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BANKING ON FORESTS:

ASSETS FOR A CLIMATE CURE?

Kanchi Kohli
Manju Menon



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Contact:

Heinrich Böll Foundation, India Office

C-20, 1st floor, Qutub Institutional Area, Delhi 110016, India

phone: +91-11-2685 4405, +91-11-2651 6695

fax: +91-11-2696 2840 • mail: india@hbfasia.org • web: www.boell-india.org

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HEINRICH
BÖLL
STIFTUNG
INDIA

Contact information:

Kalpavriksh, Delhi

Address for correspondence:

No. 7, Sector 15A,

Noida- 201301

Phone: +91 120 4229767

E-mail: kalpavriksh.delhi@gmail.com

Kalpavriksh, Pune

5, Shree Dutta Krupa Apts.,

908, Deccan Gymkhana,

Pune - 411004

Phone/Fax: +91 20 25654239

E-mail: kalpavriksh@vsnl.net

www.kalpavriksh.org

Contact for authors:

Kanchi Kohli (kanchikohli@gmail.com) and

Manju Menon (manjumenon1975@gmail.com)

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1

REGULATING FORESTS, (MIS) REMEMBERING HISTORIES

The governance of forests in India has been a complex realm to unravel. Numerous systems of governance have been devised, altered, shunned and then re-scripted since the colonial times. A lot of academic and independent scholarship has gone into peeling these layers that formed over time. Several analyses attempt to present local, case specific scenarios as well as on the subject of forest governance in general through the study of forest ecology, laws and policies.

For three decades after independence, the legislation that guided the management of forests in the country was the Indian Forest Act (IFA), 1927 instituted during the British colonial rule. The law essentially sought to reserve forests for its timber value and put forth mechanisms through which the transit of forest and non-forest produce could be determined. Once such a reservation was in place, only a limited number of rights could be entertained in such forest areas reserved for its specific utilisation and management. Post independence, even though the IFA continued to rule, there were a range of State enacted legislations which determined how forest conservation and management took place. They put forth the system of Forest Working Plans with long term cycles (10 years or more); the most crucial guiding documents of the Forest Department to carry on their forestry activities. The diversion of forest land towards non-forest use is not within the scheme or code of such forest working plans, although the Act allowed for dereservation of a Reserved Forests and tree felling by the state governments.

Since 1977, India's Constitution lists "Forests" in its Concurrent list, making it subject to

the administration and management of both wings of a federal structure: the Centre and States. Since then, the Central Government has held an upper hand in the process that restricts or releases forests to other potential users. But "forest land" is directly owned and managed by the State Forest Departments through a collection of laws and administrative policies.

There have also been several claims to the forests in many regions made by local communities, tribal groups, and others on the basis of historical evidence of how forest areas were wrongly demarcated and the illegal ways in which the latter were made to hand over their lands to the colonial government and later the government of the newly independent States. In recent times, claims have also been made on the basis of conservation efforts undertaken by communities entirely by themselves or jointly with the State Forest Departments through their various afforestation and forest management schemes.

Since 1976, after the report submitted by the National Commission on Agriculture, several schemes and programmes were introduced by State Forest Departments under what came to be known as Social Forestry. The schemes under this were mainly intended to increase areas under forest cover and for meeting the small timber, fuelwood and fodder requirements of poor people dependent on forests.

In many states, there were also ongoing community forest conservation initiatives that had been backed by local, state or national laws such as the Van Panchayat Act of 1931 in Kumaon region of Uttarakhand (erstwhile Uttar Pradesh). The official national

recognition for these initiatives came only through the National Forest Policy of 1988. Many of these independent initiatives were turned into collaborative schemes through the Joint Forest Management (JFM) Programme of the Government of India. JFM as it is popularly known, had begun as an experiment in West Bengal where the problem identified by the Forest Department was the destruction of sal forests due to illegal logging by local people and grazing. What began here in 1971 as a localised intervention of joint management of sal forests through a contractual agreement of responsibilities and benefits, was institutionalised by the Central Government through the passing of official guidelines for JFM in 1990.

Thus due to the multiple claims to ownership, jurisdiction and management of forests through India's modern history, forests have remained a subject of intrigue for all those trying to understand the complex legalities that have operated within a single space. It is on this somewhat unsettled foundation that the Forest Conservation Act (FCA), 1980, by which diversion of forest land for other uses is determined and the legal orders under the *Godavarman*¹ case, which has expanded the scope of the FCA, stand. Both these sets of regulations and judicial policy directives are meant to determine the process to be followed when forest land or areas with standing forests are to be 'diverted' for development/infrastructure projects such as road construction, industries and dams. These regulations assume that the State Forest Department is the owner of these forests and forest land and so the process of decision-making primarily takes their opinion into consideration. The centralised

and linear chain of decision-making on forests has almost remained unchanged.

Over the years, forest conflicts have increased proportionally with the growing emphasis on infrastructure development and the need for diversion of more and more forests, especially those that are under various kinds of use. The significance or the power of these conflicts can be understood by the many policy changes and statements brought out by the government such as "Go, No-Go areas for Coal mining" meant to reduce friction in the process of decision-making (discussed in detail in Chapter 3). But the most comprehensive actions to resolve these conflicts were made as part of the passing Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of *Forest Rights*) Act, 2006 (FRA). A widespread mobilisation of forest dwelling communities, those affected by forest diversion, creation of Protected Areas (PAs) like National Parks and Sanctuaries and Reserve Forests and those whose forest livelihoods were disrupted by government or court orders made a case for a new legislation that would set off a process of correcting 'historical wrongs'. While there continue to be many debates over whether this law will ever

¹On 12 December 1996, the Supreme Court (SC) of India expanded the scope of the term "forest". In *T.N. Godavarman Thirumulkpad Vs Union of India and Environmental Awareness Forum, Jammu and Kashmir vs State of Jammu and Kashmir*, the SC reinterpreted the Forest (Conservation) Act, 1980. It now included within its scope not only forests as mentioned in government records but all areas that are forests in the dictionary meaning of the term irrespective of the nature of ownership and classification. The case came to be popularly known as the *Godavarman* case.



Photo credit: Kanchi Kohli

Reserved Forest in Vazhachal division, Kerala diverted for hydro power

be implemented and if it is then what kinds of effects it will have for people, for wildlife and biodiversity, it seeks to set right in one sweep, the idea that forest dwelling communities occupy forest lands illegally, that they are 'encroachers' and therefore have no rights in the decision-making on forests. If the law is implemented, it will have a significant bearing on the manner in which forests are used in conservation, in development and for the mechanisms devised to mitigate climate change impacts.

The foremost principle of India's National Action Plan on Climate Change (NAPCC) reiterates that maintaining a high growth rate is essential to increase the living standard

of people and reducing their vulnerability to climate change. This correlates with the position taken by the country's negotiators that cuts in industrial emission for a developing country like India are not in order, with the already industrialised countries being responsible for the current climate crisis (Gol, 2010). In the context of conservation this stance is not benign or without consequences. There has been a degradation of natural ecosystems, deforestation of forests and other losses, and this will continue if the country desires industrial expansion and higher levels of economic growth.

India is also party to the 1992 United Nations Framework Convention on Climate

Change (UNFCCC) which has recognized the role of forest conservation in climate mitigation. It seeks that all obliging parties to the Convention as far as possible and as appropriate conserve forests and other carbon sinks and reservoirs. In more recent times there have been two models of climate-forest negotiations which have been heavily debated and promoted at the same time. The Reducing Emissions from Deforestation and Forest Degradation (REDD) and REDD+ schemes have allowed for forests to be exchanged for the right to continue carbon emissions. These exchanges are to be negotiated in the carbon trade market on the basis of the carbon sequestration potential of forests. The difference between REDD and REDD+ is around the additional conservation objective of the latter. (more details in Chapter 3).

Both these mechanisms can also be understood in light of the Environmental Kuznet's curve. Simon Kuznet originally developed his theory in the 1960s to explain why inequalities increase when a country begins to develop economically, but later the wealth begins to 'trickle down' and incomes begin to equalize. Later the Kuznet's Curve was somewhat arbitrarily applied to environmental situations. Degradation of natural resources is seen as a consequence of achieving a country's growth aspirations. After a threshold, when basic "physical needs" are met, interest in a clean environment rises, reversing the trend. (Richmond et al, 2007, Kohli and Menon, 2010). Therefore a rise in a nation's per capita income is necessarily linked with the destruction of natural resources and in this instance forests, evidence of which is presented further up in this study.



Photo credit: Pankaj Sekhsaria

Tribal elder with bauhinia leaves in the Araku valley, Andhra Pradesh

The REDD approach it is said supports the objectives of the Kuznet's curve. It has been argued that the application of market based forest carbon trading instruments such as REDD would result in flattening the Kuznet's curve much sooner than it would happen in the business-as-usual scenario. It is anticipated that this would lead to "a quicker increase in income, conservation itself leading to significant income increases, lowered population growth, infusion of money from outside that increases per capita income and actually reaches targeted population." The success of course would be if a programme like REDD would ensure that conservation of forests itself leads to significant increase in financial income, which then can be used to create newer forests and



Photo credit: Kanchi Kohli

Compensatory Afforestation Site in Kinnaur, Himachal Pradesh for a transmission line

forest dependencies (Kant, 2010). What is lost in the bargain is the necessary trade-off. Even as the polluters continue their practice, they can pay for the creation or conservation of forests elsewhere.

In the last decade, several debates have revolved around what is to be done with the collection of payments made by the

users of forest land (Kohli et al, 2011). In addition to the existing collection, several new gateways of funds are being opened up at the global level through the climate change discourse. These too base themselves on the principle that as long as the polluter pays for conservation somewhere and in some manner, he/she can carry on business as usual.



2

MAKING NATURAL CAPITAL: THE PRACTICE OF FOREST REGULATION

This study is an effort to understand the strategies adopted by India towards mitigating climate change impacts. We do this through a focus on forests and try to analyse the likely consequences of including or using forests to this end. We have three reasons for basing this study around the practice of official forest regulation and forest governance issues. They are stated below in ascending order of importance. The first is that forests are a very well studied aspect of the environment in India. The discourse on forests has been historically shaped both by the academic work on forests as well as the diverse articulations on it by local communities, tribal groups and social movements.

The second is that the technological aspect of forestry has remained more or less constant

through the last century. This is a critical aspect in the present day discussions on climate change because the plans devised for climate related action are not technologically superior to what has been used in forestry so far. This is unlike the case of seemingly better industrial technologies that are to be encouraged and used under the Clean Development Mechanism. Due to this aspect, the potential success of the plans drawn up as climate actions can be safely assessed by the range of experiences so far with the practice of forest conservation and management. What has changed though in the administration of forests is the manner of valuing the worth of forests. This is described in detail in Chapter 3.

The third is that there is now a very clear and definitive move towards rearranging the



Photo credit: Neeraj Vagholkar

Forest land being impacted by 1750 MW Demwe Lower project, Arunchal Pradesh

powers between various actors in the forestry sector. These are demonstrated through the growing legal and field level challenges to government permissions granted for forest diversion and the passing of the FRA. These shifts have the potential to both affect and be affected by the institutions, plans, methods and outcomes of climate actions. The unmistakable move that movements, civil society groups and communities are pushing for is decentralised decision-making and this demand has already gained so much momentum that any action proposed and against this direction are bound to be met by resistance. It is imperative that the climate action plans of the government are viewed in light of this dynamic moment in forest governance.

One of focal areas of our work in the field of environment has been to identify and understand the practice of government regulation of forests. We have documented and analysed this through several cases of 'diversion of forests for non-forest purposes'. The official regulatory discourse is that forests, though very valuable for various environmental, wildlife and livelihood reasons, may have to be sacrificed for the cause of development. So forests are 'diverted' through legitimate processes of the FCA. The decision to divert or to grant forest clearances are made on the basis of cost-benefit analyses which necessitates the exercises of enumeration and valuation of trees in a forest. Ex- Minister of State for environment Jairam Ramesh,

known for his quotable quotes remarked during a lecture in May 2011, "what we cannot measure, we cannot monitor and what we cannot monitor we cannot manage." (Ramesh, 2011)

The number of trees standing on the land to be submerged under a dam, dug up for ore or constructed upon are counted and fictional but relational values are given to them. Having arrived at a summation of these values, the exchange value for these trees is fixed so that a compensation for the loss of these forests can be arrived at. These processes of alienating trees from forests, counting, valuating in abstraction and exchanging them for other products or services of development point to the commodification of forests. The methods and parameters of valuation may differ over time but the logics of valuation remain central to forest regulation. The exchange value of forests may have changed over time but without it forest regulation or a 'trade-off' or arriving at a balance between conservation and development may be impossible to explain.

This study is primarily about the changing nature of official regulation of forests. Based on the logics of valuation forests have been reconstituted in law and policy and in conservation schemes over and over again. We attempt to analyse how this regulatory system may change and to what extent due to the climate actions proposed for forests.



3

THREE CONSTRUCTS
TO ADMINISTER
FORESTS:
LANDS, TREES
AND SINKS

As mentioned in the preceding chapters of this study, the contested ownership and jurisdiction of regulation have made forests an area of intrigue and these multiple legalities make it a very difficult landscape to plan for. But ignoring these complexities of grand proportion both temporally and spatially, the Central Government enacted the Forest (Conservation) Act (FCA), 1980 and institutionalised a new set of procedures by which forest areas could be diverted for other non-forest uses.

Though this law has been projected both by government and by several individuals and organisations working on the subject of forests as a conservation law, it is hardly that in practice. The procedures for regulating tree felling as well as dereservation of forest land (the term diversion did not exist in forest laws then) were present in the IFA and State Acts. However, the figures that arose from these permissions were staggering. In a publication of the Ministry of Environment and Forests (MoEF), the then Minister A. Raja wrote on 31st May 2004, "Between 1950 and 1980 forestlands have been diverted at the rate of 1.5 lakh hectare per annum by states/UT. Their diversion has however come down to as low as 0.38 lakh hectare per annum after 1980. If regularization of pre 1980 eligible encroachments (as per the govt policy) over 3.66 lakh hectare of forest land is excluded, the net rate of annual diversion comes to 0.23 lakh hectare only. Since 1980 about 9.21 lakh hectare for forest land have been diverted so far" (MoEF, 2004).

The National Forest Policy of 1988 substantiated the position of the MoEF. It reiterated that forests are the property of the nation and will be managed with the help of specialists

and experts. In Section 4.4.1, the Forest Policy states *"Forest land or land with tree cover should not be treated merely as a resource readily available to be utilised for various projects and programmes, but as a national asset which requires to be properly safeguarded for providing sustained benefits to the entire community. Diversion of forest land for any non-forest purpose should be subject to the most careful examinations by specialists from the standpoint of social and environmental costs and benefits. Construction of dams and reservoirs, mining and industrial development and expansion of agriculture should be consistent with the needs for conservation of trees and forests. Projects which involve such diversion should at least provide in their investment budget, funds for regeneration/compensatory afforestation."*

The FCA centralised the decision making on tree felling, diversion and dereservation and this may have simply slowed down the rate of forest use of non-forest purposes. This acute centralisation of granting permissions for non-forest use causes regulatory snags in the system as a result of which the rate of clearances or permissions for non-forest use varies from year to year. Information generated through Right to Information (RTI) applications filed by Kalpavriksh reveals these varying figures. For instance, the amount of forest land diverted (both 'in principle' and final approvals) in 2004 was 61,971.02 hectare and in 2005 was 36,336.20 hectare. In 2006, when many more proposals for diversions were considered, it was 1,08,680.29 hectare and in 2007, it was 69,502 hectare. Another RTI reveals that for the period from 1.4.2008 to 16.12.2009, the total diversion was 43,635.66. In such a situation, the annual diversion figures are not anything to go by to assess

the effect of the FCA. The centralisation of permissions may have also pushed under the table the rate and extent of illegal use of forest land (Kohli and Menon 2009). And for this, there are no statistics available. So the above preambular text of the FCA that causes most people to understand this law as a conservation law may simply be hiding the actual non-forest use on the ground.

Another change brought in with the FCA was a system of compensating for forest loss. Prior to the FCA, there was no such notion of compensation and this probably adds to the idea of the FCA being a conservation law. Initially this compensation was in the form of afforestation, subsequently, monetary compensations have been devised and added. The new law institutionalised this combination of a centralised, standardised system of valuation and compensation, thus giving a semblance of efficient and scientific forest regulation aka conservation.

The dual strategies of valuation and compensation govern the mechanics of the FCA. Together, they have contributed to the conversion of forests into decontextualised, mobile and tradable commodities between regions. Through this chapter, we seek to explain how this is achieved. We also explain the continuity between the domestic regulation on forests and the new abstractions created by the climate change discourse. While the models of valuation differ, the effects on the commodification of forests deepen as greater mobility is created and trading across countries and continents is made possible.

Forest as Land

In the year 2007, a meeting was convened to seek a definition of forests. One of

the comments by a senior forest official represented how he perceived the FCA. He clearly stated that the legislation applies to land, not to trees (Anon 2007). Under the FCA, the requirement for compensatory afforestation is the most important condition stipulated when forests are 'diverted' for non-forest use or when felling of trees is to be done or forests are to be de-reserved². All proposals for diversion are made with a comprehensive scheme for compensatory afforestation. The Forest (Conservation) Rules, 2003 (unamended version was in 1981) requires forms to be filled by the Forest Department, the agency that proposes diversion on behalf of the user agency.

As FCA understands forests for its land value, it instituted mechanisms whereby loss of forest land is replaced either near or somewhere within the State. The letter

²Section 2 of the Forest Conservation Act, 1980 states that no forest land will be diverted for non-forest use, de-reserved from being a Reserve Forest (as declared under the IFA, 1927), be assigned to any other person or authority without the permission of the central government, ie the MoEF. Permission from MoEF will need to be sought for clearing of trees which have grown naturally in that land or portion, or the purpose of using for re-afforestation.

This is in addition to the procedures laid out under the IFA and the state forest legislations wherein there are provisions for the state government allow for both de-reservation of forest land as well as felling of trees. Since 1996, any proposal that involved de-reservation of forest land also needs to seek approval from the forest bench of the Supreme Court related to the T.N. Godavarman v/s Union of India case (WP.202 of 1995).

of clearance granted in 2002 to the Bairabi hydel project in Mizoram under the Forest Conservation Act says,

“After careful consideration of the proposal of the State Government, the Central Government hereby agrees in principle for diversion of 9294 hectares of forest land (including 1666 hectares of unclassified Jhum land) for Bairabi Hydro-Electric Project in Kolasib district of Mizoram subject to the fulfillment of following conditions.

i. The user agency will transfer the cost of compensatory afforestation over 18,588 hectares of degraded forest land (revised as on date to incorporate existing wage structure) in favour of the State Forest Department and the State Government will place this fund at

the disposal of the DFO/DCF responsible for raising and maintaining the compensatory afforestation.

ii. The biodiversity loss for submerged Reserved Forest area should be compensated by acquiring 7750 hectare of Non-forest land which was earlier identified for raising compensatory afforestation. On this land, right of shifting cultivation, if any, should be acquired by the State Government and the land should be notified as Reserved Forests under the Indian Forest Act, 1927.”

In the case of the Tuivai project, again in Mizoram, the loss due to the project was to be compensated in 3 ways:

1. Declaration of a new Protected Area ie Lengteng Wildlife Sanctuary.



Photo credit: Neeraj Vagholkar

Shifting Cultivation in Dibang valley, Arunachal Pradesh

2. Regular compensatory afforestation as per the FCA.
3. In addition to this compensatory afforestation, jhum (shifting cultivation) land of old-growth (atleast 6-7 years) having 5 times the number of trees as trees being lost in the submergence were proposed to be brought under the forest department.

Such a system of compensatory afforestation requires a project authority to compensate for the loss of forest land in physical terms. All proposals seeking FCA approval (with a few listed exceptions) are made with a comprehensive scheme for compensatory afforestation. As per law, compensatory afforestation is required to be done over equivalent non-forest area at the cost of the user agency. Whenever non-forest land is not available, which is to be certified by the

Chief Secretary, compensatory afforestation is to be done over double the extent of degraded forest area at the cost of user agency. The Forest (Conservation) Rules, 2003 (unamended version was in 1981) requires forms to be filled by the Forest Department, the agency that proposes diversion on behalf of the user agency.

The MoEF has also issued specific guidelines related to how compensatory afforestation is to be carried out and monitored. The guidelines also allow for other category of forests which are recognised under the IFA, 1927 and on which FCA, 1980 is applicable to be also used for compensatory afforestation. These lands maybe revenue lands or categories of land such as *zudpi jungle/Chhote/bade jhar ka jungle/jungle-jhari land/civil – soyam* lands. These categories have their own unique ownership and management practices. How-



Photo credit: Manju Menon

Mangrove demarcated for Adani's operations on the Mundra coast, Gujarat

ever, no matter what kind of land, it needs to be identified contiguous to or in the proximity of an existing Reserved Forest or Protected Forest, primarily to enable the Forest Department officials to effectively manage the “newly planted area”. Looking for a distant site for afforestation outside the district or state is to be done only if land in that particular state is not available (Kohli et al, 2011).

MoEF’s 2004 handbook indicates that as of December 2003, compensatory afforestation has been stipulated for 6.82 lakh hectares which includes 4.55 lakh hectare degraded forest land and 2.27 lakh hectare non-forest land. About 0.13 lakh hectare non-forest land has been added to the forest area in Kerala. Therefore, about 2.40 lakh hectare of non-forest land were brought under forest category by compensatory afforestation and consolidation (MoEF, 2004). A February 2010 press release by the MoEF quotes that since 2007 and continuing in the current year, about 24,744 hectares of non-forest and degraded forest land had been identified for taking up compensatory afforestation against the approved projects under the provisions of the Forest (Conservation) Act, 1980 (MoEF, 2010).

The practical experience of land compensation

In September 2010, the Gujarat High Court sought explanation from the Mundra Port & Special Economic Zone Limited (MPSEZL), the Gujarat Forest Department, Union Defence ministry and the district collector of Kutch with respect to the allotment of 2000 hectares of land in possession of the Border Security Force (BSF) towards carrying out afforestation in lieu of the diversion that in lieu of the forest land diversion that had

taken place as a result of the company’s operations.

The company’s forest clearance for the diversion of 2008.41 hectare reserve forest land had been granted amidst substantial questioning and debate by the Supreme Court appointed Central Empowered Committee (CEC) which had found several discrepancies in the manner in which the MPSEZL had been granted approval for forest land diversion. Sister concerns of MPSEZL had initially sought diversion for different purposes and had subsequently sought to change both the purpose of the use of forest land as well as the company that would carry out the activity. The CEC set up as part of the Supreme Court’s ongoing T.N. Godvarman (W.P.(C) 202 of 1995) case related to forest matters stated that the forest clearance should not be granted to the MPSEZL (*more details on the Godavarman case in the next section*). After a series of changes in both the purpose of diversion and name of the company (all companies owned by the M/s Adani group), the final approval was sought for the Waterfront Development Project of MPSEZL. This the CEC observed was an important fact that had not been taken into account while granting approval. Infact, the CEC report dated 16.7.2008, while commenting on the grant of in-principle approval by MoEF’s Forest Advisory Committee (FAC) decision to divert 1840 hectares + 168.41 hectares of forest land concluded, *“the CEC is of the view that the recommendations of the FAC in the present case may not be accepted and the present request by the user agency for the diversion of forest land in a phased manner as part of the expansion of the Mundra Port and SEZ Limited may be rejected.”* (Kalpavriksh, 2010).

However, MPSEZL received its final forest clearance on 30.10.2009 after the Supreme Court's forest bench under the Godavarman case sent back the proposal to the MoEF asking MPSEZL to submit a fresh proposal. This final forest clearance had stipulated clear conditions wherein the company had been asked to carry out compensatory afforestation in villages Kaner and Shinapar at the cost of the user agency. The land was to be acquired and transferred to the State Forest Department within six months of the grant of clearance. The controversy has arisen as no compensatory afforestation work could be carried out on land belonging to the Border Security Force (BSF). Meanwhile it was reported that a total of Rs. 96,59,33,159 was paid by the company to the compensatory afforestation (CAMPA) Fund of the Government of India (*described in detail in the next section*) including payment for the loss of trees (Anon, 2010a).

Assessments on how compensatory afforestation has been carried out on the ground have pointed to a sorry picture. Even as forest land kept getting diverted for non-forest use, the compensatory afforestation (however limited in its replicability) was never satisfactorily achieved. The Comptroller and Auditor General (CAG) carried out a comprehensive scrutiny of the records of 17 forest territorial divisions in Madhya Pradesh where forest land was diverted for non forest uses for ten years between 1997-98 to 2006-07. The CAG report of 2007 states that in this period a total 8915.214 hectares were diverted for 96 projects. It added that 7060.979 hectare land was stipulated for compensatory afforestation with Rs. 38.37 crore fund made available by user agencies. Out of 38.37 crores, only Rs. 2.31 crores was used for CA, which is only

6% of the total fund made available. CAG reported that 67 projects and 5340.197 hectares were not at all covered under CA in this time period. The reasons for this shortfall were pointed out by the Divisional Forest Officer as lack of allotment of funds for 64 projects. Another reason was the non-transfer of non-forest land in one case and in two cases compensatory afforestation had not been carried out despite availability of funds with the divisions (CAG, 2007).

Godavarman case and compensatory afforestation debates

Since 1995, the Supreme Court of India began playing a central role in matters of forest policy and governance. This had marked the beginning of the ongoing matter being heard in the apex court since then as T.N. Godavarman Thirumulpad v/s Union of India [W.P. (Civil) No.202 of 1995], popularly known as the Forest Case or the Godavarman Case. One of the initial orders in this case changed substantially the manner in which forests had been viewed and decision making around it determined. The 12.12.1996 order in the Godavarman case expanded the meaning of the word "forests" to imply its dictionary meaning. What this meant was that any area which complied with such a meaning would need an approval under the FCA, 1980 if it were to be diverted for non-forest use.

While this order and its implications are significant to be debated upon, for the purposes of this study one needs to get deeper into the set of arguments that resulted in a method through which the cost of the loss of trees in a forest can be arrived at and thereby compensated for in monetary terms.

The genesis of this discussion can be traced back to the late 1990s when it was brought to the notice of the Supreme Court that only about 83 percent of funds deposited by the user agencies (ie the project authorities) towards compensatory afforestation have actually been realized by the concerned State Governments. The shortfall was nearly 200 crore (CEC, 2002). More significant was the submission in court that on the ground, compensatory afforestation was not taking place. The affidavits filed by the states on the current status of compensatory afforestation indicated that large sums of money had been realized by the states from the project proponents to whom permission for diversion of forest land for non-forest purposes was granted.

Until the interventions of the Supreme Court on the subject of compensatory afforestation, the money for this exercise was to be deposited with the State Government. The guidelines allowed the setting up of a special fund for this purpose. The responsibility of a person or project proponent would end once the amount required to carry out this activity is transferred to the State Government. This continues to be a bone of contention despite the fact that the money is being routed to the states through an Ad-hoc Compensatory Afforestation Planning and Management Authority (CAMPA) (Kohli et al, 2011).

Forest as Number of Standing Trees

The discussions in the Supreme Court led to two crucial institutional reforms; first, the setting up of an Ad-hoc Compensatory Afforestation Planning and Management Authority (CAMPA) located in New Delhi and second, putting into place a system

of payment of Net Present Value (NPV) for the diversion of forest land for non forest use. The Supreme Court's Godavarman bench in its order dated 26.09.2005 has defined Net Present Value (NPV) as "the present value (PV) of net cash flow from a project, discounted by the cost of capital". In simple terms, it is arrived at by deducting the cost of investment from the present value of all future earnings. If the cost of putting up a project is I and the value of earnings from the project from now till the end of the project is X, then NPV is X-I (Kohli et al, 2011).

When applied to forest land diversion, NPV is understood as a value to compensate, in money terms, for the loss of tangible as well as intangible benefits flowing from the forest lands due to its diversion to non-forest use. The new user of the forest land is expected to bear the cost of these losses by the payment of NPV. The 2005 judgement concluded that the payment of NPV is for the protection of environment and not in relation to any "proprietary right." (ibid)

Central to the method of NPV calculation is the valuation of forests based on the number of trees its supports. The payment of NPV was initially calculated at the rate of Rs. 5.80 lakhs per hectare to Rs. 9.20 per hectare depending up on density and quality of the forest. Barring the exceptions for certain activities listed by the Supreme Court and its expert committees, since 2008, the calculation for forest density is at the rate of 4.38 lakh per hectare to 10.43 lakh per hectare (as per order dated 28th March 2008) based on a detailed chart prepared by the Supreme Court's Central Empowered Committee (CEC).

This chart was submitted before the Supreme Court in 2007 and explained the rates for forest diversions to be calculated depending on the class of forests a particular area belonged to. Within each class of forests like evergreen, moist, swamp or sub alpine forests, the forests were further classified into very dense, dense and open based on which a project authority would need to pay NPV. The maximum NPV was prescribed for Class I and II i.e. very dense forest as Rs. 10,43,000 (10.43 lakhs) per hectare. The minimum rate fixed for class IV, open dense forests was Rs. 4,38,000 (4.38 lakhs) per hectare). (CEC, 2008)

When it came to Protected Areas (PAs) as declared under India's Wild Life (Protection) Act, 1972, the CEC prescribed that permission can be considered on payment of an

amount equal to ten times in the case of National Parks and five times in the case of Sanctuaries respectively of the NPV payable for such areas.

For calculating the average NPV per hectare, the CEC accorded a monetary value to seven aspects that it considered to be either a "good or service". The nature of goods and services that each class of forests could offer was directly proportional to its density. Foremost in this classification was the value of timber and fuel wood followed by value of NTFP, value of fodder, eco-tourism and bioprospecting. Ecological services of forests and value of flagship forest species was next. Interestingly the CEC also introduced carbon sequestration value as one of essence while calculating NPV. The more dense the forest, the better its ability to store carbon.



Photo credit: Kanchi Kohli

Fruit bearing trees in the forests of Niyangiri Hills

Contentious projects, Pay and Use forests

There have been many instances when high impact projects have been granted approvals with numerous conditions, central to which are the conditions of compensatory afforestation and payment of NPV. The highly controversial Niyamgiri (Odisha) bauxite mining judgment sets a figure of Rs. 55 crores as NPV and Rs. 50.53 crores towards a Wildlife Management Plan. The Lower Subansiri HE Project in Arunachal Pradesh got its final forest clearance with a condition of payment of Rs. 300 crores as NPV. The project was cleared without the assessment of downstream impacts. The process of that assessment is currently on.

What is important to note is that even as the issue of NPV was being discussed in the apex court, the proposals for exempting certain sectors entirely from the payment of NPV was proposed and deliberated in court. In September 2005 in the Supreme Court detailed judgment on NPV, exemptions were granted to certain projects such as government hospitals, dispensaries, schools, rainwater harvesting tanks and other such non-commercial ventures. The idea was that these projects should be exempted from NPV calculations as they are non-revenue earning and non-commercial welfare projects.

Another set of negotiations are by individual project promoters justifying as to why NPV should not be applicable to them on the grounds that they were a Public Sector Undertaking or the amount of forest land used is minimal.

One interesting case is related to 16 temporary mining license holders in Goa. In January 2008 they had submitted to the court that since

the amount demanded from them has been paid and compensatory afforestation work well underway, mining activity should be allowed. In this instance, the court ordered that mining activities can be carried out subject to NPV for the entire forest area included in the mining lease and the amount for carrying out compensatory afforestation which is twice the forest area included in the mining lease. They were also asked to pay penal compensatory afforestation charges for carrying out mining for the period when approval under the FCA was not accorded.

In an interesting turn of events, the State Forest Department stated that there is no degraded forest land available for afforestation work and the state is finding it difficult to utilize the money received towards the Compensatory Afforestation. The solution to this was not to find the land to carry out afforestation or stop the diversion of forests. The Supreme Court's Central Empowered Committee (CEC) suggested that the money collected be utilised for improving forests and also mangroves, National Parks and Wildlife Sanctuaries in the state. For this, a Society could be constituted with Chief Secretary of Goa as the Chairman and senior forest officials as members of the Governing Body with representatives of the MoEF and one reputed NGO as member. The money would be transferred to the society which would be utilized by the Goa Forest Department with approval of the Governing Body. The court accepted this suggestion and the case was disposed off in May 2008. In effect, Compensatory afforestation never took place for these 16 mining operations (Kohli et al, 2011).

Challenged applicability of density

The condition of compensatory afforestation meets other obstacles in Kinnaur district in

Himachal Pradesh. Located in the northeast corner of the state of Himachal Pradesh approximately 235 kilometres from the state capital, Shimla the district has three high mountain ranges i.e. Zaskar, Greater Himalayas and Dhauladhar which enclose the valleys of rivers Sutlej, Spiti, Baspa. Kinnaur's habitat is extremely ecologically sensitive, rich both in flora and fauna. Over the last few years, there has been a gradual increase in infrastructure and tourism development in the district, which has begun having social and environmental impacts. Both public sector and private sector companies have been seeking to exploit the hydropower potential of the river valleys with all the river basins being identified for series of dams. Media reports have quoted the strong agitation by people of the Sutlej valley against the existing and upcoming hydropower projects in the region (Kohli and Menon, 2010).

What is important to understand about Kinnaur is that a substantial portion of the district is above the tree line and comprises of the high altitude cold desert area. This extremely fragile ecosystem has forest types which include dry alpine scrub, dry coniferous forest, dwarf juniper scrub, western Himalayan temperate forest, kharsu oak, dry broad leaved and coniferous forest; none of which fit into the density argument.³ These forest types and many alpine pasture lands of the region are not ones where high tree density can be observed.

The applicability of both compensatory afforestation and calculation of NPV are significantly challenged in an ecosystem of this nature. During a conversation with forest officials of the region in June 2011, it was learnt that forest land is continuously being sought for the construction of border roads as

well as hydro power projects, but the district does not have any land where compensatory afforestation can take place. Any future forest land diversion will be compensated for in another district of the state of Himachal Pradesh. The calculation of NPV also becomes more complex in nature. Even if one were to assume that a price can be recovered for Kinnaur's forest types which typically fall into Eco Class V and VI in operation, the land area is lost forever and cannot be recreated. This is even if the NPV related money is routed back to the state coffers to carry out conservation activities as envisaged through the pay back mechanism worked out through the Ad hoc-CAMPA which is currently in operation.

Other processes based on tree loss calculations

Forests have been reduced to 'tree cover' alone in some other policy documents in recent times. In the years 2009-2011, there was a national debate generated around the segregation of "Go" and "No Go" areas for coal mining. Since 2009, the conversation around "Go" and "No Go" was initiated by the Ministry of Coal (MoC) and the Ministry of Environment and Forests (MoEF) to identify which blocks in India's existing nine coalfields could be allowed to be mined and which others would remain untouched to be used as strategic energy reserves in the future. MoEF and the MoC had jointly undertaken an exercise to overlay the forest cover map on the coal blocks boundaries in respect of 9 coalfields in the country and identified various coal blocks as category 'A' (No-Go areas) and Category 'B' (Go areas). In March

³Source: Official Website of District Kinnaur, Himachal Pradesh accessed on 5th August 2011 (<http://hpkinnaur.nic.in/WLSnctrs.htm>)

2010, there were 222 coal blocks from all across the country that were to be held back from being allocated for the purpose of mining. The No-Go area for mining was at this point of time 48% of the area available in the 9 coal fields (Kohli, 2011).

The methodology for this classification and decision is of significance here. The criteria used for characterizing 'A' and 'B' has been based two parameters. The first was Gross Forest Cover (GFC) where forest is defined as having crop density of more than 10%. Anything below this is scrub, which is not included in the forest cover. Any proposed coal block having 30% or more area under forest cover is placed under non-available category, ie category 'A' or 'No-Go'.

The second is Weighted Forest Cover (WFC) where the quality of forests is to come into question. However, here too it is the density of forests based on its tree cover that determines where the area can be slot- ted. A weightage of 0.85 was given to very dense forests, 0.55 to moderately dense forests and 0.25 to open forests in a coal block for calculating forest cover percentage over the whole block. The cut-off for this parameter has been kept as 10%, ie if a block has WFC of more 10%, it is in category 'A' or 'No-Go'.

However problematic and limited the above method of categorisation based only on tree cover density is, it is important to note that the final decision regarding which land to protect and which to let go has not been based on this formula at all. Instead it has been an intense give and take between the two ministries in question. In March 2011, the then Minister of Environment, Jairam Ramesh submitted in the Rajya Sabha (the upper house of the Indian parliament) that

153 coal blocks covering about 2.68 lakh hectares have been categorized as category 'A' and 449 blocks covering about 3.80 lakh hectares have been categorized as category 'B' out of total number of 602 coal blocks covering about 6.48 lakh hectares. The 222 No Go blocks were already down to 153 within a year (MoEF, 2011). As of 29th April 2011, it was reported that following an intervention by the Prime Minister of India, the MoEF has agreed to "free" 71% of the forestland in nine coalfields (Chauhan, 2011).

Forests as Carbon Stocks

At a time when domestic forest regulations in India were devising methodologies to commodify forests based on its land and tree cover density, the discussions in the climate change arena had simultaneously begun determining the economic value for forests as "carbon stocks". The 1992 Framework Convention on Climate Change (FCCC) has recognized the role of forest conservation in climate mitigation. It seeks that all obliging parties to the convention as far as possible and as appropriate conserve forests and other carbon sinks and reservoirs. It also obliges industrialized countries to contribute financial resources for the implementation of the Convention (Lovera. S. et.al, undated).

Subsequently through global negotiations, mechanisms have been arrived at where forests can be valued in the carbon trade market on the basis of their carbon sequestration potential. The international climate change discourse has brought this notion to the forefront with the concept of carbon sinks – areas which absorb more carbon than they release. Forests, with its natural carbon sequestration abilities are able to perform that function. The unit of

measurement now in addition to land and tree cover is also carbon which needs to be regulated and subsequently traded.

Such a contention has boxed forests, making them readily available for trade not just nationally but across borders. The global climate change negotiations and decisions allow for financial flow into countries which encourage the maintenance of such units of forests. Globally polluting corporations can compensate for the loss of forests in one place by putting money into schemes such as UN-Reducing Emissions from Deforestation and forest Degradation (REDD) Programme that is then transferred to “developing countries”. The UN-REDD Programme is the United Nations initiative which was launched in September 2008 to assist developing countries prepare and implement national REDD related strategies.

In many climate debates, the REDD programme attempts to present a win-win scenario. The official website of the UN-REDD programme states that it is an “effort to create a financial value for the carbon stored in forests, offering incentives for developing countries to reduce emissions from forested lands and invest in low-carbon paths to sustainable development.” The REDD+, which countries like India have been arguing for, goes beyond deforestation and forest degradation, and includes conservation, sustainable management of forests and enhancement of forest carbon stocks.

REDD+ is the scheme by which money is generated both for maintaining forests (maintaining enclosures) and for generating new forests as new ‘carbon stocks’. In practice, this means creating plantations.

Both REDD and REDD+ work on a dual financing mechanism as of today, with money to be generated both from bilateral or multilateral grants as well as a market based carbon trading mechanism where forest carbon in a different country can be traded for meeting emission targets. As of now, the future of a market based REDD model depends entirely on whether or not there will be a global climate agreement which binds countries with emissions levels. If there is no such agreement, the motivation to trade will be minimal. In other words a carbon market is possible only in a post global agreement scenario (Lele, 2011).

The REDD+ argument of the Indian Government

India’s official submission to the UNFCCC in 2009 states that developing countries cannot be denied access to their equitable share of the global atmospheric resource and carbon space. Therefore, equitable sharing of the carbon space needs to be urgently agreed to by the international community alongside keeping in mind the historical responsibility of developed countries towards contributing to climate change. With this, India reserves the right to carry on business as usual with respect to industrial and infrastructure expansion (MoEF, 2009).

In the same submission, India has regarded its regulatory regimes strong enough to prevent diversion of forests to non-forest use (e.g. agriculture, industry, human settlements, infrastructure) and stabilise forest degradation. It has also upheld the success of large nationally funded programmes for afforestation of degraded forest land as well as non-forest lands, reclaiming them from non-forest use. However, the note indicates that doing this

involves both direct and opportunity costs which involve costs from monitoring, enforcement and protection. The Indian government believes these costs should be met in substantial part, by the global climate change arrangements as it is the global scenario that benefits from such measures and not just specific countries. (ibid)

With this approach, India's official position on REDD is directed towards an approach that every unit of carbon saved is equal to one unit of carbon added. Therefore, keeping the REDD+ in perspective, the Indian government has argued that countries should be compensated not just for 'reducing deforestation' but also for 'conservation, sustainable management of forests and increase in forest cover' (ICFRE, 2007, Aggarwal et al, 2009). India's submissions and positions at the global climate change negotiations have argued that every country has the right

to either maintain or clear fell their forests. Although clear felling would imply loss of forest carbon services for the world, any country forgoing such felling will lose out on the incremental economic benefits of the same. These forests are then considered to be stocks and payments can be sought to maintain them for the global environmental good (MoEF, 2009).

For India this is a strategic argument. REDD as a climate policy is directed more towards countries like Brazil and Indonesia which are regarded as those with higher density and extent of forests and also high degrees of deforestation. India is a country which has less forest cover as compared to other countries and has presented itself to the world as one which has, over the years, managed to stabilise the loss of forests. With this approach, the country is unlikely to benefit from a typical REDD scheme



Photo credit: Kanchi Kohli

The cold desert landscape of Kinnaur

and therefore negotiations have pushed for financial support in the form of REDD+ which promises the funds for conservation and afforestation.

But Gol seeks to go beyond monetary gains through this conservation approach by supporting the REDD+ package wherein international financial support is sought towards Sustainable Forest Management (SFM) and Afforestation & Reforestation (A&R). The premise for the National Mission for a Green India (discussed in detail in the next chapter) derives substantially from this approach and is discussed in the following section. As per Gol speak, it is believed that the country stands to gain a lot from a global REDD+ mechanism, as there is a perception that this scheme has specifically opened the possibilities for the country to expect compensation for its pro-conservation approach and sustainable management of forests resulting in an even further increase of forest cover and thereby its forest carbon stocks (MoEF, 2010a).

The Indian Government's statement in the Oslo REDD conference in May 2010 reiterates its position that forests can be floated as economic assets just like in the stock market. The presentation of the Secretary, Environment and Forests on May 27, 2010 states that, *"India believes REDD needs to be seen in the broader context of REDD+, not in isolation. It needs to be towards a) Reduction of deforestation and conservation and enhancement of forest carbon stocks should be treated at par; and b) Fairness requires that a unit of carbon saved should be treated the same as unit of carbon added."* (ibid)

It therefore is in the country's financial interest to present that forests are being

conserved and that its carbon sequestration contribution needs to be valued and duly compensated for through the international REDD+ regime. Unlike the compensatory afforestation and NPV schemes which bring monetary benefits from diversion, the REDD+ schemes reward conservation efforts. So India projects itself as a conserving country to obtain REDD+ funds. However, in global terms, the more money a country receives from REDD or REDD+ schemes, the greater is the global forest loss implying that REDD and REDD+ are yet another form of monetary compensation for forest loss. In this latest form of compensation, the offsetting of forest loss is designed to take place much further away from the site of the actual loss.

Core questions around REDD in India

It is reported that officially there are no active REDD protected forests in India, though several developers and agencies have evinced interest (Sharma, 2010). There also exist several unresolved questions around REDD+. One of the core issues with REDD just like any other carbon offset programme is the issue of equity. REDD supporters have linked this mechanism to the Environmental Kuznet's curve as discussed in the introductory chapter. It is believed that "REDD is about flattening the Kuznet's curve much sooner than it would happen in the business-as-usual scenario." Since the Kuznet's curve is based on the premise that the conservation crisis can be addressed only with the generation of money even as degradation continually occurs in this process of accumulation, the REDD regime is seen as a panacea towards realising this effect (Kant, 2010).

This argument allows for environmental inequity to continue along with overconsumption of fossil fuels. Domestic legislations have allowed for compensation to take place in a neighbouring district or state. This mechanism shifts the site of compensation to any part of the globe where forest sinks are up for trade. It also brings out a peculiar give and take where a country like India which welcomes REDD+ compensations from polluting corporations or grants, would also look for REDD like or other carbon trading mechanisms to compensate for the emissions of Indian industries which is increasingly on the rise. India's REDD+ policy does not take this into account.

Even though the MoEF has set up a REDD Plus cell which is currently undertaking a carbon assessment of the country's forests, and there are large donor agencies which have funded the Ministry for REDD preparedness, there remain doubts around the motivation towards the country wanting to be REDD+ compliant. Social movements engaged in struggle for decentralised forest governance have questioned the implications of India's REDD+ push when there is no agreed upon method by which carbon absorption or storage in a forest can be measured. Such ambiguity is dangerous because it is likely that financing companies and the government legitimise the enclosure of forests from all use by people, based on fictional carbon storage figures (Campaign for Survival and Dignity, 2009).

Another significant concern is around what kinds of programmes and policies the REDD+ financing will promote and whether or not it would lead to any positive change in forest governance or management practices.

Speculations also surround whether or not there will be a significant change in the conservation and afforestation programmes in the country as and when the funds flow into place. As immediately envisaged REDD+ money is sought to fund India's National Mission for a Green India set up under the Prime Minister's Council on Climate Change. The details of this programme and implications are discussed in in the next chapter, but it is important to observe here that the Mission's objectives and implementation mechanisms are not significantly different from the way forests are being governed today. It proposes to bring "wastelands" and degraded forest lands into the climate mitigation realm when so many studies have shown that these are areas that support common survival needs of the poorest people of this country.

The implications being perceived are not entirely speculative. They stem from the experience of earlier domestic regulatory and valuation practices which have relied on similar principles. However what changes significantly is the unit of measurement, i.e. carbon and the spread of its implications as its emphasis stems from a global climate policy framework. It also leads us to critically investigate the climate effectiveness of a such a global programme for mitigation of climate change impacts.

Carbon forest creations

At this point direct carbon trading of forests with private corporations has not begun. Most of the carbon related money is through existing Clean Development Mechanisms (CDM) and carbon forestry programmes of agencies such as the World Bank which are not implemented on forest lands as yet. The Clean Development Mechanism (CDM),

defined in Article 12 of the Kyoto Protocol, allows a country with an emission-reduction or emission-limitation commitment under the Kyoto Protocol (Annex B Party) to implement an emission-reduction project in developing countries. Such projects can earn saleable certified emission reduction (CER) credits, each equivalent to one tonne of CO₂, which can be counted towards meeting Kyoto targets.⁴

One recently highlighted example of a CDM related forestry project is from the state of Himachal Pradesh. The World Bank is purchasing carbon credits from the new forests / plantations being developed on degraded areas in 177 Gram Panchayats covering around 4000 hectares of land falling in 10 districts of the state. This is part of a watershed development programme with community participation which has been funded by the World Bank. Following the audit on behalf of United Nations Framework Convention on Climate Change (UNFCCC), the project has been recommended registration with CDM Board UNFCCC (Anon, 2011).

d. Forests as Land, Trees and Sinks: The Financial Package

As per the current practices, forests in India are being valued for their land, trees and carbon stock value all together. Innovative and creative calculation methods have been put into place and newer ones are being suggested. In India, GoI is generating money through mechanisms that are leading to forest loss, i.e. through payments for compensatory afforestation, NPV, penal afforestation with valuation of both forest land and also the

number of standing trees. However, at the international level, the country presents a different scenario; of being a conserver of forests where we seek to gain from showing that we are incurring huge economic losses by not clear felling or diverting our forests for non-forest and/or industrial use. It is only this way that we can tap the cash flow from both ends.

Therefore, in many ways it is in the interest of the country's exchequer (and not necessarily forests) to keep the multiple valuation of forests going. For instance, the justification for deriving NPV from forest land diversion keeps in mind the carbon sequestration costs that are lost. REDD and REDD+ strategies calculate the revenue lost due to diverting the land for industrial and infrastructure projects. It is in such projects that the calculation of NPV and compensatory afforestation takes place.

In effect, the valuation of the same forests is taking place at three different levels, sometimes complementing and at other times sitting at cross purposes. While the land, trees and sinks have a price tag today, are they in actuality protecting forests? The funds from forest land, trees and carbon stocks is sought to be consolidated by the National Mission for a Green India. Along with various other planning and conservation grants, Rs.46000 crores is sought to be sourced from CAMPA, REDD+ and other carbon mechanisms in the next ten years (MoEF, 2010c).

⁴Source: Official website of the UNFCCC: http://unfccc.int/kyoto_protocol/mechanisms/clean_development_mechanism/items/2718.php



4

LOSS OR GAIN, ALL
THE SAME:
THE NATIONAL
MISSION FOR A
GREEN INDIA

governance and improving the ecosystem services of the forests particularly towards enhanced carbon sequestration by 50 to 60 million tonnes by the year 2020. As envisaged in the draft submitted to the Prime Minister's Council, the Mission would link with ongoing land-based greening/restoration programmes which includes availing benefits under REDD+, CDM and other carbon market mechanisms. The Compensatory Afforestation Planning and Management Authority (CAMPA) funds (as discussed in the previous chapter) and other existing afforestation programmes like those of the National Afforestation and Ecodevelopment Board (NAEB) are also envisaged to be the key financial contributors to this.

The Mission has set the ball rolling for the MoEF to house a REDD Plus Cell and to formulate "appropriate" projects/strategies to take the objectives of the GIM forward. It is stated that the cell will work within the architecture and rules agreed to under the UNFCCC to develop and implement monitoring, reporting and verification (MRV) protocols and fair benefit-sharing mechanisms in the forestry sector. A majority of the interventions under the Mission are understood to have the potential to qualify under REDD / REDD Plus schemes in the future.

The REDD Plus Cell is currently in the process of undertaking a carbon assessment of India's forests which is proposed to complement the forest cover assessment that has been done by the Forest Survey of India (FSI) each year. In addition, the Indian Institute of Science (IISc) in Bengaluru has also undertaken a mapping exercise to identify areas for GIM intervention. This exercise proposes to use composite

indices such as critical wildlife habitats, corridors, biodiversity habitats, as well as socio-economic factors (Rathore, 2011).

According to the MoEF, the GIM is not just about numbers. The documented vision of the GIM seeks to integrate the greening agenda into the context of climate change, adaptation and mitigation. The vision of greening, it claims, is different from earlier such exercises undertaken. The Mission is meant to be "holistic" toward enhancing ecosystem services such as carbon sequestration and storage. For this, it will consider not just forests but other ecosystems as well. These landscapes and sub-watersheds are to be selected based on their vulnerability to climate change.

The document however does not lay out any details of how carbon sequestration is to be achieved or enhanced in ecosystems other than forests, which is where the global carbon attention is currently fixed. Although other ecosystems like wetlands and grasslands have been seen as critical in the GIM, the Mission's operational focus remains on different kinds of forest ecosystems such as mangroves and degraded forest lands. Without much elaboration of how, it also simply brings into its ambitious climate action plan, shifting cultivation areas and abandoned mines. Many of these areas are presently under diverse ownership and may resist being brought into the ambit of the Mission.

Is carbon only a co-benefit in a carbon-led discourse?

The GIM document states its intent to integrate the needs of fuel, fodder, livelihoods

from forests and of traditional ecological knowledge into the greening exercise. These aspects have been in conflict with the afforestation programmes of the past in the country. In a presentation made by BMS Rathore, Joint Secretary, MoEF in New Delhi on 14th July 2011 highlighted that the Ministry is interested in GIM because it brings together historical experiences of forest management and conservation in India. In order to do this, it aims at linking current forest policies with climate mitigation strategies (Rathore, 2011).

Spoken of as a holistic plan, the GIM has been showcased as one where carbon is only to be seen as a co-benefit. It has been repeated over and over that the Mission includes both the provisioning aspects and regulatory aspects of climate related action. Understanding the regulatory aspect is simpler, as it is carbon which is sought to be regulated through conservation of existing sinks and creation of new ones through greening or afforestation activities. It is for the provisioning aspects that the GIM relies on biodiversity, landscapes, livelihoods and the community empowerment potential.

The question to raise upfront is around the validity of this claim. Even though the Mission uses the right mix of terminologies, it remains clear in its focus largely on forest land and on the creation and use of forest ecosystems. The emphasis of the four Sub-Missions is evidence to the above contention.

The first Sub-Mission which is to enhance the quality of forest cover and improve ecosystem services in 4.9 million hectare constitutes the largest area of the Mission's focus. Out of this, 4.5 million hectare of moderately dense

forests showing degradation (1.5 million hectare) and the eco-restoration of degraded forests (3 million hectare) will be taken up. In order to achieve this, activities undertaken will include rehabilitation of degraded open forests which will include partial or full closure of grazing activities, scientific forest management practices as well as NTFP provisioning. The remaining 0.4 million hectare is for the restoration of grasslands.

The second Sub-Mission relates to ecosystem restoration and increase in forest cover over 1.8 million hectare. The major emphasis of this submission is on shifting cultivation lands (0.6 million hectare) and scrub lands (0.8 million hectare) which are officially classified as highly degraded forest or non forest lands with less than 10% forest density. Shifting cultivation lands known to be areas where the practice of cyclical slash and burn (jhum) agriculture has been practised by tribal communities traditionally. These two together constitute 1.4 million hectare of the land being put to increase forest cover.

The *third* Sub-Mission is the smallest and relates to enhancing tree cover in urban and peri-urban areas over 0.20 million hectare.

The *fourth* Sub-Mission attends to the areas of agro-forestry and social forestry to be taken up over 3 million hectare. It is here that the GIM actually refers to the creation of carbon sinks. While the first three Sub-Missions aim to cover forest land under government jurisdiction this fourth Mission will bring both current and permanent fallows under plantations. The explanation here for this is that non-forest lands "provide ample opportunity to increase forest cover, meet the needs for forest produce and create carbon sinks". It is

here that the GIM will bring in lands under other multiple uses such as marginal farming lands/ fallow lands, trees on non-agricultural rural lands like homesteads, school yards, compounds of various offices, and private/ public establishments, public spaces, roadsides, along canals, etc. This massive programme of forestry on non-forest lands will be carried out with the participation of the community, farmers, NGOs, private sector, institutions, government agencies and the Forest Department. "Productive" agricultural lands will not be touched for this.

Even though it is not explicitly stated in the GIM, the Mission document clearly sets the stage for REDD, REDD+ or any other carbon forestry scheme. It needs to be reinstated that REDD+ and REDD are schemes by which money is generated for maintaining forests (maintaining enclosures) and for generating

new forests as 'carbon stocks', which in practice, means plantations. In both these instances like in the case of all the four Missions, the final attempt is to conserve carbon or create carbon sinks.

Thus the GIM is clearly carbon compliant, keeping the doors open to whichever way the climate change negotiations head on the issue of carbon sinks. In this carbon led discourse, the country is ready to receive money through grants, private sector trading as well as other carbon forestry programmes.

Recreating Space for Afforestation Practices

The GIM at no point de-links itself from existing afforestation and forest management practices, though it continually seeks to improve its conservation and livelihood



Photo credit: Seema Bhatt

Meeting of Joint Forest Management Committee in Harda, Madhya Pradesh

potential. Even though the final version of the GIM document talks about its linkages to the National Afforestation and Eco-development Board (NAEB) as only one of the convergences, earlier GIM drafts had explicitly stated that the Mission will be serviced by a Mission Directorate at the MoEF to be housed in the NAEB (MoEF, 2010b). This institution was set up way back in 1992 with a clear purpose of promoting afforestation, tree planting, ecological restoration and eco-development activities in the country. The special emphasis was similar to that of the GIM to improve the state of the degraded forest areas and lands adjoining the forest areas, National Parks, Sanctuaries and other Protected Areas as well as the ecologically fragile areas like the Western Himalayas, Aravallis, Western Ghats, etc.

Interestingly, one of the functions of the NAEB was also the restoration of fuelwood, fodder, timber and other forest produce on degraded forests and adjoining lands in order to meet the local demands. Fostering a people's movement for promoting afforestation and eco-development in degraded forest areas through a participatory approach and with the assistance of voluntary agencies, non-government organisations, Panchayati Raj institutions and others, was also one of the objectives of the NAEB.

It is significant to also know that the NAEB was involved in implementing a National Afforestation Programme (NAP) with the help of Forest Development Agencies (FDA)⁵ and Joint Forest Management committees (JFMC)⁶ all over the country. This was formulated by the merger of four centrally sponsored afforestation schemes of the 9th five year plan period (1997-2002). This was considered to

be a flagship afforestation programme of the MoEF through the NAEB. As on 31st March 2008, the programme was operational in 782 FDAs involving 28,181 village level Joint Forest Management committees (JFMCs). Upto March 2008, under the programme an amount of Rs. 1573.57 crore had been spent and over one million hectare forest lands were said to be regenerated following the prescribed schemes (ICFRE, 2008).

There are various critiques of both the NAP and JFM practices that have been carried out highlighting a variety of issues related to governance, transparency, financing and assessing the success and failure of

⁵Forest Development Agencies (FDAs) are to be registered as Federation of all Joint Forest Management Committees (JFMCs) within a territorial/wildlife forest divisions under the Societies Registration Act, as per the structure prescribed by the NAEB.

⁶As per the provisions of National Forest Policy 1988, the Government of India, vide letter NO.6.21/89-PP dated 1st June, 1990, outlined and conveyed to State Governments a framework for creating massive people's movement through involvement of village committees for the protection, regeneration and development of degraded forest lands. The joint forest management programme in the country is structured on the broad framework provided by the guidelines issued by the Ministry. So far, during the last ten years, 27 State Governments have adopted resolutions for implementing the JFM programme in their respective states. As on 15.8.2001, 14254845.95 hectare of forests lands are being managed under JFM programme through 62890 committees. (Source: <http://moef.nic.in/divisions/forprt/jfm/html/strength.htm>, accessed on 8th August 2011)

participatory forestry as envisaged through the NAP schemes and JFM (Lele et al, 2005, Lele 2001, Khare et al, 2000). While it is important to understand these critiques on their own terms, we mention these here as the emphasis of the National Mission for a Green India appears to merely present existing afforestation and mainstream forest conservation practices as actions to tackle climate change. As the GIM document states, the MoEF primarily puts forward “greening” as the actions for climate change mitigation and adaptation. In doing so, it does not substantially seek to change the practice of participatory forestry.

If the NAP was part of the 9th five year plan, the 10th five year plan (2002 to 2007) saw a Grants-in-Aid Greening India Scheme. The objectives echoed the earlier visions of increase in tree cover through plantations and with a focus on non-forest lands. It stipulated a fourfold increase in current annual tree planting mostly on lands outside what was called the Recorded Forest Area (RFA). The theme of people’s participation was central here and the activities were to be carried out through local bodies, gram sabhas and JFMCs. However, the key implementing agency remained the State Forest Departments.

What the GIM attempts to do is to re-engage with similar practices but this time in the context of increasing forest cover as stocks which can be traded in the carbon markets. The afforestation and conservation related activities are yet again to be carried out along with revamping the Forest Development Agency, JFMCs, Van Panchayats etc. It also seeks to integrate the implementation of the GIM through committees set up under newer legislations like the Biological

Diversity Act and Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act) or FRA, 2006. It is through the latter that a process of recognition of both individual and community forest rights on forest land which have been officially recorded or are ambiguous, is underway. Therefore collaborating with rights holders for the implementation of any conservation and afforestation schemes is essential. The GIM seeks a strong community involvement where “who decides” is the main issue in the provisioning aspects (like fuel, fodder, NTFP). Interestingly, the fourth Sub-Mission of the GIM where the process of carbon sink creation is emphasised, is to be backed by the Forest Department or the private sector.

As mentioned in the earlier section the GIM document clearly envisages that a majority of interventions under the Mission have the potential to qualify under REDD / REDD + schemes.

It is important to briefly point out here that since 2009, the State Forest Departments have also been receiving money from the Ad-hoc CAMPA (see chapter 3 for more details). This money has been collected over the years towards compensating for or payment of Net Present Value (NPV) for the diversion of forest land for non-forest use such as mining, industrial or infrastructure expansion in the country.

The experience shows that this money accessed through the Annual Plan of Operations (APOs) is being used for almost exactly the same purposes by the State Forest Departments as has been done through other afforestation schemes and programmes till date. For instance, the state of Uttarakhand has allocated Rs. 62.5 lakhs for plantations

through local Joint Forest Management (JFM) committees. Karnataka, in its APO, has also proposed monoculture plantations including commercial plants like biofuels. These plantations are to be taken up in places near the existing JFM committees with a total budget of Rs 1379.25 lakhs under the head of assisted natural regeneration. Similarly Madhya Pradesh has proposed 38.8% and Himachal Pradesh has proposed 28.4% for plantations out of their total proposed NPV budget for 2010-2011 (Kohli et al, 2011).

Five Issues around GIM

1. The commodification question: It is in the GIM that the various processes which have either treated forests as commodities or conservation enclosures find a place. The financing of the GIM is through the CAMPA, REDD and carbon forest markets all of which treat forests as a mobile, tradable commodity either at the national or the global scale. Each time the unit of measurement changes, it adds more money to the forest coffers, either through the pretext of diversion or conservation. The GIM also works well within a global system where it is possible to show forests as sovereign assets which can be made available, at a cost, to provide carbon forest credits to global players. The money that is generated then essentially takes forward revamped afforestation practices hitherto with the claims to being supportive of the community, traditional knowledge, landscape and biodiversity conservation. For both instances to work successfully requires the support of greater centralisation and institutionalisation of forest management.

2. The deforestation question: One of the foremost issues with the GIM is that it

completely evades the question of restricting deforestation in the country. India has presented itself internationally in the climate change debates as a country which has stabilised its forest loss. Therefore the GIM document completely misses the goal that the large scale diversion of forest land for non-forest use towards industrial expansion, which is facilitated through domestic legislations, needs to be minimised. The focus in the Mission is not as much about addressing the factors adding to the climate crisis but looking at adaptation and mitigation measures proposed as part of the NAPCC. So while the Mission remains silent on reducing deforestation in the country it speaks of “enhancing carbon sinks in sustainably managed forests and other ecosystems”.

3. The commons question: A major area of intervention of the GIM is in semi degraded and degraded forests as well as agricultural and non-agricultural fallows. These lands which the GIM identifies as wastelands are already under multiple yet formally unrecognised community uses, such as for grazing or as part of shifting cultivation cycles. According to Sharad Lele of ATREE, the potential availability of such wastelands and/or degraded forest lands is overestimated. Since they are already under heavy use, their transfer to afforestation schemes is likely to impact the socio-economic conditions of communities dependent on them. (Lele, 2011). Moreover uncultivated fallows are also areas located in dryland regions which have been rendered unusable due to administrative neglect. It is these lands attributed to be marginal, which have and continue to be cultivated for millets and other rainfed dryland agricultural crops. (Millet Network of India et al, 2009).

4. The access question: It has been highlighted by forest people's movements that afforestation programmes on shifting cultivation fallows, village commons and community pasture lands change the nature of these ecosystems as well as directly reduce people's access to forest produce and animal fodder. A critique by Campaign for Survival and Dignity points out that in October 2008, the Standing Committee on Environment and Forests sharply criticised such programs. It said "afforestation ... deprives forest dwellers and activists of some or all of their lands and impacts their livelihoods and basic needs – for which they are neither informed, nor consulted, nor compensated." (Department Related Parliamentary Standing Committee, 2008; Campaign for Survival and Dignity, 2011)

5. The finance question: The success of the GIM hinges directly on the finances that get generated through the expected sources. For the CAMPA to be a contributor implies that

more land would need to be diverted for non forest use and the authority procure more money through compensatory afforestation and NPV. It also seeks that all the activities that are carried out under the Mission would, in one way or the other, be linked to a carbon funding or trading mechanism, specifically REDD or REDD+. Even though many other funding sources are envisaged, it is unlikely that a Mission to green India as a climate adaptation strategy would not respond to carbon trading mechanisms in the offing. The linkage to the REDD Plus cell makes the connection stronger. However, as mentioned in the previous section, whether or not forest carbon offset schemes like REDD will operate through grants or through the market will largely depend on whether there is a globally binding agreement on emissions reductions in the near future. No private sector player is likely to be interested in carbon offsetting if there are no binding targets to reduce emissions.



5

LOOKING BACK: OUR SUSPICIONS AND SPECULATIONS

The last four chapters in this study have highlighted the various principles that have guided the practices of compensation and valuation that have intensified the commodification of forests. Its latest manifestation is the Green India Mission that proposes large scale afforestation and forest management as India's response to adapt to and mitigate climate change impacts. As cited in Chapter 3, the logics of forest valuation make it possible to explain the 'trade-offs' between official conservation and aspirations for industrialisation. The administrative procedures for the diversion of forest land for non-forest use related to industrial and infrastructural expansion allows the government to make claims of conservation and sustainable use even as it permits the submergence, uprooting and displacing of forests and forest dependent lives irrespective of scale, location and context.

The speculations and suspicions aired below, attempt to understand the interplay of multiple forms of compensatory practices largely based on the different exchange value of forests. What will the carbon based valuation alongside existing mechanisms based on land and tree density do to forest governance, forest regulation and forest conflicts? When it began, compensatory afforestation was expected to be taken up at the locations closest to where the diversion was to take place. Subsequently, regulation has allowed for compensatory plantations in neighbouring districts and states. Today, the programmes such as REDD and REDD+ speak of allowing carbon emitters to undertake compensatory activities anywhere possible. The ecological consequences of this are best explained by those trained in the discipline. We attempt to think through what the new forms of valuation and compensation mean to the social nature of regulated forests.



Photo credit: Ashish Kothari

Public consultation of the MoEF Forest Rights Act Monitoring Committee in Phulwari ki Naal Sanctuary, Rajasthan

Forest Governance

Movements, social groups and NGOs working in the field of forest governance in India have maintained that it is a hypercentralised form of governance. The use of forests for any “other” purpose continues to be decided by the Central Government. The federal nature of India’s constitution has allowed for negotiations between state and central governments to plan for forest based land use or its conversion for a non-forest purpose. This process has largely isolated forest dependent and tribal communities from forest governance except when there is a piecemeal requirement for their participation. The diversion of land, determining the cost of forests to be used by project proponents, disbursing finances for forestry schemes and identifying land for compensation have essentially been managed through Centre-State negotiations.

The GIM is an effort to project to the world that India is ready to be REDD+ compliant and that it will strive to fortify its conservation efforts as well as bring more areas under forest cover to increase its carbon sequestration value. The mere announcement of the GIM will direct how Forest Departments (through whom the schemes will be implemented) plan and reorganise their work on the ground towards these objectives and in anticipation of the projected funds. With the plans in place, ground level work will begin no matter which way the global negotiations go on forest offset schemes. The entire plan does not have to materialise for actions related to the GIM to get started on the ground as these actions are already entrenched in existing forestry practices.

The proposed offset mechanisms like REDD and REDD+ will bring in newer ways of enumerating and valuing forests. If these funds are realised, their allocations are to old, known forestry institutions and through already established channels. So the outcomes of these schemes may be predictable. REDD and forest carbon finance partnerships are now sought to be facilitated by the Union Government of India. Therefore it is very likely that the Central Government will continue to control the cash flow for forestry activities. At present this financing is through CAMPA funds which are transferred to the State Forest Departments based on their Annual Plans of Operations. The National Mission for a Green India (GIM) is a scheme which consolidates the existing forest sector use and afforestation activities and also hopes to collect more funds for this in the name of mitigating climate impacts.

Forest Regulation

The official regulation of forests based on cost-benefit analyses views forests as land, trees or as providers of services such as livelihoods or carbon sequestration, all of which can be quantified. However, these multiple ways of valuing forests are applied arbitrarily in different contexts by those incharge of regulation. So even though it appears that one regulatory framework is used to arrive at decisions that are objective and standardised, the items selected for valuation and the values assigned to them are subject to a range of factors. Several decisions of the forest bureaucracy to allow mining or other construction in Protected Areas from where people have been displaced and to encourage tourism in forests where grazing or other livelihoods have been brought to a

halt are made to seem rational and compliant with the objectives of conservation and sustainability.

Forest land that was under JFM was handed over for the proponents of the Human Dam in Chandrapur district in Maharashtra (Menon, 2004). A forest area that was created and managed by the collaborative efforts of the department and community was turned over for the project by a unilateral decision of the Forest Department that valued the project as being more beneficial than the forest. The very same department may have convinced the community to bear the costs of loss of forest livelihoods prior to setting up the JFM initiative.

The very same consequences are likely to occur to the forests created or conserved as carbon stocks. Based on the preferred system of valuation at any given time, plantations that might get created on common lands, wastelands, jhum plots and other multiple use areas can be diverted for non-forest use if the latter seems more beneficial in monetary terms.

The valuation by carbon can be extended to all trees/plantations unlike earlier systems of valuation that mostly came into operation when forests or forest land was needed for non forest purposes. So, without appearing to be a forest destructive economy, the forest bureaucracy may be able to earn both from diversion of forest land as well as from bringing more non forest areas under carbon stocks. The new losers in this context will be those who presently use the lands on which plantations may be proposed.

If funds under the REDD+ scheme are awarded to India it will be based on the

country's forest conservation status. In order to be eligible for funds we will need to always show that our forest cover is increasing. To be able to show this, even as we continue to divert more and more forests towards an aggressive industrialisation process, our forest statistics will need to be trumped up. What this means is that while forest diversion will continue in India under the domestic regulation, we will always have an skewed, underestimated picture of forest loss.

There also remains the question about how a country like India will deal with its domestic users of forests which include projects proponents of large industrial and infrastructure projects. At what level would they offset their use of forests? This disconnect continues to remain a strong and unresolved issue.

Forest Conflicts

Today, the GIM sees the recognition of rights of forest dependent communities as an important component of the implementation of the schemes of the Mission. This could result in financial flows to communities as well. What is likely to happen to forest dependent people if large amounts money flow through market based schemes and REDD+ for the conservation of forests as carbon stocks? What would it do to dissenting voices or marginal groups within a community or village? Elite capture of existing participatory forestry schemes and the consequent marginalising of poor people in a community have been highlighted in studies (Lele, 2011). There are apprehensions on how the flow of money into a local context would change the reasons for and manner by which people conserve forests. Several areas

where conservation used to take place under various conditions were brought under JFM and other official schemes. However, after official recognition, the conservation activity continued only till the time it was monetarily lucrative to do so.

On the contrary, there is also a possibility that the hypercentralisation of valuation and decision making on forests could strengthen counter trends and lead to greater mobilisation among forest affected communities. This is evident already with a growing number of ground level and legal challenges to forest diversion and land acquisition for various infrastructure projects. Several networks and coalitions of forest workers and forest peoples from around

the world are making their voices heard at the climate negotiations. These counter trends could alter the manner in which global climate mitigation schemes would be allowed to operate or not.

One needs to bear in mind that carbon stocks are still an uncertain investment and in the absence of a global climate agreement on emissions, there is no certainty that the carbon market will operate. While the GIM does not depend entirely on carbon driven funds in the form of grants or offsets, it could be implemented even without these. Moreover, its implementation is possible simply because it proposes to undertake activities that have been part of the Forest Department's operations for long now.



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The governance of forests in India has been a complex realm to unravel. Due to the multiple claims to ownership, jurisdiction and management of forests through India's modern history, forests have remained a subject of intrigue for all those trying to understand the complex legalities that have operated within a single space. It is in this arena that the legal processes for the diversion of forests for non forest use has been practiced.

The strategies of valuation of and compensation of forest loss are central to forest regulation in India. They have converted forests into decontextualised, mobile and tradable commodities between regions. In this book we seek to explain how this is achieved and look at the continuity between the domestic regulation on forests and the new abstractions created by the climate change discourse in the form of REDD and REDD+. While the models of valuation differ, the effects on the commodification of forests deepen as greater mobility is created and trading across countries and continents is made possible through real time climate mitigation plan and forestry schemes.