

Chapter 5

Chronicling Development in the Mangrove Conservation Project: Education, a Pathway for the *Irula* Tribe to Integrate in the Mainstream Society

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Abstract The 1980s and 90s of the last century witnessed greater commitment for community participation to solve development problems. Local communities were expected to become the active collaborators in the conservation and management programs, and participatory agenda was expected to expand from narrow project objectives to broader social and economic goals which are crucial for the long-term success of the conservation. A mangrove conservation project was implemented for 5 years with multistakeholder approach to develop a Joint Mangrove Management model. Irula, a marginalized tribal group depending on the mangroves for their livelihood, was identified as one of the primary stakeholders in the project. Social issues like lack of legal identity and lack of education were identified by the community as their priorities to address; degraded mangroves, the primary source for their livelihood, were also listed as one of the priorities. The project successfully facilitated the Irula to get their legal identity and also introduced basic education to the children with the active support of the entire community. A mangrove management unit was demarcated for the Irula with the approval of the state forest department in the area where they traditionally do fishing; subsequently the area was restored and managed. After a decade of the project completion, one could witness visible outcomes of the project results in the education of Irula children and the mangroves restored and managed by the Irula community.

Keywords Community participation • Mangrove restoration • Tribal empowerment • Joint forest management

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R. DasGupta, R. Shaw (eds.), *Participatory Mangrove Management in a Changing Climate*, Disaster Risk Reduction, DOI 10.1007/978-4-431-56481-2_5

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5.1 Introduction

The 80s and 90s of the last century were the decades that witnessed greater commitment for community participation and empowerment and also strongly believed that diversity is a vital factor to find answers for the development problems. Alternative forms of participatory platforms were facilitated, institutions were formed, conceptual frameworks were discussed, and interactive spaces were created to engage the stakeholders at the local level. The local communities were expected to play the role as the builders of their own future and to manage conservation and development by themselves, and the approach is often referred as community-based conservation (CBC) (Brooks et al. 2013). At the later stage, the critical approach on conventional participatory approach suggested the need for a more complex understanding of the ideas/issues of participation, efficiency, empowerment, etc. Participation should be seen as a means to achieve the project objectives and not as an end. It is a process to develop and strengthen the capacity of the local communities collaborating in the development projects. By explicitly addressing issues such as social diversity and gender, institutional norms and behavior, stakeholder analysis, devolving decision-making, and social risk, projects are more likely to contribute to equitable and sustainable development.

Participatory agenda is expected to expand from the narrow focus on communities as subjects to support and implement the project objectives to other broader issues like education, social equity, democratic governance, etc., which are very essential for the development of the society, and to trigger a transformative process. Conservation initiatives need to link biodiversity conservation with the basic needs like education and other social and economic goals of the local communities which are crucial factors for the long-term success of conservation. Projects supporting social agenda are not hijacking conservation efforts. In Indian context, elitist and discriminatory social order leave certain segments of the population to remain as disadvantaged and lack access to resources and certain basic facilities like education and employment. Article 45 about basic education says “to endeavor to provide within a period of 10 years from the commencement of the constitution, for free and compulsory education until they complete the age of 14” (Constitution of India, Article 46). Later the Supreme Court judgment declared basic education as a fundamental right. Therefore, deprivation of basic education is an aspect of human rights violation. It is an obvious fact that unless one is able to read and write, participation in the larger social and economic system is hard and difficult.

The chapter makes a modest attempt to capture the results of the efforts made to introduce basic education the felt need of Irula tribal community in the context of the mangrove conservation project. It also briefly covers another aspect the community was very keen on – the legal identity which provided the necessary base for the progress made in the education of the Irula children. A brief picture about the results achieved in the restoration of the mangroves, the main objective of the project implemented, is added at the end. The project was implemented 12 years back with a systematic participatory approach for the conservation and

management of mangrove ecosystems in the Pichavaram region of the Tamil Nadu coast in South India. The *Irula* tribe, one of the main dependent communities, was actively involved in the planning and processes of the project implementation. Understanding of culture, the way of life, and the participatory process adopted in the project ensured genuine community collaboration and the achievement of the expected conservation and development outcomes.

5.2 The Mangrove Conservation Project

M.S. Swaminathan Research Foundation (MSSRF), a nongovernmental institution, implemented “Coastal Wetlands: Mangrove Conservation and Management” project in close collaboration with state forest department, in the Pichavaram mangroves of Tamil Nadu for 5 years from 1998 to 2003. The project aims to modify the people’s relationship with the ecosystem and bring down the anthropogenic pressures on the ecosystem with the active support of the local communities. To develop a model for joint mangrove management, a process oriented, people-centered, and science-based approach was adopted. The Pichavaram mangroves cover an estuarine area of 1357 hectares and are managed by the state forest department for more than 100 years. The mangroves are rich in biodiversity and have 13 exclusive mangrove species and 31 mangrove-related associated species. Numerous species of finfish, prawns, and crabs form the major fishery resources the local populations depend upon. Several reasons were identified for the degradation of the mangroves such as clear felling, reduction in the flow of freshwater, grazing by the cattle, fishing practice by creating small artificial bunds which affect tidal flushing, etc. These reasons affected the standing biomass and the regeneration potential of various mangrove species. For participatory implementation the project adopted the following steps:

- (a) Rapid rural appraisal (RRA) was conducted to collect mangrove resources, causes of degradation, and the existing management system.
- (b) Stakeholder analysis to get inputs from primary and secondary stakeholders.
- (c) Community mobilization and participatory rural appraisal (PRA).
- (d) Village-level group formation – a community-based structure was developed which could represent the entire community to work with the other stakeholders and facilitate the process.
- (e) Preparation of microplan and joint implementation – the plan provides the details of activities, budget, roles, and responsibilities of different stakeholders.
- (f) Periodical monitoring and evaluation of project results.

Based on the RRA results, one of the villages identified to develop Joint Mangrove Management (JMM) model was M.G.R. Nagar, the *Irula* tribal settlement located at the edge of the Killai mangrove forest (the first permanent *Irula* settlement formed in the late 1970s). It is not fair to expect cooperation from the local communities to execute the project objectives without making serious efforts to address the perceived basic issues and problems in their lives. Therefore, the project

deliberately made efforts to balance the objectives of environmental conservation of the mangrove ecosystem and the social and economic issues of the tribal community.

5.3 Socio-ecological Systems of Mangroves

According to the past history, the primary livelihood of the Irula was hunting for rats in the agricultural fields and in the sandy area of the mangroves. After the paddy harvest, paddy for the daily consumption was collected from the rat burrows in the fields. They also indulged in small gaming like fish hunting with sharp wooden sticks and catching crabs by opening the burrows at the borders of mangrove waters; water cats and fox were the other animals they hunt for consumption. Modern processes like education and implementation of development programs by the state departments had not touched the Irula population.

The seminomadic Irula in the Killai region gradually settled down to a sedentary life in the last few decades of the last century. This sedentarism has increased their dependency on mangroves, the ecosystem located close to the present Irula settlement. In M.G.R. Nagar, totally 96 households were residing when the baseline survey was conducted in the year 1999. According to the baseline survey results, fishing in the mangrove waters was the primary occupation all Irular households (100 %) were doing throughout the year, and the secondary occupation was working as laborers (84.6 %) in the agricultural fields and casuarina plantations owned by other higher-caste communities. For majority of them (84.4 %), the annual income was less than Rs.10,000 (1 USD=60 Rs.), and the remaining households (15.6 %) managed to cross above Rs.10,000. Housing condition was very poor, and all families (100 %) live in a very small and single-room huts with damaged and leaky roofs. All of them (100 %) practice a crude fishing method, sit in the water during low tide, and grope in the slush of the creeks and canals to catch the prawn juveniles, and a very few men used the cast and drag nets to catch fish and prawns (cast net 15.4 % and drag net 23.1 %) for fishing. The fishing area was restricted to mangrove waters (92.3 %); only a few involved fishing in the sea as laborers in the boats of traditional fishermen, and also a few practiced independent fishing with small secondhand boats in the mangroves. The survey results also revealed that 84.6 % of Irula value healthy mangrove that is important for fishery resource and also perceived that the quantity of fishery resource in the mangroves is gradually decreasing; the main reason was degradation of mangroves due to reduction in the flow and also overexploitation of fishery resource. The baseline results also revealed that the entire community was recorded as illiterates; they were considered as unanimous, a group with no legitimate identity provided by the state; no education facility was available in the hamlet; and the children were expected to go the school in the neighboring hamlet resided by other higher castes. It was reported that the low awareness and motivational level about the importance of education is due to their seminomadic past history, distressed economic life, social exclusion, and lack of awareness, motivation, basic services, and amenities.

Table 5.1 Prioritized list of community concern

| S. no. | Concerns | Priority |
|--------|---|----------|
| 1 | Lack of community certificate | I |
| 2 | Lack of boats and nets and perpetual indebtedness | II |
| 3 | Lack of school | III |
| 4 | Degrading mangrove wetland | IV |
| 5 | Lack of legal entitlement for fishing | V |
| 6 | Lack of legal documents for housing | VI |
| 7 | Lack of fuel wood resources | VII |
| 8 | Flooding of the hamlet during the monsoon | VIII |
| 9 | Lack of rest and unlimited drudgery for women | IX |

Source: First annual microplan (1 September 1998–31 March 1999), by M.S. Swaminathan Research Foundation, Chennai-600 113, Tamil Nadu Forest Department

Socially and economically the Irula tribe existed as a homogenous group with a simple but strong local controlling mechanism. Due to lack of education and relative isolation, the Irula lack basic knowledge and skills which enable them to actively participate in the socioeconomic institutions of larger system.

To understand the local reality, community's perceptions about the local, social, and environmental history, livelihood systems, resources and priorities, dependency on mangrove resources, equity issues, etc., a multidisciplinary team conducted several PRA exercises. At the end, major concerns expressed by the Irula men and women were prioritized as a list.

The following table (Table 5.1) shows the final list made after prioritization of PRA results in M.G.R. Nagar.

Education and community development were considered keys to long-term success of conservation. Therefore, the project team decided to address the following two closely interrelated social issues prioritized by the Irula community: "lack of community certificate" (first priority – which would help to ascertain and legitimize the tribal identity and pave the way for community development) and "lack of school" (third priority). The desire to liberate the coming future generations of Irula from ignorance, marginalization, exploitation, poverty, etc. was the driving force behind the decision.

5.4 Anonymous Group to Irula Tribal Identity

Socially the community was not part of the mainstream social system kept outside the boundaries of the Hindu caste system and occupied the marginal position. The neighboring dominant agriculture and fishing communities called them as *Vedars* or *Vettaikarars* meaning hunters based on the small gaming traditionally they indulge for their livelihoods. The other communities in the region perceive the Irula as rat eaters, snake catchers, nomads, submissive, and ignorant. Due to their

lower position in the social hierarchy, the Irula were expected to listen and respond to the words of the other dominant communities in the area.

In spite of the consistent efforts and long struggle, the state government of Tamil Nadu didn't recognize their tribal identity and refused to provide the community certificate, the document which legitimizes the community status. The government administration which is responsible for ascertaining and legitimizing the tribal identity of the group refused to recognize them as Irulas, and they were asked to produce supportive documents, but in their earlier seminomadic and assetless lifestyle, they never had any opportunity to interact with any of the state departments and receive any such documents. Poor understanding of the officials about the sociocultural system of a tribal community was the other reason for the negative response. The denial of the identity was keenly felt by the community; lack of community certificate deprived them the special benefits they could receive from the government schemes meant for the tribal communities. The project team was able to record systematically all efforts made by the tribe in the past, had several interactions with the government officials, and prepared a technical ethnographic report of Irula community, which describes in details about the cultural markers of tribal identity, and the report was submitted to the district revenue department; with these efforts the project team successfully managed to convince the revenue officials, and the legitimacy of tribal status was finally achieved through the distribution of community certificates to all households residing in the hamlet.

This removed one of the major hurdles the Irula children faced to continue their education beyond class five and go to high school. They need a community certificate which is a proof to mention the community name in the school records and get a certificate when they finish class five and leave the primary school, due to lack of the community certificate, the children are unable to get a certificate when they leave the primary school and get admission for class six in high school education beyond primary level. Now with the proof available to indicate the community name in the record, this paved the way for the Irula children to have access to education beyond elementary school.

5.5 Education: The Passage of the Irula to Integrate with the Mainstream Society

It is an undeniable fact that education is a means for the advancement of skill, capacity and knowledge, and well-being and to access new opportunities, particularly communities which are marginalized and located on the periphery. Marginalized groups often lack equal access to the mainstream educational system, and even though the access is ensured in the constitution, there are several issues and practical constraints these people face in the real situations to utilize the opportunities available. Poverty, lack of awareness about the importance of education, social discrimination, language skills, method and language of educational instruction,

content of the lessons and opportunity cost of time spent in schools, low achievement levels compared to the non-tribal students, etc. prevent these groups from having access to education and result in illiteracy and poor rate of educational attainment. Four decades back, Freire (1974) who proposed critical pedagogy articulated very clearly about the learning skill of the oppressed and marginalized; he wrote “no matter how ignorant or submerged in the culture of silence s/he may be, is capable of learning or has the right to learn.”

The project team at the beginning was wondering how to address the issue and make education possible to the Irula children; a series of discussions with the community members helped the project team to understand the situation and work out appropriate strategies. Ensuring nondiscrimination in the access and quality of education is not easy in the existing system; therefore, segregation of Irula children from mainstream schools was adopted as a strategy to overcome the inhibition and discouragement among the children to attend the school and parents to send their children to school. A new school was constructed in the hamlet, land and labor were shared by the community, and the NGO met the cost involved to construct a small building. For subsequently running the school, NGO mobilized the fund from different sources. The new school located in the hamlet created a sense of ownership among the tribals; the proximity, no fear of discrimination by students from other communities, and encouragement from the teachers made the parents send their children to school.

At the beginning the school was started with a modest number of around 25 students up to 15 years old with a single teacher. The teacher was oriented on how to handle the shy and timid tribal children with language barrier and how to interact with the parents with no idea about education and feelings of cultural inferiority. He was also briefed about the tribal way of life and the sensitivity one needs to have when working with a tribal community. To manage the school, a management committee was formed with active youths and committed and experienced elders as members. Over a period of time, the school management committee developed the capacity to mobilize the entire community to discuss and find solutions for issues like enrolment, good support from the parents, good rapport with the teacher, parents' responsibility in the home environment to reinforce the learning takes place in the school, etc. The committee has been working till date, every month on the first, meets to discuss on certain common agenda, and has a good track record; this is happening without fail for the last 14 years. The first 8 years community managed the school with two teachers, based on the good performance and request made by the community the department of school education, government of Tamil Nadu has taken over the management and subsequently upgraded up to class eight. The entire community owns the responsibility to create awareness about the need for education, motivate them to send their children to the school, clarify parent's doubts about the expenses involved and the facilities/schemes available to support the students, etc.

After 15 years the school was started in the M.G.R. Nagar, at present male and female children from three Irula settlements M.G.R. Nagar (130 households), Sisil Nagar (60 households), and Thalapathy Nagar (92 households) are enrolling; the current strength of the school is nearly 250. The other two settlements Sisil Nagar and Thalapathy Nagar were developed after the 2004 Indian Ocean tsunami.

Now eight teachers are working in the school, and two new buildings were constructed. At present all boys and girls below 15 years in the village are literates and have the skill to read and write; after class eight children go to high school in the neighboring village except a few dropouts, several of them who completed the school education are now going to colleges, and the Irula parents are with the dreams that their children will become salaried employees and would not repeat the same distressed life Irulas have been undergoing over generations. The community identity-based discrimination the children faced in the earlier time is not an issue in the high school; moreover the students after class eight are able to manage themselves well in the classrooms. The committee leaders and village elders take the responsibility to support the students to go to high school and continue the study, and if needed they speak to the parents of individual children and convince to send their children to high school. The dropout cases are very few; the reasons are some of the parents do not want to send their female children after attaining puberty and in some other cases male or female children who need to support their parents to manage the household income. Now around 15 students are pursuing their higher studies in arts and science colleges and professional institutions. The entire younger generation have become literates and have the skill to read and write. In general the elders feel the educated younger generation is better informed, thinks fearlessly, shares their views and ideas, advises, and even sometimes argues and convinces the elders in the community decision-making forums like the traditional panchayat, the school management committee meetings, etc. But in the past, it was not the case, and the uneducated youths were submissive, listen, and respond to the elders' words. Glass (2010) asserts that education should be a process and practice of setting people free from socioeconomic and political oppression. On day-to-day life, the parents get support from the educated children to do simple calculations in fish markets, ration shops managed by public distribution system, count the currencies, etc. All families in the village hold savings accounts in the local bank; children support their parents and play a major role to manage the accounts. The children also support their parents in submitting loan applications to the bank to get credit for buying fishing net and small boats, similarly when the parents borrow money from the local money lenders to use for different purposes. Now modern communication tool like mobile phone has become a commonly used device among the Irula adults, and the educated children help the adults how to operate and inform them of the benefits of mobile phones. The boys and girls who had completed high school are better in interacting with the external world not like the timid and shy Irula of the elder and previous generations. The new knowledge and the linguistic and communication skills developed in Tamil, the main language, made the Irula youth to seek and access information about the state development support, exclusive opportunities available for the tribal communities, how to approach the procedures needed to follow, self-employment opportunities like small-scale business, etc. and disseminate among the Irula community members. The outlook about the opportunities, standards, and participation in the institutional system has changed. These already educated boys have become the role models to the other children in the settlement.

5.6 Mangrove Restoration and Management

The fourth concern in the priority list of the community identified through PRA was degraded mangroves which are the primary source of their livelihood. Based on the biophysical survey conducted by the project team and the participatory transect conducted in the mangrove waters with the members of the Village Development and Mangrove Council (VDMC – a local village-level structure created to work with the project team and other stakeholders), the project team identified 17 hectares of degraded mangrove areas and protected 60 hectares of mangrove forest, including the plantation in the degraded area which would improve the fishery production of the mangrove water. The area was traditionally used by the Irula men and women for fishing. Permission was obtained from the state forest department, the official owner of the mangrove forests, and the area was demarked as a management unit for the Irula of M.R.G. Nagar to restore and manage. The Irula were involved in the entire restoration process, like digging canals, making nurseries, planting, monitoring, and maintaining the canals in the following months. Digging canals and planting the saplings created employment opportunities for considerable number of days to the men and women of the tribal group. Benefit-sharing mechanism for the community was also worked out, and usufruct rights for fishing in the canals located within the management unit were demarcated for the village. During the subsequent years, two other degraded areas with 20 hectares each were identified, and the same process was adopted for the restoration. According to the Irula, monitoring of the restored units is not an issue; at least a few Irulas might be fishing near these units at any point of the day and it happens round the year.

After more than a decade now, the 57 hectares of degraded areas restored by the Irula are with dense lush green mangroves, the community feels proud about the mangrove forests they had restored and collectively managed, and the community has internalized the responsibility of protecting the area restored by them and keeping the healthy mangroves intact. The community and the state forest department have been maintaining good partnership with regard to managing the mangroves restored by them. The Irula continue the fishing practice in the main canals, and the general opinion is that now the availability of fishery resource is better than in the past.

5.7 Conclusions

Looking back after nearly more than a decade of the mangrove conservation project, visible outcomes are seen pertaining to the education of Irula tribe and mangroves restored and managed. Legal identity of the Irula achieved through the distribution of “community certificate” removed the practical hurdle for the children to continue their education beyond primary level. Institutionalizing education in the community has shown perceptible results; it was an illiterate community

15 years back when the project was launched but now has internalized the importance of education, the children feel very comfortable to enroll and continue their study, and the parents provide all support. It was quite a challenge to prepare the submissive and timid tribal group with a seminomadic culture in the past to actively participate and manage the school, but things have changed due the community's involvement, ownership, collective effort, and increased awareness over the years. The literacy rate among the younger generation is nearly 100 %, and discernible change is seen among the educated younger generation in their behavior and the way they understand the relationship with external agencies and institutions. Fear in the mind is reduced while interacting with the external world in general. The linguistic skill and ability the younger generation acquired help them to organize information/ideas and present in a logical manner. The long-term result of education in the Irula tribal community in the coming years should not be restricted with access to employment and an ensured income to support their needs and make a decent living only – but also a pathway to genuine learning and building productive human capital – as an essential component of growth, to emerge as active citizens to eradicate poverty and contribute sustainable resource management.

Commitment and accountability to protect the restored area by the community is well internalized; moreover the fishing right they enjoy in the canals, which provides the community an economic incentive, ensures for sustaining the interest to monitor and protect and the sustainable management of the mangroves restored by the community.

It is apt to record here what Amartya Sen (2002) says to support his point for the universal basic education: To catch up with the Western nations, Japan issued its fundamental code of education in the year 1872 declaring to make sure that “no community with illiterate family, nor a family with an illiterate person”; by 1910 Japan was almost fully literate at least for the young, and in 1913, though very much poor than Britain and America, Japan was publishing more books than Britain and more than twice as many as the USA. The concentration on education was responsible, to a large extent, for the nature and speed of Japan's economic and social progress. This statement applies very much to the miniscule social system of the Irula tribe to achieve not only their socioeconomic development but also to ensure the sustainable use of the mangroves they are depending on their livelihoods.

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