive use, leading to large-scale destruction, was absent earlier. But now, access to natural resources and control over their use and management is being taken away from those who valued the resources most. In Orissa's context, these would be tribals in general – and women in particular.

The vulnerability of women in tribal society is extreme, yet ironically, like in many peasant economies, they also play the most vital roles. Full of drudgery, theirs is a life of incessant physical toil, taking a toll on their health. Despite their relatively greater freedom, they have very little role in village/ Panchayat decision-making, or representation in government programmes. It is true that some demographic indicators like sex ratio show a positive trend in the tribal regions. But this is far from indicative of the actual status of women, as a look at other indicators like literacy rates, health status, and IMR will show. Increasingly, migration is resorted to by the men. Women suffer the most in such cases, as the men often return with cash savings, which are barely enough to service the debts incurred in their absence.

Globalisation and marginalisation are two sides of the same coin for the nature-dependent tribal people. Market-led globalisation and industrialisation take the form of anti-poor state policies that, without being called so, impact tribals directly and adversely, marginalising them in every sense – taking away their lands and livelihoods, rights and roots, voice and dignity. Notifications to evict those staying in forestland after 1980 are an example, as most tribals have no record of land possession before 1980. To promote commercial cultivation, large patches of tribal land are encroached upon, restricting the entry of local

communities and directly threatening livelihoods. Ironically, those who depend most on land, water and forest have the least say on their use, preservation or management.

Planned Social Intervention

To address the several issues of underdevelopment in the tribal pockets, AGRAGAMEE began with a series of discussions and dialogues with the community, aiming to increase mutual understanding and knowledge, based on a radical vision of human development and social change, which led to the formation of local organisations to ensure justice and self-reliance. AGRAGAMEE's experience of direct intervention in eight districts – Rayagada, Koraput, Nawarangpur, Malkangiri, Kalahandi, Nuapara, Phulbani and Mayurbhanj – and indirectly through partner-NGOs in others, has played a significant role in mainstreaming the issues of inequality and exclusion. This has also influenced policy and state response, and helped tribal communities to advocate for their basic rights.

The Strategy

Capacity-building and advocacy efforts in tribal Orissa have had significant positive impact, led to wide social mobilization for poverty alleviation and actually brought about change over time. (Fig 1) The successes of the women's federations, CBOs (community-based organisations) and SHGs (self help groups) with whom AGRAGAMEE has worked, are an indirect result of these efforts. Capacity building has been taken up at different levels, with village leaders, representatives of village level organisations, elected representatives at the village level, as also with specific interest groups like farmers, watershed users, teachers, and wage-labourers. Over the years, these efforts, which have always been dialogical in nature, have helped build a strong bond with the community, and strengthened actions in the field.

Models of Community Participation

Building models of community participation for the protection and conservation of natural resources, with the focus on livelihood and regeneration, has been an important objective. AGRAGAMEE's efforts have helped significantly to create sustainable avenues for socio-economic emancipation. Even more significant has been the

impact of capacity building with representatives of village level organisations. Members of Mahila Mandals and youth clubs have been equipped with tools of analysis, informed about the different government programmes and schemes, and how they work. This has had long term impact in helping people assert for better delivery of services, pressuring both elected representatives and government functionaries for proper implementation, and demanding to know their entitlements. For example, in 60 villages in Kashipur Block, people were able to check misappropriation by private dealers, and select their own dealer for the Public Distribution shops. In another major incident in 1994, people came to know that they were being paid at the old rate of Rs.11/- per day, when the Minimum Wage rate had been raised to Rs.25 per day. Their organised demands, backed by AGRAGAMEE's support, helped them realise Rs.30 lakhs of wage payment in arrears, under the multi-crore Orissa Tribal Development Project.

Some of the most outstanding outcomes have been in the efforts with farmers, which have strengthened

watershed and NRM programmes significantly. As the majority of the communities AGRAGAMEE has worked with are farmers, improved production has resulted from enabling farmers to use better techniques for composting, soil fertility improvement, pest management and crop rotation. Farmers could increase their yield by 20 - 50 percent, while also adding permanent crops such as fruit trees in the available spaces.

Community Grain Banks

Community traditions of saving surplus were encouraged and have been institutionalised through grain banks, in which AGRAGAMEE provided an incentive through a matching contribution and helping people use indigenous technologies such as bamboo mats to store grain. Women's groups have taken this up seriously, and in several villages, this simple local technology is being used for a community grain bank, from which families who are in need borrow. The interest rates are initially high, equalling the amounts charged by the money lender. However, as surplus builds up, interest rates are lowered. Specially vulnerable groups are taken

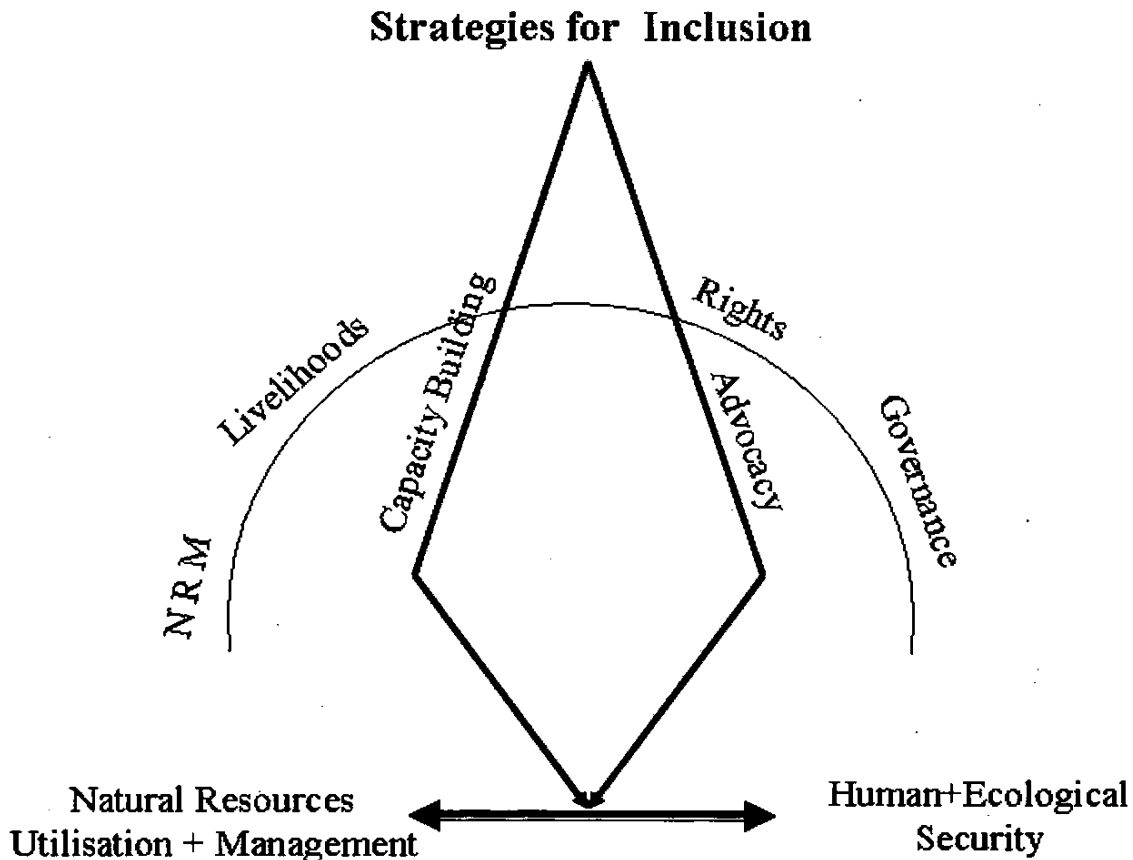


Fig. 1 Strategies for Inclusion

care of by waiving interest completely, and by overlooking previous outstanding amounts. This village-based social security system is being applied in several villages, and has been specially beneficial to landless families and old people, apart from helping the community tide over periods of drought.

Working with Pro-people Policies

A major effort in this direction was in helping tribal communities use the provisions of PESA. The activities included workshops, Panchayat level campaigns, State level and national level consultations, as also publication of a range of booklets on the provisions under PESA. The programme had a large scale impact, as representatives became more conscious of their powers, and people in the villages also demanded more participatory processes. Participation in the Gram Sabhas improved dramatically, and women were able to raise their voices, and demand accountability of their representatives. AGRAGAMEE has helped to put in place a pro-people water policy with state-wide support from different groups, including academics, civil society organisations as well as large numbers of people in the villages and tribal areas. Public hearings on water rights have helped to underline people's problems, specially those that women face in getting clean drinking water, even six decades after independence.

NREGA

With its years of experience in tribal areas, AGRAGAMEE has perceived the recently passed NREG Act as a crucial entitlement that can help in the struggle for freedom from hunger constantly waged by the poor. Awareness campaigns, IEC materials, appeals and petitions, as also workshops at the district and State level have been used to create awareness. As a result, the issue of job cards has increased, as well as applications for jobs, and demand for appropriate payment. However, the inability of the state to ensure the implementation of the programme in an efficient and just manner has been troubling, and has been brought to the notice of the state through several letters and petitions, as well as by other independent groups..

Natural Resource Management

Concerted effort has also been made to strengthen and improve tribal systems of natural resource use

and management, through programmes of watershed development and NRM trainings aimed at improving production, tree cover, and checking erosion and run off. In more than 50 villages, indiscriminate felling of trees has been checked, and more intensive cultivation has checked soil loss caused by shifting slash-and-burn cultivation. The improvement of income options through programmes such as orchard development has enabled village communities, specially Mahila Mandals, to develop alternate sources of income, improving both food security and collective bargaining power. In the village of Mankadmundi, for example, interventions for watershed development have helped the village improve tree cover on the upland slopes and enabled a fourfold increase in income through vegetable cultivation. This more intensive pattern of cultivation has helped the communities bring shifting cultivation areas under permanent tree cover, with the double benefit of checking erosion and environmental degradation, while improving availability of livelihood essentials including timber, firewood, and minor forest produce.

Several technologies introduced in natural resource management processes, including establishing contour bunds, intermixing crops, techniques of waste recycling, and alley cropping to enrich the soil and provide household needs, have first been taken up by one community or the other, and then adopted by neighbouring villages.

Women's Federations

Encouraged by women's positive response, specific programmes with tribal women's groups were taken up. Initially, it was difficult to plan interventions, as women are amongst the most disempowered, with few resources, or even education or other skills which can be developed and promoted. Savings and capacity building programmes helped to reach out to women and start dialoguing on possible areas of work. Women were intensely engaged in livelihood efforts, but always bore the brunt of exploitation in various ways. Several major issues emerged through the dialogue. The first and strongest point was the havoc caused by alcoholism. Women rose as one to address the issue of alcoholism, and soon it became a State-wide movement. In the early part of 1992, the Chief

Minister heeded the cry from the tribal regions, and banned alcohol in the tribal regions.

Ensuring Minimum Wages

A major problem related to wage payment. Here, both women and men mobilised, and took up the issue. Sumani Jhodia spoke out strongly about the lack of transparency in village works and a new government policy to implement these programmes through village committees, and not through private contractors, was initiated. In several instances, women became the village committee leaders, and ensured that the village works were carried out properly. Problems were many - engineers played with the estimate, and often, payment was withheld for months on end ; some village committee leaders even had to mortgage their land or other property to pay the labourers who could not wait so long, living as they did from hand to mouth.

However, the policy, and people's demand, helped several villages assert for Minimum Wage payment, ensure proper implementation, and develop good village infrastructure. The efforts also brought about some transparency in government programmes, enabling better control by beneficiaries.

Primary Education

One of the most critical areas of intervention has been in primary education, where AGRAGAMEE took up a series of interventions, including running primary schools, teachers' training, networking with grassroots civil society groups, and production of innovative training materials to improve teacher output, with support from the Ministry of Human Resource Development, and other agencies.

The intervention, termed "alternative and non-formal education", helped tribal children access mainstream education, by providing facilities where none existed. More than 500 children in different tribal regions were able to join government schools in higher classes as a result of this effort. In addition, development of an additional syllabus, where children were taught to analyse the economics of wage work, and of indebtedness, helped them critically understand their own situation. This has enabled children to grow up as informed and aware adults, who now take the leadership in many of the issues taken up by the village community.

Positive Results

These and many other efforts over the years – on rights, livelihoods, governance and food security – have only strengthened our conviction that, provided minimal support and opportunities, tribal communities can come out of the downward spiral of hunger-illiteracy-ignorance-poverty, and take up a process of reconstruction that would not just enhance their quality of life, but also bring about environmental regeneration at several levels. The inherent strength of the "eco-system people" like tribal communities, is their closeness to and symbiosis with their natural resource base. Women have a special relationship, as it is they who keep the food- gathering traditions alive. Having seen the positive results, both women and men have now taken up policy struggles with a will to strengthen and broaden the impact.

The Learnings

All this helped in the understanding of the dynamics of exploitation, and to realise that the web of exploitation that began with the money lender and the liquor brewer at the village level extended to ministers and national politicians and eventually to the multi-national corporations and the multi-lateral and international financial organisations. It was clear that the intrinsic relationship between the tribal people and the environment was crucial to conservation. The value of tribal traditions and knowledge systems was underlined.

Struggling to use the positive laws, enemies and friends became visible, as did the limitations of the legal system. The limitations of civil society groups, who seemed to begin in earnest when there was an issue of violation, but withdrew at the crucial time of taking an absolute stand, and left the tribal communities in the lurch, also became apparent. Unfortunately, the norm in the tribal regions was violation of basic human rights. Tribal communities have little experience of justice, as they have lived with injustice all their lives. But history shows that things had been different ; perhaps the response of the tribal communities today is due to the years of violent repression, continued in the present times by more subtle, but just as emphatic ways.

Another discovery was that the rules and laws in practice in the tribal region were quite different from

the laws and principles laid down in the constitution of the country, but were much more strictly followed. One example which continues to this day is "the law of the PC" (percentage). For any works taken up in the tribal regions, in fact, over most of rural India, (since the reach of this unwritten law is much wider than the tribal regions,) a certain percentage has to be kept aside for the different functionaries involved, including the political representatives, right up to the concerned Minister!

The qualities, abilities and disadvantages of tribal women who were widely excluded from decision making processes, as also from much of the benefits of development and welfare programmes, beginning with primary education, also came to the forefront. Women form the backbone of the tribal communities, providing the physical labour that helps not only the community, but also the parasitic non-tribal classes and castes that subsist on the labour of the tribal communities. Women were usually silent, subdued, and overshadowed by men, who tended to be relatively much more vocal, and loudly suppress women who spoke in meetings and village gatherings. However, later it was found that women had much more strength to take forward organised struggles and sustain them. They were also much more fearless in voicing dissent, and have demonstrated the ability to confront the system at different levels, from the village mahajan, to the District Collector and the Panchayat Secretary, who would try to shut them up with a display of bureaucratic authority. As the natural protectors of the eco-system, they had a much greater understanding and conviction about the issues involved in struggles for land and livelihoods.

Women's Struggle for Justice

The struggle of the tribal women followed a natural and logical course, taking off from AGRAGAMEE's efforts to help them become self-reliant and empowered. The first step was encouraging women to have collective savings. This went beyond the SHG models, seeking to include women from different villages and Panchayats, and women of different communities. Primarily, it brought together women of the tribal and SC communities, itself an achievement, as these two communities have always viewed themselves antagonistically, and have been used by the upper castes to serve

their own interests. In different districts, such as Kandhmals, Nawrangpur, Kalahandi, and of course, Rayagada, where AGRAGAMEE is based, women came together for collective savings, soon broadening out to other struggles. Discussions and sharing led women to realise that with their collective efforts, they could counter such exploitation as underpayment, non-payment of Minimum Wages, non-delivery in programmes such as the ICDS, and non-attendance of teachers.

In time, women also realised that now they had a relatively large corpus which was not being used. They did not have the confidence to enter into thrift and credit activities amongst themselves, as with their high levels of economic insecurity, they did not really consider themselves creditworthy. The dialogue on this issue led women to realise the huge exploitation that they were facing in the realm of minor forest produce. And thus began a historic struggle for rights over non-timber forest produce (NTFP) by tribal producer communities.

The Challenge of Rights to Resources

The struggle began in the picturesque and remote Panchayat of Mandibisi. This region, rich in forest produce, was the seat of maximum exploitation. As women came together, they saw their organisation, the Mandibisi Mahila Mandal, as helping them find a way out of the perpetual poverty enforced by the nexus between the business class of 'Kumties' and the moneylending Brahmins. The initial stages of the struggle brought them instant success, as they met the Chief Minister, who was sympathetic to their issues. However, this did not mean much, as the Forest Department was loth to give up its controls over even such items as seeds from the forest, and refused to submit to the commitments made by the Chief Minister, who had sent out a circular about the discussion, listing out the agreements. In time, the Chief Minister also changed, and things went from bad to worse. So the women, encouraged by the struggle, stocked up hill brooms grass, an item found in abundance in the area, and than asked simply for permission to sell it in the open market.

This was denied to them time and again, till they finally decided that at least they might bind it into brooms and then see what they could do. The

training they received for this increased the visibility of their efforts, and also posed a new threat to the TDCC (Tribal Development Cooperative Corporation) and the Forest Department, who came with their forces, and their vehicles, beat up the men, forced women to lift the road block, and seized the stock of brooms so painstakingly collected and bound into brooms by the women. AGRAGAMEE, like everyone else who knew about the case, was aghast. At the national level, sympathetic bureaucrats took it up, and the media showcased the unfair dealing with the tribal women, as at the same time the State Government was allowing licenses for a multi-crore steel plant.

Facing Unfair Practices

On the ground, however, the women of Mandibisi Mahila Mandal were harassed no end. They were booked in police cases, and their own FIR against the officers taking their brooms away was booked with much difficulty. They had to go to Rayagada, Jaipur, and Kashipur several times for the hearings. And the NTFP policy remained the same. But the media highlighting of the issues and the tribal women's struggle did make the Government sit up, and give a partial lease to Ama Sangathan for purchase, processing and sale of hill brooms in the Kashipur forest division. However, this was a huge challenge, as several permits had to be obtained, even for moving stock across Panchayat borders, as also for moving stock out of the District, and to markets out of the State. Each permit was time consuming, and involved several trips to the Block and District headquarters. In addition, royalty was also being charged, and each year, women were paying Rs.30,000 to Rs.40,000/- as royalty to the Forest Department. AGRAGAMEE provided the back-up, negotiating through the intricate rules and demands of the forest laws. Traders saw the quality of brooms, and placed orders for stock. Yet, the financial burden on the women's group as well as on AGRAGAMEE, which had taken this up without funded programmes, was high, as dealing with Forest Department demands, as well as developing skills for processing, were going on at the same time. But the tight rope balance continued.

At the same time, several other civil society groups took up the issues, as it affected people in their own Districts. The Utkal Forest Produce, a business

group which had the lease for 30 NTFP was strongly questioned for having a State-wide monopoly, and not benefiting the tribal communities in the least. The Government was also questioned, as the Utkal Forest Produce had not paid royalties to the tune of several crores. Towards the end of the '90s, all leases were cancelled. By this time, however, Ama Sangathan was being charged a royalty of Rs.1.5 lakh for its collection of 4 tonnes of brooms, as against a royalty Rs.35/- for a tonne of bauxite being charged to Utkal Alumina International Limited and others prospecting for alumina in the Block!

This high level of royalty was subsequently withdrawn, as several appeals led to questions and pressure from higher levels. In 2000, with the need to conform to PESA and mounting criticism from civil society groups and media, the Government of Orissa changed its NTFP policy, allowing a small victory to the tribal women of Mandibisi and Kashipur, even as the cases against them continued. In due course, the cases were also dropped. The women's groups were now on to a different level of struggle— with markets, profits, and sales. But, their spirit of struggle remained alive ; only now, they were up against much larger forces.

The Struggle Intensifies

The struggle of Mandibisi Mahila Mandal and Ama Sangathan for rights to NTFP only foretold the much larger challenges ahead to their life and land. Even as the tribal women scored a victory for the leaves and grass of their forests, survey teams on assignments from private and multi-national corporations were coming into the area, studying the geo-hydrological features, the micro-climate conditions, and the flora and fauna in different Panchayats. People gradually learnt that they were about to face a second wave of displacement. (The first was from the Upper Indravti Hydro-electric project in 1985, less than 50 kms from their villages as the crow flies). Women and men alike began to question this process, writing petitions and appeals to the Government.

These were not well received and a period of violent repression began. In several instances, the men were bought off. However, in the villages, the women took up the issue, and stopped survey teams and company vehicles from entering the area. Women

were also in the forefront of rallies, demonstrations and protests. Their convictions helped men also to come forward and strengthen the movement. This struggle for land and lives of the people of Kshipur has gone on for 15 years now. The people have seen new forms of repression and violence that a Government which they elected to power can unleash on them. The state has chosen to ignore this assertion by the people their rights and has unquestioningly aligned with corporate interests, providing police protection to the mining teams, and implicating the more prominent tribal men in false cases, making arrests and taking other repressive measures, but the resistance continues, with the leadership of both men and women.

Women's Role and Participation

Traditionally, the tribal women in Koraput and Rayagada districts are quiet and barely conspicuous, except in large groups at work sites, providing most of the labour for any work, agricultural or construction, that is taken up in the region. Ever faithful to the call of their innumerable duties and responsibilities for the survival of the family and maintenance of the village and its surroundings, they have accepted the culture of silence imposed on them for centuries. Theirs is a tradition of work and labour, which, with all its repressive implications, has given them a certain place and value in their community. For example, a man has to pay a definite price to get a wife in Kandha society. Even then, this marriage is not binding. If it does not work out, the woman is just as free as the man to marry again. But there her rights end. Having paid bride price, the husband claims complete ownership over his wife, and she has no rights, not even to her children. If her marriage breaks up, she must leave her children behind. The tribal woman can claim no right to any property; all she has is her ability to slog day in and day out. Her community has a good worker in her, and does not bother with any benefits like formal education, so much so that by and large tribal women are largely unfamiliar even with the mainstream Oriya language, putting an invisible barrier between them and the outside world.

Politically too, these women have been almost completely sidelined. The few who have come forward to represent their community in the Panchayati Raj institutions as a result of the one-

third reservation policy, usually become tools of the existing political system and are hardly able to represent women's needs or priorities. Outside interventions have been primarily through the menfolk, and that too, through the one or two percent of the menfolk who represent the traditional leadership of the community. So programmes of development have catered to the priorities and perceptions of only this small group rather than to critical survival needs as perceived by the women. On the other hand, some interventions have even victimised women and forced them into illicit relationships. The lives of tribal women have been much disrupted, whenever developmental interventions have been taken up in these regions.

Silent they may be, dumb they are not. The tribal women of Koraput and Kalahandi are not unaware of the injustices done to them and their children for generations together, and have finally decided to break out of their passivity and assert their rights. Since 1998, the women, backed by the men in Kucheipadar and the neighboring villages, have resisted the interventions of the mining companies to set up a bauxite mining and processing unit, and refused to give up their land, livelihoods and homes.

Mahatma Gandhi saw the tremendous strength of women in social movements and drew them into the freedom struggle. Amongst tribal and Dalit groups, women have proved time and again their importance in struggles for human rights and survival. The examples are there within Orissa itself; in the struggle against the missile test-range in Baliapal, women were in the forefront, providing the local leadership, and leading the march; in the anti-BALCO movement, women came out into the streets and blockaded roads, to be arrested. Now, once again, in Kuchiepadar and in other Panchayats of Rayagada and Kalahandi, women have stepped forward to take up the struggle for their survival and their rights, their demands echoing those of the women of Baliapal and BALCO for justice.

A Resistance Movement

But then, the state listened to the voices of the women, of the people. Today things have changed, with a state which puts profits before people, and in its eagerness to liberalise and attract the foreign investor unleashes violence on its own people.

On 16th December 2000, police entered the village of Maikanch, and beat up tribal women. Hearing

their cries, men rushed in to the rescue. The police fired into the crowd, and killed three people. This fact has received much publicity, but what is much less known is that the repression continued even after the report of the Justice PK Mishra's Judicial Commission of Inquiry. The report clearly blamed the police for the deaths in Maikanch .

"There is no doubt that the action of the police in assaulting two tribal women had the effect of magnifying the tension. Even at that stage, when the people were retreating, there was no apparent danger. ...Many of the witnesses have stated that while retreating, some of them were walking back at a normal pace, which would go to show that there had not been any violent action from the side of the villagers initially. The statements made by several tribal people that there was indiscriminate firing, which resulted in the death of three persons, and three cows, and injuries to several other persons appears more probable".

However, the Government has paid little attention to the findings of the Judicial Commission, apart from presuming that the Commission's statement, "We cannot afford to remain backward merely for the sake of so-called environmental protection" is a go-ahead for resuming violent repression of the tribal community in order to promote mining activities. After the report was tabled, the Utkal Alumina was given all kinds of support from the Orissa Government and a loyal press. A huge meeting in the Panchayat headquarters of Tikiri was organised, with a "hired" public and then, a Gram Sabha was also manufactured in three villages with the presence of 500 armed policemen, and the District Collector accompanied by seven Block Development Officers, and eight Tahsildars. This was followed by further repression through a *lathi* charge, in which arms and legs were broken.

Conclusion

But the people have not been cowed down by these counter-moves of the state, and have sustained their movement with courage and conviction, involving both men and women. In fact, the women have been much more articulate in apprehending the changes that would be forced on them by the mines and the factories, and have refused to accept the monetary carrot hung before them. A few men have indeed

been drawn by the lure of jobs and money, and are being cultivated by the companies, but the women are unanimous in their refusal to give in to these pressures of a market-driven cash economy.

Till now, the administration had retaliated only against the men leading the movement, making them out to be criminals and anti-social elements. Now however, the battle lines are clear: The administration is retaliating against the people—women, men and children- who are struggling for their survival, not indulging in criminal activities. Women and children, along with the men, have been grievously injured, and imprisoned on false charges. Who then is indulging in criminal attacks— the administration, or Makari Majhi, a grandmother of three, booked in criminal cases she does not even understand ?

The efforts of AGRAGAMEE to ensure inclusion of the tribal people, particularly women, in development processes have strengthened the voice of the people, and highlighted not only the several contradictions, but also violations of the fundamental rights of people in the tribal regions. It has helped women fight for justice on issues of survival and human rights, more fundamental to them than issues of gender discrimination. It has underlined the strength in rural and tribal women, and the resources the country is losing by its continued apathy to primary and secondary education, with a discriminatory attitude towards girls. It has also helped tribal communities access technology to add value to their products, and to increase their self-image and confidence, as they provide employment, handle machines, and sell on their own terms to a larger urban market. But even as the tribal communities have raised their voices, have insisted on inclusion, the ugly face of a government democratically elected for, by and of the people, has also been exposed. Whatever gains tribal communities might have made in the eighties and nineties, culminating in the passing of PESA in 1996, these are being brutally nullified by a state impatient with poverty, impatient with the very people who have helped preserve her natural resources over the centuries. Such attitudes spell a recipe for large-scale disasters, for when we do away with the "eco-system people" we also do away with the ecological knowledge systems that helped sustain and nurture life and nature on this planet.

Participatory Planning at the Panchayat Level

Nalini Nayak, Philip Mathew and Seeta Dasan

The Self Employed Women's Association (Kerala) a trade union of women from the unorganized sector, was involved in a programme with the Vilappil Grama Panchayat to develop norms for sustainable settlements(2005-2007), with the technical support of the environmental NGO, THANAL, in the first year.

The Background

Kerala is one of the States in the country where both political and economic decentralisation has been seriously undertaken. and there is a lively involvement of women in public life in the rural areas. In this process, Panchayats have been grappling with local issues, and looking for innovative ways to meet local people's needs. Making decentralized governance a reality is a gradual process, and in order to facilitate this process, the Kerala Planning Board elicited the involvement of people and voluntary organisations. Although there was much euphoria in the first plan phase (1994-1999), this dwindled with the change of government. But people's expectations remain high, and sustaining decentralization and its democratic base is a long and challenging task.

On the other hand, the "Kerala model" of development, post-Independence, is also highly acclaimed. The State has achieved a high level of social development at relatively low cost. The usual indicators of women's development like low maternal mortality, low child mortality, literacy and high level of education are also very impressive. But this has not led to high levels of women's work participation or even greater levels of women's participation at the various levels of decision-

making. Moreover, the incidence of violence against women is relatively high, and women's freedom of mobility highly restricted, all indicating that Kerala is still very much a patriarchal state.

Having said this, Kerala, in many respects, has been part of the global economy for long. Being a densely populated State, it has concentrated more on cash than food crops. This makes it highly dependent on food imported from neighbouring States. It is also an acknowledged fact that such foods, mainly vegetables and bananas, are not only grown with high levels of chemical pesticides and fertilizers, but are also preserved with other chemicals for greater shelf life. One of the causes for high incidence of disease and morbidity is ascribed to such contaminated food.¹ A large part of Kerala's income also comes from foreign remittances – "a money order economy" as it is called. With no local industry, unemployment among those who cannot migrate for work is also high.

SEWA's Perspective

The majority of the members of SEWA (Kerala) today are women who have lost work in their traditional occupations like agriculture, fish vending or basket making. The main reason for this has been the loss of access to natural resources on which they depended for a livelihood, as a result of other developments in the State. They now find work in the urban service sector as wage workers. The transition from self-employment to poorly paid wage work is not only demeaning, but also fragile, as there are no security nets and work cannot be guaranteed. Such workers, of whom the majority are women, are totally dependent on cash incomes.

¹ N.Manju *Health Status of Women in Kerala: Beyond Indicators* and S. Sivasankaran *The Broadening Waistline of Keralites: the Diet Link, in Kerala, 50 years and Beyond*, Ed. C.C.Kartha, Gantha Books Trivandrum, 2007

From self-employed they become wage workers in a sector where their rights as women and workers need to be safeguarded, and this is the main thrust of SEWA. With the rise in prices of basic necessities, their cash incomes lead them nowhere. They grow increasingly impoverished and indebted, with no recourse to education or health services for themselves and for their children.

As Kerala moved into decentralized planning in the mid-1990s, and transferred both political and economic power to the Panchayats, SEWA thought it an opportune time to assist in the decentralization process, in order to emphasize how local governments could assist women to safeguard their land and get economic benefit out of it, so that they are not dependent on wage work. The focus would be to help the Panchayat understand the meaning of sustainability, and develop norms to secure the livelihood of the poorer groups in the Panchayat. SEWA was aware that the Panchayat is part of a larger macro-canvas and hence working on sustainability issues would have limited scope, but it would at least create a foundation of information, based on which people could make demands for budget allocations and the creation of norms.

SEWA believes that a framework of sustainable development is also basically a feminist perspective of development. Sustainability relates to maintaining the balance between humans and nature, acknowledging the inter-connectedness and inter-relationships between the natural and human systems. Mutual interdependence is a living process/living system which has to be sustained. A feminist perspective on development also puts life and livelihood center stage, and believes in the mutual interdependence of labour between male and female. Sustaining and nurturing life cannot be commodified. The centralized, controlled, monetised and very compartmentalized system on which modern development focuses results both in violence on women/humans, and on nature and the natural cycles. Such development is patriarchal, and is the antithesis of sustainability.

Panchayats are faced with daily problems of people who need to eke out a living. Though several

technological alternatives are available, these are not at their disposal for various reasons. SEWA was keen to make this knowledge available to local people and took this opportunity at a time when the SDC-CapDeck² provided funds to strengthen local governance in mid - 2004.

The Social Intervention

The Panchayat that was chosen for the intervention is 15 km away from the Trivandrum city centre, where SEWA also has its rural centre. The total population of the Panchayat in 2001 was 34,079 with a literacy level of 82.14 percent, but a female literacy level of only 77 percent. Being so close to the city, but still with 40 percent of its population dependent on agricultural or related labour, SEWA thought it important that the Panchayat prevent the city growing over it in a pervasive manner and dispossessing its people of its resources. This could be achieved only through the active participation of people who understand their role in local government and know about norms that can be followed and alternative strategies for sustainable livelihoods. The entire programme was called "Towards norms for sustainable settlements", but here only the relevant aspects are being shared.

This was indeed a planned social intervention, as it was also time bound. It worked during the first 18 months in 4 wards of the Panchayat, and moved into the whole Panchayat in the next 12 months. Although there are several aspects to this intervention – the foremost being the empowerment of the local governance system, what is shared here is how women got involved in the various aspects of understanding sustainability and creating livelihoods, and finally got the Panchayat to devote Rs.500,000 towards women's strategic needs.

The First Phase : Exploratory

The first 14 months was an exploratory phase, and the objectives were

- to build a team of knowledgeable and skilled local individuals locally
- to develop an awareness on the concept of sustainability

² Swiss Development Corporation-Capacity Development for Decentralisation in Kerala – an autonomous fund created by the Kerala Government

- to collect data both on physical and human resources and
- to start creating some viable livelihood models.

The efforts of the first 14 months work led to a participatory study of gender issues in the Panchayat, which then fed into an elaborate process of developing a Women's Policy in the Panchayat in which the elected women representatives (EWRs) took the lead. The work can be seen in the four following stages.

1. **Creating the team:** Two grassroots workers were selected by the Panchayat ward members, two from each ward, making a team of eight. All turned out to be women, although the criteria given by SEWA was for one man and one woman.³
2. **A series of input sessions and a good simulation game** was organized, so that this team could evolve its own criteria for a sustainable settlement. They articulated sustainability as follows: *To create the base for a future generation that would be healthy and live a responsible and meaningful life.*
3. **Data collection:** physical and human resources
4. **Creating viable livelihood models:**

The Mapping Exercise

The team⁴ then got involved in a physical resource mapping process. For this, they were joined by a larger group of volunteers that the ward members selected from the SHGs created by them. Among them were also a few boys. For this exercise, again, there was a training about how physical resources can be mapped and how to identify the different kinds of land use. This was a tedious but extremely rewarding process because the entire group began to understand the nature of the material base of their wards. They got to know the physical features of

every inch of their wards intimately. This was also a chance to relate to people in the wards, explain what they were doing, spread awareness about issues of sustainability, and invite interested people to wider discussions. So the awareness spread.

The group had realized that a large part of their forests had been cleared, that cash crops were dominant, for which chemical fertilizers were used, and that paddy fields were increasingly being filled up, meaning the water holding capacity of the area was being reduced. They also realised that rocks were being blasted for granite and that large quarries were being created, which could also be the reason for creation of clefts in the rock, causing ground water to run off, besides causing respiratory diseases among those who worked in and lived around them. Traditional water ponds were either not maintained or were being reclaimed. There was still a great dependence on well water, but they mapped the area to understand where and when the wells dried up. The entire carbon and water cycles were understood in the context of their own area. This was the knowledge base on which further interventions were built.

The next step was a long process of what we called "human resource mapping". The same large team of women again undertook this. The objective was to get an understanding of the human profile of the four wards, the education, skills and work experience of the inhabitants. This material was very revealing⁴

To begin with, the areas identified for action were: livelihood revival through regeneration of wells and conservation of water sources, regeneration of local varieties of mangoes, local cultivation of vegetables and more organic farming. Regeneration of wells began and organic farming was introduced.

These four wards happened to be also the most drought prone in the Panchayat. Hence the first

³ Unemployment is among those who have least education, the largest number of whom are women. Men, even if minimally educated go for manual work, and the men of this area are in high demand because of their manual skills for which they earn from Rs. 170/- to Rs. 200/- a day. Our programme offered to pay the volunteers Rs. 2,500/- as this was not a full time work. This is also one of the reasons why men did not come forward.

⁴ This group of field workers received a monthly remuneration. CapDeck also provided funds for the team leaders who were part of SEWA and for the coordination of the programme. Input sessions and exposure programmes for both Panchayat ward Members and local people were also financially supported.

⁴ See appendix 1

demand of the people was for piped water. The discussion on water then commenced with technical inputs from a person who had done a great deal in terms of water regeneration. Several possibilities to regenerate wells came up along with actual demonstrations. Although this happened towards the end of the monsoons, the results were immediately felt. This had an effect as others also tried to do the same, to some extent.

Sustainable Livelihoods

Encouraging the agricultural labourers to move into organic farming was the next step. Here again it was mainly the women who came forward. It was the women who were anxious about their children getting ill by eating food treated with pesticide. It was also the women who were keen to be able to earn a little extra money if it was possible, as there was not much other gainful work for them locally.

Again, there were several input sessions in which both men and women took part, and in a few weeks there were several households with their own kitchen gardens, making their own organic pesticides and sharing seeds, with women taking the lead. A few were even able to cultivate surplus for the market, encouraged by the fact that THANAL also organized an organic bazaar in the city, where farmers could bring their produce. THANAL organized a collection system and so the farmers could give in anything that they thought was surplus to their own needs, not only the vegetables they grew, but anything else from their gardens like drumstick leaves, wild berries and fruits, flowers, banana stems, and eggs of country fowls. This was also an attempt to provide city dwellers with traditional food ingredients. At one of the sharing sessions among this group one woman, said after a year, *"This year my children haven't fallen sick, I haven't had to take them to the doctor. Moreover I have been able to make at least Rs.1000 a month just out of my 15 cents of land. I do not need to go anywhere else to work"*.

Towards the end of the year, just as a group exercise, the team of volunteers did some intensive work on developing norms for a sustainable settlement. What they did and later shared with a group of experts from the city was acclaimed. The ward members (two men and two women) were also very appreciative of these women, and although some

of them did feel threatened by the fact that a team of local women was now so knowledgeable, they acclaimed the work in public. At the end of the year, the team presented their findings to the Panchayat (a new Panchayat had been elected by then and one of the volunteers, a woman, had also been elected), and did a social audit of their programme. This encouraged the President and the other members who suggested that this programme be pursued in all the nineteen wards of the Panchayat. However, SEWA suggested that before doing that, the Panchayat should agree to do a detailed gender status study in which SEWA would also help and this too was accepted.

Interim Period

Doing a gender status study is mandatory in every Panchayat in Kerala, but at this time very few Panchayats had done serious documentation. When the Panchayat President accepted this suggestion, it then moved through the official process of getting the approval of the Panchayat committee. Again all the ward members were requested to provide participants who could be trained as investigators. A group of around 40 women, mostly the leaders of the ward SHGs came to SEWA for a training. Although all these women belonged to the Kutumbashree groups, and despite the fact that two terms of Panchayati Raj were already completed, and the radical component of a 10 percent budget allocation for the women's component plan had been integrated, none of these women had had any exposure to issues of gender. Hence this study was used not only to collect data, but also to raise general awareness on gender issues and the functioning of patriarchy in the ongoing process of development. The volunteers who had initially been trained were able to act as local resource persons, being able to relate ongoing issues to the reality of the Panchayat.

The study itself was a detailed and time-consuming but educative process. It was decided to have a sample size of 300 women respondents and 100 male respondents (the latter would be interviewed separately by three male field workers). Besides, this, there were focused group discussions, and also discussions with specific groups like adolescents, aged women and women who had stood for election at some time in the past twelve years. The study was a revelation for all the investigators, and as the

data was analysed, there were important findings for the Panchayat as well. But the findings also had then to be ratified by the Panchayat, and this was another process that was utilized as a means of empowering the newly elected women representatives (EWRs).⁵

Second Phase: Expansion to the Whole Panchayat

The programme then moved into a new phase covering the entire Panchayat. There was now a well-equipped local team to carry the work forward. The main aims of this phase were:

- to get the ward members involved in an interactive process with the local people, so that the project planning of the Panchayat would be more people and need oriented (40 percent of the state funds are directly handed over to the Panchayats for local development and they have to decide on its use).
- to strengthen the role of the EWRs and help them become active decision makers in the Panchayat, and facilitate their work through the development of a women's policy
- to pursue the bio-models towards sustainability in developing working and managerial skills among women
- to create some institutional mechanisms by which the participatory governance process towards sustainability would continue

The focus here is on the latter three issues and just those aspects relevant to this case study.

The Technology Dimension

In developing the livelihood bio-models, the aim was also to see that women develop both an understanding of sustainable livelihoods and the skills to sustain them. A livelihood bio-model, in our understanding, is one which meets a household's basic needs from a mix of human labour and bio-mass.

The first year had concentrated on organic farming and women had learnt about organic manures, pesticides, and the need and methods to preserve and multiply seeds. Two important income-

generating possibilities already existed in the village, but in which women had very little part. The first was the coconut economy – all controlled by men, from the climbing of the trees, to the shelling of the nuts and the making of coconut oil; and the other was animal husbandry. There is a growing trend for people to cut down their coconut palms because they do not find labour to cut the nuts. Although women do the major work of caring for cows, the cows are milked by men, and in this case by migrant labour, who also have to be paid Rs 250-300 a month. As a result, there is a high dependency on milk from Tamil Nadu to meet requirements in Southern Kerala.

So we thought women should learn to climb the coconut trees and then be organized to produce coconut oil, and that they could also be trained to milk cows so that the cow population would increase. Both these things were laughed at in the Panchayat, but once the trainings were announced, women signed up to participate. The more successful was the milking of cows, for although only 16 women came forward for the first training, another 35 soon followed. Quite a few women decided to buy a cow, once they knew that they could milk it themselves. For the coconut palm climbing there were not that many candidates, also because the contraption that assists the climbers was heavy⁶. Two women perfected the skills and can now easily earn Rs. 100/- a day in their own surroundings. SEWA is now trying to improve the quality of the contraption to make it lighter, so that women can easily transport it themselves and there would be more takers.

To complete the first round, inputs were given on the use of energy for cooking and lighting. The logic of high dependence on electricity coming from big dams and its negative impact on local populations was discussed. The dependence on firewood, which is becoming more expensive, was also discussed, in relation to societies that create waste and then dump it in some one else's backyard. Hence there was exposure to the transformation of waste into wealth – recycled paper and biogas. Though domestic models had been installed with a subsidy, the costs were still high⁷. SEWA then developed,

⁵ see appendix 2

⁶ This device has been developed by the Agro-Industries Corporation, Trivandrum.

drawing from other experiments in Kerala, a smaller model with only kitchen waste and this caught on. Together with this, hay boxes and smokeless choolas were also popularized as a means of conserving energy.

SEWA then organized a managerial skill training for the local women's SHGs. Among them were women who had undertaken the production of coconut oil but were only providing the labour component. There were also women who were producing soap in the same way. For the next phase SEWA has now offered to assist the Panchayat in organizing a marketing outlet for these groups in an integrated manner, and help them be totally managed by the women. SEWA has also organized a paper unit for the transformation of waste paper and tailoring waste into hand-made paper. This unit is presently run by an unit of members of SEWA but located in the Panchayat, so that people can see for themselves how waste can be transformed into usable products. This has been accompanied by an anti-plastics drive and a programme in the local schools for consciousness-raising and the starting of nature clubs in the schools.

Now that several of these devices are in use and units in operation, SEWA will monitor and study what real impact has been made on energy conservation and household incomes.

Feedback from Stakeholders

The programme ended with a social audit, with the objective of encouraging transparency in local governance. Besides the programme team giving a detailed account of the progress of the work and expenditure, some of the participating women shared their experiences with the representatives of the Panchayat. Some of the poorer women had successfully made use of all the components, thereby making their household itself a sustainable unit—with a mere 10 cents of land and an irregular income from their husbands, who are daily wage workers. Their fuel expenses had reduced by 70 percent. One who had installed a larger biogas plant said she no longer needed cooking gas or firewood, and cooking was both easy and clean. In fact, she had more gas than she needed. Even those who were too poor to instal anything but the smokeless choola and the

hay box, said that their fuel expenses and cooking time had been reduced.

All these technologies also contribute to the diminishing of green house gases, leading to larger sustainability of the planet. But it cannot be said that this reduces women's labour as a whole. Caring for a cow is time consuming, and unless the husband and children also help, it becomes an added burden for the woman. Biogas systems also are living systems which need attention, but they are a source of great confidence, as even children begin to explain their working and benefits to visitors. The hay boxes are like magic, as people realize how simple it is to conserve heat and how little is actually needed to cook.

As the management of waste is one of the major problems of urbanization, transforming waste into wealth is an important component of urban planning. While smaller units can transform their waste into biogas for cooking, larger units like markets and public spaces can convert biodegradable waste into electricity, as has been done in several markets in Trivandrum.

Institutional Arrangements

During this entire process, it became increasingly clear that people were interested in becoming involved in their local area and deliberating upon it. Attempts had been made to help them react during the Grama Sabhas, but on the one hand, they did not feel equipped to do so, and on the other, their feeling was that ward members were interested only in handing out doles to beneficiaries and not in long-term planning. It was important to build up a broader-based platform where these discussions could be broadened and carried through. Therefore, out of this process grew what was called a Citizens' Forum—a group of concerned citizens that met every month to discuss issues that affected the Panchayat, and to get deeper knowledge of the roles and responsibilities of the Panchayat under the new Act, and the rights of the citizens in local government. This again was a very stimulating process as much of what they received in the inputs was new to them, and they felt that they could take a more involved position in the Panchayat, transcending party politics, that is so deep seated in Kerala civil society.

⁷ Developed by Khadi and Village Industries Commission

This group met on a monthly basis and began to take up some activities in the Panchayat. Interestingly, there are both men and women in the Forum, with active participation of the men. Perhaps the lack of interest of men in the earlier stages is related to their class status and preoccupation with employment issues.

Although all these programmes have eventually to be taken up by the Panchayat, the experience revealed that Panchayat members often are unable to initiate the process. It was imperative therefore to put in place certain institutional arrangements through which this process could be kept alive, and the following have been done.

- The Citizens' Forum that meets every month, but which has created the Vilappil Citizens Development Samithi
- The Women's Core Group: This has two components, one an informal grouping of the EWRs who meet regularly to see how the Women's Development Policy can be pursued in the Panchayat, and the other made up of active women in the Panchayat, which also meets regularly to pursue some of the programmes undertaken through the Citizens' Forum, concentrating on creating marketing support for the Panchayat products.
- The Nature Clubs in the schools that will build up consciousness on sustainability through action with the future generation.

Constraints and Barriers

It is fascinating to watch the growing participation of women in such processes, as they become aware of the health and development dimensions of the issue. They are far more involved in such processes than men, although men still want to control things. Since the men are not involved in the household, especially if they are in politics, they do not really understand the importance of such interventions. There is also a huge gap between the EWRs and the larger base of women, as the latter actually get busy developing skills and implementation that the EWRs cannot do. The EWRs are therefore not able to really convince other Panchayat members of the benefits and translate these into policy decisions in the Panchayat. But the EWRs did get involved in

putting together a Women's Policy, based on the work of the core group of women in the Panchayat. It is also a very interesting policy, but whether they will be able to bring it to any level of implementation still has to be seen. They have nevertheless been able to get the Panchayat to budget Rs.500,000 to meet women's strategic needs.

Elected women representatives indeed have a very difficult task. First, the majority of them initially have a hard time coping with the demands of their husbands, and more so when they enter the public space. The husbands not only want to be everywhere their wives are, but often they become so unbelievably suspicious and brutal in their control mechanisms, that one wonders why they even permitted their wives to stand for public office to begin with. Secondly, within the Panchayat itself, EWRs are treated as mere puppets despite the fact that they work responsibly within their wards. Third, they very rarely can take stands they believe in, as there is always the party whip telling them what to do.

The strategy used was to first give them as much information as possible, thereby building up confidence on issues to be tackled, on the one hand; and on the other, encouraging them to build a united platform among themselves as women, so that they would finally be heard and taken seriously by the others. Working through the gender status study was found to be the best tool, as this gave them facts and figures about happenings in the Panchayat. Now there was a broader platform to work with other concerned women without feeling threatened by them, and an ability to find a way forward. But the process is not automatic. The attempt has been to see that these women create a strong group among themselves and support each other when interventions are made in the Panchayat.

Other Outstanding Problems

- But there are some also tensions between EWRs and other women with leadership qualities in the wards. The EWRs depend on local women leaders to keep the SHGs going, as these women are members of the Area Development Committees. As these women actually do the grass roots organizing work, they develop organizational and development skills. At this point, the EWRs

make sure the others do not overstep their limits, with the result that even the micro-enterprises that the SHGs start are not carried to their logical conclusion. Developing feminist styles of leadership is a far off dream, when women are expected to live up to the male style of functioning in the wards, or treated like children in the committee. The elected representatives in general feel that the ward is their territory, and issue orders and *fatwas* against those that enter the ward to interact with the members without their permission. In fact, when the ward members found women approaching SEWA to help with problems, some of them were told they would not be eligible for Panchayat funds if they related to SEWA.

- The existing coconut climbing device is heavy and has to be lightened, but will this raise the cost beyond the abilities of the women to pay? This is an issue that technology has to address.
- A household needs a minimum 10 cents of land to be viable, and there is still a section of households that do not have even that.
- Finally, the entire process of decision making is time-consuming and laborious, and more so when no political party has a majority in the Panchayat. Getting consensual decisions is an extremely difficult and frustrating

process. But on the other hand, when women are once enthused, they find ways to forge ahead.

Insights

Developing a consciousness and then appropriate technologies for sustainable livelihoods is more than a one-time intervention. It is a process that has multiple dimensions, and in our understanding, is rooted in a life-centered development paradigm. Such a paradigm requires extensive people's participation, and is based on the concept that there are limits to growth and that production should essentially focus on need and not merely profit. Such livelihood-entered technologies do not focus on the market and hence do not enter the GNP; therefore they are also not reflected in figures of 'growth'. Hence Panchayats are not likely to subsidise them.

There are a large number of trained personnel in the Government who also have innovative ideas, but are looking for local coordination which is wanting in the existing organizational structure, and hence the importance of an NGO making these links. Very often NGOs remain outside the official structure, and this may not be the most sustainable way in which to proceed. Such interventions have to lead to policy changes, so that these technologies can also be subsidized and become accessible to the really poor who need them the most.

Appendix 1

Main Findings of the Human Resource Mapping

- The basic family pattern was nuclear with around 4 members in a household
- The percentage of people that had studied beyond the SSLC was very small in all age groups, but surprisingly, was lower in the age group 16-22 than in the age group 23-50. Among all categories, there were fewer females.
- The majority of households had below 10 cents of land.
- The major land use was for coconut and mixed crops, with rubber in a round 7 percent of the area, and despite some wet land there was no paddy cultivation at all.
- Over 60 percent of the income came from coolie work. Only 18 percent had full employment, and another 24 percent less for 10-20 days a month. The rest had or worked at home.
- People went as far as the city to work and there was very little seasonal or other migration.
- Very few of the workers belonged to any workers' organisations, and there were more union members in the older age group than in the age group 23-50 years. They belonged mainly to the agricultural and construction workers' unions.

- Only about 6-7 percent had participated in all the Grama Sabhas and a few more (5 percent) in some. Generally people did not think they had much to gain or learn through the Panchayat system.
- There was a shift in the skills and competencies of the three age groups, with a clear shift away from agriculture into construction, and now into the computer and even tailoring industry as seen below.

Appendix 2.

Main Findings of the Gender Status Study

- Broadly, there was a difference between the participation in the household of poorer and middle class women, as poorer women contributed substantially financially. In decision making also, poorer women had more say than women in the middle income bracket.
- The majority of the women were dependents, mainly on the husband's income, as 70 percent of them had no income of their own
- There was very low possibility of mobility for women, who are often confined to their immediate surroundings
- The struggle for the needs of daily life, to keep the home fire burning, is an increasing pressure, and this burden is borne mainly by women.
- The majority of the women had a physically difficult job at home, both in collecting water and wood for cooking, the basic daily requirements to keep life going.
- In most cases, women did have a say in deciding about the number and spacing of children.
- The large majority accepted the social norms of taking and giving dowry.
- Men were somewhat aware of the nuances of sexual harassment, but the general level of awareness was low
- A large number of women internalized the idea that men had a right to beat them.
- More than half of the men felt that they had no right to beat their women.
- Most of the women felt that men beat their wives either because they drink, or because they need to cover up other extra-marital relationships, or because of dowry problems.
- The majority of the women felt that they have some level of freedom within their family, but when out in public, they felt policed and harassed.
- Men expressed the need for women to be members in political parties, but said they did not need to have any role in decision making or in the leadership.
- 35-50 percent of the women felt that participation in Panchayat activities had helped them substantially or in some measure to grow personally, either to take leadership or get involved in community issues or to develop a better understanding of social issues or to relate to people.
- Kutumbasree has facilitated a mobilization process of women, but it has not really led to their empowerment and involvement in other social issues.
- Most of the women felt that women had absolutely no place in religious practices or events, or even in decision making bodies
- 77 percent would like to work, but they need the husband's permission to do that.

On the whole, the mobilisation of women and their participation in public life through the process of decentralized governance has indeed brought many positive changes in their lives. But the deep-rooted

values of tradition and the visual media that depict women as inferior also continue to give men the right to continue to dominate them. The advances in education did not seem to have given women any enhanced status, besides a few who enjoyed greater mobility, with access to motorized vehicles. But this mobility was again constrained by eve-teasing and sexual harassment that women had to face on an everyday basis. Dowries were also on the rise regardless of a woman's education or economic status. Preference for a male child was also showing up in the child sex ration, beginning to be favorable for males, and some women admitted that they underwent abortion for this purpose. Women's awareness of their rights and how they can be assisted by progressive laws was limited, and hence their reluctance to use them.

Public institutions like the anganwadis, schools and Community Health Centre were still considered of utmost importance to women, as around 40 percent of them were still poor. Yet there was a feeling that these institutions can be better managed and provide better delivery of services in more women-friendly ways. The role of the agricultural department needs to be drastically reframed to meet the needs of farmers and people as they become more health conscious and aware of the dangers of environmental pollution. While unemployment was a serious problem to be addressed, there were still a large number of households where the education levels were limited, and hence creation of 'simple' employment is of great importance.

Women's experience in public office revealed that they were more bound by the priorities of the political party they belonged to than their needs as women. As political parties are very male-dominated, women's voices get minimal consideration. Moreover, the democratic process of discussion and taking decisions in a more consultative manner was not encouraged in the Panchayat. All discussions were politically motivated.

A Women's Development Policy and some programmes to improve the situation of women in the Panchayat were developed as an outcome of the gender status study.



Insights from the Case Studies- an Overview

Mina Swaminathan

At the beginning of the twenty-first century, there is considerable disenchantment in India with the outcomes of development in the second half of the twentieth century. While there have been numerous examples of progress that one can well be proud of, and much of this progress has been directly related to advances in science and technology, it is also true that on the whole, the rich have got richer and the poor poorer. Far from disappearing, inequality has increased sharply, reaching extremes that could never even be imagined earlier. Even worse, the number of the "unreached" has expanded enormously, while that of those who have gained has grown only modestly, so that today there are far more unreached than well-off or comfortable. In other words, the gap between the excluded and the rest is now wider than ever before, both in terms of relative numbers and in terms of the difference in life chances and quality of life. This is the dilemma faced by the country at the turn of the century—unprecedented opportunity for a few, and life at the margins of survival for many. It is obviously time to reconsider the development paradigm.

The skewed nature of development has been further exacerbated by several other social and natural events and trends—population movements, displacement due to development projects and rural-urban migration, natural resource degradation and ecological crises, cycles of disasters, and erosion of natural resources, but is also the outcome of earlier policies, such as the loss of people's rights to land, forests and water, the failure to provide universal education and health care of adequate quality, inadequate redistribution of assets like land, and others which need not now be described in

detail. What is important is the issue of how to provide sustainable livelihoods for all, in the context of widespread social exclusion..

Who are the Excluded?

In defining social exclusion, one can begin with a definition provided by Buvinic (2005) as "the denial of equal access to opportunities imposed by certain groups in society on others".¹ This definition draws attention to three main aspects of exclusion—that groups are culturally defined, that exclusion is embedded in social relations, and that it results in various forms of deprivation and/or disempowerment.

In Indian society, there are broadly four axes of exclusion—caste/ethnicity, class, gender and location. As far as the first category is concerned, it includes far more than the Scheduled Castes (now more generally known as Dalits) and Scheduled Tribes notified by the Constitution, and also applies to a large and amorphous group of other castes and tribes, especially the many nomadic and wandering groups ranging from pastoralists to entertainers. While the first two groups account for about a quarter of the population (16.2 and 8.2 percent respectively in 2001) the percentage of the third group is not unambiguously defined. As to class, which is concerned with differences in income and wealth, again the statistics are constantly argued over by specialists, ranging from a quarter to 38 percent of the population. A recent prestigious study² for example estimates that 70 percent of the population today lives on less than Rs.20 per day, at the edge of survival.

¹ Buvinic, Mayra(2005).

² National Commission on Enterprises in the Unorganised Sector(2007)

Another dangerously threatened and little studied group in this category, which has grown by leaps and bounds in the last few decades, is the increasing number of "invisible" people or "new" nomads—migrants who move in search of livelihoods, living in makeshift camps, shanty towns and "unauthorized" urban settlements, sometimes for years together; in other cases, moving from place to place, mobile in different ways and for different periods and reasons, but all seemingly invisible to the authorities.

As for gender, women in all groups together make up half the population, or a little less, (due to the adverse sex ratio) but obviously women in the excluded groups would be more seriously affected in all dimensions. Finally, location—by which is meant those furthest from the center, in remote and/or inaccessible locations, who often lack even the simplest basic facilities. All these form the "excluded" and a little simple arithmetic will show that they are by far the majority.

The Nature of Exclusion

All these diverse excluded groups not only share common problems, but each also has certain disabilities and disadvantages specific to the group. For example, women in all categories lack rights to property and assets in their own names, and are much more poorly educated than the men in their own social group. Forest dwellers, mainly tribals, have been gradually disempowered and deprived of rights to the very land, forests, water and other natural resources that they have lived in, conserved, and nurtured for centuries. It is estimated that about 40 million people have been displaced in the last half century by big dams and other development projects. As well, they lack access to education, health care and other services available to the more privileged. Dalits, traditionally landless, continue to remain so in large measure and to face, not only lack of the same basic facilities, but also continuing caste discrimination. And this in spite of reservation for SCs and STs in education and employment, starting right from the time the Constitution was framed in 1950. And the remote, the smaller marginalized groups, and the "new" nomads migrants are still struggling even to become visible on the map of the policy makers.

Yet it is not as though no efforts have been made in the past to address this state of affairs. A large number of well-intentioned laws and schemes have been developed and implemented over the years, too numerous to list here, and much money has been poured into them. But it seems these efforts have not been able to attack the problem at its roots. Poor implementation is partly due to the well-known corruption, bureaucratisation and sluggishness that dogs programmes implemented by the state. But this is not all. The legal, social and cultural climate has also not been conducive to such development. In other words, the priorities, perceptions and perspectives have also been out of kilter. This can be illustrated in several ways, for example, the reluctance of the more privileged groups, who have the responsibility of carrying out these tasks, or the role of science and technology.

Science and Sustainable Livelihood

Clearly, modern science and technology has had in the past, and continues to have, tremendous significance for improving the life of human beings. And indeed, India since Independence has an enviable record in the development of science and technology, having broken several barriers and chalked up many achievements. But from the early days, the emphasis has always been on heavy industry, power, infrastructure, manufacturing, and transport, all seen as the key to economic growth, strength and self-reliance. Later, the emphasis shifted to space, nuclear energy, defence, and air transport, and still later to telecommunications and Information Technology.

All these acknowledged achievements have been at the cost of simple applications of science and technology that would benefit the ordinary citizen, man or woman, especially the lowlier among them. So now we have a proliferation of smooth running airlines, side by side with one lakh villages without clean drinking water; Indian-made satellites circling the skies while 70 percent of the people have no sanitation or access to toilets; and a galaxy of brilliant graduates working in the sector IT here and abroad while 40 percent of all children under 14 are out of school. Could not the same or similar technologies have been applied to solve the problems? It seems that high technology has won over "appropriate" or "intermediate" technology.

Nevertheless, science and technology must now, more than ever, place themselves at the disposal of sustainable livelihoods for all.

New Approaches to Social Inclusion—the Case Studies

The social barriers suffered by the excluded groups have undermined both their participation in, and access to, the benefits of development, specially in relation to science and technology-driven development. Yet development experiences in India have time and again demonstrated innovative approaches to “reach the unreached,” spearheaded by non-governmental organizations and community-based groups, which work in specific contexts with flexible approaches.

It was with a view to sharing these unique experiences and learning from such strategies and approaches that this collection of case studies has been put together. The question raised was; can the collective wisdom derived from these diverse social interventions be of value, not only to other agencies involved in development activities, but most importantly, to policy formulation and a new vision and leadership from the state? A quick review of some important aspects of the six case studies may suggest the possibilities. A careful reading of the six case studies will throw up many interesting points for discussion, as well as challenges. A comparative summary of the main characteristics of the case studies will be found at pp 68-69.

Similarities and Differences

All the catalyst agencies are similar in having firmly chosen to work with a marginalised group, with the intent of carving out a path for their inclusion, and with the broad general goal of holistic development through sustainable livelihoods. But even here, the interpretations are varied. In three cases, livelihoods are central to development; while in the other three, empowerment leads the way. Even the perceptions about the axis and nature of exclusion to be focused on vary. Five prioritise gender, but only three of these start with a focus on women, while for the other two the community is the focus, with a strong emphasis on women's role and gender issues; the sixth started by working with the whole tribal community and slowly came to an understanding of women's roles.

Similarly, two could be described as focusing on tribal communities, of which one included other underprivileged rural groups, especially Dalits, and emphasized women's role from the beginning; while the other worked with a simple well-defined tribal group and emphasized women's role only later. Yet another started with rural women labourers in a poverty context, mostly Dalit, but including women of other backward castes. Of the three groups of women, two were rural, while the third lived in a partly rural and partly urban or semi-urban context, which is becoming increasingly visible. Thus, the diversity among the groups makes it possible only to say that what they all have in common is a marginalized status.

Perspectives, Approaches and Strategies

Similarities and contrasts are also found in the perspective from which each agency carrying out the intervention is working, and the approach. Two are based on knowledge-science and TK (traditional knowledge), but the equations between the two are quite different in each of the interventions. In one case, the approach is science-led, gradually recognizing TK, and from an initial top-down approach developing a participatory relationship between the two partners and the two knowledge systems. It is significant that for this agency the major goal was initially conservation, and livelihoods were brought in only because people had to be enrolled for conservation by giving them a stake in it. In the other case, the starting point was both TK and local resources, which were taken as the base on which to empower the people and build their livelihoods, leading to pragmatic strategies. Science, mostly technology, came in only to assist and support this process.

The two women-centred interventions both attempt to support women's development, but with varying understandings of how to deal with a patriarchal society and how to use science and technology in doing so. The first has a Gandhian approach, showing how to strengthen and include women as equal partners in development without appearing to compete or struggle with men, and this influences the unique strategy adopted; the second critically analyses two different examples of women-focused activities, illustrating almost perfectly the difference between the how-to and the how-not-to.

The last two interventions are process-based — participatory and exploratory in nature. There are no fixed targets, but a slow, step by step process, inspired by a vision, with a non-linear approach, and as needed mid-course corrections. The first grew out of a feminist critique of the current paradigm of development, started working with women, but then went on to involve the entire community, as it intended. The second is an activist's vision of a multi-faceted struggle for people's rights; also non-linear, using several different strategies, methods, and tactical changes, but always keeping in the forefront the building of people's capacities, conceived as the main ingredient for success. Interestingly, one is a micro-level effort, and the other an attempt at the macro-level, showing that scale need not alter the approach. In both, the typical action-reflection-action cycle of such praxis-based approaches is clearly revealed and justified.

Learnings and Insights

It goes without saying that the strategies, entry points, methods and outcomes which follow from these approaches, as well as the relationships to science and technology also vary widely among the groups and raise many questions. Chief among these is: how far can these efforts be replicated? If each is rooted in its context, how, if at all, can they be universalized? What policy changes are required? What are the lessons to be learnt?

To begin with, the major obstacles facing the marginalized in achieving better and sustainable livelihoods have to be confronted. The three main obstacles are lack of access and control over productive assets, especially land; lack of realization of rights and entitlements; and the lack of support services. These have been powerfully brought out in several of the case studies. They have to be simultaneously addressed if sustainable livelihoods for the excluded are to become a reality.

Land other Productive Assets

Lack of title (or long-term tenure) to land, which is often also essential for building other assets such as houses, workplaces, and wells or buying equipment, is perhaps the most basic constraint facing marginalised people, making livelihoods uncertain, limited and with no assurance for the

future. This issue came up in all the case studies, though in different forms. It is most sharply articulated in the case of the displaced, a continuing threat for the two tribal groups included here and many others, not to mention the millions displaced in the past by dams, wild life sanctuaries and other development projects. Equally disturbing is the fate of the traditionally landless, agricultural labourers, mostly Dalits, who today have at the most house plots, except in a few instances, but no land for productive purposes. For example, the women in the southern districts who have been organized by CCD to make herbal medicines, have no land of their own, but collect herbs from waste lands, village lands, road and canal sides, and untilled or fallow fields in the non-cultivating season. Even a small change in the laws and rules relating to access to common property resources could play havoc with their livelihoods. In another case from Kerala, the irony of a well-meaning Government arranging teaching in agricultural skills for women who have no access to agricultural land cannot be missed.

Entitlements

Equally important are other basic rights and entitlements, some guaranteed by the Constitution, others provided by laws and schemes, others yet to be ensured. Some of these are the right to education, the right to work, and the right not to be discriminated against. Many of these are unrealized, for various reasons, by the marginalized. Here a major constraint is that the machinery for dissemination of information is so weak that often people do not know or are confused about what they are entitled to, and how to go about getting it, as well as being deterred by the costs of getting it, compounded by misinformation deliberately supplied by vested interests.

In this context, a major new development is the right to information, guaranteed by the RTI (Right to Information Act 2005) which makes it compulsory for the Government to respond to queries for information within a specified time-frame, thus allowing people to demand information. But even here, considerable facilitation is required for the weakest and most marginalized groups even to get the information, let alone act on it. Only one among the catalyst agencies has focused on rights and entitlements and developed long-term strategies for

the struggle, combining it with short-term activities which are supportive; the others focus more on short-term goals, bargaining for achievements that will foster self-confidence, leaving the long-term issues for later.

Support Services

The third major handicap is the lack of support services, needed at every stage to *enable* the excluded groups to make use of the available facilities, assets and entitlements. Without such services, the marginalized may stumble both in using productive assets and accessing their basic entitlements fully. This becomes most obvious in the case of women, who are socially required to carry the full burden of reproductive work (including both care and household chores), in addition to productive work. Women have the greatest need for services like child care, health care, and transport, (even to participate in skill training programmes, for example) and also for facilities and devices that offer water, toilets, sanitation, fuel, fodder, and energy at the doorstep, and that can thus save both the time and drudgery involved in procuring these basic necessities of life. Yet these issues are rarely prioritized, even by those working mostly with women, and almost never implemented as *links* with livelihood programmes.

The focus is usually on more visible kinds of support services like skills training, capacity building, credit, financial, organizational and marketing support, which are, significantly, the same for both sexes, and relate purely to the productive domain. Women's special needs for support services in the reproductive domain, the lack of which is one of the main causes of their marginalization, is not often emphasized. One of the case studies from Kerala, for example, relating to women's development, has developed a comprehensive list of the support services needed, of the second type, but has not addressed the first category. Of course, this may be because such services are seen as having to be mostly provided by the state anyway, though there is an increasing tendency towards privatisation. The need for greater state intervention in these areas, both to frame just policies, and to implement them, becomes obvious.

The Role of S&T

From these studies, it seems that science and technology (S&T) has not yet played a very significant role in addressing the issue of sustainable livelihoods for the marginalized. Only one agency consciously used science both as an entry point and as a tool to develop effective strategies, and succeeded by gradually entering into dialogic mode with the community. For all the others, S&T came in later, as a response to demand, and to an evolving and changing demand. They found that there were no ready-made solutions; appropriate technologies had to be searched for, then adapted, before they could be adopted. There were also problems in establishing the required linkages, and in the training. Formal training models developed in very different situations were also found unsuitable and had to be adapted before adoption. Put differently, technology is not reaching out to specific needs, or even looking for them. Rather, it is supply driven. In the one case which started with technical training, (the WIA Programme in Kerala), there were numerous problems and the results were not commensurate with either the expenditure or the effort put in. In other words, technology development has to become more participatory, developing context-and-need-specific solutions, tailoring itself to client needs and resources, and the economic, social and ecological environment.

Similarly, technologies developed for large-scale operations, as in industry, may not be good solutions for the small scale—"intermediate" in the sense of scale at least, is required. Another need is for S&T to work at up-gradation of traditional technologies, as has been demonstrated by several institutions (not represented among these cases). Finally, S&T must follow, not precede, the process of empowerment of excluded groups. For S&T to become a humble junior partner of poor, mostly rural, groups of people may be a revolutionary suggestion, but that is precisely an insight which clearly emerges from these studies.

Policy Implications

Chambers (1995)³ defining livelihoods, states that it requires "tangible assets (resources and stores) intangible assets (claims and access), and

³ 3 Chambers (1995)

capabilities" Keeping in mind both the plurality of contexts and the multiplicity of deprivations, what policies are needed to enable the excluded to access these critical inputs? How can laws and policies become flexible in operation, but without infringing on rights? The following guidelines emerge from this approach.

- **Develop policy frameworks which can be regularly adapted to changing needs and circumstances.** Several of our current policies are based on laws passed a century or more ago, and have little relevance to the present situation. Regular review of laws and policies, especially those affecting marginalized groups and development issues, is essential. Not only are new laws and policies needed, but each should have a built-in provision for review after a certain number of years.
- **Sensitise S&T Departments and institutions to social and gender needs and issues,** in order to bring these on to their agenda of plans and activities. To begin with, study of the social and economic environment and of development issues should begin early among would-be scientists, right from the student level, and continue with regular orientation sessions, so that scientists do not become isolated from the social concerns of the people, and develop a perspective on it. At the institutional level, planning, research and extension activities should be undertaken jointly with other stakeholders, rather than independently. A "social justice" impact assessment tool should be developed and used, just as environmental assessment tools have been, to assess all new large-scale projects and programmes.
- **Prioritise the realization of rights to productive assets for the marginalized.** Here implementation of several just and fair existing provisions, laws and schemes is as important as the development of new ones; both should be done in consultation with the people, through their organizations, especially as there are multiple systems of customary rights and community rights.
- **Develop new laws and schemes to realize entitlements and support services.** Efficient, thorough and fair implementation of existing entitlements and support services should be the starting point, followed by new proposals for services developed in collaboration with people's organisations. This is especially important for women, who need more support services than men in every social group.
- **Strengthen and collaborate with autonomous people's organization/ networks.** This is important for two purposes: a) to listen to expressions of people's needs and b) to monitor implementation collaboratively. Several intermediary organizations, like elected representatives, NGOs, educational institutions and others can also be of help in both processes, but the direct participation of people's collectives is the basic requirement.
- **Promote networking of all agencies, Governmental and other** for smooth delivery of services and an integrated approach to programmes. This is perhaps the most difficult objective to achieve and requires the most effort. That would be the real test of a genuine commitment to gender and social inclusion.

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A Comparative Overview of the Six Case Studies

Name of Catalyst Organisation	ATREE	CCD	GSGSK	CSGCA	AGRAGAMEE	SEWA KERALA
Group for Inclusion	Tribals-men/women	Women-Dalits/landless, mostly labourers	Women-mostly home-makers	Rural women in agriculture	Tribal/other rural people, women/men	Village community -women/men
Perspectives	Science-based approach to conservation, development and livelihood	TK + LR as base for sustainable livelihood, empowerment of marginalised	Gandhian - voice and opportunity for women to develop as equals	Women's development. Empower women to confront discrimination	Rights-based critique of law, policy+ development paradigm.	Feminist, people's participation. Critique of present S&T, development paradigms
Aims	Conservation of biodiversity + NRM with involvement of stakeholders	Improvement of women's condition in poverty context	Women's development +empowerment, leading to partnership with men	Develop approach to empower women and change policies /schemes	Empower tribal women/men to struggle for rights and access entitlements	Empower decentralised PRIs to address environmental issues + promote biomass-based livelihoods
Desired Structure	Still evolving	Strong autonomous federal structure	Strong federation of parallel men/women groups	Network of support services for women's SHGs	Strong autonomous federation for advocacy, voice and struggle	Conscientised Panchayat members, EWRs, citizens/women
Strategy	Demonstrate NRM-based livelihoods to create stake in conservation	Prioritise capacity building and skills training	Prioritise capacity building and skills among groups	Study, critique evaluate, disseminate and advocate findings	Awareness, organisation and capacity building	Capacity building, strengthen old and facilitate new groups

Name of Catalyst Organisation	ATREE	CCD	GSGSK	CSGCA	AGRAMEE	SEWA KERALA
Entry point	NITP	Poverty context low wages and limited employment. Mobilise for earnings	Savings/thrift "Bank at the doorstep" Mobilise to develop potential	Evaluation study by Research and Extn. Deptt. of University	Poverty context, reduced resources, livelihoods entitlements Mobilise for awareness action	Environmental issues, lack of employment, pollution. Mobilise to develop potential
Methods	Demo/teaching NRM based livelihoods. Combine S + T with TK	Mobilise and organise, based on women's TK. S& T later	Organise savings /thrift. Allow agenda to emerge	Research methodology Documentation	Exploratory. Awareness, organisation, mobilisation, public action.	Exploratory. Process-based methods to develop own plan
Output	Development of skills, livelihoods, income	Strong autonomous federation. Big increase in earnings	Strong federation. Empowered women. Rise in earnings.	Reports published, disseminated Advocacy ongoing	Strong federation capable of advocacy, negotiation + NRM tasks	Empowered EWRs/citizens, PRI Forum for planning. Gender budget
S & T	As entry point and strategy	On demand- in stages	Evolved demand slowly. Technology not adapted.	Supply first problems-lack of linkages and no adaptation	Demand evolving. Struggling to get appropriate technology	Demand evolved slowly. Adaptations and supply ongoing

Profiles



Siddappa Setty Outreach Coordinator, who has been with ATREE since 1998, has a Ph.D. from the University of Mysore. His main primary interests are in sustainable management of forest resources and organic farming, value addition to forest and agriculture produce, poverty alleviation and restoration.



Sushmita Mandal has a Masters in Social Work from the Tata Institute of Social Sciences in Mumbai, and is a Senior Research Associate. She is interested in environment education, gender justice, and conflict management.

Ashoka Trust for Research in Ecology and Environment (ATREE)

The Ashoka Trust for Research in Ecology and the Environment (ATREE) was established in 1996 in to achieve three goals: (i) conserve biological diversity and promote sustainable development, (ii) improve the institutional and policy framework for protection of the environment, and (iii) strengthen the capacity of government and non-government organizations to solve environmental problems.

ATREE activities include (i) basic and applied research on conservation, (ii) interdisciplinary work on conservation and environment related issues. (iii) development of innovative models to resolve environmental problems, (iv) policy analysis and implementation, (v) work with local communities to promote conservation and livelihoods, (vi) collaboration with other researchers (vii) provision of information (viii) environmental education, (ix) scholarship and grant support for conservation and sustainable development, and (x) nurturing of young professionals.

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Muthu Velayudham hails from a farming family known for its social service. Like-minded friends and a Masters' degree in Social Work motivated him to start CCD. Exposure to both Christian and Hindu charity missions strengthened his resolve, and various saints and priests are his role-models. He began rehabilitating street children in Madurai city twenty years ago. He dreams of initiating a vocational-cum-spiritual training centre for rural development for NGOs and CBOs.

Covenant Centre for Deveopment (CCD)

The Covenant Centre for Development (CCD) is a Madurai-based NGO established in 1993, working to reduce rural-urban migration by promoting savings and employment in villages. It provides technology, organizational training, external finance and market access to Community Based Organisations. CCD has 120 staff today with 6 geographical sites across Tamilnadu, and 800 Self Help Groups (SHG) organized into 7 federations,

with 16,000 members from 296 villages, and collective savings of Rs. 24 million. CCD has also promoted Kitchen Herbal Gardens in 20,000 families and helped them to save 50 percent of their primary health care expenses. CCD has established four community enterprises.

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Sudha Soni, a specialist in environment, capacity building and community-based organizations, is now a Consultant on environment-related projects, forest certification processes, gender issues, capacity building, training, research and impact assessment studies. She is associated with various institutions, including the GSGSK where she is currently engaged in organizational streamlining to improve management.

Gandhi Smarak Grama Seva Kendra (GSGSK)

The Gandhi Smarak Grama Seva Kendra (GSGSK) established in 1958, was registered in 1960 as a non-profit secular, non-political organization, serving all sections of the people. Since its inception GSGSK has been engaged in building a new social order—a classless and casteless society, according to the vision of Mahatma Gandhi. The organization has been working for the betterment of society, promoting sustainable livelihoods, and has reached more than 80,000 families, a population of roughly 3,00,000.

The mission of the GSGSK is to serve the poor and the marginalized rural people through community based organizations, in order to enhance opportunities for employment, income generation, education, health care and better social status.

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Dr. P.S. Geethakutty, presently Professor and Head of the Centre for Gender Studies, National Institute of Rural Development, Hyderabad, was from 2000 till May 2007 the founding Project Coordinator of the Centre for Studies on Gender Concerns in Agriculture at the Kerala Agricultural University, Thrissur. With a Doctorate in Agricultural Extension, she has been a leader in gender studies of farming systems and in promoting gender mainstreaming in agricultural education, with a focus on technology for women.

Centre for Studies of Gender Concerns in Agriculture (CSGCA)

The Centre for Studies on Gender Concerns in Agriculture of Kerala Agricultural University in the Thrissur campus is a pioneering effort among the State Agricultural Universities in India. Established in 1999, the Centre has made many innovative efforts for capacity building among scientists, teachers, extension personnel, policy makers and students of agriculture to mainstream gender in agricultural development. In collaboration with MSSRF, Chennai, it has brought out an undergraduate course module and resource book on "engendering" agricultural education. Besides various research

studies involving gender analysis, the Centre is also working towards promoting technological empowerment among rural women.

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Vidya Das Vidhya Das began her career in development at the Social Work & Research Centre, where her involvement with women helped her understand issues of inequality and oppression beyond gender discrimination. Moving on to AGRAGAMEE and tribal Orissa, she has taken the struggle forward, helping women organise for the right to land and livelihoods. She has written extensively writing on displacement, and the disruptive impact of industrial and mining projects on human rights and social justice

AGRAGAMEE

AGRAGAMEE is a registered society formed twenty-five years ago by a group of activists and thinkers committed to working with marginalized and underprivileged communities in the tribal districts of Orissa. It has initiated a sustainable development process, combining an issue-based approach with programmes for socio-economic development, to promote people-centred development throughout India. The focus is on integrated approaches to help tribal communities mobilize for self-sustaining development initiatives. The aim is about social change through awareness, as well as by forming local level organisations to ensure social justice, and better the economic conditions of poor communities by realising the potential of personal skills and resources.

AGRAGAMEE

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Nalini Nayak is now the Hon.General Secretary of SEWA-Kerala and has worked for over three decades with coastal communities. Of late, she has been working more intensively with women, and in developing feminist perspectives as well as praxis within the fisheries, and in women's organizations.

Philip Mathew, the co-ordinator of SEWA's programme on sustainable alternatives, is involved in developing appropriate technologies.

Sita Dasan a field organizer of SEWA, works to build awareness and participation.

Self Employed Women's Association (SEWA)

The Self Employed Women's Association (SEWA) Kerala is a women's membership-based organization affiliated to the national SEWA trade union. It strives to assure women workers their rights with dignity. As an effort to safeguard women's access to local resources and livelihood, SEWA(Kerala) has been involved in a local Panchayat in a programme towards developing norms for sustainable settlements.

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