

PRIVATIZE THE FOREST ENCROACHMENTS AS SMALL PRIVATE FORESTS/AGROFORESTS

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In the developing countries forests are mostly government owned or is a public property. The forests are facing a great challenge from the increase in cultivation by the local people who live in the forests. There is a sincere effort to analyze the whole issue. The analysis is based entirely on the personal experience gained over a period of over 32 years as a forester, in a developing country that has strong roots in democracy. Besides detailed analysis of the problem some solution is suggested to meet with the problem but it may not be the only solution. The analysis of the problem and some solutions suggested may also hold good for other developing democracies.

As you are reading this, **the world is losing 22.53 ha of forest area, every minute**, as per the estimate of World Watch Institute. Similarly the FAO estimates the loss of forests to 26 ha every minute. In India whose forest area is only 19.39% of the total geographical area the loss of forests due to cultivation was 1.73 Million ha in a period of 8 years from 1987 to 1995. It averages to about loss of 4 ha of forests per minute due to cultivation in forests of India.

The history of depletion of forest cover is the history of increase in cropped area of the world. The population of the world is going up in leaps and bounds and its impact is more felt in developing countries than in advanced economies of the world. The population of the world in 1950 was 2555 millions which has gone to 6079 million in the year 2000. It is estimated to go up to 9084 millions in the year 2050. India had population of 350 Millions in year 1950. It has gone up to 1014 Million in year 2000 and is estimated to go up to 1706 Million in year 2050. The most affect of the increase in population will be on land resources. Extra land will be required for habitation and food production. The situation after 50 years will be such that forests will be in some isolated pockets unless drastic and new approach is thought of.

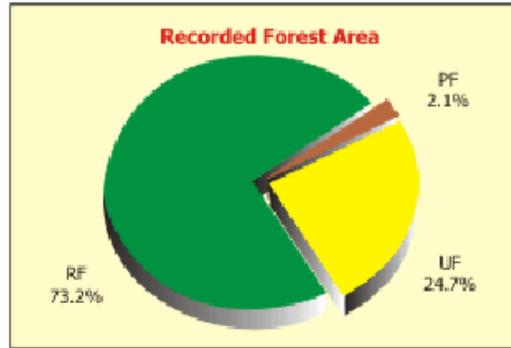
Analysis of the loss of forests in state of Gujarat in India is presented as a case study.

Gujarat State is situated in the western part of India. The state was carved out of Bombay State in 1961. It has geographical area 196022 sq.km. It has human population of 50.60 million out of which 62.6% is in rural area and 37.4 % is in urban areas. The present density of population is 258 / sq.km. Per capita forest area is merely 0.04 ha. Live stock is 18.6 million. The Tribal population constitutes 14.9 % of the population.

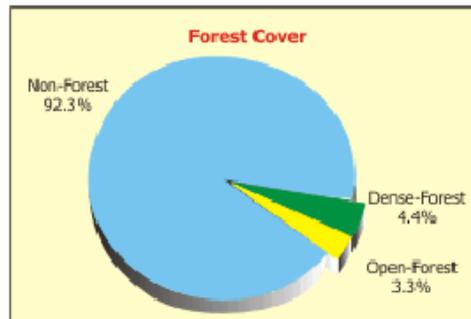
The forest area in Gujarat is 19188 sq.km or 9.8 % of the total geographical area.

As per the data available from **Forest Survey of India** from its publication “**State of Forests**” it indicates the present status as given below.:-

Recorded Forest Area	
Reserved Forest (RF)	13,904 km ²
Protected Forest (PF)	396 km ²
Unclassed Forest (UF)	4,699 km ²
Total	18,999 km ²
<i>Of State's Geographic Area</i>	9.7 %
<i>Of Country's Forest Area</i>	2.5 %



Forest Cover	
Dense Forest	8,673 km ²
Open Forest	6,479 km ²
Total	15,152 km ²
<i>Of State's Geographic Area</i>	7.7 %
<i>Of Country's Forest Cover</i>	2.2 %



Tree Cover	
Culturable Non-Forest Area (CNFA)	172,915 km ²
No. of trees per ha of CNFA	8.1
Tree Cover	4,036 km ²
<i>Of State's Geographic Area</i>	2.1 %
<i>Of CNFA</i>	2.3 %

Forest & Tree Cover	
Total Forest & Tree Cover	19,188 km ²
<i>Of State's Geographic Area</i>	9.8 %
<i>Of Country's Forest & Tree Cover</i>	2.5%
Per capita Forest & Tree Cover	0.04 ha

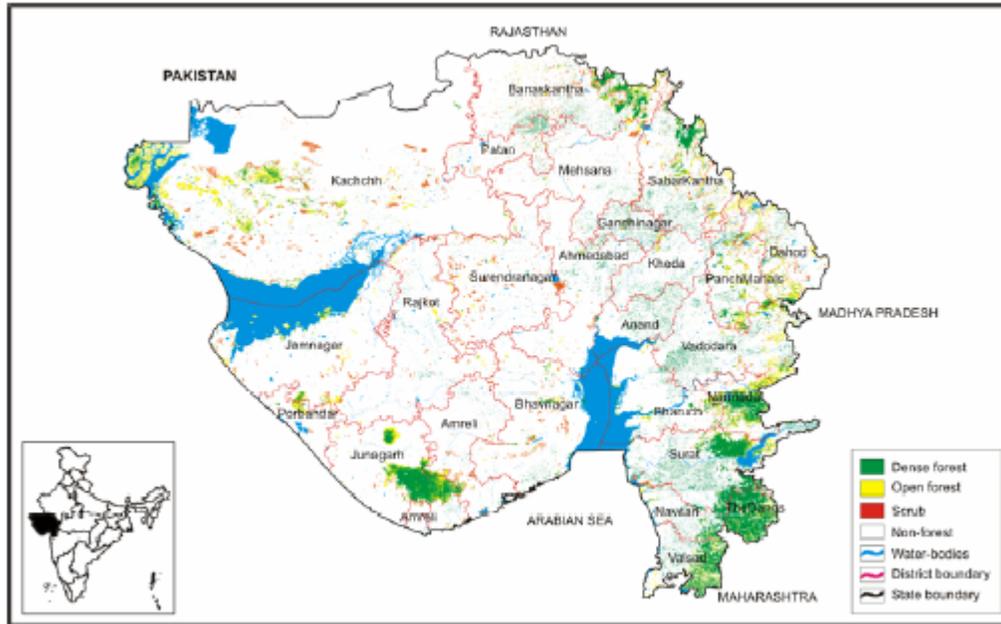


Figure 6.08 Forest Cover map of Gujarat

The forest area consists of Moist Deciduous, Dry Deciduous, Scrub, Desert Type and Mangrove Type of Forests. It has rich biodiversity. It has rich flora of 155 families, 902 genera and 2198 species. It has 27 species of mangrove vegetation. It is recorded that in this rich flora, there are 53 rare species and 750 species are of medicinal value. There are sixteen wild life and Bird Sanctuaries and there are four national Parks. The fauna is rich and varied. It has Asiatic Lions and Asiatic Wild Ass, which are found only in Gujarat in the world. There are number of Carnivorous and Herbivorous animals. It has rich variety of Birds including Migratory Birds.

The statistical data available from the “**Statistics of Gujarat Forests**” indicates that from 1990 to year 2000 that is in a period of 20 years total forest area deforested as per the Government’s permission and orders is 154047.52 ha.

The breakup of this permanent legalized loss of forests is as given below.

FOREST AREA DEFORESTED

1.Period:- 16 years	
2.Area lost under submergence of irrigation projects-	25831.33 ha
3.Area lost under Rehabilitation of people:-	19414.33 ha
4.Area lost due to Agriculture in Forests:-	94699.47 ha
5.Area lost due to construction of Roads and Transmission lines:-	404.81 ha
6. Areas lost due to Industries and Townships:-	1683.70
7. Areas lost due to Miscellaneous reasons:-	12015.75 ha
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Total Area lost in 16 years:-	154049.92 ha

Total area lost for agriculture is 61% of the total loss of forest area for all other uses.

For the sake of statistics the loss of forest is 26.74 ha per day or 1.11 ha per hour or 185 sq. m per minute. Even if we take only the forest area lost due to encroachment by agriculture it works out to about 16 ha per day. This is not a small loss to the state, which has only 6 % of the land cover which is tree clad.

All the forests are government owned are overburdened with rights and privileges for the local population. The tribal population mostly lives in the forest areas of south and central Gujarat. The average works out to 178 persons per sq.km if entire forest area of 19188 sq. km is taken. However if the forest areas of 9514 sq.km where they reside is taken into consideration, the density of population works out to 356 per sq.km. This is more than the density of 256 per sq.km for the entire state of Gujarat.

In spite of enjoying number of privileges of collection and sell of non wood forest produce like leaves, fruits, seeds and grass, they live in poverty. They collect free fuel wood for their personal use, and they get certain numbers of Bamboos every year free of cost from the forests. They have right of way and right to water. The main factors which is responsible for their poverty is unemployment or underemployment and poor productivity of the land they till. The food security is further threatened due the sources of food from the forest and small land holdings with poor productivity.

Poverty as defined and as measured by the World Bank, indicates that it is consumption based. It quotes in its latest document as given below.

“Measuring poverty at the global level

When estimating poverty worldwide, the same reference poverty line has to be used, and expressed in a common unit across countries. Therefore, for the purpose of global aggregation and comparison, the World Bank uses reference lines set at \$1 and \$2 per day in 1993 Purchasing Power Parity (PPP) terms (where PPPs measure the relative purchasing power of currencies across countries). It has been estimated that in 1999 1.2 billion people world-wide had consumption levels below \$1 a day -- 23 percent of the population of the developing world and 2.8 billion lived on less than \$2 a day. These figures are lower than earlier estimates, indicating that some progress has taken place, but they still remain too high in terms of human suffering, and much more remains to be done. And it should be emphasized that for analysis of poverty in a particular country, the World Bank always uses poverty line(s) based on norms for that society.”

Whatever be the definition or standards for poverty line, the forest dwellers live much below the poverty line.

The causes of spread of agriculture in forests.

I have witnessed the spread of agriculture in the span of 32 years of my service as a forester in the state of Gujarat in India. It will hold good for many of the under developed and poverty stricken countries.

Causes of Cultivation in Forests:

The in depth analysis of the factors that lead to spread of cultivation in forests are poverty related and is due to miss-management of human development while we did care for forest development and conservation.

- (a) **Agricultural Production in Forest Area:** Agricultural production is merely as a subsistence production that is not sufficient for the tribal family even for three to four months. This is due to the fact that most of this cultivation is on uneven hilly terrain and once the forest trees and vegetation is removed soil is subject to erosion. There is no soil conservation. There is no input of irrigation or fertilizer, insecticide or quality seeds. There is barely any marketing facility or any network of roads in the forest areas. In the absence of any such input for agriculture, the production is bare minimum and this prompts the farmer to clear more and more land for cultivation as he and his family has to survive. Thus it causes expansion of agriculture in the forest area.
- (b) **Employment Opportunities: There lack of employment opportunities for the people who live in forests** also frustrates the desire of people to do something better than unauthorized cultivation in the forests. Forestry works like plantations, silvicultural operations like thinning, cleaning, Felling of trees, and other forestry works like construction and maintenance roads, forest fencing, and forest fire lines, **give only seasonal partial employment in certain areas of forests and is not widespread employment for all the people all the time of the year.**
- (c) **Lack of Education or Professional Training:** There are schools run by Government. There is no motivation to study and the attendance in the school is poor. All the villages in the forest areas do not have school. If the children have to study they have to walk long distances to attend school. There are no roads or transport facilities for the children. The teachers also do not attend school regularly as their families live away from them. In fact the teachers always feel that their posting in the forest areas is a punishment for them. They are not motivated to serve the children of the forest dwellers who have no opportunity except the school provided by the Government. In this background of educational facility hardly 5-10% of children pass primary or middle school levels. There are no training institutes for on job professional training within reachable and affordable limits of the tribal people. In some institutes motivation is given to these children by way of fee waiver or free residential facilities. However due to lack of knowledge or publicity many children are unable to take advantage of the facility provided. The professional training should be for such disciplines through which they can get their livelihood in future. This needs to be decided after involving the people themselves. **The tribal area needs a separate approach of education and training.**
- (d) **Food Security:**

Availability of food from the forests is a major factor that affects the inhabitants of forests. Before the planned investments in forests began, the forests were fully of bio diversity and better stocked than 55 years after independence. **Planning brought in**

more investments, for raising monoculture. It promoted plantations specially that of the fast growing species like Eucalyptus, Casuarinas, Teak and others. This no doubt gave fast growth of plantations but in the process we **lost the excellent bio diversity that was so essential for the tribal people who lived in the forests.** The tribal people used to get fruits, flowers, roots, and large number of herbs and shrubs that fed them in the times when the food from agriculture was not available. **It was a blunder on the part of planners that they overlooked this requirement of people before converting the forests to monoculture crops.** The agriculture on which these people depended was subsistence agriculture that was a primitive type of agriculture and depended only on the unpredictable seasonal rainwater. The monsoon season in this part of the country is from July to September. Number of days on which it actually rains may be 20 to 40 days. The worst impact on agriculture is that of number of dry days between one rain and the other. The farmers had to entirely depend on the pattern of rain that may follow once the seed is sown in the soil.

- (e) **Land as security:** In absence of any other security these poor inhabitants of forests look for a **piece of land to give them a feeling of security** in the event of any catastrophe that their family may have to face. For them to get small quantity of grain that these impoverished land produce, although is not enough for their family for 2-3 months, is not so important then to hold the land as a security for them. Same feeling in them is true in respect of number of non-milch cattle that they possess. **The land they acquire by clearing the forests is free to them so is the grazing of cattle in the forests.**

- (f) **Alienation:** Since the local people living in the forests were not involved in the management of forests for more than past century, either prior to independence or after, a feeling of alienation has taken deep roots in the people. What few concessions that were given as per the requirement of provisions of Indian Forest Act (During the process of reservation of Forests, Forest settlement officer inquires in to the rights and privileges of the people and grants them as required). Rights and privileges gave them free access to the forest to graze cattle except where area is closed, collect firewood for their own requirement, collect fruits, leaves and flowers, take bamboos and specified number of small timber for their personal use. The population explosion over a period of past five decades has changed the scenario. The population of India was 238 M in 1901. It is already past 900 M in 2000. It is four times of what it was 100 years back. The result is obvious and it has taken a toll of forest resources and it is one of the major causes of depletion of forests. The non-availability of privileged goods resulted in frustration of the people and led to further alienation. **Feeling is developed that when these forests do not give what they need, why should they bother to protect and it is better to cultivate the land rather than keep it as eroded and depleted forests. The politicians also fell for such alienation as it helped them to increase their vote Bank.**

- (g) **Loss of Biodiversity:** the Government owned Majority of India's forests. Prior to independence (August 1947), British Government had managed the forests on scientific

principle, which we inherited. Since the British were more interested in getting revenue, they gave importance to revenue earning timber species like Teak, Rosewood, Khair (*Acacia catechu*), Sal (*Shorea robusta*), Bamboo and others. These species were selected on the basis of its utility in housing, furniture or industrial use. The system of prioritization was there for selecting species for regeneration either naturally or artificially through large plantations. We inherited this system as Indian Foresters were trained in the British managed forests. The system of monoculture was prevalent and although good success was achieved, the biodiversity was slowly reduced. The species, which could stand the shade of dominant major species, survived while others perished. In many forests, there was loss of biodiversity. It was so much so that only pure tree crop of one species could be seen. The local people lost many species which gave them food, fruits, and medicines. This system also increased erosion of forest soil. This added to the feeling of insecurity amongst the people who depended on forests.

- (h) **Shortcomings of Democracy:** Democracy is more than 50 years of age in India. The constitution of India on the whole has stood the test of time and there has not been any basic change in the enshrined principle of the Constitution. Yet over a period of time shortcomings seen as, in relation to the conservation of Forests are necessary to be explained and understood. Education has not achieved its desired goal and education level is rather low both amongst the politicians as well as the voters. **Politicians look to the short-term gain of getting elected for five years. They dole out favours, at the time of elections to illiterate or less educated and poverty stricken voters.** The poor forest dwellers fall in this category. In Gujarat State in India, where forests are Government owned and managed, it is on record that before the ensuing elections, unauthorized cultivation, recorded as an offence in the forest record is regularized which means that the person who has violated the forest law is made the owner of the forestland illegally occupied. **This much area gets reduced from forest record. It does the damage two ways. The forest offender gets rewarded for the offence and it gives an impetus to him as well as others who normally would not take to committing the offence also get the inspiration.** The top politicians like Chief Minister and Ministers in the Government also know this but under the pretext that regularizing the unauthorized cultivation would stabilize him economically, orders the regularization of this illegal cultivation.

In democracy the forester, or a bureaucrat, who is a Government servant, can go only up to the extent of opposing this move of the elected politician, only on paper, but once the Government issues the orders, he has to obey and execute it. The forester is very often blamed for the current situation. Anyone but the media, political parties do not see what he has done and the people concerned with gains always highlight what little he might have failed to achieve. If we list the conditions in which the forester is fighting this menace of cultivation, it will be apparent that he is fighting against a wall. There is no support from the politicians whether of the ruling parties or the opposition. No party eyeing for the elections, has the courage to speak in favour of protecting the forests from the unauthorized cultivation. The people living in the forests are interested in getting land free and hence they also are with the politicians. The Indian Forest Act gives power to the forester but the moment he

tries to implement to protect the forester, the politicians term him as a impractical and try to either transfer him or put pressure to make him obey their dictates rather than follow the law. **When he asks for weapons he is not given. When he asks for more staff to protect the forests he is denied. The wireless net-work which should have been given to him in fifties are now slowly made available in leaps and bounds. The reasons given are the low budget for the forest protection, slow implementation of orders placed due to bureaucratic lethargy. It indicates that there is no will amongst the politicians in the Government, to protect the forests.**

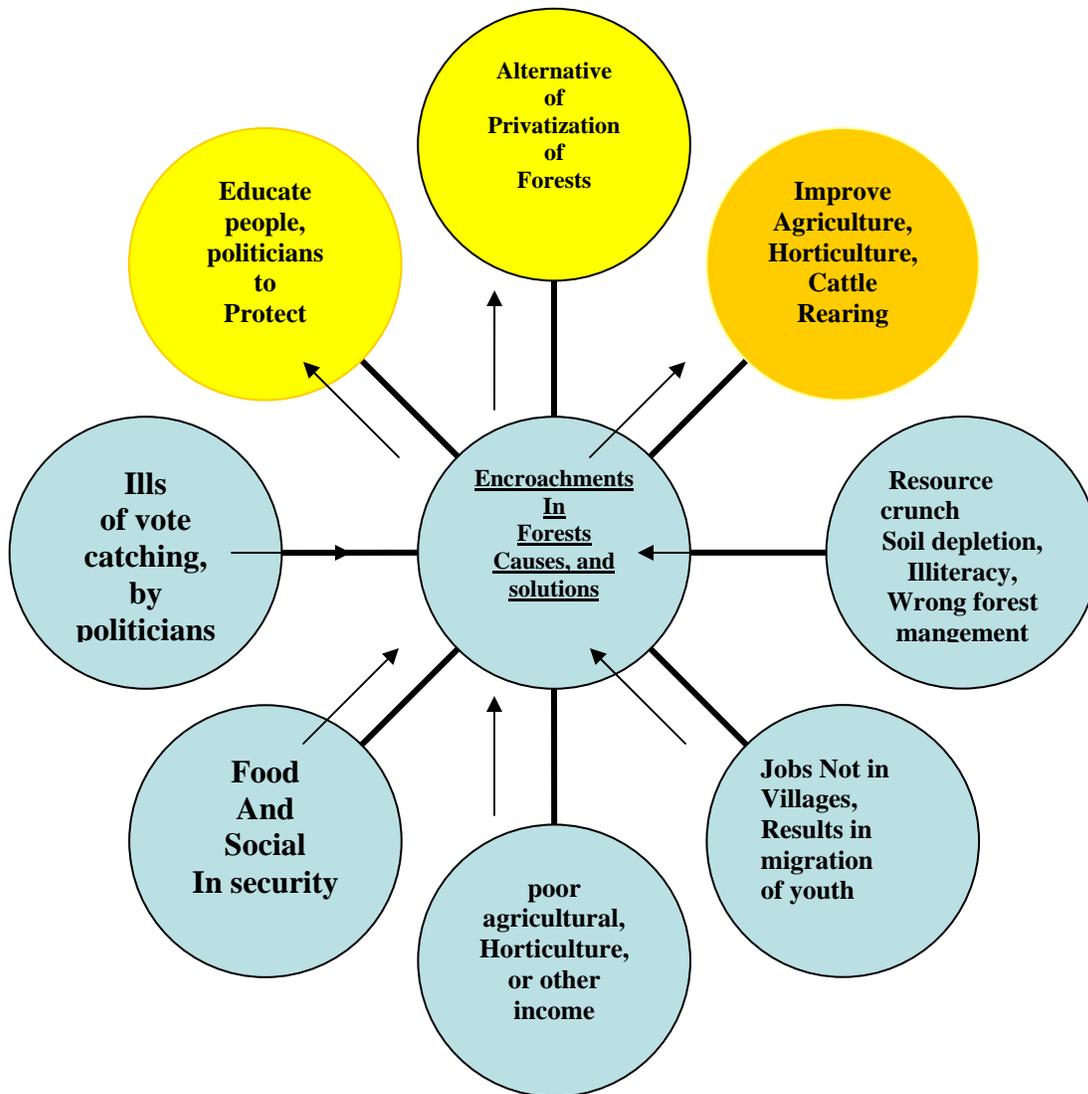
h. NGO's ROLE

Where there is pain the human feelings are bound to be touched. Number of NGO's (Non Government Organization) feel sorry for the poor tribal cultivators. They are right in their feelings and their actions are justifiable. These NGO's often go to the Courts to seek justice for the poor when appeals to the bureaucracy, politicians and people who matter fail. The cause for which the NGO's strive here is concerned not with the saving of forests but with helping tribals to get more land. Such activity has much wider implications than normally understood. **The land, which a person cultivates in forest area gradually, deteriorates. The forest are permanently lost and gradually the land becomes non productive. What does the poor tribal gain in the long run, is frustration, poor land condition and a feeling of guilt that he has done an illegal act.**

i. Government's Action and Forester's Dilemma

The order of the Government always carries a specific condition that no further encroachments in the forest will be permitted. However before the next election again the same drama is enacted and more and more areas are permanently lost from the forests. The Forest Department in the State of Maharashtra in India, as in many states, is suffering from entire lack of prioterized attention by the Government. In spite of hue and cry by the foresters, Forests have always received a step motherly treatment. For example if a forest Department Jeep is declared as unworthy of Road, it is used take at least ten years after such certificate is obtained. It is because of the clerical hierarchy seating in the secretariat do not bother and on some pretext or other Finance is not sanctioned. The result is that the vehicle spends more days in workshop than on the road. Who suffers? **Neither the bureaucrats, nor the forester suffers but the real sufferer is the forests.** Similar is the situation to get weapons or the Wireless sets. It takes minimum of five to seven years to get them after the first proposal is sent to the Government. Priority is never for the Forests but it is only for the schemes in which there is quick gain for the people who matter. In this specific case of State of Maharshtra, on the intervention of Supreme Court of India, the government was ordered to evict the unauthorized cultivators and report compliance by 30th September 2002. The Government than acted swiftly but again this move thwarted the forest department by issuing another order circumventing the order of the Supreme Court.

What is the way out?



PRIVATIZE FOREST ENCROACHMENTS AS SMALL PRIVATE FORESTS

"The 21st century is destined to be the century of the environment, the time we settle down before we wreck the planet," declared Harvard University biologist Edward Wilson in his Bradley Lecture at Washington, D.C.'s American Enterprise Institute. His speech, based on his upcoming book, *The Future of Life* dealt with what Wilson calls "the reconciliation of humanity with nature." Because of humanity's misuse of the Earth,

Wilson fears humanity is "at risk of losing forever much of the rest of life--creation, if you prefer." He further states

"The main reason that species are being threatened with extinction is that they live in open-access commons. The point is clearest in the case of tropical forests and fisheries. No one owns the forests or fisheries; therefore anyone may exploit them. No one has an incentive to leave any trees or fish behind because if they do, someone else will harvest them and get the benefits for themselves. In other words, those who immediately benefit from exploiting the resource do not bear the long run costs of its ultimate destruction. This mismatch between benefits and costs is a recipe for disaster.

There are two things one can do to try to fix a commons: The first is to regulate it, and the second is to privatize it. Unfortunately, the record shows that political regulation of forests, parks, fisheries, air sheds, and rivers, has not been notably successful in protecting those resources. For example, the government-owned rainforests in Brazil, Indonesia, and the Philippines, continue to shrink. New England's cod fishery is still in near total collapse. Often what ends up happening is that the benefits are privatized while the costs are socialized: Fishers catch and sell the fish; when the fishery collapses, taxpayers buy their boats, pay for job retraining, and other subsidies.

The road not taken often enough, one largely ignored by Wilson, is to privatize a commons. There is usually considerable political resistance to this course of action because people who once had access are now denied it or are forced to pay for something they used to get for free. Corporations don't want to pay full price for the water they use, the minerals they mine, or the trees they cut. Fishermen don't want to pay for the fish they catch. Citizens don't want to pay for visits to national parks.

But privatization of a commons--a forest or a fishery--means that the benefits and the costs are now borne by the same people. History shows that this match-up encourages them to protect a resource. We know privatization works for the same reason that owners tend to take better care of their houses than renters do, and that there is no shortage of Persian cats or chickens, even as bluebirds and Karner Blue butterflies become scarcer.

Privatization works to preserve nature in another way as well. Wilson shortsightedly dismissed tree plantations as not being "real forests." But the fact is that intensively managed tree plantations growing on just 5 percent of the earth's forestlands could supply all of the world's current requirements for wood products. This could spare 95 percent of the world's forests for "nature." Wilson, after offering a few cautionary words, did give a ringing endorsement to the role that genetically enhanced crops must play in preserving wild lands. "We must increase the productivity of the cropland we already have under cultivation by creating an 'Ever Green Revolution' that doesn't depend on massive amounts of fertilizer and irrigation," he declared. "The advantages of genetically engineered crops are simply enormous.

“In the case of privatization, a good policy falls victim to a vision of an allegedly perfect policy through which all species are saved. The environmentalist lobby often rejects privatization because it will not give them everything that they want (and they will have to pay for what they get as well). Environmentalists worry, with some justification, that property owners may sometimes want to use their property in ways that do not maximize species preservation goals. However, if species preservation is a legitimate national and international public good--and I think it is--then our responsibilities as citizens toward property owners is the same as for any other use public use of their property: They should be compensated. Whenever we want to build a school, an airport, or a road, we do not simply walk in and take the property. We pay a fair price for it first. Similarly, in pursuing the worthy goal of species preservation, it seems reasonable that we should pay those whose property we take in the service of that goal. “

These forest encroachments are being regularized as permanent agricultural land. These plots of land are lost permanently as a forest land. This is being done periodically every 4-5 years just before the elections by the party in power to gain favour of large number of voters in the forest area. Again the cycle is repeated. More and more encroachment takes place. Instead of giving this land a legal status of revenue land, it is suggested to give the status of private small forests. Thousands of forest dwellers will get property rights over the land and can continue as agro-forests or small forests. The small-scale forests can be from 0.1 ha to 5 ha.

THE ADVANTAGES OF PRIVATIZING THE FORESTS VIS-A-VIS CONVERTING TO AGRICULTURAL LAND

A. In the interest of the Forest Encroacher/Farmer:

- i.** He gets ownership of the land, which gives him much needed security.
- ii.** He will do all the efforts to prevent soil erosion by rainwater to improve the land.
- iii.** He has option of cultivation, horticulture or agro forestry.
- iv.** He can get loans/subsidies as is available to other farmers form revenue land.
- v.** He can undertake Taungya type of agri-silvi plantation of tree crops with good returns.
- vi.** He can cultivate medicinal plants, or other non wood forest produce like spices etc. as per his choice.
- vii.** He can maintain certain number of trees of his choice to protect the land from further degradation.

- viii. He can use the land for fodder cultivation to support small cattle rearing, poultry, piggery etc.

B. In the interests of conserving and preserving forest cover and Protect from land Degradation:

- i. The land although is in legal possession and ownership of the farmer, it continues as Private Forest. Thus the farmer will willingly maintain certain number of trees as may be prescribed by Forest Department.
- ii. With a view to give better protection to the land from erosion, removal of tree growth, bamboos will be regulated.
- iii. Since the farmer will have intermittent income from the forest produce he will continue to conserve them.
- iv. The farmer will be trained in raising horticultural crop and better fodder production which will help him to develop animal husbandry.
- v. The farmer will be given better technology of improved agriculture, through extension methods. The farmer will be promoted to till the land in strips along the contours and if possible practice Taungya type of plantations.
- vi. Entire agricultural income along with income from trees, non forest produce will give the farmer better financial stability.

If the present encroachments are continued, neither there will be trees nor agriculture after few years and barren wasteland be created.

Concept and extent of small scale Forest/ private Forests in other countries.

1. USA :- Small scale private forests is given the nomenclature of **Non Industrial Private Forests (NIPF)**. These are forest plots owned by farmers, other individuals, corporations and these do not operate wood processing plants (Zhai and Harrison-2000). According to these authors total NIPF accounts for 59% of total timberland in USA and contributes 50% of timber production in the country. There are about 7 Million NIPF Land holders though only 600,000 withholdings are larger than 40 ha who contribute 80% of NIPF harvest. Some efforts to change the nomenclature of NIPF to Family forests, small forests, Private Forests, could not get support. Instead a new nomenclature of Private Forest land Holders (PFL) is gaining ground.
2. Finland:- The traditional private Forestry can scarcely be regarded as small private ownership forests. Family forestry is there since a long time. There are 600000 family forest owners controlling 62 % of forest area of the country.
3. Austria:- Sekot in 2001 in his report presented definition of small scale farm forests as private holding between 1 ha and 200 ha. 53 % of small forest is more than 200 ha each. 32 % of small forests has less than 200 ha of area. 15 % is Federal Forests. 47 % of toatal Land area has forest.
4. United Kingdom:- In UK the farm woodlands/farm forests/private forests is the terminology used. Total Private woodland is 1.6 Million ha and is twice the area held by Forestry Commission. The Private forests are of 300 to 500 ha and are mostly used for recreational purpose.

5. Nordic Countries:- Finland Sweden and Norway have private forests and account for 60 to 70% of the total forest area. Family Forests are managed along with other income generating activities such as agriculture, off farm employment. Typical size of Family forests is 25 to 40 ha.
6. Germany, Austria and Switzerland:- 39% of family forest holdings are less than 5 ha. 29 % of total family forests the forest area is more than 1000ha.
7. Central and East European Countries: After the decline of Communism, private ownership has gone up and in Romania it is 6% while in Czechoslovakia it is 60 %. Most of the private holdings are likely to be of 2-3 ha.
8. Small Scale Forestry in Japan: Family owned forests exists in Japan since past 300 years. According to statistics (2001), there are 2.5 million forest house holds. 1.5 million are less than 1 ha, 0.78 million hold 1-5 ha. Thus 90 % of forest holding are less than 2 ha. Japan has 67 % of land cover under forests. Here the definition of small scale forest means 2.5 ha or less.

Advantages of Privatizing the Forests Encroachments as Small Agro-forests

1. The encroacher of legalized forest land which is a Government or Public property gets ownership of land.
2. The land will be maintained, as Private Small agro forest hence will not go into the category of Revenue land. Thereby in the control of removal of trees and management as forest will have a say from Forest authority.
3. Land will be protected from soil erosion as there will be restriction in maintaining some tree cover. The farmer will have to maintain certain mix of tree crop species to maintain biodiversity so that the owner can get intermittent forest produce like bamboos, grass, non timber forest produce like leaves, flowers, seeds and medicinal plants.
4. If the arrangement calls for sharing of tree crop revenue, Government will also not lose everything.
5. the stake holder will be beneficiary of earnings from trees and intermittent forest produce and agricultural crop, he will maintain good forest cover and manage the forest better than what he would have got otherwise.

Disadvantage of not privatizing the forest encroachments

If the encroachments are not declared as private or small agro forests the disadvantages will be as mentioned below.

1. There will be total loss of vegetation and subsequent erosion of land. This leaves enough reasons for the extension of cultivation in forests or practice of shifting cultivation.
2. There will not be any trees of private ownership which gives sort of assurance to the poor land owner for emergency and urgent financial needs.
3. **Once the land is cultivated and is cleared of all vegetation a chain reaction of soil loss-loss of sub soil moisture and loss of agricultural crop sets- in. We lose the forest and we lose the land too.**

EPILOUGE

Considering all the aspects of the loss of forests due to unauthorized cultivation, in developing countries, the best solution lies in declaring this cultivation in the forests as Small Private Forests or Agro Forests. This will not only save the forests but will also help in improving the economic status of the poor who are cultivating this area as subsistence farming and it gives them some feeling of security. Other measures are to improve their employment opportunities and income through, cottage type of industries based on local resources and eco-tourism.

In a democratic set up, it is necessary to educate the political thought towards better governance of the Forests. As for all the ills of democracy we go to seek justice from the highest courts of India, this issue which needs justice for a noble cause of preserving our forests and also to give better life to the tribal people who live in forests.

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