

People in Conservation

Biodiversity Conservation and Livelihood Security

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Kalpavriksh Environment Action Group

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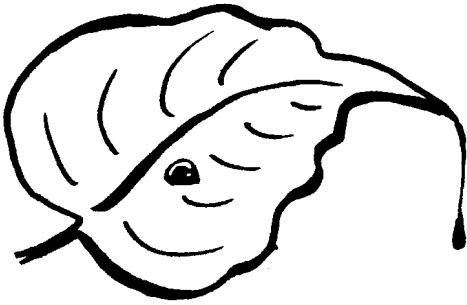
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The last few editorials have largely focused on laws, policies, rules and regulations. While the importance of these in strengthening all that is just and equitable in the world can never be overestimated, this is as good a time as any other to remember, that the best of laws and policies, rules and regulations, and institutions are only as good as the individuals who make or break them. Ultimately, it is individual integrity and commitment to the cause that will decide how effective we are in our chosen path.

While editors the world over have to edit and present news about the likes of Ramalinga Raju of the Satyam scam, Bernard Madoff of the Ponzi scheme and Tian Wenhua of the toxic milk scam, I feel fortunate and blessed to present a newsletter about the likes of Shri Vijay Jardhari of Jardhar Gaon, Shri Chaitram Pawar of Baripada and the old unknown village lady from Chincholi Morachi, who softly warned us against going too close to the peacocks that were protected by her village. They all share a sense of personal integrity and a belief in a cause that is larger than just their personal longings. Sometimes this integrity is almost visible like a physical force and all one can do is to be touched by it and rejoice at its presence.

Here is to starting the new year, with gratitude for the huge network of committed people, that continue to work towards community based biodiversity conservation and livelihood security and hoping that the cause will continue to attract individuals with clarity of thought, integrity of character and a high level of commitment to the stated cause.

The Baranaja System



Jardhargaon is a village at a height of 1500 metres situated in the hilly district of Tehri Garhwal in the State of Uttarakhand in North India. Jardhargaon has pine forests, village grasslands (Civil Soyam Forest) and dense Reserved Forests covering an area of 429.5 ha consisting primarily of oak and rhododendron trees. Cultivation is the main livelihood of the people of this region.

This is part of the Garhwal region where the Chipko Movement took place. The Chipko Movement started in the early 1980s as a spontaneous local protest against tree felling by contractors and it spread rapidly across the region. The Movement resulted in a 15 year moratorium on commercial felling at altitudes over 1000 metres in the Uttarakhand region. Jardhargaon, too, came under the influence of this Movement, primarily through the active involvement of one of its residents, Vijay Jardhari.

Since returning home from the Movement, Jardhari has been instrumental in ushering in a conservation movement of a quieter and deeper kind in his village. In 1980 a *Van Suraksha Samiti* or VSS (Forest Protection Committee) was set up by local people, in order to conserve the Civil Soyam Forest (reserved for the villagers' to use) as well as the Reserved Forest which is officially owned by the government. The Reserved forest which earlier had broad leaved trees were severely denuded by the 1980s. The community decided to stop using it for grazing as well as for collection of fuel-wood and timber and to

control forest fires. They did not opt for any afforestation programme but let the forest regenerate on its own. Today, nearly 30 years later, the de facto control of the forests lies with the community and the once barren land is home to several hectares of dense mixed forest consisting of a diversity of oak (*Quercus incana*), burans (*Rhododendron arboreum*), horse chestnut (*Aesculus indica*), pine (*Pinus roxburghii*) and other species. An assessment in the 1990s by botanists of the G.B. Pant Institute of Himalayan Environment and Development showed levels of diversity that were unmatched by government protected forests. The village is also home to black bears (*Ursus thibetanus*), leopards (*Panthera pardus*), wild boars (*Sus scrofa*), many deer species and over a hundred species of birds. Tigers (*Panthera tigris*) too have been occasionally reported from the area.

Another movement called the *Beej Bachao Andolan* (Save the Seeds Movement) started a few years after the forest protection activity. This movement was a response to the crisis that faced the agrarian community as a result of getting trapped in the government propagated Green Revolution. After an initial rise in productivity, the Green Revolution had over the years resulted in soil infertility, weaker seeds, and an increasing dependence of the local community on external government and private agencies. Besides this, as more and more land was devoted to growing market crops, the huge range of foods that were available in the wild and grown on the farms were disappearing, resulting in poor health of the community. Vijay Jardhari consulted the elders of the community for a solution to the problem and was advised to comb local forests and farms and find the wild cousins and cultivated varieties of indigenous seeds and bring them back to the farms. This also meant using traditional methods of agriculture which included systems like the Baranaja where atleast 12 species are grown on a field at a time in what looks like a messy arrangement of varieties of cereals, lentils, vegetables, creepers and roots but actually is a highly sustainable and time-tested method of agriculture. Today this movement has resulted in the revival of many species, including 200 varieties of beans, 100 varieties of paddy and 320 varieties of wheat. The surplus is sold in the markets of Delhi with the help of NGOs like Vividhara and Kalpavriksh. The increasing demand for organic food has also meant better economic returns for the inhabitants of

this unique village. Today more and more farmers in the surrounding villages are returning to traditional seeds and methods of farming.

While the advantages of this quiet, consistent and deep conservation effort are many, the community does have its share of challenges. The conservation efforts have led to an increase in the number of monkeys that raid the houses, of wild pigs that raid fields and of bears that attack millets, maize and wild fruit. The area officially is under the Forest Department and the officials do not have a solution to this problem as yet. Another challenge is the constant threat from lime-stone mining efforts in the area and the community has been fighting to stall the commencement of mining which will negatively affect the biodiversity of the region and the livelihoods of the people. Besides this, there was a lack of coordination and trust between the community owned VSS which lacks official recognition and the officially recognised Van Panchayat (VP) but in recent times there has been greater acceptance of each other.

This effort has been written about extensively and is recognised internationally as one of the most successful conservation efforts by a community. The Movement has also played a major role in bringing about international recognition to the existence of Community Conserved Areas.

Source: 'Jardhargaon Community Conserved Area', A Report by Kalpavriksh members following a field visit and consultation with the residents of Jardhargaon in July 2008

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Gujarat

A Win-Win Situation

By the year 2000, the coastal village of Ashirawandh, in Abdasa Taluka in Kutch faced a severe resource crisis. Over the previous years, locals had depleted the surrounding mangrove base which in turn had affected the fish stock and the livelihood of the local fishermen. In 2001, the India-Canada Environmental Facility (ICEF) gave funds for the restoration of mangroves in Gujarat. As part of this project, 55 households from Ashirawandh were selected to implement a community based mangrove conservation programme. The total cost of the project that spread over 5 years was over Rs. 50 lakhs. Initially the ICEF provided for a number of facilities to get the villagers interested. The project provided drinking water and facilitated the construction of a primary school in the village. A village welfare fund was also set up with a corpus of close to 4 lakhs donated from the project money.

Besides this, as part of the project, some of the land was leased to the villagers by the Revenue Department. Thus encouraged, the villagers planted mangrove species over 251 hectares of land on the periphery of the village. The saplings are now over a metre tall. Sedimentation in the area has decreased since then helping marine life and increasing the fish in the area. This has also resulted in a line of defence being put back in place against calamities of the ocean. The fodder needs of the cattle are also taken care of by the regenerating mangroves.

The project was completed in 2006 and the village community is now in charge of the plantation with assistance from researchers of the Gujarat Institute of Desert Ecology (GUIDE). G.A. Thivakaran, marine biologist at GUIDE says that the project has been very rewarding and that the community participation was 100%. Shyam Gandhvi, a resident of Ashirawandh adds, "It has been a win win situation for us. The village got a welfare fund, a school and drinking water facilities apart from the mangrove."

Himachal Pradesh

Pine Monocultures Make Way for Biodiversity

Fifteen years ago the hillside of Karsog Tehsil in Mandi District of Himachal Pradesh was covered with pine mono cultures. The officials of the Forest Department (FD) preferred pine as it is not eaten by cattle, grows quickly after a fire, is hardy, requires minimum effort and has a good survival rate. Another thing in favour of the pine monoculture was and still is the fact that the pine resin industry employs 40,000 people in the state.

The local people however preferred a variety of broad leaved species in the forest which provided them with fodder for their cattle and organic fertilizer for their fields. The pine monoculture provided neither; moreover the highly inflammable pine needles increased the chance of forest fires manifold. In 1992-93, fed up with their lack of access to their forests and its changing nature, the local women decided what trees they wanted in their forests and worked towards replacing the monoculture with a more biodiverse mix of trees. The initiative has now spread to 80 forest committees all over Karsog. And today the pine monoculture in the area has been replaced by a more biodiverse forest consisting of amla (*Indian gooseberry*), pomegranate (*Punica granatum*) as well as oak (*Quercus incana*) and other fodder providing trees.

Today the villagers say, that where the community forest committees are strong, the FD cannot ignore the community any longer and the local community is consulted and a variety of trees are planted along with the pine trees.

Source: Archita Bhatta, 'Banking on Variety', Down to Earth, November 2007

A Roosting Site for Bats



Gidadapalya is an agrarian village in Tumkur District of Karnataka. The villagers cultivate diversified crops like tomato, ragi, arecanut, coconut, sapota and other vegetables. The village is surrounded by forest plantations of casuarinas, acacia and indigenous tree species like the banyan (*Ficus bengalensis*), *bauhinia* (*Bauhinia variegata*), the rain tree (*Samanea saman*) and tamarind (*Tamarindus indica*).

For many generations, this village has been a host to bats (*Pteropus giganteus*). The efforts have been more focused in recent years. In the last 20 years an area of 10,000 sq. metres belonging to Shri Gangadhar has been chosen by the bats as their roosting site. The bats face grave threat from hunters who come from surrounding areas to hunt these creatures and sell them in the market for Rs.200 each.

The site has 30 banyan trees and a number of bamboo clumps. There is a small temple at the roosting site and the villagers believe that it is their sacred duty to protect the bats. The villagers keep a watch and chase away hunters. The protection provided to this area has resulted in an increase not only the number of bats (currently around 2600) but also in the biodiversity of the area. Some of the other animals and birds found at the roosting site are the mongoose (*Herpestes auropunctatus*), wild boars (*Sus scrofa*), hares, rodents, foxes, snakes and birds such as peacocks, woodpeckers, chloropsis, pied cuckoo and owls.

Bats provide substantial ecological and economic services via pollination, seed dispersal and agricultural pest control. The bats directly affect the

livelihood of this agrarian community of mostly organic farmers. The huge collection of leaf litter and bat droppings collected once a year from the protected roosting site is a crucial input into the self sustaining farming practices of the local community. The rich fertilizer mix is collected every year in April and distributed amongst the villagers who use this as manure to cultivate ragi, areca, coconut and other crops.

This is yet another example of communities protecting an endangered species for a number of interwoven reasons. The need of the day is some legal protection to the area to fight the threat from hunters and to obtain such protection, the villagers are trying to get the area declared a heritage site.

Source: A.K.Chakravarthy, 'A Case of Giant Indian Fruit Bat Roost in Karnataka, South India for Declaration as a Community Heritage Site'

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Maharashtra

A Gandhian Dream Comes True

The tribal village of Baripada in Dhule District was surrounded by highly degraded forests eighteen years ago. This had resulted in water scarcity, drought and excessive outward migration. Yet today the village is widely recognised both nationally and internationally as a model village and is the recipient of many awards for the same. Chaitram Pawar, a tribal with a Gandhian dream and a resolve of steel to match has been largely instrumental in this transformation.

In 1992, a group of youngsters headed by Chaitram Pawar managed to plant trees over 10,000 acres of land. They initially faced stiff opposition and ridicule from the village elders who had come to believe that afforestation and tree plantations were the prerogative of the government. However the resolve

of the youngsters paid off and the initial effort grew organically and over the years gradually took the shape of a cohesive village development plan put together by the residents of the village.

Convinced that their livelihoods were linked to the environment around, Chaitram Pawar mobilized fellow villagers to set up a Village Development Committee (VDC), to protect the afforested area. A number of rules were put down and strictly regulated by the committee. These rules disallowed the felling of green trees and entry of bullock carts in the afforested area. Collection of firewood (dead branches) was allowed only once a year, areas were demarcated for cattle grazing and other areas were made out of bounds to cattle. Anyone who broke any of these rules was fined specific amounts. Every member of the community contributed some amount for all the conservation and development work in the village. Village elders played the role of 'guardians of the forest' and were reimbursed for their efforts from the funds collected from the villagers themselves.



The results are there for all to see. Today the village is surrounded by 11000 acres of lush forest. The dense forests have helped retain water and this in turn has helped agriculture. Today this once drought hit village grows a variety of crops which include the likes of rice, jowar and soyabean. There is also a significant cultivation of oil seeds. Though the village does get electricity, in a bid to become self sufficient in this area they have started using the remains of certain wild plants to create biofuels. Where once residents had to walk 3 kilometres to fetch water, they now supply water to 5 neighbouring villages. Where once they could only irrigate 15 acres of land they now have brought 120 acres under irrigation.

The benefits are many and at many levels, and with community members like Chaitram Pawar, friends like the Pune based NGO Vanavasi Kalyan Ashram and the backing of a united community, Baripada stands as a role model from which many villages in India can take inspiration.

Source: Aditi Utpat, 'The Road to Baripada', Sunday Times Of India, July 2008

The Peacock Village

Chincholi Morachi is a village about 90 kilometres from Pune on the Pune-Ahmednagar highway and literally means the abode of peacocks and tamarind trees. The village lives up to its name and is home to approximately the same number (2000) of pea fowls (*Pavo cristatus*) as humans.



The people of the village protect and revere the pea fowl. For them it is the carrier (*vahan*) of the village deity Khandoba. S.H. Phalke, a teacher at the local agricultural institute says, "Most people here treat peacocks like their children, which is why you will find that during the sowing time, extra grains are sown in the fields so that the peacocks too can have their fill." Even when the region is reeling under the effect of drought as has happened time and again, and there is not a drop of water to drink, villagers ensure that there is some water available for the peacocks. The birds keep the snakes at bay and act as a natural biological control by eating insects that attack crops.

Last year the Maharashtra Tourism Department gave Chincholi Morachi the status of a Tourist Village. The villagers in general as yet do not see the peacock as a way to generate more revenue and are more concerned about the effect that tourists have on the shy birds. On a visit to the village one does not see the usual signs of a tourist spot, instead one will come

across old village women walking by on winding mud paths or workers at a construction site gently reminding tourists not to venture too near the birds as they are shy of strangers and have in recent years known to move away from the village when tourists intrude on their space.

The Sarpanch of the village, who also heads a local NGO is currently working towards making this a tourist spot by developing infrastructure on his own property. Whether or not this will be in the interest of the villagers as a whole or of the birds, only time will tell.

Source: Atul Sethi, 'Where Peacocks Enjoy Pride of Perch', Times of India, February 2008 and from a visit to Chincholi Morachi by the editor

Nagaland

Khonoma Nature Conservation and Tragopan Sanctuary

Khonoma is a village in Nagaland and home to the proud Angami tribe, traditionally known for its bravery, valour and hunting skills. The region was once rich in biodiversity and wildlife but had been stripped clear of most of its wildlife by 1993. However the trajectory of conservation efforts in Khonoma in the last decade has been awe inspiring.

Until 1994, guests to this village were treated to lavish feasts where the menu included a wide variety of wild meat. However in 1995, alarmed by the drastic loss of the local rich wildlife and due to the efforts of village elders like Tsilie Sakhrie, Forest Department officials like T. Angami and NGOs like Centre for Environment Education (CEE), the Village Council (the customary village institution) passed rules to regulate hunting in 70 sq. kilometres of the forest near Khonoma. In this area, only limited hunting of crop destroyers like some deer species and wild boar (*Sus scrofa*) was allowed and the sale of all wild meat was banned. Anyone caught breaking these customary rules was fined anywhere from Rs. 300 to Rs. 3000. The clans to which defaulters belonged also faced prospects of being fined. The stopping of hunting and selling of wild meat definitely affected the food

availability and livelihoods of local people to a certain extent, but the rules were upheld and followed.

In 1998, the Khonoma Nature Conservation and Tragopan Sanctuary was declared by the local community. Local rules and regulations, local institutions and local people nominated as officials were put in place by the Village Council to manage the sanctuary. In 2000, hunting was completely stopped and slowly wildlife is returning to the village, the sanctuary and the surrounding Dzuku Valley. Currently one finds considerable wild life here which includes the black bear (*Ursus thibetanus*), the sambar (*Cervus unicolor*) and the leopard (*Panthera pardus*), over 40 species of orchids, as well as the endemic Dzuku lily. Khonoma is also recognised as an Important Bird Area (IBA) and is home to the endangered Blythe's tragopan (*Tragopan blythii*). Feroze Ahmed, a biologist documenting the biodiversity of the area, reports that there are 20 species of frogs and toads in the area. Khonoma with its sophisticated cultivation technique is also a centre of impressive agro-biodiversity. It is home to 60 varieties of rice and a large variety of millets and maize.



The Central and State Government have stepped in to create tourism-based livelihoods for the conserving community, which to a certain extent may offset the loss to hunting-based livelihoods. In 2003, the Khonoma Tourism Board (KTB) was constituted and members of the local community were encouraged to take on jobs as guides, tour operators and

interpreters. The Union Ministry of Tourism and Culture also adopted the village under its Green Project and Khonoma now has some good roads and solar energy.

While biodiversity and wildlife have definitely returned with the effort, the livelihood issue is a bit more complicated. Some are of the opinion that the experiment in Khonoma is a complete success and Khonoma can become a role model for community-based conservation and livelihood security, while others feel that the livelihood benefits have been only at the individual level. Payments are made to guides, performers at cultural programmes and to individual families but the village as a whole has not benefited much.

Source: Amarjyoti Borah , 'Welcome to Khonoma Eco-tourism; A Success in a Nagaland Village', Down to Earth, March 2008

Orissa

Sal and Siali

A few months before the festival of Lord Jagannath (*Jagannath Utsav*) in Majhiakhanda village in Nayagarh District of Orissa, the village women get together to knead a mixture of ant hill clay, cow dung and cow urine into egg shaped balls and seeds of siali are preserved within them. The dried balls will be broken open during the the bathing festival of the Lord Jagannath (*Snan Ucchab*) and the preserved seeds of siali taken out, sown along with prayers for their health and well being.

The ecological jargon ascribed to the festivities of the day, is not known to the colourfully dressed village women but environmentalists say that this is a traditional method of preserving an important part of the biodiversity of the area. Siali (*Bauhinia vahili*) and sal (*Shorea robusta*) leaves are a major source of sustenance and livelihood generation for people in the predominantly tribal districts in Orissa and trade in these leaves has often saved people in the area from starvation deaths.

An individual collects between a 1000 and 2000 leaves per day, which can be made into about 200 plates; the sale of which in turn fetches about Rs.60. Trade is unorganised but according to conservative estimates, Orissa does Rs. 400 crores of business in siali and sal leaves every year. There is some dispute regarding the matter of whether local people get a fair price or not. Forest Department officials say that the prices are fixed by the State Government and traders cannot cheat the collectors, however collectors do not agree. They say that there are no storage facilities in the village and transportation costs are high and this forces the villagers to sell the leaves off at a lower price.

Some environmentalists say that in the process of collecting the leaves, the branches are wrenched out by local people, causing irreparable damage to the trees. However Pushpanjali Satpathy of the NGO Vasundhara says, "people take good care of the trees since they are critical to their livelihoods, besides government allows collection of leaves for only four to six months, allowing the trees sufficient time to regenerate."

Source: Panchanan Sahu , 'Earning for their Plate', Down to Earth, February 2008

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Bat Haven

45% of the bat species of the world are endangered, threatened or near threatened and their numbers continue to decline. But the scene is different in the village of Kural in Nayagarh District of Orissa. In this village, the bats have found a safe haven and the local community proactively works to protect them from harm.

No one in the village knows exactly when the conservation efforts began. Village seniors date it back to the pre-independence era when hundreds of bats took shelter in a banyan (*Ficus bengalensis*) and ashoka tree (*Saraca indica*) near a pond close to the village temple. Gradually, as the population

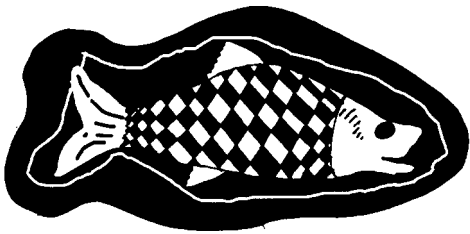
increased, the bats started to disperse to adjacent trees in and around the water body. The villagers are aware that the bats do cause a certain extent of crop loss, but this has not led to any ill will towards the bats amongst the villagers.

In summer, when due to the scorching heat, bats often fall off trees and die, villagers hang pitchers filled with water on the trees inhabited by the bats to help the animals cope with the intense heat and to quench their thirst. Currently a formal village committee for bat conservation has been formed by the villagers. This committee guards the bats from attacks by neighbouring villagers and fines anyone found guilty of ill-treating the bats.

Source: Priya Abraham, 'Rural Folks Take Lead to Protect Bats', Telgraph, Bhubaneswar, Aug. 2008

West Bengal

Sewage to Resource



About 750 million litres of sewage is produced by the city of Kolkata every day. This untreated sewage is dumped into the wetlands in the eastern fringes of the city. The State has spent a lot of public money to treat this waste but failed to do so. However the local community of this area has, through generations, developed a biodiversity enriching and livelihood friendly method to clean the untreated waste. The community uses a network of ponds to do this. The sewage is used to grow fish, irrigate fields and the cleansed water is then allowed to flow into the Kutigong River.

An average pond can produce as much as 5 tonnes of fish every year. The species grown here are *rohu*, *catla*, *mrigal* and *tilapia*. The ponds support 8500 people directly with livelihood and sustenance, ensure

a regular supply of fish to the city markets, serve as a carbon sink and treat around 750 million litres of sewage flushed out from Kolkata every day.

The sewage that arrives at the pond network every day is kept standing in the sun for a specific amount of time, so that the organic waste gets biodegraded through an algae-bacteria symbiotic process. The people maintain the correct design, excavate the ponds to the required depth, allow the correct amount of sewage into each pond, decide how long the sewage should be kept standing for the waste to biodegrade and then decide when the water is safe to be used to breed fish. Local hyacinths are used to absorb the heavy metal waste in the sewage. At the end of this traditional community process, the organic pollution is reduced by more than 80%.

The ingenious local practice has been going on for a long time, unnoticed and unrecognised, but now the wetlands have been recognised under the Ramsar Convention and the practice has found mention in the National Environment Policy of the country. Dhrubjyoti Ghosh, one of the world's leading ecologists has this to say about the wetlands and the community practice, 'for a planner it is difficult to identify an alternative concept that can be less capital intensive, than the Kolkata wetland system. It has been functioning for ages in harmony with nature.'

Source: Umesh Anand , 'How Ponds Keep a River Clean', Civil Society, Vol. 5, Nos. 9, July 2008

The Sunderban Mangroves

In recent years the Sunderbans has been in the news for the killing of tigers, the destruction of mangroves and such other news of ecological and social disasters. This is about to change as some of the local women have been mobilized by a group called Nature Environment and Wildlife Society (NEWS) to work for the regeneration of the mangroves. These women understand that the existence of their villages and forest is under threat due to global warming and these are likely to be washed away in the near future and that only conservation of the mangroves provides a way to minimize the damage. This has mobilized them to regenerate the mangroves destroyed in recent years.

Garan, bain, sundari, kankra and hetal are local plants that grow very quickly, and help in stabilizing the river bank and preventing soil erosion. Nearly 200 village women of the most affected areas like Mathurakhand, Amlamethi, Tridibnagar, Jamespur and Sonagaon are developing five nurseries to grow lakhs of these plants. They also intend to plant 60,000 trees along the bank of the Herobhanga River, which is now in a critical condition due to subsidence. Besides this, they have also decided to protect plants from domestic animals. Those who earlier collected prawns from the river water, now collect seeds of plants floating down the river so that more plants can be grown faster. Women also hold meetings in other villages, convincing more women to join the movement in saving the mangroves. This is an impressive agenda by any standard. If the movement continues, the environment of Sunderbans is bound to witness a great change for the better.

Source: Sujit Roy, 'Local Women Give Back Sunderban The Mangrove Forest', www.merinews.com, June 2008

The Tarevalata Tribe

The Tarevalata tribe is an indigenous tribe that lives in the coastal village of Chivoko in Luru Province of the Solomon Islands. That the Tarevalata land is conserved by the tribe and belongs to the tribe has always been recognised by customary law. These laws are strong; however these become ineffective in the face of external threats, that do not respect customary laws. Formal recognition of territory and rights to conserve and manage resources has come in handy here.



Recently the community boundaries have been officially recognised and there are now maps in court that define the geographical boundaries of their land. In addition to this, the community currently has High Court rulings that give legal recognition to their customary tenure rights over these lands, reefs and natural resources. This recognition has helped the local conserving community protect their resources from various external forces like commercial logging interests and from neighbouring communities attempting to carry on logging activities in Tarevalata territory. An organisation called the Luru Land Conference of Tribal Communities (LLCTC) has helped the tribe get this legal recognition.

The customary laws and practices now formally recognised refer to a bundle of institutions and tenure arrangements. These also include methods of fishing, gardening, building homes from local material, ways in which violations to these customary rules are

treated etc. The local knowledge of the forest and its bounty is incredible – there is a use (dietary, medicinal, cultural) for almost every plant and animal available in the area.

The community has in place several areas where harvesting of timber is not allowed. There are others where restricted harvesting is allowed and still other areas allotted for very specific purposes. Having all these checks in place, they are open to trading in the excess timber regulated by customary laws. They are not in favour of large scale commercial logging that has no understanding of the various uses of the forests, stream and the ecosystem.

The Tarevalata land consists of tall dense mangroves, and tidal mudflats. By tradition there are forest areas of restricted use and access. The shores are sheltered by lagoons and are protected by a large diverse and vibrant fringing reef. The marine environment supports an abundance of fish and other marine resources that the community uses in a sustainable manner.

The biodiversity of Lauru Island is of global significance. The Chivoko reef and lagoon systems are at the epicenter of the 'Coral Triangle' – the global source of coral reef biodiversity. There are over 500 species of corals recorded in the Lauru waters. The Tarevalata forests are teeming with wildlife – especially butterflies, snails, amphibians, reptiles, bats and birds. Endemism is extraordinarily high. Dozens of species of orchid can be found. As similar lowland forest systems of the Solomon Islands succumb to logging and degradation, the forests of the Tarevalata stand out as one of the last remaining pockets of representative habitat.

Community decisions are made by the Chief and the Chief is guided by the rules and regulations put in place by earlier Chiefs. There is also a council of elders who can veto the Chief and also put forward motions in the interest of the people. The religious head is also guided by the tribal Chief and customary rules. Each Chief, in his wisdom adds to and modifies the customary rules in keeping with the issues of the times. An example of this is the current legal recognition obtained for customary laws and boundaries. Similarly, while the tribe is well equipped to handle the conservation and management of its forest biodiversity – it is not as well versed in the

management and conservation of its rich marine biodiversity. The tribe is working with a group called Nature Conservancy to expand their understanding and skills in the area of marine conservation.

The Tarevalata tribe thus has the benefit of indigenous wisdom, strong customary laws, legal recognition of these laws, and a set of institutions that while deeply rooted in tradition and traditional knowledge, understands the need to dialogue and do what is needed to tackle the issues of the day. The land and the tribe stand out as a shining example for other communities in the Solomon Islands whose forests are under severe threat from commercial logging.

Source: A report by Dao Nguyen and Jimmy Kereseka, 'The Tarevalata '*Kastom*' Conservation Area, Chivoko, Lauru Island, Solomon Islands'

Micro-credit and Macro Decisions

Bangladesh is an agriculture-driven economy, with most of its population dependent on farming. Currently there is a concerted effort by the government to replace the impressive local varieties of food grains with a few imported hybrids. According to the Ministry of Agriculture, 5200 tonnes of hybrid seeds were used last year and this year the number has gone up to 12,148 tonnes of hybrid seeds. Of this, 10,348 tonnes were imported and only 1800 tonnes produced locally. Hybrid seeds, which are much costlier than local seeds, are also being tied up with micro-credit organisations where hybrid seeds are provided as part of the credit scheme.

The reasons being given by the government agencies for this shift from local biodiverse grains to a few imported hybrid grains is that the country is facing an acute food shortage which is due to a number of reasons, among them being growth in population without any growth in land holding, and calamities like floods and cyclones (Sidr) that have destroyed a large portion of the crops. The officials insist that this is the only way to improve yield.

Currently the government is promoting hybrid rice in the Greater Barisal region. Ironically this region had a huge grain surplus with local high yielding varieties in 2001. Bhola, Barguna, Barisal, Patuakhali and

Pirojpur districts had a surplus of 0.55 million tonnes of rice that year – says Sukanta Sen, Executive director of the NGO, Bangladesh Resource Centre for Indigenous Knowledge.

Agriculture experts also point out that hybrid varieties destroy plant diversity. Z. Karim former Secretary and agriculture expert says, "it is a matter of great concern that we don't know yet how stable it (hybrid seeds) is for our weather."

In the meantime, micro-credit and government policies continue such that the food security of this country is now being moved away from the traditional hands of the millions of local farmers into that of four or five multinational seed companies. This move also has huge implications for the biodiversity of the country as well as the livelihoods of most of its population.

Source: Pinaki Roy, 'Seeds of Market - Bangladesh Promotes Hybrid Rice over Local Varieties', *Down to Earth*, April, 2008

Books and Reports

Six Years of the Biological Diversity Act In India

Compiled by : KALPAVRIKSH
(www.kalpavriksh.org) and GRAIN (www.grain.org),
January 2009

This status report takes a closer look at how, and how much, the Biological Diversity Act 2002 is in line with the Convention on Biological Diversity. The Biological Diversity Act, (2002) through its implementing Rules (2004), has been operationalised since coming into force. The analysis is presented in the backdrop of the present political economy, which has a major impact on conservation legislation such as this. It examines whether the thrust of the implementation has been on setting up the structures and procedure for "regulating" access, as well as pushing the officially-sponsored documentation of biological resources and traditional practices through "people's biodiversity registers (PBRs)" at the local and databases at the national levels respectively. It further probes the extent to which the principles of conservation have been realised. The report determines whether the six years of implementation experience actually breathe life into of the stated objectives of the Biological Diversity Act, which is conservation, sustainable use and equitable benefit sharing from the use of biological resources, or has been contrary to them.

The report also draws on the many voices from the ground raised at the series of regional workshops organised across India through 2004-2008 under the ongoing *Campaign for Conservation and Community Control over Biodiversity*. In coherence with the *Campaign*, the report especially focuses on the directions the law's implementation has taken, vis-a-vis decentralised decision-making on biological resources, *in-situ* conservation of these resources and related knowledge, and empowerment of local people and resource-dependent communities.

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