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Abstract:

More than three fourth of geographical area of Meghalaya is under forest cover. About 90% of forests of Meghalaya belong to communities who manage them through traditional institutions. These forests are popularly known as community forests. The forests of Meghalaya are experiencing pressure due to extraction of fuel wood and timber, grazing, and expansion of agriculture and human habitations. The pressure is maximum in Khasi Hills which covers about half of the geographical area and supports about half of the population of the state. The community forests have been classified into various categories depending on the quantum of restrictions imposed on extraction of forest produce. The most common types of community forests are: sacred forest (Law Kyntang, Law Lyngdoh, Law Niam), village restricted forest (Law Adong) and village supply forest (Law Shnong). Almost every village in Khasi Hills has a community forest of one or the other category. It has been reported that Khasi Hills is losing forest cover at a rapid rate and most of the forest cover loss is taking place in the community forests. Therefore, there is a genuine and urgent need to devise strategies and approaches to conserve these forests with an aim to enhance and sustain the economic and ecological benefits from the forests accruing to the people, particularly to the communities dependent on forest for their livelihoods. This paper proposes a sound strategy for conservation of community forests of Khasi Hills, Meghalaya by developing community forest networks.

Keywords: Meghalaya; Community forests; Sacred forests; Forest networks; Conservation.

Introduction

Forests are an important source of food, fibre, freshwater and construction materials for subsistence as well as cash income for the people of Meghalaya and act as 'safety net' in

times of hardship. For these reasons, communities dwelling in or near forests have in the past ensured that rich and diverse forest areas are preserved and protected. Close proximity to these resources and their constant utilisation have enabled traditional communities to develop an understanding of the conservation and sustainable utilisation of forests. This knowledge is expressed in the diverse cultural practices of the local people and forms part of their human heritage. About 90% of forests of Meghalaya belong to communities who manage it through traditional institutions using local knowledge and practices transmitted from generation to generation. The community institutions and forest management practices vary in different regions of the state viz., Khasi Hills, Garo Hills and Jaintia Hills (Tiwari, 2019). This paper relates to the Khasi Hills predominantly inhabited by people belonging to Khasi tribe and comprising of four districts of Meghalaya viz., East Khasi Hills, West Khasi Hills, South West Khasi Hills and Ri Bhoi. Khasi Hills occupies about half (11715 sq km) of the geographical area of Meghalaya. It is also inhabited by about half (1487166) of the population of the state. It is located in the central part of the state and covers three distinct land morphs viz., the Northern Slope predominantly covering the Ri Bhoi District, Central Plateau covering the districts of East Khasi Hills, West Khasi Hills, and South West Khasi Hills and Southern Slope in the southern part of East Khasi Hills bordering Bangladesh (Fig. 1).

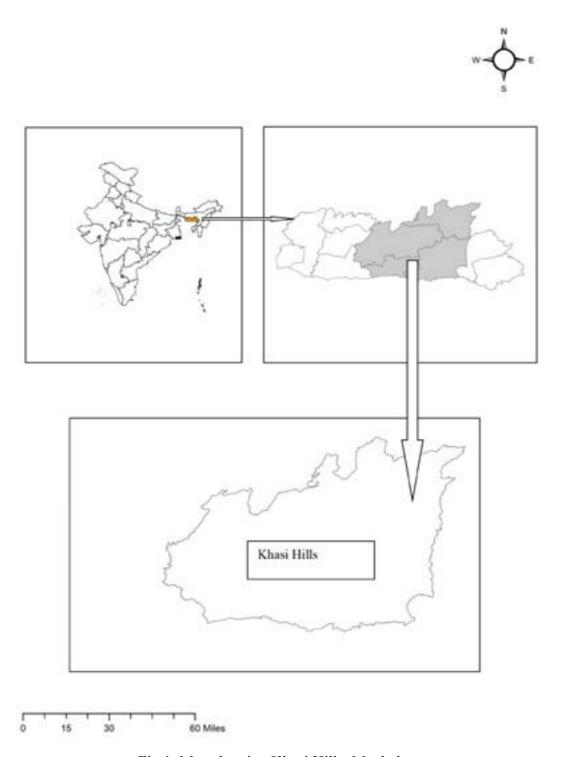


Fig 1. Map showing Khasi Hills, Meghalaya

Community forests (CFs) of Khasi Hills are of diverse types viz., sacred forest, village forest, raid forest, syiemship forest, clan forest, church forest, society forest, cemetery forest etc. Most of these forests are managed by traditional institutions (TIs) headed by Syiem, Sirdar, Wahdar, Lyngdoh, Rangbah Shnong, Rangbah Kur, Syiem Raid, etc. Khasi Hills Autonomous District Council (KHADC), a non-traditional institution, established under sixth schedule of Indian constitution, has administrative control over these traditional institutions and thus wields indirect control over the CFs. The KHADC also collects royalty and cess over the sale of forest products. The State Forest Department (SFD), Government of Meghalaya, also has significant stake in these forests, particularly for issuing transit permit and collection of taxes on the forest products sold outside the state. Few decades ago SFD took up the responsibility of regenerating degraded CFs through Joint Forest Management Committees (JFMCs) funded under National Afforestation Programme of Government of India. During past four decades the SFD and Soil and Water Conservation Department (SWCD) of the Government of Meghalaya have raised thousands of hectares of forest tree plantations on degraded CFs and erstwhile *jhum* lands; some of which have matured and the departments are in the process of handing them over to the local traditional institutions for management and control e.g. Hima Mylliem Forest, Mawpat. Thus any action aimed at promoting community forest management (CFM) in four districts of Khasi Hills must associate all the three agencies viz., traditional institutions, KHADC and State Forest Department. There is ample scope of enhancing the level of cooperation among these institutions and there is a need to devise mechanism to enhance the cooperation among these institutions in the field of forest management in general and CFM in particular. Fifteen CFs of Khasi Hills have been declared as Community Reserves (CR) vide Section 36 C of the Wild Life (Protection) Act, 1972 through an agreement between the heads of traditional institutions and State Forest Department (http://www.megforest. gov.in/wildlife community.html). This is a miniscule considering the number and area of forest under community control in Khasi Hills. Bringing all or even substantial number of CFs under CR, a type of protected area, may not be possible as this will restrict several usufruct rights of the communities and also put tremendous responsibility on the forest officials to oversee the enforcement of the provisions of Wildlife (Protection) Act 1972 in the CRs located in various parts of the region. Several of the CFs serve as source of land and building materials for construction of houses for newlywed couples belonging to poorer section of the society. CFs are source of NTFPs, fuelwood, fodder and serve as grazing land for livestock. CFs also provide timber and at times cash for building and or maintenance of community hall, churches, schools and other infrastructure in the village as decided by the Durbar. CFs are a common property resource and every resident of the village are proud owner of the community forest. Thus converting CFs into CRs will deprive the communities of their livelihoods and make them dependent on market for their day to day needs of forest products and services. It will not be out of context to say that CR is a borrowed concept superimposed over the Khasi people who already have a

working model of community forest management (CFM) practicsed for centuries (Tiwari et al., 2010; Oberlack et al., 2015).

Mounting pressures from market forces and increasing aspirations of local people for improving their standards of living has commoditised the forests and thus the people are least interested in setting aside the forests for future or protecting forests without any tangible benefits accruing to them in short run. This has resulted in large-scale degradation of the CFs in Meghalaya. In most villages only the sacred forests (Law Kyntang, Law Lyngdoh, and Law Niam) and prohibited forests (Law Adong) harbour primary forests. In most parts of Khasi Hills the village forests (Law Shnong) where from extraction of fuel wood and timber for bonafied use is allowed, are no longer in good condition. In spite of presence of strong traditional institutions 'tragedy of commons' has come into play and during past fifty years or so large scale extraction of timber has resulted in depletion and degradation of CFs in the state. Illegal extraction of timber and its export to neighbouring state through informal trade is not very uncommon. Recent forest cover assessments have shown that the forest cover of Meghalaya in general and Khasi Hills in particular is on decline and within a span of two years 2017-2019, 121.48 sq.km forest cover of Khasi Hills has been lost (ISFR, 2019). Therefore, there is a genuine and urgent need to devise strategies and approaches to conserve these forests with an aim to enhance and sustain the economic and ecological benefits from the forests accruing to the people, particularly the communities dependent on forest for their livelihoods. A number of government and non-government agencies have been working for protection and regeneration of the forests of the state and several thousands of hectares of tree plantations have been created. However, this has made little positive impact towards conservation of CFs. Our study on the status of CFs in Meghalaya has revealed that lasting impact can be made if the communities recognise the need and develop their own local specific strategy for CFM (Overlack et al., 2015). The role of external agencies could be limited to sensitisation and motivation of the community leaders and sharing with them some experiences and technologies that have worked in similar situations elsewhere. In order to reach the communities and to deliver the services there is a need to develop an institutional network that can facilitate the process and help in percolation of ideas. Networking of CFs of the state may help a great deal in achieving the objective of conservation and sustainable management of forests of Meghalaya that will in turn help in poverty alleviation and sustainable economic and social development of the people of the state. The CF networks can provide a forum through which the government departments (e.g. SFD, SWCD), KHADC and non-government agencies can deliver services and implement forestry related programmes. In order to develop such networks following key activities need to be taken up.

Key Activities

Identify and sensitise the functionaries of traditional institutions

The first and foremost requirement for developing the network of community forest in East Khasi Hills, West Khasi Hills, South West Khasi Hills and Ri Bhoi districts of Meghalaya is to motivate and sensitise the TIs who control these forests at the local level. These institutions can be the Rangbah Shnong (Village headman) Rangbah Dang (Locality headman) and Rangbah Kur (Clan chief), as they are the local authorities and therefore they are in a better position to influence the decision of the families and individuals. However, the number of village level local authorities may run into thousands and therefore, it may not be feasible to work with all of them individually. So, it would be prudent to clump them in to groups/clusters of manageable size. A cluster of twenty to thirty villages should be good enough. It would be better if these village clusters have some organic linkage, for example, they may belong to same Sirdarship, Lyngdohship, Raid Syiemship or Wahdarship etc. In the four districts of Khasi Hills there are 16 Syiemships, 6 Sirdarships, 3 Lyngdohships, and 1 Wahdarship. The jurisdiction of Syiemships in few cases are generally very large covering thousands of square km area and as many number of villages. Therefore, working at the level of Syiemships particularly the ones like Mylliem and Khyriem may not be feasible. Smaller and middle level TIs namely, Sirdarships, Lyngdohships, Raid Syiemships and Wahdarships, generally spread over 10-20 villages, are most appropriate for formation of networks. So first activity to be taken up is to procure where available or prepare where not available, the jurisdiction map of various middle level traditional institutions. Some middle level TIs have formed associations of village headman locally called as Synjuk Rangbah Shnong. The node of this network can be located at the headquarters of TI chief who may work as Community Facilitator/Coordinator (CF) for the area under his jurisdiction.

The hierarchy of Traditional Institutions differs in different parts of Khasi Hills. However, generally they can be one of following types:-

- **Type 1.** Khasi Hills Autonomous District Council \rightarrow Syiem Hima \rightarrow Syiem Raid \rightarrow Rangbah Shnong \rightarrow Rangbah Dong \rightarrow Family \rightarrow Individual
- **Type 2.** Khasi Hills Autonomous District Council \rightarrow Lyngdoh Hima \rightarrow Rangbah Shnong \rightarrow Rangbah Dong \rightarrow Family \rightarrow Individual
- **Type 3**. Khasi Hills Autonomous District Council \rightarrow Syiem Hima \rightarrow Syiem Raid \rightarrow Rangbah Shnong \rightarrow Rangbah Kur \rightarrow Family \rightarrow Individual
- **Type** 4. *Khasi Hills Autonomous District Council* \rightarrow *Sirdar/Wahdar* \rightarrow *Rangbah Shnong* \rightarrow *Rangbah Kur* \rightarrow *Family* \rightarrow *Individual*

A typical hierarchy and relationship among traditional institutions in Khasi Hills is shown in the Fig.2.

DETAILS ON HIERARCHY OF KHASI TRADITIONAL INSTITUTIONS

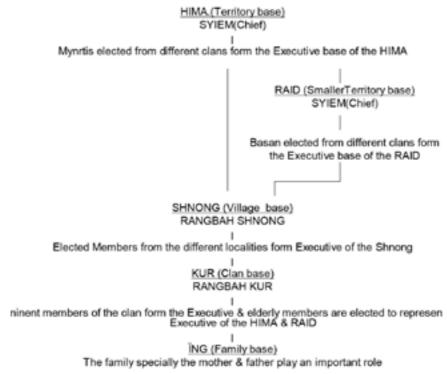


Fig.2. Hierarchy and relationship among various traditional institutions of Khasi Hills, Meghalaya (Syiemlieh *et al.*, 2003).

Identify a community leader

During the process of identifying and sensitising the traditional institutions, it is required to identify the community leaders (CL) having interest in development of society and village. The CL should be a volunteer not a paid employee. It has been seen that no sooner a social worker becomes a paid employee he (CL) looses his hold on the people and he is no longer able to take voluntary work from others in the society leading to erosion of his respect and authority. Community leader can work as functionary of the network who may keep the records and convene the meetings. The working of CF network shall depend to a large extent on the community facilitator (TI chief) and the community leader.

Locate and classify community forests

Almost every Khasi village has a community forest of one or the other kind. Some villages

have two three types of community forests (Tynsong et al., 2012). The institution involved in management of these forests and forestlands vary according to the type of forest (Table 1). With the help of local traditional institutions and by using remote sensing data and GIS techniques, it is possible to show the CFs of Khasi Hills on a map. The forests may be classified on the basis of their status of degradation or canopy cover also, as the strategy of their development will vary accordingly, for example the ones in good condition may need continuity of protection while the degraded one may involve efforts for regeneration as well as protection. Proximity and typological similarity may work as affiliating force for building networks. For example, it may be easier to construct a network of Sacred Forests (Law Kyntang). It may be interesting to explore possibility of forming networks of village forests (Law Shnong) and networks of prohibited forests (Law Adong) etc. Major community forests and chief functionaries of traditional institution/authority responsible for their management in Khasi Hills of Meghalaya are given in Table 1.

Table 1. Community forests and institution/authority responsible for their management

Type of Community Forest	Chief functionary of Institution/authority
	responsible for management
Sacred Forests	Lyngdoh, Rangbah Shnong, Rangbah Kur
Village Forests	Rangbah Shnong, Rangbah Dong
Raid Forest	Syiem Raid
Clan Forest	Rangbah Kur
Syiemship Forest	Syiem Hima

Demonstrate the goods and services provided by the CFs

In modern world, traditional beliefs and education, awareness raising and capacity building alone may not help in conservation of CFs unless it is combined with the economic returns in short run. During a workshop organised by our group we have very clearly demonstrated the linkages of forest services (particularly water source protection) with the village forests (Tynsong *et al.*, 2012). This exercise was done by the villagers themselves and by the end of workshop the participants were very excited having discovered the dependence of a variety of user groups (e.g. urban water supplies, hydroelectricity production units, industries) on their forests, some of these user groups were located hundreds of kilometres away from their villages. Such exercises involving the communities may help in motivating the people for protection and management of CFs as they discover by themselves the services rendered by their forests. In some cases

possibility of introducing collection of user fee may be explored which may provide benefit in short run to the communities conserving CFs. Being hill state water conservation service of CFs is likely to be most attractive to the people of Meghalaya (Tiwari, unpublished). Biodiversity conservation, climate amelioration, biological control of pests, and provisional services may be explained with suitable examples and locally available evidences. In several villages the villagers are experiencing the water scarcity and have begun to realise the value of CFs in protection of water sources. Through our field works we have observed that villagers consider forest stream water better for drinking than the water supplied by the taps installed by government. All the villages and CFs belonging to one watershed/catchment or clusters of CFs providing ecosystem services to one user group may form a network in order to take care of their interests jointly. Water resource map and its connectivity with the forests are depicted in Fig. 3 and Fig. 4. Pyngwait and Mynring villages have large area of community forests which are serving the water services of the downstream villages. It is seen that most streams originate in the forests at upstream and join the rivers in the valleys downstream. Villages located downstream are dependent on the upstream villages for their water supply. It is likely that the rivers supplying water to downstream may dry up or may become seasonal if the upstream forests are degraded. This further demonstrates and emphasises on the need of some sort of networking and dialogue among upstream and downstream villages for sustainable management of forests.

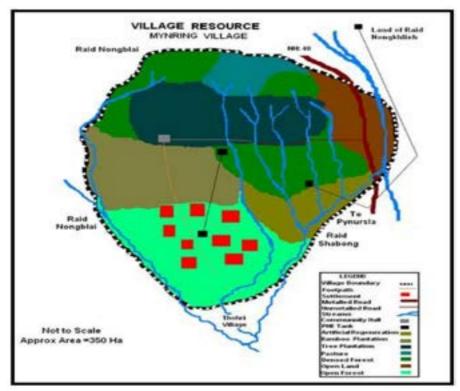


Fig. 3. Water Resource map of Pyngwait village showing its connectivity with forests

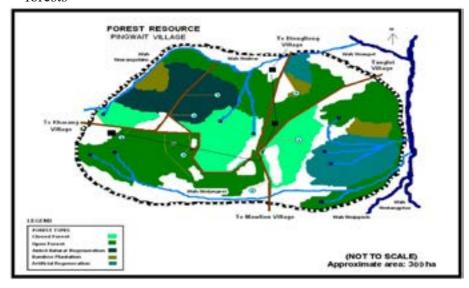


Fig. 4. Water Resource map of Mynring and Pyngwait village showing its connectivity with forests

Institutionalising the Networks

It has been observed time and again that the networks breakdown if they are not supported by an institutional framework. In case of CF network the organisational support is already in existence in the form of TIs. The concept of CF network needs to be strengthened/ assimilated in the working of these organisations. Newly created institutions like JFMCs, Village Employment Councils (VEC) and Watershed Development Committees may also be involved in networking of the CFs. The CF networks can be made sustainable by promoting periodic interactions among the members where they can discuss common issues relating to conservation of CFs such as policy changes, government support, land use at the landscape level and conflict resolutions. It is important that the people understand the value of interdependence of the CFs and people at large. This can be demonstrated by undertaking simple exercises on spatial information relating to cumulative impact of the CFs at landscape level in enhancing the ecosystem services provided by the forests. In Khasi Hills there are several CFs on the hills whose adjoining valleys support fertile lands where paddy is cultivated. The close linkages between the CFs, soil fertility, soil moisture of agricultural lands and quality and quantity of water in the streams running through the valleys needs to be explained to the communities. This can be done by drawing resource map as shown in Fig. 3 and Fig. 4.

Sharing experiences and dissemination of success stories

The first one or two networks may need support and interventions. It is desirable to see that the sites selected for initial networking should be such that chances of success are more as we cannot afford to fail. If we are able to demonstrate a working CF network at one site, subsequent networks of CFs shall propagate by themselves or will need minimal efforts. In order to achieve this, the financial input should be kept to minimum. Once this is achieved it may be desirable to facilitate sharing of experiences and dissemination of success stories in order to accelerate the spread of networking.

Linking of TIs with the Government

Government departments invariably approach village level TIs before taking up any development work in the village. However, the disbursement of finances to the TIs is never done. The major hurdle in this regard is general non-existence of accounting and audit procedures in the working of the TIs. The other factors that come in way of formal involvement of TIs is their semi-democratic character, large scale structural and functional variability, absence of codified legislations and non –participation of women in village durbars/decision making. One way to find solution to this problem is to analyse the approaches and experiences of other agencies in tackling similar situations. For example: Nagaland was also faced with somewhat similar challenge, which they have been able to tackle by establishing Village Development Boards which works as interface between the

TIs and government. In IFAD project villages of Meghalaya, this issue has been tackled by establishing Natural Resource Management Groups in each project village. In Mawphlang village of EK Hills district of Meghalaya the villagers had established a Forest Regeneration Committee for implementation of North-Eastern Council funded project. From these examples it is clear that it is possible to link the TIs with the Government and it is happening wherever need arises.

Structure and Functioning of CF Networks

The structure of the CF network shall be local specific. However, broadly, as stated earlier its jurisdiction should be the village included in the middle level TI of the area. The network should work under overall guidance of the Chief of the TI who shall be assisted by the community leader identified for the purpose. All the headmen of the area shall be member of the network. All the CFs situated in the area covered by the network shall be identified and their regeneration and protection shall be the primary task of the network. The network shall share their experiences and resources (managerial skill, propagules/ planting materials, social fencing etc) among themselves through formal and informal meetings. The network can become a pressure group for collective bargaining for funds and resources from government and international agencies like Carbon Fund or GEF grants. The network can identify/develop a pool of knowledgeable persons who can serve as trainer and motivator for CFM.

Steps to develop community-based networks

The next step to develop community-based network should be to demonstrate to the people about the benefits of the forests. This should be done through village level participatory planning workshops at various levels. At level 1: the village leaders like executive members of village durbar and village elders may be motivated who in turn can take the message to common people. The TIs are already linked with the Khasi Hills Autonomous District Council (KHADC) though Sixth Schedule of Constitution of India. At present KHADC is not in a position to provide any technical or financial assistance to the TIs. Once several networks are in place they can be federated at the level of Syiemship, the highest level of TI. Even before this happens, it will be helpful if the Syem Mylliem and Syiem Khyriem, under whose jurisdiction a large chunk of East Khasi Hills and Ri Bhoi districts falls, are informed and taken into confidence about the activity and their cooperation is ensured for furthering the cause.

Who should take the Responsibility?

The task will need a great deal of interdepartmental coordination and therefore in my opinion the Meghalaya Basin Development Authority (MBDA) should be in a better position to take the responsibility. The MBDA may like to assign the task to The World Bank supported Meghalaya Community-led Landscape Management Project (CLLMP)

who can take a lead in this activity. The project has a reach to the rural areas and has man power and material resources for undertaking the task. The project staff may be supported by Village Level Workers (VLWs) and other grassroots level government officials who may help in organising the meetings and in collection of data concerning forests and people of the villages.

Bench marks of Achievements

Some indicators of success of development of CF network are: 1. High level of interaction among the network members as evident by formal or informal meetings held. 2. Regeneration of CFs or at least arresting of their degradation 3. Replication of networking in neighbouring areas. If these indicators are observed on the ground, the objective of CF networking has been achieved.

Conclusion and Summary

In conclusion, it can be said that Developing Community Forest Network (CFN) can be a potent strategy for conservation of community forests in places where they are under the control and management of traditional institutions like Khasi Hills of Meghalaya. The process of development of the network shall include documentation of CFs and associated TIs, selecting right size of network, motivating the personnel of TIs, capacity building of local leaders, institutionalising the networks, linking them with higher level of TIs, creating platform for constant interaction among network members and linking the networks with the state and national governments and where necessary with international agencies.

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