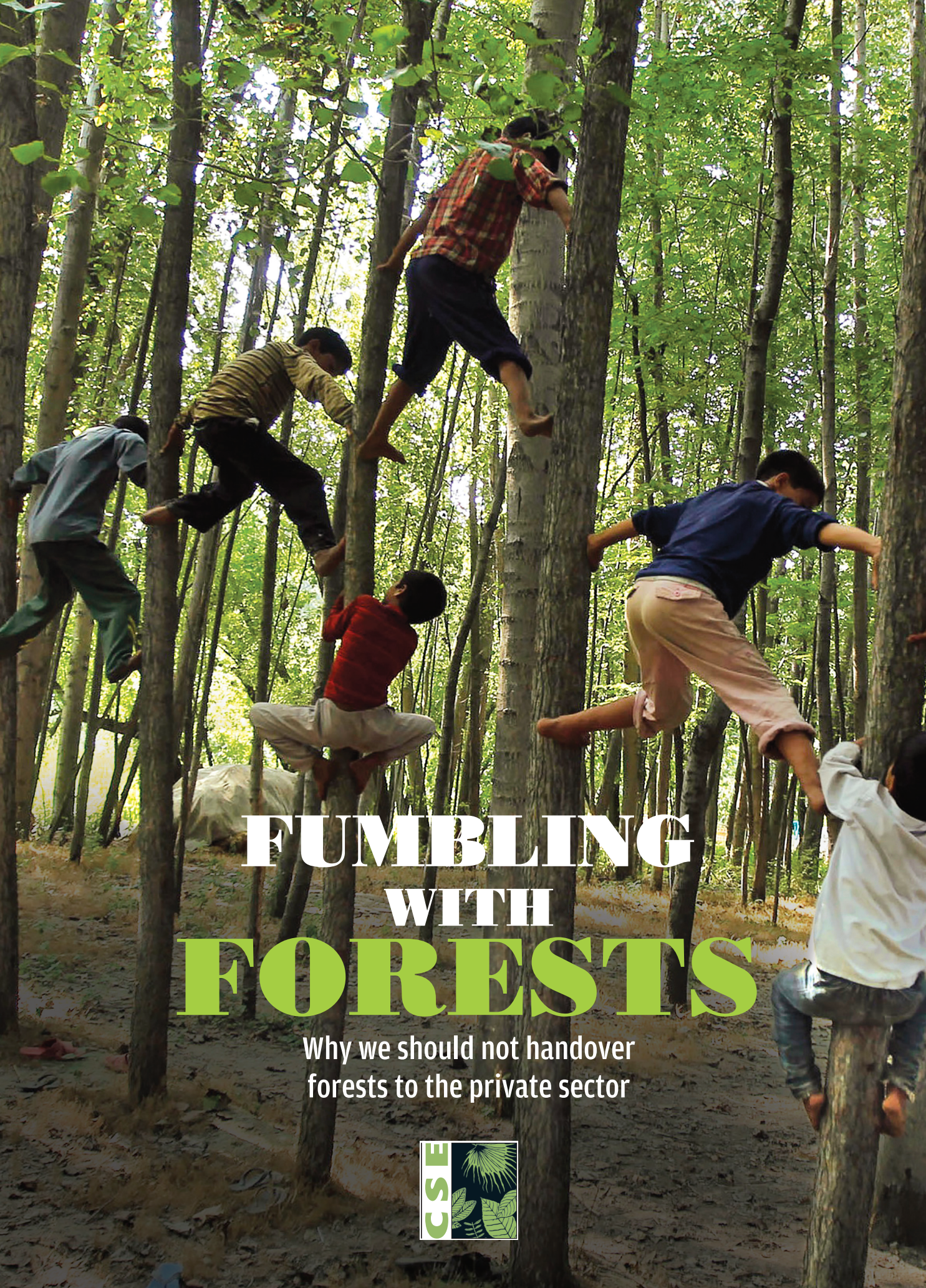

FUMBLING WITH FORESTS

Why we should not handover forests to the private sector

CSE

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Contents

Preface

Forests are the means of sustenance for millions of people and a source of raw materials to many industries in India. A people-versus-industry tussle has long existed over the forests in India. This debate has now been reignited by the 'Guidelines for participation of private sector in afforestation of degraded forests' by the Ministry of Environment, Forest and Climate Change (MoEF&CC), which proposes to open '*degraded forests*' in the country to private investors.

The proposal has startled both environmentalists and forest communities alike. If implemented, it will convert vast stretches of forestlands into large monoculture plantations, which will be of use only to wood-based industries like pulp and paper, and exclude forest-dependent communities.

Centre for Science and Environment (CSE) finds the ministry's proposal largely problematic because these so-called '*degraded forests'* have, in the first place, been allowed to degrade over decades by governments, and now the Central government is contemplating doling them out to industrialists to meet short-term commercial interests. Ironically, the forestlands under question are degraded not because they are unused, but because they are overused. Continuous grazing and cutting/lopping has caused chronic disturbances in forests, leading to their degradation. Further, despite being degraded, these forests continue to provide forest-dependent people a variety of ecosystem services.

CSE has opposed forest diversions to the paper and wood industry since the inception of the idea in the 1990s. Over the decades it has stood by its recommendation of utilizing farm forestry as an alternative to producing raw material for industry, which will also help build a people-led wood economy in India. As we have discussed in this report, there are several available options to fill the industrial demand gaps for wood.

If forests are managed properly, they have the potential to support the demands of both industry and communities. But for this to happen, industry needs to give up its demand for forestlands and strike partnerships with farmers and forest-dependent communities. We also need to find incentives for farmers and rural communities to grow trees and build wood markets.

For the reasons and analysis detailed in this report, we must not allow industrial use of our forests as proposed by the MoEF&CC. We hope that our analysis of the issue in this report will bring us closer to finding better solutions for the sustainable development of our forests and millions of forest-dependent people of India.

Chandra Bhushan

INTRODUCTION

The Ministry of Environment, Forest and Climate Change (MoEF&CC) has issued guidelines for the participation of the private sector in afforestation of degraded forests. The guidelines propose to make available degraded forests with forest cover density of not more than 10 per cent to different agencies, including industries requiring timber and other forest produce for their end use. They mention various reasons to support this initiative, such as improving productivity of degraded forestlands, enhancing forest financing, creating new jobs and livelihoods, enhanced raw material availability and carbon benefits.

Centre for Science and Environment (CSE) opposes the said proposal. It has opposed such efforts to divert forestlands in past too. It also expresses disappointment over the fact that the guidelines have been issued to states/UTs without any larger public consultation. As we have discussed in this report, the proposal will have more losses than benefits and will usher in a non-participatory plantation economy enriching a few companies rather than poor forest-dependent people in India.

Farm forestry has flourished in India in the last few decades after farmers started growing industrial wood by engaging with wood-based industry in a win-win situation. Against this background, the proposal to allow industries' use of forests will have a devastating impact on the lives and livelihoods of close to 20 million farmers involved in farm forestry. The guidelines also do not recognize their negative implications on forest-dependent people, whose rights would be grossly violated by this initiative. Needless to say, they will have large-scale overall adverse economic, social and ecological impacts in rural India.

The guidelines are also not in consonance with the National Forest Policy (NFP) of 1988, which stipulates the maintenance of forests for environmental stability, meeting the requirements of rural and tribal populations for forest products, and increasing forest productivity for *national* needs. NFP also prescribed sourcing industrial wood from farmers against what is now being proposed by MoEF&CC. Further we should regenerate these degraded forests through the involvement of communities rather than handing them over to the private sector.

The proposal will have severe ecological consequences by creating largely monoculture plantations with low ecological values and no wildlife. Though the guidelines mention using a mix of species in such plantations, ensuring such an ecologically viable mix of species will remain a big challenge given the vested commercial interests of industries. Further, no matter how degraded they may appear, degraded forest areas of India are significant sources of various ecosystem services and livelihoods to millions of forest-dependent people, and harbour unique biodiversity as well. Plantations on these lands will never match diverted natural forests in terms of ecological functions and complexity. They may also pose threats to many endangered species, such as the Great Indian Bustard and blackbuck, which inhabit the open forestlands now being rendered dispensable by the new government.

1. PSEUDO-SCARCITY OF WOOD: AN ECONOMIC ANALYSIS

One of the main arguments put forth by the guidelines is regarding meeting the shortage of raw material to industries by regenerating degraded forests. The paper and pulp industry has long been eyeing these forests as a cheap land resource for growing raw material and has made several attempts to get hold of these lands (see Box: *Persistent industry demand: A chronology*).

Our analysis shows that industry's recently reiterated demand for the degraded forests is in fact driven by the motive of profit enhancement rather than a shortage of raw material. In fact, various industries are successfully sourcing their current wood demands from farm forestry. But industry wants cheap wood and they are eyeing forestlands for this.

It is clear that the cost of wood in the open market (which reflects the true cost of land, input and labour) is higher than that produced from captive plantations (where land is free). For instance, as per the Annual Report (2013–14) of Mysore Paper Mills, the average weighted cost of acacia and eucalyptus pulpwood obtained from captive plantations works out to Rs 2,127 per tonne as against Rs 5,288 per tonne paid to M/s KFDC and M/s KSFIC. It is this difference in price that is making the pulp and paper industry demand forestland for captive plantation. If their demand is met, it would be the mother of all subsidies.

In the last three decades, a vibrant market for wood from farm forestry has been established. With an innovative farm-forestry supply-chain mechanism, industries are making farmers grow up to 200 tonnes of wood from each hectare compared to 6–10 tonnes per ha from government forests. Even on un-irrigated lands, yields go up to 50–70 tonnes per ha. Major paper mills of the country, such as ITC Ltd, JK Papers and BILT, are able to meet up to 95 per cent of their raw material demands from farm forestry (see *Table 1: Wood requirement and generation by paper mills through farm forestry*). Thus, industry continuing its demands for degraded forests is suspicious.

In fact, looking deeper, it is clear that the reasons for shortage of raw material, if any, are quite different. Currently, because of the lack of supplies from nearby areas, competition and high demand, wood is transported from faraway places. ITC Ltd says in its 2013 report that the current cost of wood-based raw material to Indian mills is US $70/tonne compared to US $17/tonne in Indonesia and US $25/tonne in Brazil. With transportation costs accounting for nearly 30–50 per cent of the wood cost, developing farm forestry near mills is being vigorously pursued by manufacturers. As per ITC, '*Now mills are procuring wood, spending a huge amount on transport from faraway distances. The wood price increase from May 2012 is more than 46% (Rs 1400 for Rs 3000 mill delivered). Mills are exploring import of wood chips or logs to overcome the present shortage'.* But against a total annual demand for wood of 1,00,92,625 tonnes by 27 paper mills (listed in Table 1), they are able to produce 3,94,25,580 tonnes of wood from farm forestry over a four-year felling cycle by engaging with farmers. Hence, the annual industrial demand for wood of 10 million tonnes is almost completely met through farm forestry plantations (see *Table 1: Wood requirement and generation by paper mills through farm forestry*). Therefore, there is no actual scarcity of wood for industry in the country. In order to have greater success, this model of industry–farmer partnership needs to be replicated by other paper and wood-based mills also to grow wood with farmers in the vicinity of mills, reduce transportation costs and create a win-win situation for industry and farmers.

Persistent industry demand: A chronology

1976: The National Commission on Agriculture supported the view that '*Resources for industrial raw material, both for internal consumption and export, should be stepped up through large-scale industrial plantations on forest lands*.' It recommended creating Forest Development Corporations (FDCs) to attract institutional finances. Following the NCA recommendations, 26 State Forest Development Corporations were set up to raise monoculture plantations on forestlands. FDCs were allotted vast extents of the best forestlands to grow successful industrial plantations by availing institutional finances.

1988: Paradigm shift from production towards forest conservation: The National Forest Policy is formulated. Policy restricted commercial plantations in forests and asks industry to source wood from farmers. In view of the price rise in wood sourced from farms, industry demands captive plantations.

1991: The Karnataka state government decided to lease over 28,350 ha of degraded and reserved forestlands for 40 years to Karnataka Pulpwood Ltd (KPL)—a joint sector company of the Karnataka government and the Birla-owned Harihar Polyfibers—for raising captive eucalyptus plantations, overlooking claims of local villagers who depended on these forests for basic needs. In December 1986, a public interest litigation case was filed in the Supreme Court by Shivaram Karanth, Anil Agarwal (CSE) and others. As a consequence of a sustained struggle for over seven years, the Karnataka government cancels Harihar Polyfibers lease.

1992: Industry kept pressing the demand of forests. Kamal Nath, then environment minister, proposed to give 1.7 million ha of forestlands for captive plantations. A proposal was made to the Cabinet Committee on Economic Affairs to amend policies to make this happen. But the proposal did not go far. It was severely criticized by environmentalists, tribal leaders and politicians who argued that industry should be given non-forest wasteland.

1994: Draft guidelines for afforestation of degraded lands through industries. It is proposed that land will be leased to the Forest Development Corporation (FDC) who, in turn, will enter into a proper MoU with industry without leasing the land to them. First, the most severely degraded forests with a canopy density of less than 10 per cent would be allotted and the next category would be offered for plantation later.

1996: Saifuddin Soz, then environment minister, openly opposed industry's proposals to privatize forests. But the Madhya Pradesh government invited tenders from industries for the grant of forestland for 30-year leases, which was stopped because of pressure from civil society.

1997: The Working Group was formed to examine the prospects of leasing out degraded forestlands to private entrepreneurs/forest corporations chaired by N.C. Saxena, then Secretary, Wastelands Development, to report to the Planning Commission on the issue. The report concluded that while industry should be involved in re-greening revenue wastelands (such as the Bhal lands of Gujarat and the ravines of Madhya Pradesh), it should not be given forestland as it would impinge on both people and forests. The Working Group advises that the industries needing forest raw material should establish contact with farmers. The group supported the involvement of industry in the use of non-forest wasteland. These lands added up to 20 million ha out of industry's total requirements of 2 million ha to grow plantation crops. But industry turned down this offer. It wanted more productive forestland.

1998: Expert Committee on the Review of Afforestation Policies and Rehabilitation of Wastelands convened. The committee could not resolve the issue of industry's participation in afforestation of highly degraded forestlands, leaving the issue remain open.

2000: Andhra Pradesh proposed to sign an MoU with the Reliance group of industries to set up plantations in government forestlands but was forced to give up the proposal as the news leaked out and opposition mounted. Groups in the state argued that the government should give the rights to the local Vana Suraksha Samitis—village-level forest-user groups that protected and regenerated degraded forests. In 2001, the state government was forced to give up this proposal.

2011: The Planning Commission's Working Group for the 12th Five-Year Plan recommends leasing 2.5 million ha of forestland to the paper industry. The Ministry of Environment and Forests opposes the idea of handing over forestland for commercial purposes.

2014: The MoEF&CC rejects the recommendations of the Planning Commission's Working Group, says forests are not meant for industry. Industry keeps pushing for the demand.

2015: Guidelines for participation of private sector in afforestation of degraded forests. Guidelines seek to give away forestlands with less than 10 per cent canopy cover to private agencies for growing plantations. It proposes to grow plantations for industrial purpose on 85–90 per cent of the area of such lands while proposing that the remaining 10–15 per cent of the area is used for growing plantations for local community use. Concerns like low productivity, lack of finance, degradation of forests, low availability of industrial raw material etc. cited for proposing the idea.

Table 1: Wood requirement and generation by paper mills through farm forestry

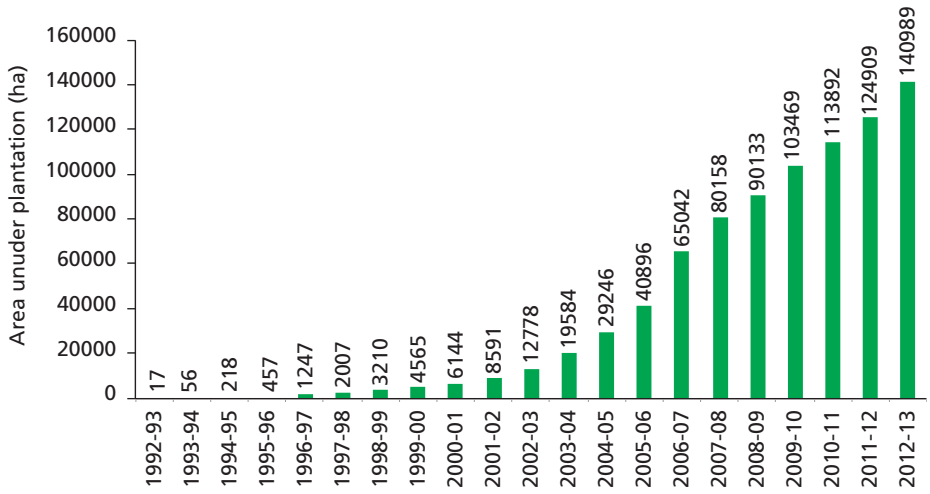
Company	Wood pulp (t)	Wood requirement (t)			Area planted (ha)	Estimated wood generation (t) @60t/ha
		Bamboo	Wood	Total		
ITC Ltd	3,00,000	0	11,25,000	11,25,000	1,40,989	84,59,340
Tamil Nadu News Print Ltd*	2,80,000	0	4,00,000	4,00,000	34,542	20,72,520
Century P&P Ltd*	2,80,000	1,68,750	9,58,125	11,26,875	2,340	1,40,400
JK Corp (Orissa)	2,20,000	50,000	8,50,000	9,00,000	59,974	35,98,440
JK Corp (Gujarat)	55,000	80,000	1,26,250	2,06,250		
Orient Paper Mill Ltd	80,000	1,67,000	1,73,000	3,40,000	33,043	19,82,580
Star Paper Mill Ltd	70,000	1,00,000	1,80,000	2,80,000	72,740	43,64,400
Mysore Paper Mill*	60,000	0	2,25,000	2,25,000	27,500	16,50,000
Sirpur Paper Mill Ltd	1,20,000	0	3,75,000	3,75,000	30,921	18,55,260
BILT Ballarupur/Asthi	2,20,000	2,00,000	1,75,000	3,75,000	36,055	21,63,300
BILT Sewa	1,00,000	40,000	3,35,000	3,75,000		
BILT Yamunanagar	1,00,000	0	3,75,000	3,75,000		
BILT Kamalpur	1,00,000	0	3,75,000	3,75,000		
BILT Chowdwar (Not Operational)	0	0	0	0		
Seshasai P&B Ltd*	1,60,000	0	4,00,000	4,00,000	18,534	11,12,040
Andhra Pradesh Paper Mill Ltd	2,20,000	18,000	8,00,000	8,18,000	1,24,040	74,42,400
Circar Paper Mill*	0	0	5,000	5,000	0	0
West Coast Paper Mill Ltd	2,80,000	0	9,00,000	9,00,000	44,260	26,55,600
Rama News Prints*	0	0	0	0	0	0
HNL Kottayam	80,000	0	3,00,000	3,00,000	32,000	19,20,000
HNL Naogaon	1,00,000	0	3,75,000	3,75,000		
HNL Kachar	1,00,000	0	3,75,000	3,75,000		
HNL Nagaland	20,000	0	75,000	75,000		
Nepa Paper Mill*	0	0	50,000	50,000	0	0
Yash Paper Mill	5,000	0	16,500	16,500	150	9,000
Delta Paper Mill*	80,000	0	3,00,000	3,00,000	0	0
Emami Paper Mill*	0	0	0	0	5	300
Total	**30,30,000**	**8,23,750**	**92,68,875**	**1,00,92,625**	**6,57,093**	**3,94,25,580**

*Mills using agro-residues and wastepaper for pulp production apart from wood and bamboo

Source: ITC, 2013

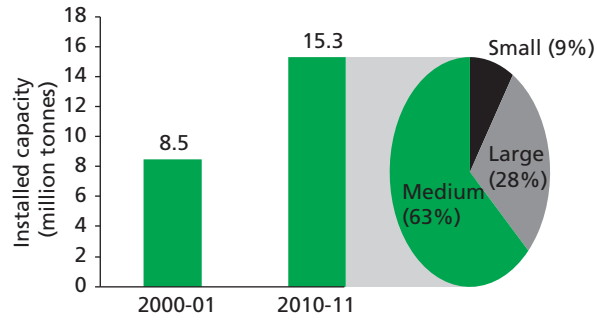
Further, in recent years as the trend in the industrial plantations shows, the area under plantations to feed industry with raw material is growing in extent. Taking the example of ITC Ltd and other paper mills, the companies are successfully procuring their growing demand for wood by increasing the area under farm forestry plantations (see *Graph 1 and Table 2*). The trend is also confirmed by CSE's Green Rating Project (GRP) study according to which, *'In 2001, the industry produced around 1.7 MT [million tonnes] of pulp and paper from 3.4 MT of wood and bamboo. In 2011, 3.1 MT of paper was manufactured from approximately 6.5 MT of wood, a bulk of which was produced by large-scale integrated mills. Clearly, the two-fold increase in consumption of wood has been possible as these mills had opted to take the farm forestry route. This move is bringing the industry closer to a sustainable model of wood sourcing'* (see *Graphs 2 and 3*). The GRP study shows an increasing trend of farm-forestry-sourced raw material in other sample paper mills across India too (see *Graph 4*) wherein an increasing trend is seen during 1998–2012 and a small drop in 2013 which can be attributed to wood imports during that time (see *Box: Why did we import wood in 2013–14?*).

Graph 1: ITC's plantations showing increasing trend in 1992–2013



Source: ITC, 2013

Graph 2: Installed capacity of the Indian paper industry



Source: GRP, 2014

Graph 3: Increasing demand for paper and production of pulp in India

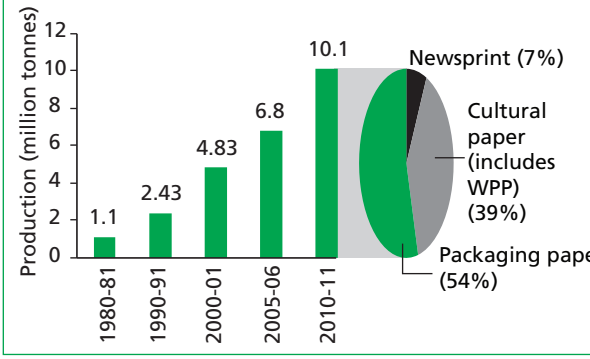
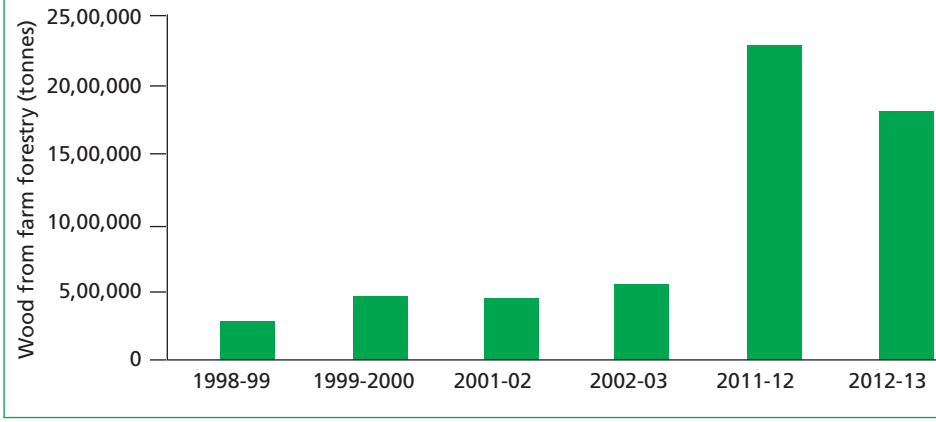


Table 2: Sample mills with most of its raw material from farm forestry in 2011–12

Source of raw material/wood	Paper mills with percentage from various sources						
	BILT – Ballarpur	TNPL	ITC Ltd	Sirpur Paper	Star	West Coast Paper	JK Papers (Rayagada)
Farm forestry	**87.13**	**48.97**	**99.89**	**98.97**	**89.08**	**87.64**	**91.24**
Govt. forests	11.33	0.00	0.11	0.91	10.92	11.18	8.76
Govt. plantations	1.54	26.45	0.00	0.00	0.00	0.00	0.00
Captive plantations	0.00	0.83	0.00	0.00	0.00	1.18	0.00
Open market	0.00	23.75	0.00	0.12	0.00	0.00	0.00
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Source: GRP, 2014

Graph 4: Increasing trend of sourcing wood from farm forestry by the Indian paper industry



Source: GRP, 2014

Why did we import wood in 2013–14?

It is interesting to note that India's increasing wood imports in the past had more to do with rising open-market wood prices in India than low availability of raw material. As per interactions with ITC, import prices have more or less stayed stable in the last decade, whereas farm gate prices have been increasing. In such a situation, import price became comparable to the domestic wood price, especially in the case of domestic shortage, and it became commercially viable to import. Wood shortage occurred because in 2008–09 the supply of wood was greater than demand, leading to a drop in wood prices to about Rs 2,500 per tonne. Consequently, farmers did not grow wood in 2008–09 and domestic wood prices shot up to almost double in 2013 due to shortages.

The paper industry has experienced a shortage of wood in the last three to four years only. But now that wood prices are up, farmers will take up farm forestry again. Thus, fluctuations in the demand and supply, with lack of incentives to engage in farm forestry, altered wood prices and increased dependence on export, not failure of farm forestry.

According to the Indian Paper Manufacturers Association (IPMA), the demand for the paper industry is approximately 11 million tonnes and availability of wood in the country is approximately 9 million tonnes. Ninety per cent of this domestic wood supply comes from farm forestry. According to IPMA, mill-delivered wood cost in India is currently higher than in other Asian countries, such as the Philippines. This places the paper industry in India at a competitive disadvantage. However, IPMA claims importing wood logs and chips is commercially viable only for a limited number of paper mills, primarily those near ports. For instance, JK Paper Ltd claims to have imported 70,000 tonnes of wood in 2013 for the first time because of this shortage.

The GRP study of CSE has monitored the trend for demand for paper over years. In its GRP1, GRP2 and GRP3 studies (1999, 2004 and 2013 respectively), the trend shows that the proportion of wood from farm forestry in sampled mills has been 61 per cent in 2013. Other estimates show that 65 per cent of the country's wood demand and half of its fuelwood demand are being met by trees grown on farms (World Agroforestry Centre, 2014). Therefore, farm forestry is already supplying the majority of raw material to industry, as also confirmed by industry's claims.

Currently, agroforestry is practised on 13.5 million ha in India (i.e. 8 per cent of India's area under agriculture), but its potential is far greater. Hence, there is no actual shortage of land to grow raw material, only a lack of will in industry to

partner with farmers to grow wood and pay them the right prices.

Further, it is a known fact that the growth of the farm forestry and agroforestry sectors in India is curtailed by the prohibitory regulations in place that make people reluctant to grow trees on their private and common lands, especially long-rotation species such as teak. Though the ministry has issued guidelines for felling and transit regulations for trees grown on non-forest/private lands, the impacts are yet to be observed on the ground. If we can create a conducive atmosphere for people to grow and trade trees, there is no reason to believe that we cannot generate enough wood to meet the current and future demands of Indian industries.

2. LIVELIHOOD FOR FARMERS OR PLANTATION FOR INDUSTRY?

Farmers grow plantations voluntarily on their farms as it is profitable for them. Short- and long-rotation tree crops have a favourable benefit–cost ratio with high internal rates of returns (see *Table 3: Economics of growing selected species in agroforestry systems in India*). Many farmers have learned to tap this benefit but others need to adopt the practice to create large-scale economies. As mentioned earlier, such proposals have been suggested to industries earlier too, but due to inherent low productivity of these lands, industries have evaded the challenge by declining the offers. They want already productive forestlands to grow trees, which have been wrongly classified as *'degraded forests'* on the basis of simplistic criterion of canopy cover.

Industrial demand for degraded forests must be discouraged in view of the availability of many other land types for growing plantations outside forests (see '*3. Alternative lands for growing industrial wood*'). There is a significant amount of degraded land, such as cultivable wasteland and fallow land, available for restoration and growing tree crops (see *Table 4: Land use in India showing availability of land for growing tree crops*). It is estimated that even going by the growing demand for wood, India will require only 2.63 million ha of land to grow timber for the plywood industry. The total landmass required to raise pulpwood plantations will be around 1.56 million ha, assuming productivity of 50 tonne/ha for a five-year felling cycle. A Working Paper of the Planning Commission (2014) says that according to industry's own admission, industry's requirement can easily be met from 2 million ha of degraded land. Against these estimates, there is 141 million ha of cultivated land and 35 million ha of farmer-owned uncultivated wasteland, with enough potential to produce wood for industry. The only requirement is that industries take up the challenge of greening these lands in partnership with local communities and

Table 3: Economics of growing selected species in agroforestry systems in India

Species	Poplar	Eucalyptus	Kadamba*	Teak
Rotation years	7	10	8	20
Number of trees/hectare	500	1,250	320	475
Expenditure/hectare in INR	82,292	1,13,215	43,776	2,09,715
Benefit (in INR)	2,72,533	2,66,220	68,124	4,19,961
B:C ratio	3.31	2.33	1.6	2.0
IRR per cent	68	32	31	30

**Anthocephalus kadamba*

Source: FAO, 2009

Table 4: Land use in India showing availability of land for growing tree crops

Land use	Area in million hectares	Percentage
Total geographic area	328.73	
Reporting area for land utilization	306.05	100.0
Forests	69.02	22.6
Not available for cultivation	42.41	13.9
Permanent pasture and grazing land	11.04	3.6
Land under miscellaneous tree crops and groves	3.62	1.2
Cultivable wasteland	13.48	4.5
Other fallow land	10.11	3.3
Current fallows	14.80	4.8
Net area sown	141.23	46.1

Source: Agriculture Statistics at a Glance 2003, Ministry of Agriculture

adopt suitable reclamation/plantation technologies with good land-use practices for quicker tree growth.

3. ALTERNATIVE LANDS FOR GROWING INDUSTRIAL WOOD

There are many viable alternative options for meeting the demand of industry other than diverting forestlands (see *Table 4*). For example, even if one third of the 24 million ha of forestlands managed by JFM starts yielding wood for industries, it alone is sufficient to become an inexhaustible supplier of forest-based raw material for industry. But for that to happen, the JFM programme will need some fundamental revamping so that benefits from protection and regeneration activities are equitably shared between forest departments and communities, encouraging communities enough to grow wood on these lands. This has not been practised so far on JFM lands.

Another viable alternative is to grow the raw material on forests and non-forest degraded lands in partnership with local communities. As per the Forest Survey of India, India has 9.13 million ha of tree cover outside forests (i.e. 2.78 per cent of its geographical area). If this area is enhanced by regenerating the abundant wastelands of the country, we can become a surplus and exporting country for wood and forest products. Farmers themselves own more than 35 million ha of uncultivated wastelands. If only a portion of it is utilized for tree crops, the result would be higher rural incomes, better environment and sated industry.

Tree cooperatives in India have also been successful and a financially viable model, but have failed so far to reach scales because of the government's existing restrictive forest practices. These tree cooperatives should be scaled up to fill demand–supply gaps and improve rural wood economies.

The forestlands given to forest-dependent communities under the Forest Rights Act, 2006 provide another viable alternative to grow trees for industrial use. Since the FRA came into force, about 1.9 million ha of forestland has been distributed to forest communities. These communities may be persuaded to grow tree crops on these naturally rich forestlands to generate raw material for industries and make forest communities economically prosperous.

In summary, industries want to enhance their profits by creating captive

plantations and doing away with paying the market price for wood. If farmers and local communities are given the right prices for the wood grown on their farms and village commons, there will be no reason to believe that we cannot grow enough wood within the country and reduce imports. But for this to happen, industries must give up their demand of forests and respect the need of farmers to be paid adequately.

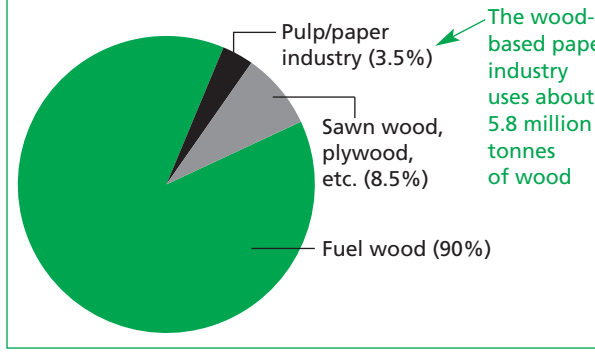
4. LPG OR POLLUTING FIREWOOD?

The proposal argues that degraded forests need to be diverted to produce more fuelwood for the local communities as the demand for fuelwood is increasing. The big question is: Should India allow its womenfolk and girl children to continue with the drudgery of collecting and burning polluting biomass or shift them to cleaner energy sources? Should we not reduce fuelwood dependency of the Indian population by diverting the energy source from fuelwood to LPG, electricity, solar, wind energy etc.?

The answer is clear. Fuelwood is not going to be the cooking fuel of choice in the future, keeping in view India's developmental needs as well as its climate change commitments to UNFCCC.

Fuelwood use in India, mainly in rural areas, claims 90 per cent of total wood production in country, with 3.5 per cent claimed by paper/pulp and the remaining 6.5 per cent by the sawn wood and plywood industries (See *Graph 5: Pulp and paper industry uses only 3–4 per cent of total wood in India*). If we can divert this huge demand for fuelwood to alternative energy sources, the demand on forests for wood will fall drastically. Therefore, diverting forests to industry is not a viable long-term solution.

Graph 5: Pulp and paper industry uses only 3–4 per cent of total wood in India



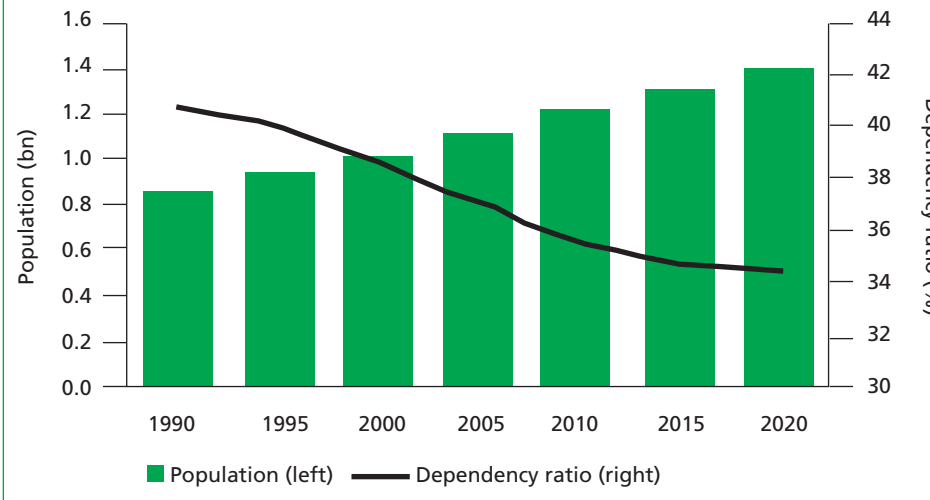
Source: FAO, 2009

The above argument is supported by the fact that the dependency ratio of the population on forests shows a declining trend, as indicated by the India Forestry Outlook Study by the Food and Agriculture Organization of the United Nations (FAO) in 2009 (see *Graph 6: Declining dependence of Indian population on forests*). However, the study says that with the increase in size of forest-dependent population with the faster growth of population, the total demand for products and services from forests keeps increasing, albeit at a slower rate than the population. This opportunity can be used by the Government of India to increase penetration of alternative energy sources in rural economies. Diverting forests to industries will only compound the problem of increasing the demand for fuelwood. Instead, communities should be encouraged by the government to enhance the productivity of degraded forests by more effective arrangements than social forestry or JFM programmes.

5. WE CANNOT LET OUR FORESTS FUNCTION AS CARBON JUNKYARDS

There is a gradual shift in global opinion in the post-Kyoto Protocol period on how we should tackle the climate change challenge. Developed countries are reluctant to reduce their carbon emissions and surreptitiously want to shed their responsibilities onto developing countries, like India, to reduce deforestation

Graph 6: Declining dependence of Indian population on forests



Source: India Forestry Outlook Study by FAO, 2009

and degradation and develop their forests as sinks for global carbon dioxide emissions. This has led to various initiatives, such as sustainable management of forests (SFM), reducing emissions from deforestation and forest degradation (REDD+), international efforts to enhance forest carbon stocks in developing countries through afforestation and reforestation and the forest sector Nationally Appropriate Mitigation Actions (NAMAs).

Though these initiatives are important to reduce the global intensity of climate change impacts, developing countries like India must be cautious that their forests are not converted into carbon junkyards for the world, especially when these bio-diverse forests harbour millions of forest-dependent people also. We must aim at regenerating our forests by using suitable silvicultural techniques and involving communities while providing additional carbon sinks.

6. COUNTERPROPOSAL

CSE shares the concerns of the MoEF&CC that degraded forests of India need interventions to increase productivity. This is urgent, considering the growing demand for wood for sundry purposes as well as for improving livelihood conditions of millions of forest-dependent poor whose natural resource base in Indian forests is continuously degrading.

Increased productivity will help India meet its climate change commitments also. But simplistic diversions to industry to allow them to grow captive plantations will not solve the problem. Instead, it will only aggravate the poor forest economics of India.

In view of this, and the facts and concerns discussed above, CSE makes the following counterproposal:

a. **Industry must source its raw material from farmers:** As the aforesaid analysis indicates, the industry–farmer partnership has been a successful model in India and needs to be further enhanced. Granting forests for

captive plantations will mean destroying the development of the farm-fed wood market in India. In such a case, not only will a lot of poor-quality farmlands owned by poor farmers remain without a market, but the wood produced by 24 million ha of forestlands under the JFM programme will not find a good market. If the proposed guidelines of MoEF&CC are implemented, the poor will be badly affected as they will not be able to collect fuelwood or graze their animals on these lands given to private agencies. There will also be social conflicts and heavy costs in policing these lands to prevent people from entering protected plantations.

CSE suggests that the government facilitates farmers and communities to grow trees on their farms, common lands and degraded lands and allows them to freely sell wood in markets in a conducive Minimum Support Price (MSP) regime. Further, the government should create a conducive investment regime for farmers by instigating banks to provide loans for plantations on private lands, create a buy-back arrangement with farmers and fix suitable MSPs.

b. **Indian Forest Management must be revamped:** As per the Forest Sector Report, 2010 by the Indian Council of Forestry Research and Education (ICFRE), government-owned forests produced just 2.38 million cubic metres (cum) of timber per year. The remaining 18.7 million ha of private forests, plantations and tree cover yield 44.3 million cum of timber per year, which is 20 times the government's production. One reason for this misbalance is the lack of proper management of government forests as indicated by the fact that presently less than 10 million ha of government-managed forests are under Working Plans (ITTO, 2010). Therefore, the government must put in some serious efforts in the direction of scientifically preparing Working Plans and make sure they are implemented in their true spirit. We must replace the idea of monoculture-captive plantations with bio-diverse forests which are sustainably managed and harvested using suitable silvicultural techniques. In this way, poor communities will be benefitted, forests will be made productive, ecological integrity will be maintained and industries will be supplied enough raw materials.

   The Compensatory Afforestation Fund (CAF) Bill, 2015, which is in Parliament, also promises huge financial resource for investment in forestry. Through this massive funding source, forest departments can regenerate degraded forest areas by involving local communities in an ecologically sustainable manner. Diverting forests to industries will only aggravate the situation as industry has neither the knowledge nor technololgy or experience to restore these degraded areas. Industries may create good plantations but not good forests.

c. **Update knowledge and data on productivity of Indian forests and devise ways to improve it:** At present, we hardly have any clear idea on what is being harvested from Indian forests and how much is going where. The picture appears more puzzling by illegal timber and NTFP trade in country. In fact, all data on forest accounts has disappeared from national accounts lately. We must bring necessary changes in research and natural resource accounting regime in India. Forest Statistics Reports of the MoEF&CC need to be made more regular, scientific and comprehensive. Accordingly, forest Working Plans and Wildlife Conservation Plans should be designed, reviewed and adapted to contemporary site-specific ecological, social and economic needs. The Indian Council of Forestry Research and Education

(ICFRE), which has already turned into a defunct institution, must be revived to take lead in national forest research, education and extension activities.

d. **Forest departments must engage more with local communities for regenerating forests:** Lessons from failures of JFM and social forestry programmes in India have taught us well that improving forest productivity will not happen unless people are in charge of this. Any attempt to alienate people by involving the private sector will not work. It is well established that the current degradation of forests is because of *overuse*, not *non-use*.

   This learning must guide the renewed long-term engagement of the department with the people. The government should adopt a two-pronged strategy. Firstly, growing trees on private lands must be made hassle-free by reforming the timber cutting and transit regulations on private lands. Secondly, communities should be handed over the degraded forestlands to grow and harvest trees by devising suitable participatory mechanisms. But for the trees grown on government forestland, communities must be paid the cost of labour and adequate share of forest products on a sustainable basis. We need people to plant trees on a variety of land uses and derive benefits from it. Else, we will lose the opportunity.

e. **Strengthen FRA regime with community forest management:** The Forest Rights Act needs to be used as the basis for afforestation by recognizing community forest rights and promoting participatory forestry on community forestlands. Villagers must have rights over cutting, transportation and sale of any trees or bamboos planted over forestlands. FRA should be integrated diligently with the upcoming compensatory afforestation regime under the proposed CAF Bill 2015. All afforestation activities, either on forestlands or non-forestlands, must involve local communities as a mandatory provision.

f. **Synergize various forest-related Acts, policies and programmes at the national, state and locals levels:** Various schemes and programmes formulated for the forestry sector in India, such as the Indian Forest Act, Forest Conservation Act, National Forest Policy, Compensatory Afforestation Management and Planning Authority (CAMPA), JFM, MGNREGA (forestry activities) and Green India Mission, are presently running in isolation with each other. There is a huge synergy gap among these forestry instruments, especially at the grassroots level. The CAF Bill, 2015, with its massive monetary resources, can provide enough finance to transform forest governance in India. This opportunity should be used to design an integrated long-term national forest action plan involving multiple land uses to achieve clearly defined and rational forestry targets (including social, industrial and biodiversity needs) that are in consonance with local, national and global imperatives.

7. CONCLUSION

India needs to bite the bullet to increase the productivity of degraded forestlands, which is possibly among the poorest in the world today. Much of this area is undergoing fast degradation and needs urgent efforts to reinvigorate the growth of vegetation. But silvicultural and socioeconomic considerations must be kept in view while moving forward. Efforts must also be speeded up to compensate for forest losses due to industrial activities, which are causing

large-scale fragmentation of the remaining forest habitats of India.

India has large geographical area with the advantages of suitable climate and rich soil that is highly conducive for tree growth. Not only forests, but farms and village common lands of India have the potential to supply enough wood to meet the demands of both industries as well as communities simultaneously. The need of the hour is to develop people-led movements with supporting incentives for farmers and rural communities to grow trees and create flourishing domestic wood markets.

As history has shown, doling out the forests to industries indiscriminately will only destroy the farm-forestry economies while taking away people's rights from the last remaining forest commons. Instead, we need to make people partners in progress by making them learn to grow trees on degraded forests and farms in ways which bring money to the poor. This can be achieved if the Forest Department revives its JFM and agroforestry programmes and industry enhances its partnership with people. Also, while the poorest people of India live in its richest forested areas, we need to move beyond conservation to sustainable forest management and productive forestry for the benefit of its people. Pending all that, we must not allow industrial exploitation of our forests as proposed now by MoEF&CC.

ANNEXURE

CSE's response to 'Guidelines for participation of private sector in afforestation of degraded forests'

I. Introduction (1–7)

The guidelines mention lack of investment, poor productivity and shortage of raw material as grounds for giving away degraded forests to the private sector. CSE holds the stand that given the enormous funds available under the Compensatory Afforestation Management and Planning Authority (CAMPA), there should not be any shortage of funds for investment in the forestry sector for improving productivity.

With the above-mentioned examples of flourishing farm-forestry sector in partnership with the paper industry, investment in the forestry sector does not seem to be a real issue. Also, as mentioned earlier, there is no actual shortage of raw material, but a lack of will in industry to grow trees and pay appropriate prices to farmers and communities.

To improve productivity and meet the demand for raw material from industries, government must promote the farm forestry, revamp the JFM programme and create community-led plantation initiatives on degraded lands to supply wood for industry. Poor forest-management has resulted in pressure on forests and degradation. Low import tariffs and cheap wood available outside has also resulted in the dependence of industry on wood imports. Importing wood by industry is comparable to or even cheaper in some cases than buying it from farmers, after factoring in transport costs.

It is proposed in the guidelines that forests with less than 10 per cent cover be given for private plantations. On this, we hold that not all forestlands with poor canopy can be considered degraded. Alpine forests, wetlands, grasslands etc. are vital ecosystems with little canopy cover. The proposal may open the floodgates to divert these important ecosystems for captive plantations.

While on one hand the guidelines mention that around 300 million people in India depend, directly or indirectly, on forests for sustenance and livelihood—deriving food, fruits, fuelwood, small timber, non-timber forest products (NTFPs), medicinal plants etc.—on the other hand, the spirit of the guidelines appears discordant with the proposal of transferring forests from communities to industries. Captive plantations, if not promoted keeping in view demands of local communities, will further degrade the quality of forests, not improve it. Moreover, as the government's recent thrust is to provide LPG and alternative energy sources to rural people, the demand of fuelwood is bound to fall in the near future with less pressure on forests.

II. Objectives (8–10)

Under the 'Objectives' section of the guidelines, MoEF&CC mentions the failure of national forestry programmes in making the desired impact in improving productivity and quality of forest cover because of a lack of sufficient investment, capacity, technological upgradation and adequate skilled manpower.

On this, CSE suggests that the government facilitates farmers and communities to grow trees on their farms, common lands and degraded lands and allows them to freely sell wood in markets in a conducive Minimum Support Price (MSP) regime. Private-sector dominance in the forests will only alienate communities from these last remaining commons while ruining their basic livelihoods.

Further, on the reiterated issue of lack of investment in forestry, it is emphasized that if forestlands are given to the private sector, they will grow captive plantations using largely public money by taking loans from banks. As a more viable alternative, the government should create a conducive investment regime for farmers and interested people by instigating banks to provide loans for plantations on private lands, create a buy-back arrangement with farmers and fix suitable MSPs. The Compensatory Afforestation Fund Bill, 2015 also promises huge financial resource which can be used for filling this investment gap. By using this massive funding source, degraded forest areas can be sustainably regenerated by forest departments with participation of local communities. Industry has neither the knowledge nor technology or experience to restore these degraded forests. They may have experience of growing plantations, but not forests. Further, though the guidelines mention '*involving all stakeholders'*, it fails to prescribe any mechanism for public or community participation in regenerating degraded forests.

Further, it seems doubtful that diverting degraded forests to industry will enhance forest productivity or quality, or create enough jobs to compensate for the loss of livelihood of traditionally forest-dependent communities. Also, CSE agrees with idea of enhancing carbon sequestration and flow of ecosystem services from these degraded forests, but it must be done in partnership with local communities for larger benefits, not with the private sector and industries. In the highly contested global climate change regime, we must also ensure that our forestlands are not converted to carbon junkyards of the world at the cost of Indian people.

To reduce import dependency, the government must bring necessary changes in import tariffs to discourage wood imports and promote the domestic production of wood on farms and forestlands. As events in the 1980s and 1990s showed, private sector participation in the forest sector devastate local wood economies and severely impact the biodiversity of the country. Therefore, CSE does not support this reiterated idea of industrial use of forests.

III. Safeguards

11. **Security of forestlands:** Although the government proposes sufficient security of forestland to begin with, forestlands once diverted will be subject to use and misuse according to whims and fancies of the industrial sector. This will also give rise to conflicts with communities, especially while forest departments are contesting forest rights under FRA with communities.

12. **Ecological:** The provision that 85–90 per cent of the forestlands will be developed as monocultures and the remaining 10–15 per cent will be developed (by industry) for local communities with suitable plant mix is highly biased. While the guidelines recognize that millions of people are dependent on forests for their sustenance livelihood and are facing an acute shortage of fuelwood, giving away forestlands to industries will keep local communities from meeting their demand for forest products from only

10–15 per cent of the forests and alienate them to the extreme.

13. **Social and economic:** Although the guidelines prescribe that the rights of local communities and forest rights will be safeguarded, there is no clear mechanism to ensure this. Further, this seems only a remote possibility as community forest rights (CFRs) under FRA are still to be largely implemented. Giving away the forestlands to industry will infringe on these rights at the stage of FRA implementation. The guidelines also don't give any '*predetermined ratio'* for sharing forest produce, which may lead to gross misuse of this provision by industry. On employment, we must understand that no matter how much employment plantation activities generate for local people, it will be only minuscule compared to the wide-scale loss of sustenance livelihoods of millions of forest-dependent people.

14. **Mechanism for speedy resolution of disputes:** The provision of referring the disputes for arbitration to the concerned Regional Additional PCCF of MoEF&CC and making its decision final is highly objectionable given the fact that often the local communities are in conflict with forest department itself. This arrangement will compromise the grievance-redressal mechanism and trample the voice of people in these areas.

IV. Eligible agencies for afforestation

CSE disagrees with the recommendation of giving away the forestlands to private sector entities. However, it supports regeneration of these degraded areas with community participation for growing forest products of local community and industrial use. CSE views that in all such arrangements, economic and livelihood needs of the communities must take precedence.

V. Procedure

A. **Issuance of guidelines:** The provision that '*after the approval of Central government for such arrangement with private agencies, the agreement/contract shall form part of Working Plans of respective forest areas of the division*' is already flawed as large areas of Indian forests continue to be managed without any Working Plans. The government must complete the exercise of preparing Working Plans for all the forests before tampering with the delicate forest regime in country.

B. **Identification of degraded forest lands:** A thumb rule of diverting forests with less than 10 per cent density is a very unscientific understanding given that many vital ecosystems in the country such as grasslands, alpine scrubs, shola grasslands and wetlands have inherently sparse tree densities. This limited understanding in the guidelines gives scope to devastate these fragile ecosystems in the country. CSE supports developing maps of suitable areas with soil capability classification for afforestation, but only if these lands are afforested with community-led programmes.

C. **Process of fair, transparent and competitive bidding:** As we don't support the idea itself of industrial use of forests, we desist from commenting on this section.

D. **Plantation creation, maintenance and record maintenance:** Although the guidelines mention the desire for multiple products from plantations, plantations will not under any circumstance be able to match existing forests in terms of the multiplicity of forest goods and services they provide to India's large population. Further, natural vegetation must be preserved

and enriched not only along rivers/nallahs or steep slopes to safeguard ecology and environment, but must also be preserved to sustain and promote the livelihoods of forest-dependent people and create landscape-level ecological security of the country.

The guidelines are a short-sighted move to favour industries at the cost of local communities, evident from the biased prescription of 85–90 per cent area to be used by industries and only 10–15 per cent area to be developed for local communities. We argue that if the total forests of India are not able to meet the demand of its citizens (as mentioned in the guidelines itself), how will only 10–15 per cent meet such growing community demands?

Instead, the government must promote plantations on JFM lands along with equitable benefit-sharing with communities and promote farm forestry to build people-led forest economies rather than building dangerous forest capitalism. Further, the guidelines' prescription of providing grass and fodder rights on all 100 per cent of land seems highly impractical as industries won't allow people to graze their animals on these fenced lands.

E. Usufruct sharing: As mentioned in this section, the idea of laying the responsibility of protecting the interests of local communities with the Forest Department seems highly unrealistic, given the failures of such a mechanism in the JFM programme, FRA rights distribution and other forest schemes, where communities have been partnered with. In view of the failures of such arrangements in past, the government should encourage people to grow trees on common lands and degraded forests, own the NTFPs grown on it, and market the produce as per the prevailing market situations in a supporting harvest, transit and trade regime.

G. and H. As we don't support the idea itself of industrial use of forests, we desist from commenting on these sections.

References

'Agriculture Statistics at a Glance, 2003', Ministry of Agriculture, Government of India.

Census of India, 2011, Government of India.

FAO, 2009, India Forestry Outlook Study, Ministry of Environment and Forests Government of India, Working Paper No. APFSOS II/WP/2009/06.

'Forest Sector Report 2010', Indian Council of Forestry Research and Education, Dehradun.

Green Ratings Project (1999, 2004 and 2013), Centre for Science and Environment.

Guidelines of the Ministry of Environment, Forest and Climate Change (MoEF&CC) for the participation of the private sector in afforestation of degraded forests.

Joining the Dots, The Report of the Tiger Task Force, 2005, Union Ministry of Environment and Forests (Project Tiger).

K. Balooni, 2000, 'Teak investment programmes: an Indian perspective', Unasylva 201, Vol. 51, 2000.

Kulkarni, H.D. 2013. 'Pulp and Paper Industry Raw Material Scenario-ITC Plantation A Case Study', IPPTA Technical Paper Series, Vol. 25, No. 1, Jan–March 2013.

Mammen Chundamannil, 'Teak Plantations in Nilambur—An Economic Review', Kerala Forest Research Institute Research Report 144.

Manmohan Yadav and Kalpana Basera, 2013, 'Status of Forest Products Production and Trade', Working Paper Series (2013/1), Indian Institute of Forest Management.

Milkuri Chiranjeeva Reddy and Somashekhar L. Madiwalar, 2014, 'Productivity Assessment and Economic Analysis of Teak Plantations in Different Agro-climatic Zones of Karnataka', *Indian Forester,* 140 (3): 287–90, 2014.

N.C. Saxena, 2013, 'Rehabilitation of Degraded Lands in India through Watershed Development', Planning Commission, Government of India.

N.C. Saxena, 2015, 'Forests in tribal lives', Planning Commission, Government of India.

National Forest Policy, 1988, Government of India.

R.M. Singhal, Sudhir Kumar and V. Jeeva, 'Forests and forestry research in India', *Tropical Ecology* 44(1): 55–61, 2003.

S.K. Chauhan, R. Sharma, B. Singh and S.C. Sharma, 2015, 'Biomass production, carbon sequestration and economics of on-farm poplar, plantations in Punjab, India', *Journal of Applied and Natural Science* 7 (1) : 452–58 (2015).

'State of Forests Report, 2013', Forest Survey of India

'Status Report on use of fuelwood in India', M.S. Swaminathan Research Foundation, India.

Sunil Nautiyal, 2013, 'A transition from wood fuel to LPG and its impact on energy conservation and health in the Central Himalayas', India.

Sushil Saigal, Ganga Ram Dahal, Bhaskar Vira, 2009, 'Analysis of Forestry Cooperatives in Rajasthan, India', CIFOR/University of Cambridge.

Web sources

http://www.downtoearth.org.in/blog/aiding-agenda-25217

http://www.downtoearth.org.in/blog/indigenous-species-can-meet-growing-demand-for-wood-51499

http://www.downtoearth.org.in/blog/money-does-grow-on-trees-12016

http://www.downtoearth.org.in/blog/rethinkgrowth-with-forest-capital-33479

http://www.downtoearth.org.in/blog/revamp-forest-policy-18902

http://www.downtoearth.org.in/blog/seeing-land-for-trees-14450
http://www.downtoearth.org.in/blog/when-planting-trees-is-a-curse-43618
http://www.downtoearth.org.in/coverage/bamboo-under-siege-37774
http://www.downtoearth.org.in/coverage/forest-to-farms-45285
http://www.downtoearth.org.in/coverage/paper-chase-28579
http://www.downtoearth.org.in/coverage/paper-question-10172
http://www.downtoearth.org.in/coverage/paper-works-20183
http://www.downtoearth.org.in/coverage/planters-devils-28568
http://www.downtoearth.org.in/coverage/private-affairs-7568
http://www.downtoearth.org.in/coverage/private-plantations-urged-on-forestland-31053
http://www.downtoearth.org.in/coverage/sunset-sector-11880
http://www.downtoearth.org.in/coverage/what-should-be-done-20182
http://www.downtoearth.org.in/news/a-cryptic-clue-24840
http://www.downtoearth.org.in/news/a-pampered-paper-industry-cries-wolf-30889
http://www.downtoearth.org.in/news/commercial-harvest-of-degraded-forests-on-cards-45162
http://www.downtoearth.org.in/news/communitise-natural-resource-management-29728
http://www.downtoearth.org.in/news/green-milestone-22968
http://www.downtoearth.org.in/news/hidden-subsidies-in-power-paper-industries-29987
http://www.downtoearth.org.in/news/india-must-rethink-timber-strategy-13902
http://www.downtoearth.org.in/news/industry-casts-covetous-eye-on-village-commons-31141
http://www.downtoearth.org.in/news/mef-stumped-27717
http://www.downtoearth.org.in/news/missing-the-woods-for-the-trees-28401
http://www.downtoearth.org.in/news/more-fuelwood-more-forests-13101
http://www.downtoearth.org.in/news/on-paper-18796
http://www.downtoearth.org.in/news/paper-capers-28399
http://www.downtoearth.org.in/news/peoples-interest-in-forests-is-sacrosanct-31859
http://www.downtoearth.org.in/news/plantation-proposal-28781
http://www.hnlonline.com/php/showContent.php?lid=44&pid=42&spid=42
http://www.ipma.co.in/
http://www.itcpspd.com/Development_of_the_Clones.aspx
http://www.itcpspd.com/plantation.aspx
http://www.mpm.co.in/forestry.html
http://www.planningcommission.nic.in/hindi/reports/wrkpapers/index.php?repts=wp_Iseexe.htm
http://www.planningcommission.nic.in/reports/articles/ncsxna/index.php?repts=ft.htm
http://www.planningcommission.nic.in/reports/articles/ncsxna/index.php?repts=agro.htm
http://www.un.org/esa/forests/wp-content/uploads/2013/03/India.pdf
http://www.wca2014.org/the-world-congress-on-agroforestry-media-advisory/#.Vl1gAtIrLIU
http://www.worldagroforestry.org/newsroom/highlights/india-leads-way-agroforestry-policy

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