

Proceedings:

National Workshop

on

**“Guiding Forest Management on Bio-Diversity
Conservation and Climate Adaptation”**



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1. INTRODUCTION

1.1. BACKGROUND

As the world braces to observe 2011 as the ‘International Year of Forests’, mankind is reminded once again of the sheer necessity to not only have a rethink on our relationship with forest resources but also to re-invent people’s action in management of such resources. The realisation that in our quest for ‘development’ we have rode roughshod over the forest resources is creeping into the mainstream with increasing concern.

The term ‘forest management’ has become the buzzword. Hordes of scientific studies and assessments are being done in that regard. People from various strata and background are putting their worth for ‘better management of forest’. How far such management prescriptions have succeeded in better management of forest has remained a big issue for debate. But the fact remains that our forest resources are constantly being degraded - both quantitatively and qualitatively; and thereby putting in jeopardy (i) the lives and livelihoods of millions of forest dwellers and forest dependents; (ii) the existence of bio-diverse balanced forest resources.

Various studies have estimated that forest destruction has directly affected livelihoods of over 1.6 billion people worldwide. And the indirect affect has been quite phenomenal and grasped everyone, irrespective of a direct dealing and dependence with the forest sector. The most notable of all ramifications has been on changes in global and local climates. Forest sector has been blamed as the second largest anthropogenic source of carbon dioxide emission to the atmosphere. Scientists have estimated that carbon emissions from deforestation and forest degradation account for about 20 percent of global anthropogenic carbon dioxide emission.

Some other studies have reported a lesser percentage of emission from forest sector, particularly because emission from combustion of fossil fuel has risen rapidly. A paper by G.R. Ven Der Welf *et al.* (*CO₂ Emission from Forest Loss*, Nature Geo Science, Volume 2, 2009) mentions that carbon emissions from both deforestation and fossil fuel combustion suggest that in 2008, the relative contribution of CO₂ emissions from deforestation and forest degradation was, around 12 percent. There may have been some disputes regarding exact contribution of forest sector to global CO₂ emissions, but, there are no two opinions that forest sector is the second largest emitter of global warming causing gases to the atmosphere. This is very sad, because forest is the only sector which has vast natural capacities to mitigate carbon emissions in the atmosphere. Because of large scale degradation, forest sector which

should have been the principal source of carbon mitigation is now being alleged as one of the principal factors causing global warming.

While forest sector has earned the ignominy of being a climate offender, the sector itself has also been one of the cruelest victims to impacts of global warming. Every climatic aberration is having adverse imprints on the forest resources. As degradation of forest resources are blamed for global warming, the same resources on other hand are increasingly becoming susceptible to climate change affects. Having said this, forest sector also provides us opportunities for the best mode of adaptation to climatic vagaries. Thus, management of forest resources has become more important.

While climate change has brought back ‘forest’ to the centre of focus at various level, scrutiny of past forest management practices and approaches has become imperative. Apart from addressing ‘quantitative’ issues, doubts have also been raised at how far ‘forest management’ has succeeded in maintaining or enhancing macro and micro bio-diversity. Many researchers, field practitioners and more importantly communities who are directly related with forest resources view that ‘forest management’ has more often remained ‘economy’ oriented than ‘ecology’ oriented, thereby having negative repercussions on overall forest resources and their traditional managers – the communities themselves. Concerns are growing that modern approaches to forest management marginalizes, alienates and deprives the rights and access of traditional forest dwellers and dependents.

While all these happen, enormity of people’s sufferings - who depend overwhelmingly on forest resources for their livelihood - increase by leaps. And they are the ones who have the least capacity to adapt to modern coping mechanisms. Forest resources, as a whole, have been abominably dealt with and people who have traditionally been respectful in dealing and living with the forest resources have largely been excluded not only from the so called development arena but also have been forced to sever their natural bonding with the forests. This devilish connivance has led to degradation and destruction of immense magnitude.

This has forced humanity to understand that science and external ideas and interventions to manage forest, however advanced they may be, cannot compensate community’s own involvement. Thus humanity, with its advanced learning, is again compelled to lean back on the age old practice of establishing cordial and respectful relationship with the forest resources. But this is easier said than done as challenges surmount. We have the challenges not only to ensure lives and livelihoods of billions of people who directly depend upon the forest resources; we also have the added task to reduce forest’s climate changing properties and enhance its mitigating capacities. Simply put, we have to save our forests and biodiversity to reduce and stop emissions from the forest sector; and through that increase carbon mitigation scope from forest resources. And then we have to safeguard the livelihoods of billions of people who depend on forest resources.

The critical question that arises here is, HOW?

Regional Centre for Development Cooperation tried to find some answer to that from a two day long national workshop titled, “Guiding Forest Management on Bio-Diversity Conservation and Climate Adaptation”. This workshop was attended by a range of stakeholders from across India. A successful leader in community forest management from Nepal also participated in it. The participants included senior officers from the government, academicians and researchers from forest management institutes, activists and NGOs working on issues of forest management, and leaders from forest protecting communities in Odisha. The two-day long workshop was organized at Bhubaneswar, the capital city of eastern Indian state of Odisha, on 10th and 11th February, 2011.

The workshop was appropriate because it was organized when the world was charting out varieties of initiatives to observe 2011 as the ‘International Year of Forest’. The place of the workshop was also appropriate as Odisha, with about 31.38 percent of its area under forest cover (as per 2006 satellite data, analysed in Forest Survey of India report of 2009), is witnessing severe pressure on its forest resources due to population increase and rapid infrastructure/industrial developments. Besides, Odisha provides the opportunity to make a valid comparison between different forms of management as various types of forest management approaches are being practiced here. More than 10 million people in Odisha, inhabiting 29000 forest and forest fringe villages, depend significantly on the forest. They have gone through a variety of experiences and learning. Such learning can be taken to other parts as well.

1.2 OBJECTIVES

At the time of globalization and rapid climate change the present system of forest management is facing various new challenges ranging from accommodating the provisions of the Forest Rights Act, to climate change impact mitigation strategy. The proposed workshop was designed to discuss specifically on the limitations and improvement of forest management practices in the light of biodiversity conservation and climate adaptation, taking the IIFM-developed Criteria & Indicator system as a tool. The objective was to come out with a clear understanding if the presently developed practices are adequate enough to address the issues of biodiversity conservation and climate adaptation and if not then what needs to be done. Of course such an important issue can't be resolved in a two-day workshop, but there was indeed a hope that it would pave the way for future deliberations on the same.

Thus the workshop had lead presentations from academic researchers, civil society facilitators and experienced community practitioners. It also considerably included government's view point.¹

1.3 ABOUT THE ORGANISER(s)

Regional Centre for Development Cooperation, in short *RCDC*, is a non-government organisation dedicated to work for the cause of natural resources and their sustainable management, primarily through the lenses of the common people. Forest and forest based

¹ For workshop agenda, please see ‘Annexure 1’

bio-diversity has remained its core focus area. RCDC's strength lies in a balanced mix of research and dissemination capacities and vast grassroots presence. The organisation is actively engaged with community members in more than 4000 villages on forest management and patronizes about 5000 forest protecting groups.



RCDC, like many other organisations and experts, believes that too much & complex technicalities create a major divide between the local communities and the local resources management. It also believes that there is no alternative than to engage the communities for fruitful and sustainable forest management as that comes naturally to the forest dependent communities. Involving the communities in management of forest resources..., by devolving in them the rights and authorities has been proved as the most efficient forest management tool. After all, who else can better manage the resources than those who have the direct stakes therein? In a regime of unpredictable climate change related events, RCDC understands that our resolve and determination has to be much... much... stronger so as to capacitate the community base for a truly effective mitigation & adaptation mechanism alongwith a care for biodiversity conservation

Many organisations and people have lent generous support to organize the workshop. OXFAM-India provided the financial support for conducting this workshop. Many resource persons from across the country chipped in with their valued views and experiences. The event became further worthy with presence of Ghan Shyam Pandey of Global Alliance for Community Forestry(GACF), Nepal – an internationally acclaimed community forest management campaigner - who willingly bore all his travel expenditures himself. International Union of Forest Research Organizations(IUFRO), through its Working Party on Community Forestry, took a special interest in the thematic focus of the event and Bikash Rath, the coordinator of this Working Party helped facilitate the process on a voluntary basis.



2. WORKSHOP PROCEEDING

2.1 INAUGURAL SESSION

The two day long workshop began with a packed audience and a distinguished panel at the Mahanadi hall at DRTC-CYSD at 10 AM on 10th February 2011. Bikash Rath, Senior Programme Manager, RCDC (who also volunteers as the Coordinator of IUFRO Working Party on Community Forestry) moderated the inaugural session.

2.1.1. Welcome note by Mr Kailash Chandra Dash

Executive Director of RCDC, Mr Kailash Chandra Dash, welcomed all guests and participants and said that it was a privilege for RCDC to organize such kind of workshop in the International Year of Forests. He said that issues of forest management need to be relooked with enhanced focus on community participation to mitigate challenges of sustaining diversity and also in increasing adaptive mechanisms, especially in a situation when climate change has started posing serious threats. In a very humble tone and with amazing spontaneity he explained the relevance of the opportunity and the roles that RCDC has played or intends to play. Mr Dash informed that RCDC has always focused on sustainable management of forest – both for community livelihoods and environment sustainability - through increased community participation. Further energies will be added from this year, he said. He further added that in a fitting support to the International Year of Forest theme to celebrate people's action to sustainably manage the world's forests, issues of Community Forest Management (CFM) and Community-led Bio-Resource Governance will form the nucleus of RCDC's activities. In such situations roles played by community networks are very important. Thus RCDC will increase its collaboration with state level network of forest protecting communities, the Odisha Jungle Manch (OJM) to launch massive campaigns to pressurize the government to recognize CFM.



(From left: Mr.Monojit Ghosal, Mr.Prashant Mohanty, Prof. Radhamohan, Dr.Ghan Shyam Pandey, Mr.Bhagirathi Behera, Mr.Kailash Chandra Dash, Dr.Ganesh Yadav)

Mr Dash further briefed about other RCDC programmes aimed at adaptation to climate change led disasters. He said that RCDC has already conducted studies of climate change adaptation in two coastal districts as part of an international initiative in collaboration with Concern Worldwide. “Like that activity, we will link everything related to climate change with forest,” he told.

Mr Dash then introduced the distinguished dignitaries. In the process he welcomed Mr. Bhagirathi Behera, Director, Environment cum Special Secretary Forest & Environment, Government of Orissa; Mr Ghan Shyam Pandey, GACF, Nepal; Professor Radhamohan, reknown social activist and environmentalist; Mr. K Mohammad Naushad, Chief Conservator of Forest, Kerala Forest Department; Dr.Ganesh Yadav, IIFM, Bhopal; Mr. Monojit Ghosal of Broederljk Delen, Belgium; and Dr Soumitri Das of TERI. Mr Dash also welcomed leaders from forest protecting communities.

Ending his welcome address, Mr Dash reiterated that RCDC intends to make community forestry visible this year. He sought enthusiastic participation to guide such interventions in the context of climate change and forest management.

2.1.2 Workshop introduction by Bikash Rath

Mr Bikash Rath started by saying that he had to play a dual role – representing both RCDC and IUFRO. He expressed his happiness about participation of senior officers from the government and acclaimed international experts. He hoped that the distinguished participants

would surely give good guidance to forest related activities. Mr Rath gave elaborate presentation on objective of the workshop, IUFRO's focus(see inbox), observations on C&I and limitations of Criteria & Indicators(C&Is).

He said, the workshop intends to initiate a momentum to community based conservation and forest management activities. This is a challenging job because we are all aware about various conflicts relating to community forest management. Sustainable Forest Management (SFM) is gaining a lot of attention these days. Many communities have taken up forest management actions, and quite successfully too, Rath said. Such Community Forest Management (CFM) is gaining increasing popularity and acceptance. There are other forms of practices in place also, Joint Forest Management (JFM) being a prominent practice among those in which the community is involved but under the supervision & control of the Forest Department. He said that through both – CFM and JFM – practices, forest conservation has been achieved; and then posed a question, what are the standard parameters that can help us measure the extent to which these conservation initiatives have been actually successful and beneficial to the local communities? These issues have not been dealt with a great deal of focus in the past, but now the Government of India has taken up an initiative, in association with Indian Institute of Forest Management (IIFM). They have developed a set of Criteria and Indicators. This will measure the claims and efficiencies of sustainable forest management(SFM). Hence, SFM uses C&Is as one of its tools and it can be applied to all forms of forest management, be it CFM or JFM. This will also prove the efficiencies of community-based systems. He however clarified that the set of criteria and indicators are not being imposed upon the people, rather these are being & have to be developed so as to become community-friendly in the sense that the genuine stakes of local communities are duly honored and at the same time the set should be of a kind that the community can actually practice/use in the field. Hence, the C&Is have to overcome their present limitations², have to take care of site specific realities, and also the community can have their own inputs.

IUFRO's interest in the workshop

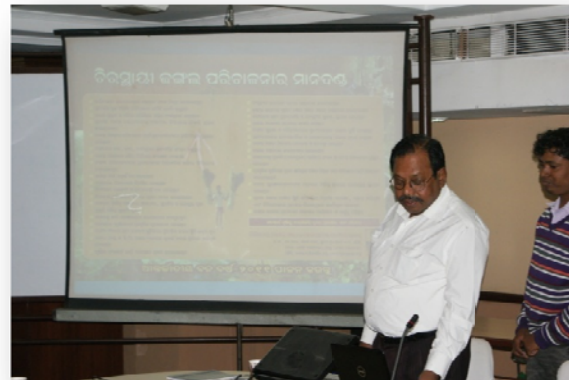
- The IUFRO Working Party on Community Forestry is trying bridge the gap between technical forestry & society.
- Six of the thematic areas of IUFRO's research goals include biodiversity conservation and climate change related to forest.
- Since the concept of Sustainable Forest Management has been recognized in India to be essentially community-based/participatory, IUFRO would like to facilitate a process that can ensure a C&I system that can demonstrate the potential of community forestry in taking care of biodiversity conservation & climate adaptation in forest management practices.

² He referred to the fact that so far community participation is concerned, the present set of C&Is recognizes only JFM mode of participatory management, and it doesn't appear to take care of some of the finer dynamics of focusing on biodiversity conservation or climate adaptation(for instance, silvicultural operations to be guided for this purpose).

Expressing that climate change, which has evolved as a big threat, may adversely affect many plant species and produce thereof, like, *siali* leaves and *lac*; the management approaches have to be cautious, Mr.Rath said. He further said that in a recently organized(by RCDC) workshop which had participants from agriculture, forest, fishery departments, a straight question was posed, i.e., whether all these departments conform to the principles, policies and guidelines on bio-diversity conservation & management when they promote bioresource development? He gave example of promotion of *Jatropha* on a large scale to indicate how bioresource development programmes have contradicted biodiversity concerns.

Releasing Book and IEC material

Introduction to the workshop was followed with brief participant self-introduction. The esteemed guests then released a book titled, *Community Action in a Climate Change Regime – Managing Diversity*, comprising of research and experience articles by renowned national and international researchers and practitioners. A special poster was also inaugurated on the occasion.



Thematic presentations followed the brief book release and introduction session.

2.1.3 Presentation of government’s initiatives by Mr Bhagirathi Behera, IFS

Mr Bhagirathi Behera, IFS who is the Director, Environment in the Forest Department, Government of Odisha, was the Chief Guest at the inaugural session. He thanked RCDC for the initiative for this workshop, and briefed the House about the government initiatives against climate change. He said that our forest sector has tremendous potential in reducing emission from deforestation and for carbon sequestration. This can be achieved through proper forest management. He further said that while the forest area in the state was found to have increased by 100 sq.km. during 2005-07 about 10,000 sq km of forest land is still devoid of any growth and potential of that area has to be explored and tapped. Referring to the draft Climate Change Action Plan of the state government, he shared the plan for plantations of 5 sq.km. of bald hill every year; conservation of coastal ecosystem; use of modern technology for fire fighting , improved tree planting, and evaluating long term affect of climate change on forest, etc.. Mr Behera said further that climate change is likely to increase incidence of forest fires, growth of invasive weeds, increase in human-elephant

conflicts, and adverse effect on mangroves. Therefore, among other measures, he opined for incentive-based community participation and said that the pluckers of kendu leaves have already been advised by the Department to use wet napkins on head and to go with drinking water.

2.1.4 “Government should accept community rights.”-Prof Radhamohan

Renowned academician, social worker and ex-Information Commissioner, Professor Radhamohan enthralled the audience with crispy quotes and mesmeric explanations. He started by saying that ‘management’ of forest has been imported into our indigenous system and thus it is an alien idea. The British government made policies that suited them. Brandish, a German forester, played a key role in vesting management of forest, which had no managers till then, with the government. And since then governments have clung on to that authority. Prof. Radhamohan further informed that renewed interest in management of forest is a relatively recent phenomenon. In the 1980s concerns grew as true estimation of forest came from satellite imageries and the figures were significantly less than earlier estimations based on forest area. During the course of his presentation he referred to quotes from many acclaimed persons. He referred to a statement made by Winston Churchill, the British Prime Minister during the Second World War, where he had said, “Duration of war cannot be taken by Generals. It is more a political consideration.” The Professor related that same logic to forest management and said, “Similarly, management of forest cannot be done by government. It has to be with the communities.” He then went on to compare the debates on JFM Vs CFM with that of Protestant Vs Catholic. The gist of his argument was that as both Protestants and Catholics preach Christianity, similarly both JFM and CFM aim to manage forest sustainably with increased community participation. He argued that JFM approach may be continued but the government should accept community rights. He said that protecting forest is the most pertinent issue now and not who or how that is managed. Saying this he pointed out that the onus of achieving this lies with the government. The government must make necessary changes, he argued.

Linking forest to the bio-diversity, the Professor said various studies have proved that no species is valueless in our eco-system. Citing examples, he referred to how essence prepared from *Hemidesmus indicus* (anantamul) has been used to replace synthetic essence in icecream, and how the pulverized powder coating of raktachandan (*Pterocarpus santalinus*) can give protection against radiation. And thus we cannot be selective in picking and choosing species in our efforts to manage forests. He suggested for focusing on microflora & microfauna which may be more vulnerable to climate change impacts, and then referred to climatic changes and impacts on forest from a different perspective. He said that we are all concerned about global warming, but the next ice age is knocking at the door. He referred to past instances and said that the last warmest period was followed by an ice age. His point of argument was that climate change is not one dimensional, and magnitude of probabilities may affect us. Saying all these, he then concluded with an example of frog syndrome – where a frog when subjected to slow and gradual boiling water fails to identify the rise in temperature and stays put in the utensil. But a frog that jumps straight to a vessel with boiled water

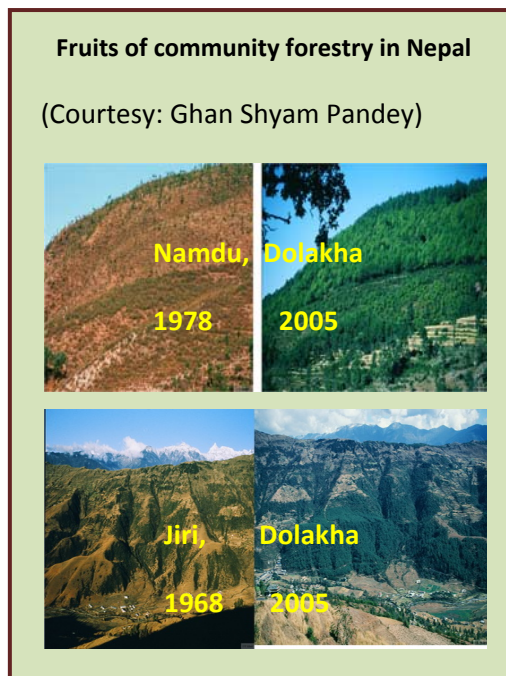
immediately senses the difference and jumps out of it at the earliest. “We are no better than frogs,” he cautioned and urged all to rise to the challenge through concerted actions.

2.1.5: **“Locally controlled forestry has no substitute.”** – Ghan Shyam Pandey, GACF, Nepal

Mr Ghan Shyam Pandey had a power point presentation but words flowed from him with great spontaneity and passion revealing his intimate involvement in the matter. He started his presentation with a chronicle of community movements to manage forests in Nepal(see inbox).

Mr Pandey elaborately briefed about various community initiatives in his country to conserve and manage forest resources. He narrated various case studies. Pictorial depiction of two community initiatives was spell-binding as they clearly depicted the enormous potential of community conservation initiatives.

He attributed the success to strong and united



Chronicle of community forest management initiatives in Nepal

<i>Year/Period</i>	<i>Development</i>
Before 1957	Communities / forests coexisted
1957	Nationalization forest (deforestation started)
1978	Community forestry initiated through Panchayat Forestry Regulations (rate of deforestation reduced)
1987	First national community forestry workshop
1989	Master plan for forestry sector
1991	Networking of forest users at local and district levels started
1993	Forest Act came into force
1995	Formal establishment of Federation of Community Forestry, Users' Nepal (FACOFUN)

(Courtesy: Ghan Shyam Pandey)

community movements. Now community forest management in Nepal is spread over 1.4 million hectares of forest area and involves 1.7 million households, roughly 35 percent of total population of Nepal. “This united effort is facilitated by 15,000 strong Community Forestry User Groups (CFUG) and an immensely mainstreamed gender balance action,” he said and mentioned that in Nepal CFM committees either the president or the general secretary has to be a woman.

Mr Pandey then went on to explain that forest conservation and regeneration has been successful wherever community has been proactively engaged therein. He regretted that world over, governments have been the culprit in holding on the ownership of forest areas. This syndrome is more pronounced in Africa and Asia . This has to change, he said.

Relating to the present climate change discourses and initiatives, Mr Pandey said that forest has evolved as the rallying issue for mitigation and adaptation. That will be more prominent in the future. In such a back-drop the business of climate change mitigation has to be looked into from people's perspective. He made a special reference to REDD and posed a question as to who owns the carbon. He urged that Reducing Emission from Deforestation and Degradation (REDD) should rather be redefined to mean Rights-Equity-Democracy-Development so as to make the initiative inclusive and successful. He said that climate change, along with its inherent ecological and environmental challenges, has also forced us to face other social and administrative challenges. There is an apprehension that climate change is leading to further colonization and centralization. And, when the community support can provide a low-cost solution by helping regeneration of degraded natural forests, why does the government seek climate finance, that too in the form of a loan, from foreign agencies? He further said that while only about 25% of the world's forests are under the local communities & tribals, they are richer than that under the control of governments.

But, amidst all the challenges there is always a way forward, said Mr Pandey. The first initiative must aim to give a proper direction to the development approach. He said that we have to put the last first. Among other things we have to: a) secure tenure and rights; b) build capacities; c) provide support for networking; d) ensure climate justice and equity; e) ensure smooth technology transfer from rich to poor countries; f) provide market services; g) more action than mere talk; and g) must focus on poverty reduction.

While biodiversity should be inclusive of human relationship & indigenous knowledge systems, it must also be realized that it is not limited to Protected Areas only because elephants come to community forest areas, he opined.

Concluding his fascinating presentation he said, "Forests cannot be protected by remote control. Community has to be the initiator. Climate change has certainly increased the challenges but increased focus on locally controlled forest can provide a better mitigation."

2.1.6 "Climate change is affecting the poorer the most." – Monojit Ghosal, representative, Broederlijk Delen

"Na jane do badlon ke darmiyan kya sajish huyee, ki jinki ghar mitti ke the unhi ke ghar barish huyi", Mr Monojit Ghosal, country representative of Broederlijk Delen (BD), an international NGO, started with this thoughtful Urdu *shayree*. The *shayree* means, the poor and helpless face the affects of adventures by rich and powerful. Mr Ghosal, with a technical background, has also loads of experience in working with forest protecting communities and

the *shayree* only substantiated his decades-long experiences. He focused on the relationship between environment and poverty. He said, “My experience has now overtaken my professional background. As my experiences grew I understood how hollow my ideas were.”.

The disturbing thing is that everything is being viewed from a capital approach, a money approach, he said. And thus, poverty is interpreted in economic terms with its social & environmental aspects less focused. Deforestation is often linked with poverty. Unfortunately, with a colonized mind as the Prof. Amartya Sen said, we tend to be oriented by western concepts & approaches like REDD, he said. Mr Ghosal even blamed the elected representatives. He said that even a Sarapanch, once elected as representative aligns with powerful establishments than siding with the communities.

People are now feeling the change in climate because the change has been quite dramatic. Even tribal areas have become devoid of forest. He further opined that not only governments, every other stakeholder - including NGOs - too need to have better interactions with the communities. The board members have to have better understanding of the grassroots. He expressed regret that many Acts and policies are coming up but they are not having integration and coherence. He concluded by reiterating that forest cannot be remotely operated and a government cannot always have its way. The communities have to be a part of that.

2.1.7 Open Session

The inaugural concluded with an intense open session, where most of the questions and queries were posed to Mr Ghan Shyam Pandey about possible ways to strengthen community forestry in India and Odisha. Mr Pandey lucidly explained that any community effort has to begin from a strong root and with close networking. He elaborated on his experience with more details and said that learning by doing is the best possible way and that was adopted in Nepal. He further said that the community initiatives became a national political movement. And thus in the national policy of Nepal it was stated that community forest management would be the key. Now the GACF is fighting for tenure rights to forest communities. “We are advocating for public property right, community property right and individual property right,” he added. Replying to a query on dealing with forest loggers and organized forest felling, Mr Pandey told that they have developed two systems to deal with loggers. “We have laws that have provision for punitive measures for violating community made policies. All our community organisations have prepared their own constitutions,” he informed the participants and said that apart from financial penalty there are also provisions for penalty in the form of labour, and social penalty. Replying to a question on gender balance, he said that FECOFUN first established this balance and also the fact that despite lack of skill & education women can still do effective work. In a passionate note he concluded by saying that “Trees grow well with affection from communities, not through soil only”.

Mr Behera was asked some questions relating to state government’s climate change action plan. He replied that forest conservation and regeneration was being pushed in a big way and

that would be implemented through convergence of various line departments. He also said that the government was looking forward to tap REDD potentials.

The dignitaries were presented with memento on behalf of RCDC. Session moderator Bikash Rath gave a very brief overview of the session in both English and local language and thanked all the guests and participants for a very successful inaugural session.

2.2 THEMATIC SESSION 1: FOREST MANAGEMENT & BIODIVERSITY CONSERVATION

This thematic session covered various conservation-, value addition- and benchmarking issues relating to sustainable forest management. It was moderated by Dr.G.S.Pandey.

2.2.1 “Proper management of NTFP contributes to sustainable forest management.” – K.A. Mohammad Naushad, IFS

Mr. K. A. Mohammad Naushad is a Chief Conservator of Forest from Kerala Forest Department. Kerala with bio-diversity rich coast and Western-Ghat hills has remained a fascinating region for researchers, environmental activists and conservation practitioners. Mr. Naushad gave an elaborate presentation from his experience and also from the authority of his very senior official position on conservation of high priced Non Timber Forest Produces (NTFPs).

In Kerala NTFPs are collected free of cost by Girijan co operative societies and marketed by Kerala State Federation of SC and ST Development Co-operatives Ltd. Of late the sector is grappling with challenges like shrinking resource base, escalating demand of NTFP products and the resultant destructive and exploitative practices. In this battle the primary collectors are losing out because the immediate financial benefits are not accruing to them and their livelihood source is shrinking in the face of unsustainable harvesting and exploitative practices. The middlemen and intermediaries are prevailing over the primary gatherers. He termed this as ‘Nil sense of belonging’ and cautioned that “This calls for adoption of a better and alternative system of management of NTFPs giving more power to groups at the grass root level.”



Citing a case study from Kerala, he informed that the NTFP collection and marketing sector was plagued by institutional constraints and a deficit of long-term vision and innovation. He said that the federation only catered to the niche premium market and invested little in value addition and brand promotion. Kerala draws a lot of traders and medical tourists who chiefly come to get benefited from the herbal system of treatment, and thus conservation of the bio-

diversity was a big challenge medicinal plants being under high pressure. Whereas crores of rupees were pumped into production of items like cardamom and cashew, NTFPs received no such thrust. With the natural resource base thus ignored & shrinking, we have to go for ex-situ cultivation, he said because through this various plant population can be increased on a controllable and sustainable basis, the quality can be better assured, the species identification can be made secure and more importantly they will help in reducing burden from naturally collected NTFPs. He further argued that while natural ecosystems such as forests, wetlands and grasslands can be protected by legislation, many other medicinal plant habitats such as marginal, remote, wastelands, roadsides, or even gardens and hedges cannot.

However, even most progressive farmers are reluctant to take up farming of medicinal plants because of the uncertain market. It has happened with cocoa. Also crops with long gestation periods create more uncertainty. In this context Mr Naushad suggested a three pronged strategy to address the challenge: (a) Joint/public-private collaborative ventures; (b) Application of frontier technologies; and (c) Incentivisation of repositories. He elaborately shared about a model tripartite collaboration between forest department, FDA, and industry/corporate house as an example of joint ventures. Application of frontier technologies like silvicultural engineering of medicinal plants & cash crops and innovations like precision farming hold the key for the future, he said; and mentioned as example of the third strategy the Kerala government's special scheme for protection & conservation of sacred grooves under which in February 2011 total 139 groove owners were selected for long term management with a support of Rs.40,000/groove. He opined that the farmer should be able to produce medicinal plants at no extra cost. Quoting MS Swaminathan's call for 'crop from every drop', he put forth the slogan of 'yield from every yard' for optimum use of the scarce land available; and cited as example how some shade-bearing medicinal plants like *Adhatoda basica* can be grown as intercrop in rubber plantations. He ended his presentation by saying that we have to conserve the bio-diversity at any cost and concluded by citing the role of sacred groves, even if on a smaller scale, in forest and bio-diversity conservation.

2.2.2 “Criteria & Indicator for community based biodiversity conservation can go a long way in forest management.” – Dr. Ganesh Yadav, Indian Institute of Forest Management



Dr. Ganesh Yadav is a Programme Manager with the *International Centre for Community Forestry*, Indian Institute of Forest Management (IIFM), Bhopal which is an autonomous institute of Govt. of India. He gave a detailed presentation on Sustainable Forest Management (SFM) through Criteria and Indicators (C&I) approach. The focus was on C & I. The IIFM is working to impart theme based knowledge inputs, on application of C & I for SFM in India, and its monitoring

and evaluation mechanism. He started with a brief and simplified introduction of hierarchy of monitoring system i.e. Principle, Criteria, Indicators and Verifiers.

After the brief introduction of C & I, he tried to establish the role of C & I in a climate change scenario. Quoting research data he said that 95% of plant species are likely to become extinct with a rise in temperature from 1.4 degree to 5.8 degree Celsius, and 25% would disappear with a rise by 1.5 degree to 2.5 degree Celsius. He referred to various climate change projections and said that there is no specific climate projection model that clearly demarcates impact of anthropogenic contribution to climate change. But, he stressed, there are enough indications that climate change is impacting forest produces. He gave example of steady decline of NTFPs in Mandla and Dindori district of MP and Dhamtari district of Chhattisgarh(like, during last 10 years production of amla decreased from 10000 quintals to 2000 quintals in the Mandla district whereas that of Chironjee decreased from 400 quintals to 100 quintals in the Dindori district). And the decline has been observed even in a certified forest area like Dhamtari where good practices exist, which shows that the decline is not simply man-made. He also said that where there is no community participation there has been no stoppage to forest degradation.

After this Mr Yadav dwelled on need of 'certification'. He argued that India needs certification because it will lead to: i) Economic incentives to community for responsible collection and use, ii) Protection and recognition to customary rights, harvest and conservation practices favouring better management forest resources, iii) Provide conducive and practicable mechanism, iv) Systematic approach for forest conservation, livelihoods and trade, v) Price Premium / Green Premium, vi) Ensure sustainable forest management, vii) Whole operations under a well defined system-so less scope of error, viii) Consumer friendly-ensures quality product, ix) It may benefit the gatherers through greater collection in their vicinity, with less drudgery, better quality and more returns, particularly women and children who constitute bulk of the gatherers (over 67%), and x) Group Certification-establish community control over forest resources rather than individual control. He then discussed generic and specific certification standards giving examples of some sustainability initiatives around the world and some certification initiatives in India(like, in Dhamtari certified area there are standards set for collection, and also are good infrastructures for storage & processing, etc.), and elaborately discussed IIFM's own experience in certification. He added that success of C & I depends on many factors, but emphasized that structure does not guarantee better function of the standard; rather functioning of the standard depends on three important factors, i.e., i) resource status, productivity, regeneration capability etc., ii) bilateral matching of institutions(BMI and iii) economic incentive to all stakeholders.

Mr Yadav then informed about the draft national set of C&I for Sustainable Management of natural forest. He discussed on the following criterion set in the draft national set, i.e., i)Criterion 1: Maintenance/increase in the extent of forest and tree cover (Indicators- 4), ii)Criterion 2: Maintenance, Conservation and enhancement of biodiversity (Indicators- 7), iii)Criterion 3: Maintenance and Enhancement of forest health and vitality (Indicators-6), iv)Criterion 4 : Conservation and maintenance of soil and water resources (Indicators-4),

v) Criterion 5 : Maintenance and enhancement of forest resource productivity (Indicators-4), vi) Criterion 6: Optimization of forest resource utilization (Indicators-9), vii) Criterion 7: Maintenance and enhancement of social, cultural and spiritual benefits (Indicators-4), and viii) Criterion 8: Adequacy of Policy, Legal and Institutional framework (Indicators-10). He also discussed on Pricing and Premiums.

Regarding certification agencies and their charges he mentioned Forest Stewardship Council, Sustainable Forest Initiative, and Participatory Guarantee System; and said that in Dhamtari a group certification of Joint Forest Management committees had been made. Charges are variable, like US\$7.50 is charged per hectare by Rainforest Alliance for individual farmers whereas US\$5/hectare is charged for some others.

Towards the end he came to the very serious debate on whether transparency opens a window for sustainable development. He argued that several international initiatives like UNEP finance initiatives, equatorial principles, principle for responsible investments, etc. are some positive initiatives.

He concluded by expressing many hopes and doubts. He said, influx of revenue and capital into sustainable production is likely to increase; supply chains serving the respective sectors is likely to benefit from the management infrastructure—improved monitoring and enforcement and access to technical assistance; certification brings market recognition and valuation of sustainable practices, however, market impacts at the firm and farm levels remain critical. System criteria of the initiatives are dominated by social and environmental factors: social side - health and safety requirements, as well as compliance with core ILO conventions, were covered by most of the initiatives reviewed; living wage and gender related criteria are, largely absent from some of the initiatives; strong environmental criteria coverage has been observed across water, soil, synthetic inputs and GMO categories; and on the economic frontier, few initiatives mention a premium as a part of their criteria, although others contain good commercial practices within their criteria.

2.2.3 Open Session

There was intense debate on presentations made by Mr Naushad and Mr Yadav. A section of participants, primarily the representatives from forest protecting communities, drew attentions to the possible adverse impacts of some initiatives which are being pushed as scientific as that can complicate matters significantly. Their argument was that sustainable forest management depends very less on science and more on community participation. More technology and more use of science will alienate the community from management, they feared. Mr.Rangadhar Behera cited example from Kandhamal district where organic certification & bulk trading of turmeric increased the price implying that even local people have to purchase the same at a higher price. Mr. Mihir Mohanty of Kalinga Development Foundation also expressed concern regarding the impact of certification on common man (since the prices will increase). Mr Pradeep Mishra stressed on the fact that sustainability is rather a social concept, and that since FRA provides scope for SFM by local communities let gram sabhas be involved in the certification process. The presenters agreed to many of such

views and said that both marketing of NTFPs and C & I are also looking at that angle to maximize community participation. Prof. Yadav said that since certification did not originate in India, hence India has not reached a stage to establish own certification system; still we need not obey to all the principles/norms of foreign certification agencies and have Indian certification agencies like CGCERT.

Replying to a query by Mr.Kailash Chandra Dash, Dr.Yadav clarified that several factors like suppression of natural ecosystems, diversion of forest land, biological pollution(introduction of exotic species) are responsible for a decline in NTFP production alongwith climate change.

2.2.4 Moderator’s remark and end of day-one programmes

Mr.Pandey, who moderated this session, concluded the session with his remarks that whether we accept or not market is coming. The question for us thus is how and where and what we accept has to be decided. The challenge in such backdrop is that most of the governments are not recognizing indigenous knowledge and are instead putting more emphasis on science and technologies.

In the sideline of the workshop, after the end of the first day programmes, members of Odisha Jungle Mancha (OJM) held discussion with Mr Ghan Shyam Pandey of GACF, Nepal. Mr Ghasiram Panda of RCDC and Mr. Prashant Mohanty of Vasundhara also joined the meeting. Among other things the meeting primarily discussed possible ways to strengthen the OJM, broad-base community forestry movement, and identify issues and establish linkages with various likeminded networks both within India and abroad. The discussion was very fruitful. One instant outcome of the meeting was that a representative group of OJM was invited to visit Nepal to have first hand exposure on the practice and prevalence there.

With this the formal proceedings of the day ended. But an informal but very important sideline event began where members of Odisha Jungle Mancha (a state-wide federation of forest protecting communities) held an intensive and passionate discussion with Mr Ghanshyam Pandey.

2.3 Day-Two of the workshop – Thematic Session – II

The second day of the workshop, on February 11th 2011, began with Mr. Ghasiram Panda giving a re-cap of first day’s proceedings. The thematic session – II started with Dr Nilakantha Panigrahi of Nabakrushna Choudhury Centre for Development Studies (NCDS), in Chair. Dr. Panigrahi welcomed all and initiated the session’s proceeding.

2.3.1 “We believe forest as our own, our life, our ideology, our culture and our everything,” – Ghan Shyam Pandey

Given the intensity of the first day’s deliberation on GACF experience in community forestry and also their experience in dealing with use of technologies and various international treaties on climate change, the Chair requested Mr Ghan Shyam Pandey to elaborate further on the subject. Mr. Pandey’s presentation primarily centered around challenges of forest management in the face of an increasing economic consideration of all natural resources,

more so of forest. He said that while for the community sees forest in its totality and not only in terms of carbon, and while there should be different valuation of carbon stock for CFM forests and forests under government control, no body came for valuation of CFM forests which is why FECOFUN started community evaluation of the stock in 10000 forest patches. He mentioned how strong is the presence of FECOFUN in Nepal, and how the political parties care to take its support because of its wide-spread community base. FECOFUN played a critical role in the process that ultimately forced King Gyanendra to hand over power.

The Nepal government had planned to allot *Shorea robusta* forests to a Finish company for Eucalyptus plantation, but FECOFUN objected to it, made a dialogue with the Finish government and finally the plan was withdrawn.

Dr.Pandey said that in the political economy of forest, mere right is not enough and economic benefit is also necessary. He cited an example from Costarica where the urban people pay an environmental tax to the forest protecting communities in rural areas.

2.3.2 “Many limitations plague present forest management practices for effective climate change adaptation mechanism.” – Dr. Ganesh Yadav

Mr. Ganesh Yadav exclusively dealt with IIFM’s experience with current forest management practices, especially vis-à-vis climate change mechanism. He said that the potential for forest as carbon mitigating and carbon sequestering agent has not yet been tapped properly and that forest is the most neglected resource in the world. Though some initiatives have been made in this regard, the communities at the grassroots have hardly been involved therein. Thus most attempts to relate forest management with climate change mechanism has mostly been elitist and discriminatory in nature. Villagers’ perspective of climate change is subjective & qualitative while scientists’ perception is objective & quantitative. He gave example of the present Clean Development Mechanism (CDM). Besides, there are other ecological challenges. Plantation is being viewed as a part of forest management, but plantation does not necessarily lead to a better bio-diversity and may on the contrary harm it. He said that the challenge lies in establishing a perfect equilibrium between community management and scientific management.

He further said that there is no contribution on the part of traders & industries for promotion of CFM, silvicultural approaches ignore indigenous knowledge systems, and feasible alternative is not made in grazing control. India has a contradictory situation where policies are not coherent, and there are examples where even government agencies ignore forests & communities for commercial interest(like, Uranium Corporation encroached upon a community-protected forest near Jamshedpur and lured the villagers to leave the forest so that it can expand its activities).

He said tenurial rights are important in carbon trading, so it has to be ensured which is why the C&I system also has provided space for such rights. In some countries industries paid premium to people for social carbon, but the amount was small enough.

Responding to suggestions from the House to take initiatives on the part of IIFM to facilitate necessary changes in the forest policy and management systems so as to give due importance to community rights, Dr. Yadav said that IIFM has now a mandate to send its students to forest-related sectors and has scope for NGO management in its new perspective plan so that the perspective of social sector can be duly taken care of in working on forest management.

2.3.3 “Adaptation and Mitigation is the key in climate change context” – Soumitri Das

Mr Soumitri Das, a Fellow at the Forestry and Biodiversity, Earth Science and Climate



Change Division at The Energy and Resources Institute (TERI) elaborately discussed on the need to adapt and mitigate in a rapidly deteriorating climatic world. He started with the science of climate balance and then went on to discuss how the climate change is happening. He was conclusive that climate change is largely a resultant of anthropogenic pressures. He urged that adaptation has become the need of the hour. Adaptation is primarily of 3 types: anticipatory, autonomous and planned adaptation. He cited various examples of how adaptive measures are to planned & implemented. For instance, the Egyptian

government did not anticipate that in the desert climate of the country there can be heavy rains any time, hence adequate drainage systems were not planned in Cairo which is why a recent downpour made the streets of the city flooded. Similarly, in Rajasthan the traditional stepwells helped conserve water, but pipe water supply systems lead to neglecting the same and making them defunct.

Some of the adaptation options he suggested for are mentioned in box.

SECTORAL ADAPTATION STRATEGY

- Agriculture: Climate-tolerant crop varieties, role of ICT, soil and water conservation, changes in cropping patterns
- Water resources: Better water storage and recharge, efficient irrigation practices, watershed management, assessment of flows, early warning
- Forestry & biodiversity: In-situ species conservation, climate-hardy varieties, community engagement in forest conservation, fire protection etc.
- Health: Better public health care, bolster water and sanitation programmes, awareness at the local level
- Coastal zones: Early warning, disaster risk reduction training of communities, cyclone shelters, mangrove plantations, dikes and embankments, strengthen ICT (Courtesy: Soumitri Das)

He then went on to discuss various mitigation measures, both technological and traditional; and mentioned the following mitigation sectors alongwith their mitigation strategies:

- Energy supply(like, improved supply & distribution system and renewable energy, capturing & burning methane given off by large hydro-dams, etc.)
- Transport(like, cleaner fuel & more fuel efficient vehicles, shifting to rail & public transport systems, etc.)
- Buildings(energy saving systems, green buildings, recovery & recycling of fluorinated gases, etc.)
- Industry(heat & power recovery, efficient use of electrical equipments, material recycling & substitution, etc.)
- Agriculture(like, improved rice cultivation techniques and livestock and manure management techniques to reduce CH₄ emissions, improved nitrogen fertilizer application techniques to reduce N₂O emissions, etc.)
- Forestry(like, harvested wood product management, use of forestry products for bioenergy to replace fossil fuel use, afforestation, etc.)
- Waste management(like, landfill methane recovery, waste incineration with energy recovery, composting of organic waste, controlled waste and water treatment, etc.)

He cited the example of a building of TERI at Gurgaon where a tunnel has been built in such a way that it provides environmental cooling without AC. This has been based on the principle that 4 metre below the ground the temperature doesn't change.

He informed that the provision in the Forest Rights Act, 2006 to ensure forest conservation through community participation has a big potential to address climate change issues, but if the community wants to participate in carbon trading it has to adopt monitoring & other relevant activities. He further said that climate change mitigation involving forest will be about trade-offs between between forestry and other land-uses; between forest conservation for carbon storage and other environmental services; among utilization strategies of harvested wood products aimed at maximizing carbon storage, etc. Referring to REDD+, he concluded that REDD+ is not just about money, it is also about good governance; it is not just about carbon, it is also about welfare of people through forests, and multiple products and services from forests.

However, he did not support the present models of economy & commercial approaches and rather suggested for reality-based ecological economics model. For instance, he said that GDP doesn't actually take into consideration many economical dynamics like benefits from NTFPs.

2.3.4 Open Session

Discussion in the open session mostly centered on REDD+ and CDM and how the communities can benefit from those. It was agreed that the present systems have very limited provisions for community space in participation and profit sharing. Mr. Pravat Sutar said that ancient texts on architecture like the *Shilpa sashtra* suggest methods & systems that can make buildings energy-efficient & healthy. Mr. Sangram Keshari Rout said more use of water in rice cultivation leads to production of more methane (hence SRI can be useful).

2.3.5 Chair's summary

Chairman of the session Dr Nilakantha Panigrahi summed up the session by saying that challenges are growing but they have to be taken up. In a climate change scenario, in order to save our bio-diversity we are required to have a perfect balance between technology and community ownership, where community ownership cannot in any manner be relegated.

2.4 Valediction by Mr Ghasiram Panda

Mr Ghasiram Panda thanked all the resource persons and the participants for two days of energetic and fruitful discussions. He reiterated Mr Kailash Dash's announcement that RCDC would push for community forest ownership and management, and would address the issue with a lot more vigor in the year 2011. He also expressed happiness that the workshop resulted in furthering collaborations of the NGOs and community forestry groups with international movements and also the government. With this he declared an end to the workshop.

ANNEXURE 1
WORKSHOP AGENDA

**NATIONAL WORKSHOP ON
GUIDING FOREST MANAGEMENT ON BIODIVERSITY CONSERVATION
& CLIMATE ADAPTATION**

Venue: DRTC-CYSD, Bhubaneswar

Date: 10-11 February 2011

Organized by: Regional Centre for Development Cooperation (RCDC), Bhubaneswar

Supported by: OXFAM India

AGENDA

Session-1

Inauguration

Session Moderator: Bikash Rath, IUFRO

Registration	9.30-10.30 a.m.	Sushree Samal, Programme Officer, RCDC
Welcome address	10.30-10.40 a.m.	Sri Kailash Chandra Dash, Executive Director, RCDC
Introduction to the workshop	10.40 – 11.00	Bikash Rath, Sr. Programme Manager, RCDC and Coordinator, IUFRO Working Party on Community Forestry
Self introduction	11.00 – 11.15	By participants
Unveiling journal and specially developed ICT material on the occasion of International Year of Forests.	11.15 – 11.30	By Chief Guest, Spl Guest and Chief Speaker

Sharing about the journal and ICT material	11.30 am – 11.35 am	Bimal Prasad Pandia , RCDC
Inauguration & inaugural address by the Chief Guest: <i>New challenges in forest management and response of the state</i>	11.35 a.m.-12.00 a.m.	Sri Bhagirathi Behera , IFS Spl Secretary, Deptt of Forest and Director, Deptt of Environment Government of Orissa
Address by the Spl Guest	12.00 am – 12. 25 am	Sri Ghan Shyam Pandey , Chairperson, Global Alliance of Community Forestry (GACF), Kathmandu, Nepal
Address by the chief speaker on <i>New challenges in forest management</i>	12.25 am – 12.50 am	Prof Radhamohan
Open house discussion	12.50am – 1.20 pm	Moderator
Vote of thanks	1.20 pm – 1.30 pm	Suresh Ch Bisyoj , Director, Field operation
Lunch break	1.30 p.m.-2.30 p.m.	

Thematic Session-1: Forest management & biodiversity conservation

Session Moderator: Prof A.K.Patil, IIFM, Bhopal

C&I for community based biodiversity conservation in view of present limitations of forest management	2.30 p.m. – 3.15 p.m.	Dr Ganesh Yadav Programme Manager SFM Practices IIFM, Bhopal
Conservation models of high-priced NTFPs	3.15 p.m.- 4.00 p.m.	Mr.K.A.Mohammed Noushad , IFS Chief Conservator of Forests, Kerala.

Open house discussion	4.00 p.m.-4.30 p.m.	Moderator
Summarization by the moderator	4.30 p.m.- 4.45 p.m.	Moderator
Sharing from Bangladesh	5.00 pm – 5.30 pm	Samshul Arefin ALRD, Bangladesh

11-2-2010

Thematic Session-2: Forest management & climate adaptation

Session Coordinator: Dr Ganesh Yadav, IIFM, Bhopal

Sharing with the Chairperson of GACF	9.30 am – 10.15 am	Ghan Shyam Pandey Chairperson Global Alliance of Community Forestry (GACF) Kathmandu, Nepal
Limitations of present practices of forest management for effective climate change adaptation mechanism	10.15 am – 11.00 am	Prof P.K. Biswas IIFM, Bhopal
Applying C&I for climate adaptation	11.00 – 11.45 am	Soumitri Das TERI, New Delhi
Open house discussion	11.45 – 12.45 pm	Moderator
Summarization by the moderator	12.45 – 1.00 pm	Moderator
Valediction	1.00 pm – 1.30 pm	Ghasiram Panda Programme Manager, RCDC
Lunch	1.00 pm – 2.00 pm	

Note: Prof. A.K.Patil, Prof. P.K.Biswal, and Mr.Samshul Arefin could not attend the workshop.

ANNEXURE 2

Revised Framework of C&I for Sustainable Management of NTFP after Incorporating Regional Suggestions.

Principle 1 - Policies and Laws exist and are clear and consistent.	
Criteria	Indicators
1.1 Use rights and tenures are well established and complied with and are consistent with International commitments.	1.1.1 Local / bonafide / primary collectors having clear rights to access, use and manage the NTFP resources traditionally in clearly known and demarcated forest areas.
	1.1.2 Availability and knowledge of the respective orders at local level.
	1.1.3 Compliance of the Govt. orders/ Legal Provisions on participatory basis.
	1.1.4 Regulatory/ Legal actions against violation and Reward for better compliance.
1.2 Laws, regulations administrative and procedural requirements for conservation and development are in place.	1.2.1 National and state level conservation laws and regulations broadly in tune with International / Regional laws / Treaties / Conventions/commitments.
	1.2.2 Implementation at the field level with collective responsibility and participation.
	1.2.3 Periodic review and monitoring / follow up mechanism on participatory basis.
1.3 Registration of gatherers, collection agents, middlemen, traders, exporters, growers and processing units / industries are mandatory in the area.	1.3.1 Provisions for registration on local area basis.
	1.3.2 Provision for periodic inspection and review of the registration.
	1.3.3 Availability of the registration document with all necessary details (personal info, collection details etc.) at the local level.
1.4 Regulation on forest based NTFP transit (either T.P. or other means) are in place.	1.4.1 Appropriate legal instrument through collective process for regulation of transit of wild NTFP with details of routes and validity of transit period exists.
	1.4.2 Availability of detailed information on NTFP to be transported and also for stored stock with duration.
	1.4.3 Availability of special transit provision for prioritized plants and their products.
1.5 Regulations for Chain-Of- Custody and transparency are in place.	1.5.1 Provisions of voluntary disclosures of related information of all registered stakeholders as listed in 1.3.
	1.5.2 Provisions for actions against violations.

Principle 2 - Wild area productivity and environmental values are sustained	
Criteria	Indicator
2.1 Forest area management plan for practical management processes is prepared.	2.1.1 Microplan/Working plan /Management plan includes local NTFP resources and their socio-economic importance.
	2.1.2 Planning done in a participatory manner.
	2.1.3 Plan consistent with other management plans of the adjacent or overlapping area(s), if exists.
	2.1.4 Periodical reviewing of the plan and execution.
	2.1.5 Local level availability of the Plan document (in local language) and its compliance.
2.2 Inventorisation , assessment and periodic monitoring of the NTFP resources are done for sound management of NTFPs.	2.2.1 Local level inventorying of NTFP resources.
	2.2.2. Conservation status assessment of the socio-economically important NTFPs.
	2.2.3 Periodic monitoring of the NTFP resources.
2.3 Sensitive/ RET/ IUCN Red List species and their habitat conservation plan is prepared to identify the synergy among themselves.	2.3.1 Conservation measures (i.e. <i>in situ</i> / <i>ex situ</i>) for RET species.
	2.3.2 Habitat / ecosystem conservation planning with participatory approach.
	2.3.3 Local participation in conservation activity ensured.
	2.3.4 Traditional conservation practices taken into account.
2.4 Conservation strategy and action plan is in place to maintain the germplasm.	2.4.1 Special conservation programmes - including preservation plots and sacred grooves - made and implemented for in situ conservation.
	2.4.2 Plant genetic resources conserved.

Principle 3- Responsible collection practices are practiced and enabling support system exists.	
Criteria	Indicators
3.1 Good collection practices are followed.	3.1.1 Identification of the species to be collected and regulated or discontinued as under - a. Endangered or critically endangered species: no collection. b. Vulnerable species: management strategies are defined and recommended for implementation. c .Threatened species and other categories : regulated collection.
	3.1.2 Detail map of collection sites available & followed.
	3.1.3 Instructions for Collection of each prioritized species (time, method, instrument details) prepared on the basis of available scientific information and traditional practices and consistent with WHO/NMPB guidelines.
	3.1.4 Allowable collection quantities defined in consultation with stakeholders and as per the record available using reliable and practical measurement methods (weight/number/gunny bags/canisters/baskets etc.) without disturbing the surroundings.
	3.1.5 Harvesting calendar of plant species at the community level prepared & followed in a participatory manner.
	3.1.6 Wastage due to poor and destructive collection practices planned to be minimized.
	3.2 Harvesting and

regeneration are so balanced that sustainability is insured.	distribution, structure (age classes) in the collection area.
	3.2.2 Age and size of plants for collection defined (e.g. Plant diameter, DBH, height, flowering and fruiting) & model procedure explained through demonstration plot.
	3.2.3 Maximum allowed frequency & quantum of collection does not exceed the rate of regeneration.
	3.2.4 Some mother plants retained in a distributed manner.
	3.2.5 Traditions & rituals relating to collection practices respected.
	3.2.6 Period assessment of regeneration status in participatory manner.
3.3 Quality assessment of the collected material is done through accredited laboratories.	3.3.1 Quality of collected material determined by the internationally/ nationally //locally accepted standards.
	3.3.2 Quality assessment done through accredited laboratories /agencies/ organizations.
	3.3.3 Information on availability of quality assessment standards and testing facilities available at local / regional levels.
3.4 Good warehousing practices are followed.	3.4.1 Availability of sufficient storage space suitable for the nature/end use of the material.
	3.4.2 Standard labeling & warehousing protocols followed.
	3.4.3 Storage register maintained and updated regularly.
3.5 Regulations regarding transit, chain of custody & transparency are followed.	3.5.1 Regular checking roster prepared & followed with surprise checkings.
	3.5.2 Regulatory actions against violations.

Principle 4 - Livelihood security and benefit-sharing facilitated through enabling organizational framework.	
Criteria	Indicators
4.1 Processing and value addition of wild collected NTFP are conducted in a manner that strengthens and diversifies the local economy.	4.1.1 Measures for skill up-gradation at local level.
	4.1.2 Availability of primary processing facility.
	4.1.3 Local level availability of micro finance/ micro credit.
	4.1.4 Establishment of market linkage.
4.2 Marketing of NTFP resources is facilitated based on its demand in the market.	4.2.1 Availability of authentic market information to the gatherers.
	4.2.2 Market development and promotional activity.
	4.2.3 Only surplus NTFP traded/ local consumptions not compromised.
	4.2.4 Measures for marketing skill up-gradation at local level.
4.3 The gatherers & processing workers are organized into enabling institutions.	4.3.1 Organised groups/Self Help Groups/ Committees/ societies/ JFMCs/Federations etc.
	4.3.2 These groups empowered for their independent democratic/ participatory functioning.
4.4 Benefit sharing mechanism exists and distribution of the profit is done based on the agreement between the involved gatherers &	4.4.1 Price fixation of the raw / processed material on the basis of demand-supply assessment.
	4.4.2 Agreement between the involved gatherer groups & the buyers on the basis of mutually agreed terms &

the buyers.	conditions. 4.4.3 Profit equitably distributed among the stakeholders.
4.5 Safe working conditions are provided to ensure workers' safety.	4.5.1 Adequate safety and precautionary measures taken for gatherers of wild NTFP. 4.5.2 Necessary equipments and training provided for collection and processing activities. 4.5.3 Compliance with relevant laws / regulations. 4.5.4 Insurance cover for the gatherers & processing workers.

(Courtesy: IIFM, Bhopal)