# TOTAL FOREST MANAGEMENT (TFM) AN INNOVATIVE APPROACH FOR CONSERVATION OF NATURAL FORESTS WITH HUMAN FACE

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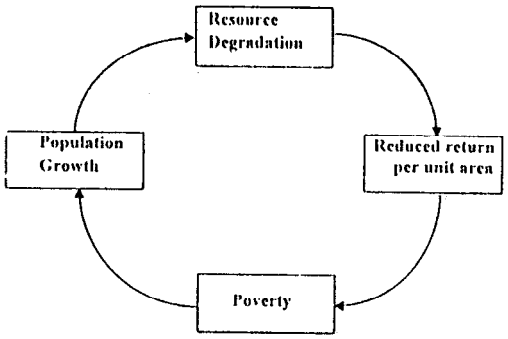
## Introduction

With the ever increasing anthropogenic impact, the life support system of the earth is under constant pressure. The adverse effect is manifested through depletion of the vegetal cover, land degradation, distortion of the hydrological cycle and consequent decrease in productivity per unit area leading to enhanced poverty and misery. Poverty and illiteracy coupled with malnutrition, are again the two main causes of increased population growth which further accentuate the natural resource degradation process. As Brown (1993) has pointed out that while in 1984 earth was losing 11 million hectares of tropical forests per year, the loss rose to 17 million hectares per year in 1993. The world population which stood at a level of 2.6 billion in 1950, rose to 5.5 billion in 1992. The size of the land and its natural resources are finite and the population explosion could not be reflected in a form other than continued natural resource degradation, endangering the sustainability of the fragile eco-systems. This tragedy of the depletion of our natural resources can be diagrammatically illustrated in form of a vicious circle as shown below (Fig. 1).

**Fig. 1**




'Vicious Circle' of Natural Resource Degradation

## What Ails Forestry?

By and large all along these years foresters have been looking for various causes and reasons of rapid depletion of our forests inside the forestry domain only and accordingly the myopic remedial solutions suggested had a very limited success. In their zeal for increasing production from forests, the traditional forester concentrated on the 'tree' and the scientific forestry including various silvicultural practices hovered on biological, technical and to some extent economic aspect of the productive and protective functions of the forests. The interdependence of the different facets of the vicious circle illustrated in previous section was never appreciated fully. As Pearse (1985) noted that forestry is not an end in itself, it is a means of achieving economic, social and environmental objectives. Forestry is for people.

Having realised the importance of the

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human sensitivities, it will be worthwhile to discuss briefly the implication of the role of the people in forestry management. In a highly stratified and caste ridden society that we have, it becomes all the more important to appreciate the role of social structure and grassroot level leadership of different groups. A number of factors such as natural resources, including forests, agro-climatic conditions as well as many social factors like education, literacy, health and other types of awareness, interact in a highly complex manner to provide for a ground for operationalisation of a project. For example, towards the end of 19th century, Swedish forests were also in bad shape and degraded but with increased level of literacy, education, technological innovations and by creating awareness for forestry, Sweden could develop sustainable forestry where annual cut is now restricted to two-third of the annual growth.

**Sustainability : People First**

Perhaps no other word is shrouded with mystery, romanticism, complexity and even confusion in forestry sector as the term sustainability. The basic question which has led to vagueness and at times conflicts is : sustainability of what and for whom? In classical silvicultural systems, mention has been made of sustained yield formula which continued to be a central theme in forest management practices for a long time. It is but natural that timber sustainability will have conflict with bio-diversity and other life-support systems. In forest management, there is simply no free lunch. However, defining sustainability narrowly as the production of a continuous yield of marketable timber is a mistake, even if non-timber forest products are taken into account. By definition, natural forest management should keep human uses of forests at a level compatible with the maintenance of the ecological processes that sustain them (Johnson and Cabarle, 1993). Most such "secondary" concerns are actually integral components of the forest ecosystem essential to the production of the primary product.

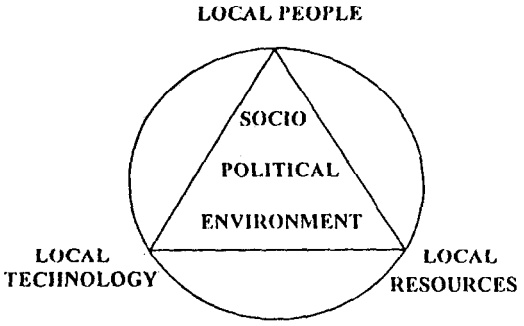
After recognition of the basic fact that the health of the forests has lot to do with the human dimensions, it becomes imperative to assess the dynamics of the impact of the people on the forests and impact of the forests on the people, because it is the resultant scenario that will decide the future course of action. This point needs further elaboration in national context. India has got 15% of the world human population and 16% of cattle population but it has less than 1% of the total productive forest area of the world (Sharma, 1994). The combined effect of these biotic pressures on natural resources is much beyond the carrying capacity and the problem is acute in rural areas where more than 67% of the Indian population lives. There is not enough land, nor industries in countryside, consequently job opportunities are not keeping pace with the swelling number of unemployed. Thus, to translate the dream of full employment level which was one of the cornerstone of the Eighth Plan, the pace of generation of adequate employment would have to be geared up in the vicinity of 10 million job opportunities per year (Sengupta, 1992). However, the present employment generation matrix is becoming highly skewed because agriculture which was supposed to be the mainstay of employment potential in rural India has reached a near saturation point thanks to the application of modern innovative techniques including mechanisation in the primary sector. Furthermore, development of job opportunities in agriculture have come

down to 0.9% as against more than 3% in non agricultural sector. The situation has been further compounded by a wind of economic reforms which is sweeping all over the world. Our country is no exception to it. A new economic order is in the offing on account of opening up of free market forces and competition. But the developed market economies at times tend to become insensitive to the poor. People living in and around forest areas do not have adequate education, health cover, nutrition and safe drinking water facility. Positive aspects of 'Planned Economic Development' have, by and large eluded them. They still practice primitive subsistence agriculture with very low productive system and to meet their growing foodgrain requirement, they go for more and more extensive cultivation including shifting cultivation or encroachment in forest area. In this process steep slopes and areas unfit for growing of annual crops are brought under the plough, making it a near ecological disaster. Man, material and money have long been recognised as the critical inputs for economic development. With proper integration, planning and development of institutional frame work a large manpower can be considered as a potential productive basic resource for laying the foundation stone of a sustainable system.

## Total Forest Management (TFM) with Human Face

The Total Forest Management (TFM) is a positive step towards breaking the vicious circle, which attempts to address the issue by keeping human being in the centre. The underlying philosophy of the new and innovative approach is that in the primary sector, people use natural resources to satisfy their physiological needs by using local techniques and goods so produced are either consumed by them or are bartered or marketed. In the instant case, people living in and around forest area, suffer from the Disadvantaged Geographic Location (DGL) and hence they have been deprived of the benefits of the planned economic development. In that process, they continue to have very heavy dependence on natural resources, particularly forests. Mystical words like ecology and environment have no meaning for the poor forest dweller. For them, on the contrary, there is another 'E' namely economics which is much more important than the two 'E's (Ecology and Environment). In fact there are many more E's to buttress the TFM system, as will be elaborated in following paragraph. Under the TFM system, local people use the local resource by adopting local technology. What is needed is the gradual upgradation of the local technology and provision of the market support for the goods and services they produce. The whole system operates within the social and political ethos so that all the human sensitivities involved are taken care of. Diagrammatically this approach can be represented as a green triangle shown below (Fig. 2).

**Fig. 2**




Green Triangle of locals.

While this methodology assumes that the local people are the corner stone of the system, the uniqueness of approach lies in reinforcing human building blocks by introducing many E's like 'educating' them, 'enlisting' their support, 'empowering' them, bring in the 'equity' and allowing them to 'enjoy' the benefits as per their priorities, apart from 'employing' them. Similarly, in respect of the local resources there are many E's : 'enhancing' the resource, 'enriching' the resource, 'efficient' and 'economic' use of the resource, all of which lend support to the sustainability of system: Next step is the gradual upgradation of the local technology which brings in the much desired stability to the system rather than transplanting exotic technology blindly which can play havoc and there are numerous examples of the same. Furthermore, by providing appropriate market support for the goods and services generated, this green triangle system, in totality becomes sustainable. This in essence is the central theme of the innovative approach, which incidentally is capable of providing answers and remedial measures for most of the ailments which forestry sector is suffering from.

The approach described above is not merely a theoretical and academic exercise in futility. In Madhya Pradesh, the Total Forest Management has been in operation since winter of 1996 in vast stretches varying in size from 500 $km^2$ to 1500 $km^2$ area, spread over the Districts of Mandla, Bilaspur, Rajnandgaon, Chhindwara, Hoshangabad, Betul, Raipur and Bastar. In certain villages it is seen to be believed as to how the local people are becoming not merely passive recipients of the programme but active partners in the endeavour and in some cases even proud owners of the assets created, thus translating the cherished dream of 'man with nature' rather than 'man versus nature' into reality.

## Operational Modality of the TFM

To translate the contemplated TFM model into reality in the first instance, it becomes imperative to examine the dynamics of the impact of the forests on the people and impact of the people on the forest. People need forests for meeting their domestic needs in terms of fuelwood, fodder, small timber and other minor forest products besides grazing by their animals. These are the genuine and felt needs and under normal conditions, natural forests are capable of meeting these needs of the local people. When there are not enough employment opportunities or the agricultural practices are at the subsistence level, with the increase in population, people tend to indulge in activities like headloading and even illicit cutting of trees. In extreme cases often the forest lands are encroached upon for bringing more land under the plough. Land and water are two most important natural resources in these areas, but they are finite. However with judicious mix of interventions, like development of irrigation facilities, application of improved and modern agricultural practices and creation of other income generation activities based on local available natural resources, the possibilities of ample job opportunities can be explored. Thus the negative impact of the people on the forest can be brought under manageable limits. Therefore, the first step in the Total Forest Management system is to create awareness among the local people about their latent strength, availability of natural resources and potential of using them on sustained basis by technological upgradations. This is achieved by the repeated interaction of the staff with the villagers, and organising training and visit

to successful areas, a process which helps in bridging the credibility gap. Broadly the physical activities like construction of water harvesting structures, drinking water facilities, school building, Anganwadi, community centres and other infrastructural facilities can be grouped as "hardware" of the system. On the other hand, interventions like enlisting the support of the people, bridging the credibility gap, soliciting participation of the local people and the process of empowering them could be classified as "software" of the system. In fact it is not the "hardware" but the development of the "software" which holds the key to the success of the programme.

To start with, local people being the most important assets they need to be showered with many 'E's. Being poor, for them economics precedes ecology and environment. In tune with their priorities, there has to be sharp focus on productivity enhancement so that they can reap better economic returns. For those who possess land, a programme is initiated to upgrade the productivity of the agriculture system by land shaping, constructing stopdams, tube-wells and making them available other inputs for better crop husbandry practices, so that the land under rainfed condition is transformed into double cropped or in certain cases even triple cropped. Increasing the productivity of the land provides good harvest as well as gainful employment around the year. All these on-farm activities can be adopted as a package for improving the socio-economic condition of the people who otherwise practice subsistence agriculture. For landless persons off-farm activities leading to income generation can be devised by using forest biomass as well as those without it. In the first category, activities like MFP collection, rope making, honey collection, nursery raising etc. can be thought of whereas in the later category schemes like poultry, piggery, mushroom cultivation shop-keeping, grocery etc can be envisaged. Thus, the proposed system takes care of both the landed peasants as well as landless labourers. It goes without saying that once people get opportunities to earn their livelihood by decent means easily then there will be less encouragement for them to indulge in nefarious activities which often lead to degradation of the forests.

Development of the software package of the TFM is really tricky and challenging job. By and large people in the remote areas with low level of literacy and past experience of dealing with the bureaucracy have very little faith in the Government delivery system. Bridging this credibility gap thus becomes the most onerous task. Forestry personnel also lack the interpersonal skill in dealing with the human related activities. Therefore creating awareness, training, orientation of the local people as well as the forest-staff become one of the most important task. In the beginning, advantage has been taken of the existence of the village level organisations life Forest Protection Committee (FPC) and Village Forest Committee (VFC) and they are being empowered and involved meaningfully in the decision making process like choosing the activities, their location, execution and management of the same. The underlying motto is that let the people build, operate and manage the system themselves. In one instance when the villagers, during a PRA exercise demanded construction of a stopdam for improving the crop production, the Department gave them an option to select the site with a suggestion that the villagers should dig the canal first to take the water from the stopdam to their fields. It was amazing to see that the FPC took the

challenge in the right earnest and all the FPC members came out to dig canal and completed the job in a record time of 15 days. That incidentally showed the genuineness of the felt need too. The Department gave the necessary amount for construction of the stopdam to the FPC. It was an eye opener experience to see the villagers using this amount with great efficiency, economy and effectiveness and more importantly the result was that the villagers became proud "owner" of the stopdam. For maintenance of the stopdam, the villagers themselves decided to levy a fee on the beneficiaries and the money is used for augmenting the resource base of the FPC. When the cheque for the stopdam was handed over by the Forest Guard to the President of FPC, social esteem of the Forest Guard went up in the eyes of the villagers and the Forest Guard too felt elated in this process. Encouraged by this new role, he has been transformed into a friend, philosopher and guide in that area. One added advantage of this new methodology has been that it has brought much needed transparency in the working of the Department. Impressed by the changed attitude of the Department, the local MLA also came forward and gave funds from his discretionary quota to the Department for development and execution of welfare activities in Dindori Forest Division (Mandla District).

In short, role of the different actors in the field namely the Government, the Forest Protection Committee and the individual has been well defined and activities have been delineated accordingly. The Department is undertaking infrastructural development activities like construction of water harvesting structures, forest improvement, regeneration and other Government facilities whereas the FPC is building, operating and managing the assets like community centre, internal village road, agricultural implements and other common village assets. The individual looks after self employment schemes and matters relating to seeds, fertiliser and other inputs etc. The landless persons are imparted training in tradeable skills. The training basket consists of schemes relating to leaf cup making, rope making, collection, grading and storage of minor forest products including medicinal plants, beekeeping, mushroom cultivation etc. Market support is provided by developing linkages with the consumers. A local youth, preferably literate one, is chosen as the Samiti Sewak, who is imparted training in maintenance of the local assets like repair of handpump, gobar-gas plants; preparation of blood slides for malaria; crop husbandry and animal husbandry practices. Since he is one from the villagers, he can work as an excellent link between the Government and the forest-dwellers by bridging the credibility gap.

Very low level of literacy particularly among the females, poor nutrition and inadequate health cover are equally important issues that have been addressed rationally under the TFM. In the interior areas either there are no schools and if schools are sanctioned, there are no school buildings or the teacher seldom visits the school. Same is true of medical facilities. Under TFM, the Department is constructing school buildings, health centres and Anganwadis. In villages where there is no school, the FPC with its comfortable money base, has engaged part-time tutors and in certain cases, the local Forest Guard has taken this assignment on honorary basis. To take care of malnutrition, the Department is distributing foodgrain, pulses and oil as part of wages and the money so generated is again invested in developing infrastructural facilities including ambulance and medicines. During rainy

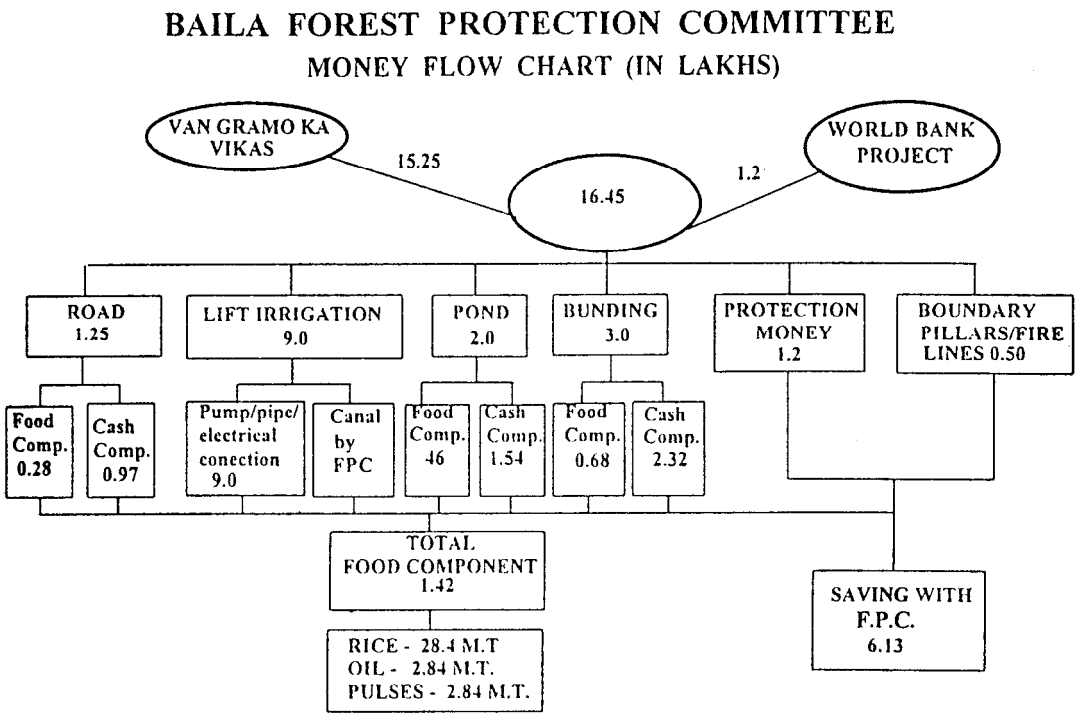
season of 1996, many villagers suffering from cholera and malaria were provided immediate medical help in Hoshangabad and Mandla District.

In absence of any worthwhile financial institution in the remote areas, the poor forest dweller has to go to the money-lender, who charges 10% interest rate on monthly basis i.e. more than 120% per annum. The FPC, with its comfortable money base is coming to the rescue of its members by providing loan/advances at terms and conditions decided by them. The money base of the FPC is swelling by Government contribution, protection money from the Forest Department, Shramdan component, service charge for using the assets, subsidies, institutional finance etc. It may be interesting to note that in certain cases the FPC money base has grown upto lakhs of rupees, an amount never conceptualised by the poor forest dweller. These success stories are being replicated in different parts of the State. A typical example from the Ideal Forest Management Report of Baila Forest Protection Committee (Anon., 1997) in Mandla District will bear testimony to this.

**Non Timber Forest Products: Backbone of the TFM**

In the context of conservation of natural forests, Non Timber Forest Products (NTFP) have been playing very important role but their overall implications have not been fully appreciated. By far timber production and few other commercially important minor forest products have been drawing the attention of the forest managers. Rural

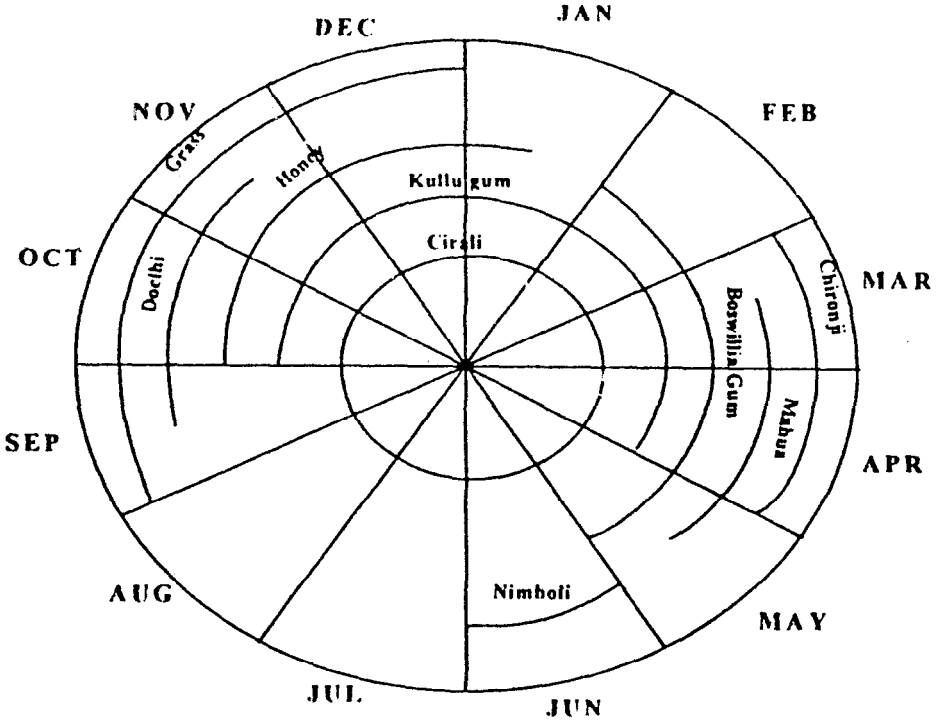
**Fig. 3**



poor, more importantly the landless ones living in and around forest areas have greater stakes in the NTFP. While analysing the role of NTFP in village economy, Malhotra *et al.* (1992) reported that in Midnapore District of West Bengal, mean annual income from Non-Timber Forest Products to a tribal and caste Hindu household is Rs. 2,232/- and Rs. 2,229/- respectively. The contribution to the total family income generated by collection of NTFP by tribal is 22%. This is a most conservative estimate because income from medicinal plants, several fruits, barks etc. collected occasionally has not been estimated or added. In fact, it has been observed that half of the employment generated in the forestry sector is through NTFP and total employment generated by this activity is estimated to be around two million person years (Anon., 1993).

One of the unique features of the NTFP contribution is that it is on annual basis whereas in respect of timber one has to wait from 10 to 100 years depending upon the species. Therefore, the collection, godowning, processing and sale of the NTFP becomes an excellent activity for providing sustenance to the rural poor. This incidentally, fits extremely well in the green triangular canvas made with the fabric of local people, local resources and local technology. Furthermore the NTFP related activities can be spread throughout the year which can very well be tuned with the agricultural rhythm, so that when there are not enough tasks to be performed under

**Fig. 4**




A typical MFP Cycle - FPC Asir

crop-husbandry, the villagers can take up NTFP activities. A case study of Burhanpur Division by Goverdhan (1996), has brought out a typical NTFP cycle as shown below (Fig. 4).

A perusal of the cycle reveals that a forest dweller can adjust his work-schedule in such a way that round the year he can derive some income by dovetailing agricultural activities with the NTFP related functions.

Under the umbrella of NTFP related activities, both the unemployed as well as under-employed can take up gainful employment. NTFP based small-scale enterprises can further strengthen the socio-economic base of the rural poor on account of low capital and low energy requirement, proper utilisation of local renewable raw material and technological know-how, checking migration from rural to urban areas, and being a family activity it provides satisfaction of 'creation'.

It is interesting to note that under the process of conservation of natural forests by the Forest Protection Committee, NTFP contributes substantial money base to the local village level organisations which have been assigned protection of good forests. For example, cutting, baling and sale of grass has generated lacs of rupees for the FPCs in Harda, Jhabua and Dewas Forest Divisions. Similarly collection and sale of *Emblica officinalis, Swertia chirata, Madhuca longifolia* seeds and its flower are contributing substantially towards the FPC money base. To augment and stabilise the activity in Hoshangabad Forest Division as reported by Shrivastava (1997) several initiatives have been taken up to establish linkages between the village level forest protection organisation and the NTFP trade. Some of the interventions initiated are establishment of marketing information and research, publication of bi-monthly NTFP newsletter, sharing of profit between MFP societies and JFM committees. These initiatives have started yielding good results as will be seen from the Table 1.

From forestry point of view, tasar silkworm rearing is another important activity which can provide gainful employment to landless persons (Sharma, 1994). For example tropical tasar silkworm is found widely in forests of central India. It has both wild as well as semi-domesticated eco-races. More than 30 varieties of *Antheraea mylitta* have been identified of which important varieties are Daba, Sarehan, Laria, Modal, Sukinda and Raily. Daba is by far the most important commercial variety which accounts for more

**Table 1**

*NTFP Collection in Hoshangabad with JFM initiatives.*

| NTFP | Quantity Collected in 1995 | Quantity Collected in 1996 season | Approximate Value (Rs.) |
|---|---|---|---|
| *Madhuca longifolia* | Nil | 522.30 qtls | 3,65,600 |
| *Chlorophytum tuberosum* | Nil | 125 kg (Dry) | 37,500 |
| *Swertia chirata* | Nil | 469 qtls | 1,45,390 |
| *Phoenix acaulis* | Nil | 3000 bundles | 18,000 |
| *Eulaliopsis binata* | Nil | 1000 bundles | 60,000 |

than 60% of the total tasar production in the country. It is a semi-domesticated eco-race which is amenable to rearing under manageable conditions. Raily is commercially important Sal based wild eco-race of *Antheraea mylitta* found mainly in Bastar District of Madhya Pradesh. Tasar culture is unique because it involves low investment, no equipments needed and rearing house is not required. Thus this can become an ideal income generation programme for landless persons because host plants are located either in the Government forests or in the community land.

At the State level, collections and trade of some of the important NTFP like Tendu Patta, Sal Seed, Harra and Kullu gum have been taken up under the aegis of M.P. State Minor Forest Produce Trading and Development Cooperative Federation, a Govt. of M.P. undertaking. As per their note (Anon., 1996), the work related to the job is organised on three-tier basis. At the primary level, 1947 primary societies consisting of actual pluckers have been constituted and the Chairman of the Society is chosen from the members only. Then at the District level there are 44 unions with an elected Chairman. At the apex level is the Minor Forest Produce Cooperative Federation. Table 2 gives the details of Tendu Patta trade for the last 6 years.

Another feature of the tendu patta trade is that incentive wages from the additional surplus generated in the trade are distributed to the member pluckers. It is encouraging to note that apart from the income generated to the pluckers by way of collection of the leaves, Rs. 124 crores have been disbursed as incentive wages among the members. Furthermore a group insurance scheme with the help of LIC of India has been started for the pluckers where insurance cover to the tune of Rs. 3,500/- to Rs. 7,000/- are provided without paying any cost by the person insured.

Harra (*Terminalia chebula*) is another important nationalised NTFP which is collected through primary societies in 17 districts. Table 3 gives the data relating to Harra trade.

Sal seed is yet another important NTFP which is collected through societies in 12

**Table 2**

*Tendu (Diospyros melanoxylon) Patta Trade for the last 6 years.*

Quantity: In lakh Std. Bags
Amount : In Rs. Crores.

| Year | Collection Rate (Rs. per st. bag) | Total Godowned quantity | Amount disbursed as collection wages | Total expenditure | Quantity Sold till now | Sale Price | Net receipts |
|---|---|---|---|---|---|---|---|
| 1991-92 | 250 | 45.79 | 115.40 | 180.00 | 45.79 | 298.07 | 118.07 |
| 1992-93 | 250 | 44.64 | 112.65 | 201.47 | 44.64 | 285.99 | 84.52 |
| 1993-94 | 300 | 40.98 | 123.93 | 198.29 | 40.98 | 252.77 | 54.52 |
| 1994-95 | 300 | 42.08 | 127.14 | 210.95 | 42.08 | 299.40 | 88.45 |
| 1995-96 | 300 | 39.36 | 118.68 | 197.80 | 35.24 | 274.11 | 76.31 |
| 1996-97 | 300 | 44.42 | 155.75 | 267.00 | 9.20 | 78.73 | - |

districts in Madhya Pradesh. Table 4 gives the details of the sal seed trade in the State for the last 6 years.

It is evident from the forgoing illustrations, that the combined impact of NTFP related activities is substantial in strengthening the socio-economic base of the rural poor which in turn creates positive stakes for the people in terms of protecting the natural forests. Enhancement and enrichment of the NTFP base, therefore, becomes one of the important planks of the sustainable forest management. Against this backdrop there is an urgent need to include NTFP related issues in the research priorities of the forestry sector. More specifically the research should focus on evolving methodologies to augment the NTFP base by all possible means including application of modern biology and genetic engineering; devising non-destructive type of harvesting technologies, improved methods for collection, storage and processing which leads to value-addition to the raw NTFP collected. In short scientific management of NTFP related activities with human face can become one of the most important component of the natural forest Conservation strategy.

## Conclusion

To break the vicious circle of natural resource degradation including forests, the Total Forest Management (TFM) with its attendant instrumentalities is an innovative approach with human face. By devising a

**Table 3**

*Collection and disposal of Harra (Terminalia chebula)*

| Collection Year | Collection Rate (Rs. per qtl) | Quantity collected (qtls) | Amount paid towards collection wages (Rs. lakhs) | Quantity sold (qtls) | Sale Price (Rs. lakhs) |
|---|---|---|---|---|---|
| 1990-91 | 100 | 157494 | 157.49 | 15830 | 333.28 |
| 1991-92 | 100 | 144969 | 144.97 | 142076 | 255.59 |
| 1992-93 | 110 | 140055 | 154.06 | 136554 | 249.38 |
| 1993-94 | 110 | 87612 | 96.37 | 84587 | 180.99 |
| 1994-95 | 110 | 55056 | 60.56 | 50736 | 143.54 |
| 1995-96 | 130 | 106107 | 137.94 | 77987 | 265.06 |

**Table 4**

*Collection and disposal of Sal (Shorea robusta) Seed*

| Collection Year | Collection Rate (Rs. per qtl) | Quantity collected (qtls) | Amount paid towards collection wages (Rs. lakhs) | Quantity delivered (qtls) |
|---|---|---|---|---|
| 1991 | 120 | 198163 | 237.80 | 193308 |
| 1992 | 135 | 546900 | 738.32 | 540383 |
| 1993 | 150 | 438138 | 657.21 | 418594 |
| 1994 | 150 | 138012 | 207.02 | 131601 |
| 1995 | 160 | 361625 | 579.01 | 337844 |
| 1996 | 160 | 793597 | 1269.76 | 567811 |

package of 'Hardware' of physical activities and 'Software' of human sensitivities, it is possible to develop a sustainable framework for conservation of our forests and the mega-biodiversity which is presently under attack from all sides.

## SUMMARY

**With the ever increasing anthropogenic impact, the life support system of the earth is under constant pressure. The adverse effect is reflected by way of natural resource degradation, leading to reduction in productivity which ends up in enhanced poverty and misery. Poverty, malnutrition and illiteracy are the main causes of population growth that further accentuates the degradation process. This, ultimately forms a vicious circle of natural resource degradation including forests. To conserve our forests, by and large, foresters concentrated on 'tree', without appreciating the interdependence of various facets of the vicious circle. Forestry is not an end in itself. It ought to be looked as an integral part of the eco-system, operating within the social, political and economic framework. Forestry is for people. Since traditional forestry management focussed only on single aspects of the vicious circle, no tangible achievements in respect of reversing or arresting the trend of degradation were forthcoming. The Total Forest Management (TFM) is an innovative approach for conservation of forests, which attempts to address the malady in totality by keeping 'people' in the centre. The local people, local resource and local technology constitute the cornerstones of the green triangle which operates within the socio-political milieu so that the human aspect is taken care of. The system is being tried in five different areas of Madhya Pradesh by developing a package of 'hardware' of physical activities and 'software' of human sensitivities, which help in productivity enhancement through on farm and off farm activities. Non-Timber Forest Products (NTFP), with its attendant instrumentalities constitute the back bone of the system. The result is that the forest dwellers are not mere passive recipients of the programme but have become active partners in the endeavour and in many cases even proud owner of the hardware.**

## संपूर्ण वन-प्रबन्ध - मानवमुखी प्राकृतिक वनों के संरक्षण की नई दृष्टि

आर०सी० शर्मा

### सारांश

निरन्तर बढ़ते मानवजनित सम्पर्क के कारण पृथ्वी की जीवन धारण प्रणाली पर निरन्तर स्थायी दबाव पड़ रहा है । इसका प्रतिकूल प्रभाव प्राकृतिक संसाधनों के व्याह्रास में प्रतिबिम्बित हो रहा है जिसकी उत्पादकता घटती जा रही है और जिसका अन्तिम परिणाम ज्यादा गरीबी और अधिक कष्ट हो रहा है । गरीबी, कुपोषण और अशिक्षा, जनसंख्या वृद्धि के प्रधान कारण हैं जो व्याह्रास प्रक्रिया से और अधिक दारूण बन जाते हैं । अन्ततः इससे और अधिक प्राकृतिक संस्साधनों के व्याह्रास का, जिसमें वन भी आते हैं, एक दुष्चक्र निर्मित हो जाता है । वनों के संरक्षण में मोटे तौर पर वानिकों ने वृक्ष पर अपना ध्यान केन्द्रित किए बिना यह समझे कि इस दुष्चक्र के विभिन्न पक्ष परस्पर एक-दूसरे पर आश्रित हैं । वानिकी स्वयं अन्तिम लक्ष्य नहीं है । इसे परिस्थिति-संहति के अविच्छेद्य भाग के रूप में समझा जाना चाहिए जो एक सामाजिक, राजनैतिक और आर्थिक चौखटे के अन्दर रहते हुए कार्य करता है । वानिकी जनता के लिए ही तो है । क्योंकि पारम्परिक वानिकी प्रबन्ध में ध्यान इस दुष्चक्र के केवल एक पक्ष पर केन्द्रित किया गया इसलिए व्याह्रास को पिछली तरफ मोड़ने या उसे रोकने में कोई दर्शनीय उपलब्धि प्राप्त नहीं हो पाई । संपूर्ण वन प्रबन्ध वनों का संरक्षण करने की एक नई दृष्टि है जिसमें जनता को केन्द्र में रखकर रोग दूर करने पर पूर्णता से ध्यान देने का प्रयास किया जाता है । स्थानीय जनता, स्थानीय संसाधन और स्थानीय प्रौद्योगिकीय हरे त्रिकोण के कोने हैं जो समाज-राजनैतिक जगत में रहकर इस प्रकार कार्य करते हैं जिसमें मानव पक्ष की भी चिन्ता की जाती है । यह प्रणाली मध्य प्रदेश के पांच विभिन्न क्षेत्रों में भौतिक कार्यों के हार्डवेयर (बड़ी सामग्री) और मानव संवेदनाओं के साफ्टवेयर (सूक्ष्म सामग्री) का एक पैकेज तैयार करके आजमाई जा रही है जो खेतों पर और खेतों से बाहर किए जाने वाले कार्यों द्वारा उत्पादकता बढ़ाने में मदद देती

है । अकोष्ठ वनोपज जिसके साथ उनकी उपकरणताएँ भी जुड़ी हैं इस प्रणाली का मेरू दण्ड हैं । परिणाम इसका यह निकला है कि वनवासी कार्यक्रम के निष्क्रिय भाव से प्राप्तकर्ता मात्र नहीं रह गये हैं बल्कि इस प्रयत्न के वे सक्रिय भागीदार भी बन गए हैं और बहुत सारी जगह तो वे हार्डवेयर के गर्व भरे स्वामी तक बन गए हैं ।

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