

Legislative Brief

The Compensatory Afforestation Fund Bill, 2008

The Bill was introduced in the Lok Sabha on 5th May 2008 and was referred to the Standing Committee on Science & Technology, Environment & Forests (Chairperson: Shri V. Maitreyan).

The Standing Committee is scheduled to submit its report within three months.

Recent Briefs:

[The Paramedical and Physiotherapy Central Councils Bill, 2007](#)
June 27, 2008

[The Drugs and Cosmetics \(Amendment\) Bill, 2007](#)
April 29, 2008

Sarita Vanka
sarita@prsindia.org

July 22, 2008

Highlights of the Bill

- ◆ When forest land is diverted for non-forest purposes, the user must provide money for compensatory afforestation (planting of trees on another piece of land). The user must also pay compensation for the loss of environmental services provided by the forest land due to the diversion.
- ◆ The Bill creates a permanent Compensatory Afforestation Fund (CAF), under the Public Account of India, to receive the money collected as compensation for the diverted forest land. Money in the ad hoc fund (established by a Supreme Court order) shall be transferred to CAF.
- ◆ The money in CAF shall be used for the development, maintenance and protection of forests and wildlife, and the Green India programme.
- ◆ Afforestation money collected from a state shall only be used within that state. If the diversion of forest land affects multiple states, the money allotted for one state may be used in adjoining states.
- ◆ CAF shall be controlled by the central government and managed by the Compensatory Afforestation Fund Management and Planning Authority (CAMPA). CAMPA shall consist of a governing body, an executive body, and a monitoring group.

Key Issues and Analysis

- ◆ CAMPA shall release money to the states to carry out afforestation work. The Bill also requires CAMPA to 'accomplish' the afforestation work. Whereas CAMPA has the power to manage and monitor funds, it does not have any power to direct implementation agencies (which are state government bodies) to comply.
- ◆ Of the total required afforestation, about 42% has been completed as of May 2008. Some states have completed less than 1% while other states have completed almost 90% of the required afforestation.
- ◆ Net Present Value (NPV) is used to estimate the loss of environmental services that are provided by the forest area which is being diverted. The Bill states that NPV calculations may be revised periodically by an expert committee. The Bill does not make it mandatory for the government to revise NPV at periodic intervals.
- ◆ The Bill states that all money collected for 'additional compensatory afforestation' and 'catchment area treatment plan' shall be deposited in CAF. The Bill does not provide a definition for either term.

PART A: HIGHLIGHTS OF THE BILL¹

Context

India has 677 thousand square kilometres of forest cover, which is approximately 21% of the total geographic area.² The Forest Survey of India 2005 classifies forest cover as land with either very dense forests (2%), moderately dense forest (10%), and open forest (9%).^{3,4} States with the largest amount of area under forest cover include Madhya Pradesh, Arunachal Pradesh, Chattisgarh, Orissa, and Maharashtra, while several northeast states have the highest proportion of geographic area under forest cover. Between the Forest Surveys of 2003 and 2005, some states such as Madhya Pradesh, Chattisgarh, Gujarat, Assam, Nagaland, Manipur, and the Andaman & Nicobar Islands have seen a reduction in forest cover. In these states, approximately 728 square kilometres of forest land (about 0.1% of forest cover) were lost due to shifting cultivation, tsunami destruction, dam projects, and legal and illicit tree felling.

Several laws govern the use and protection of forest land in India. For example, the Forest (Conservation) Act, 1980 specifies conditions under which the central government may grant permission for the diversion of forest land for non-forest purposes.⁵ All projects that are approved for diversions of land are required to pay money for afforestation (planting of trees) work elsewhere. Since the Act came into force, approximately 11,500 square kilometres of land has been diverted for non-forest purposes across the country.⁶ Currently, 410 applications for forest clearances are pending with the centre and 1,494 applications are pending with the states.⁷

In the *T.N Godavarman Thirumalpad vs. Union of India* case, the Supreme Court issued several orders regarding the valuation of forests and management of afforestation funds. (The case was filed in 1995 and a final judgement is still pending.) In 2002, the Supreme Court directed the centre to pool money from the diversion of forest land into a central fund. In 2006, the Supreme Court ordered the creation of an ad hoc Compensatory Afforestation Fund Management and Planning Authority to collect all afforestation money. The Compensatory Afforestation Fund Bill, 2008 creates the Compensatory Afforestation Fund to collect all money from the diversion of forest land for afforestation purposes. The Bill also creates a permanent Compensatory Afforestation Fund Management and Planning Authority (CAMPA) to manage and utilise these funds.

Key Features

Compensation for Diverting Forest Land

- The Forest (Conservation) Act, 1980 requires user agencies that divert forest land to pay a certain amount of money for 'compensatory afforestation'. Compensatory afforestation is defined in this Bill as afforestation that is done when forest land is diverted for non-forestry use.
- The Supreme Court directed user agencies to pay a sum based on the 'net present value' of the diverted forest land.⁸ The Bill defines 'net present value' as the quantification of the environmental services provided for the diverted forest area. This calculation shall be periodically determined by a centrally appointed expert committee.
- The Bill defines 'environmental services' as: (i) wood, non-timber forest produce, fuel, etc; (ii) benefits such as regulation of climate, disease control, flood moderation, etc; and (iii) non-material benefits received from ecosystems such as spiritual, educational, etc.
- The Bill also defines 'penal compensatory afforestation' as extra afforestation work to be completed when non-forest activities have been carried out without prior approval from the relevant authority.

The Compensatory Afforestation Fund

- The Bill establishes the Compensatory Afforestation Fund (CAF), under the Public Account of India^{*}, to receive the money collected for compensatory afforestation. The money shall be held in an interest bearing non-lapsable fund with yearly interest rates determined by the central government.
- Money in the ad hoc fund (established by the Supreme Court order) shall be transferred to CAF. The sources of funds for CAF shall include: (i) all money for compensatory, additional compensatory, and penal compensatory afforestation; (ii) money collected under the Wild Life (Protection) Act, 1972 for biodiversity and wildlife protection; (iii) NPV money; (iv) money for catchment area treatment plans; and (v) grants, loans, and donations.

* Government receipts and expenditures are kept in three funds: (i) the Consolidated Fund; (ii) Contingency Fund; (iii) the Public Account. All revenue, loans, and receipts from the recovery of loans form the Consolidated Fund. Money held in provident funds, small savings, government income for expenditures on specific projects, etc form the Public Account. Funds in the Public Account must be utilised for the specific purpose assigned to them.

Compensatory Afforestation Fund Management and Planning Authority

- CAF shall be controlled by the central government and managed by the Compensatory Afforestation Fund Management and Planning Authority (CAMPA). CAMPA shall consist of a governing body and shall be assisted by an executive body, a monitoring group, and an administrative support mechanism.
- The central government may appoint an officer of the rank of inspector general of forests as both CEO and member-secretary of the governing and executive body. The CAMPA shall appoint a conservator of forests, deputy conservator of forests, and a financial advisor and chief accounts officer. Table 1 explains the functions of each CAMPA body.

Table 1: Structure and Responsibilities of CAMPA

Body	Composition	Functions
Governing Body	14 government officials from relevant ministries, 3 principal chief conservators of forests on yearly rotation, 1 inspector general of forests, and three NGO experts	Oversee the Green India programme, watershed development or forest conservation works in forest area financed under the Fund; maintain a separate account for wildlife protection funds; fundraising and resource mobilization; approve rules for management of CAF, and establish guidelines for allocation of funds; submit yearly progress reports on all programmes to Parliament and the public; approve annual report.
Executive Body	7 government officials from relevant ministries; 1 inspector general of forests; chairman of NABARD; 3 non-official wildlife, forestry and forest development experts; CEO of CAMPA	Approve work plans and deployment of funds and staff; delegation of financial or administrative powers; financial procedure; investment of funds, and decides expenditures on establishment and other overheads subject to approval by the Governing Body; power to withhold funds released to a state or union territory if not being utilised properly; and maintain public information system on CAMPA.
Monitoring Group	6 field experts in environment, wildlife, forest, and social sector	Create a system for monitoring and evaluating projects by the states; inspect and audit projects; and create transparent and accountability measures.

Sources: The Compensatory Afforestation Fund Bill, 2008; PRS.

Utilisation of CAF

- The money in CAF shall be used for the development, maintenance and protection of forests and wildlife, other afforestation projects as prescribed by the central government, and the Green India programme. The Green India programme is a central government initiative for the afforestation of degraded forest land. The programme shall receive partial funding from CAF and raise the remainder from various other sources.
- The central government may makes rules to constitute the state management committee, state steering committee, and joint forest management committee. The money shall be released in pre-determined instalments to the state management committee according to an annual operation plan. The money may also be used for site specific schemes that are received along with the proposals for diversion of forest land.
- All money collected under the decision of the standing committee* of the National Board for Wildlife or the Supreme Court orders on diversion of protected land shall form the Fund’s corpus (principal amount). The income shall be used exclusively for conservation activities in protected areas and only in special cases may a portion of the corpus be used.
- Afforestation money collected from a state shall only be used within that state. If the diversion of forest land adversely affects multiple states, the money allotted for one state may be used in adjoining states.
- CAMPA, after receipt of money, shall complete the afforestation within one year or two growing seasons after project completion.

PART B: KEY ISSUES AND ANALYSIS

Powers and Duties of CAMPA

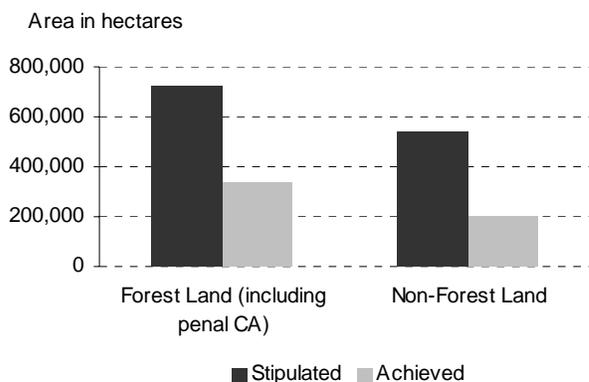
Clauses:
6(2), 6(6) &
6(8)

CAMPA shall release the afforestation money to the states who will undertake the afforestation work through the joint forest management committees. The Bill requires CAMPA to ‘accomplish’ all afforestation work within one year or two growing seasons. Whereas CAMPA has the power to manage and monitor funds, it does not have any power to direct the implementation agencies (which are state government bodies) to comply.

* The Standing Committee of the National Board for Wildlife was constituted in 2003 and undertakes work related to conservation and development of wildlife, makes recommendations and advises on projects related to wildlife, and reviews the progress of wildlife conservation projects.

Afforestation Data

Figure 1: Total Compensatory Afforestation from October 1980-May 2008



Sources: Handbook of Forest (Conservation) Act, 1980 with Guidelines & Clarification, Ministry of Environment and Forests; PRS.

Since the Forest (Conservation) Act, 1980, the government has approved 17,569 cases (including in-principle approvals) for the diversion of nearly 11,50,000 hectares (11,500 sq km) of land. The types of projects approved for diversion include defence, power, mining, forest village conversions, regularisation of encroachments, roads, railways, schools, and rehabilitation. While 75% of approved cases are for projects with an area below 5 hectares, 9% of cases with a project area above 40 hectares account for nearly 95% of the diverted area.⁶ Figure 1 shows the total amount of afforestation mandated by the government since the 1980 Act, and the amount achieved. Completed afforestation varies with some states completing 90% of the required afforestation and others less than 1%.^{6,9} Of the total stipulated afforestation, approximately 42% has been completed across India as of May 2008.

Net Present Value

Clause 2(g) In the context of this Bill, Net Present Value (NPV)^{*} is used to estimate the loss of environmental services that are provided by the forest area which is being diverted. Initially, only money for compensatory afforestation was collected from user agencies that diverted forest land. In 2002, the Supreme Court recommended that in addition to compensatory afforestation, net present value shall also be charged at Rs 5.80-9.20 lakh per hectare depending on the quality and density of the land diverted. The Ministry of Environment and Forests complied with these orders and instructed states to collect money for all projects where Stage-I approval had been granted after October 30, 2002.¹⁰

The Bill specifies that the NPV will be determined by an expert committee appointed by the central government. In 2005, the Supreme Court constituted an expert committee (Chairperson: Kanchan Chopra) to review and determine the appropriate methodology for calculating NPV. Its findings were discussed with the Supreme Court constituted Central Empowered Committee (CEC), which submitted its own recommendations on NPV calculations. Some recommendations from both the committees are listed in Table 2.

Table 2: Committee Recommendations on NPV Computation

Issue	Kanchan Chopra Committee	Central Empowered Committee
Classification	Determines forest area (having tree canopy cover of more than 10% over an area of more than 0.5 hectares) on a case by case basis; methodology includes Seth & Champion ¹¹ (classification based on forest type), density cover, tree species, altitude, slope, and aspect of forest, soil depths	Uses classification of Seth & Champion where forest are divided into 16 major groups and 221 types and subtypes; also groups forest types into 6 ecological classes based on density, tree cover, and other weightage factors;
Eco-Services Valued for NPV	Annual value of eco-services is calculated by estimating the annual value and annual costs of timber, fuel wood, carbon storage value, non-timber forest products, fodder, eco-tourism, and watershed services	Average net present value per hectare is calculated by estimating the value of timber and fuel wood, non-timber forest produce, fodder, eco-tourism, bio-prospecting, ecological services of forest, flagship species, and carbon sequestration
Location Specific Value	Gives the methodology for calculating the NPV for forest goods and services, but recommends a site specific computation	Uses an estimated average NPV value of the country's forests to create a matrix of per hectare costs based on eco-classes and forest density
Discount Rate	Recommends a 5% discount rate calculated over 20 years; revisions should be done every 5 years	Uses a 4% discount; revisions should be done every five years based on the forest cover assessment and the change in the wholesale price index
Use of NPV Money	Three-tier fund at the central, state, and local levels; money should be divided among stakeholders	Money should go into the Compensatory Afforestation Fund. Allows for the diversion of protected areas at a cost of 10 times the standardised NPV.

Sources: Report of the Expert Committee on Net Present Value (Kanchan Chopra Committee) 2006; Central Empowered Committee, Ministry of Environments and Forests; PRS.

^{*} Net present value (NPV) is a method of valuing a project based on what its future earnings or cash flows are worth today. Since a unit of money today is not worth the same at a point in the future, such cash flows have to be adjusted using a discount rate (which is similar to an interest rate). As the discount rate increases, the NPV of a project falls, and vice versa.

Revisions of NPV

Clause 2(g) Both the CEC and the Chopra Committee recommend revising NPV calculations every five years. The Bill states that NPV may be determined by a central committee from time to time. The Bill does not make it mandatory for the government to revise NPV at periodic intervals.

Central Laws and Key Supreme Court Judgements

Several central laws and key orders in the 1995 Supreme Court case *T.N. Godavarman Thirumalpad vs. Union of India* also relate specifically to the protection and use of forests. Table 3 lists some of the relevant provisions that govern the diversion of forest land for non-forest purposes and afforestation.

Table 3: Key Laws, Policies and Orders

Act/ Policy/ Order	Highlights
The Indian Forest Act, 1927	Consolidates law relating to forests and regulation of forest produce; gives the government power to reserve and de-reserve forests and notify forest-land and waste-land as 'protected forests'; allows government to protect forests for special purposes; and regulates the transit of forest-produce.
The Forest (Conservation) Act, 1980	Restricts the dereservation of reserved forests and use of forest land for non-forest purposes; establishes the process for submission of proposals for diversion of forest land; and creates an advisory committee for granting clearances.
The Wildlife (Protection) Act, 1972	Protects wildlife, plants, and birds; gives the government power to declare certain areas as 'sanctuaries' and 'national parks'; prohibits certain activities in national parks, reserved forests, and sanctuaries.
National Forest Policy (1988)	Examines environmental and social costs and benefits for any diversion of forest land for non-forest purposes. Development projects (dams, reservoirs, mining, etc) should be consistent with conservation needs and include funds for regeneration/compensatory afforestation; mining projects should regenerate the deforested area and no leases should be granted without a proper environment management plan and enforcement by the ministry.
T.N Godavarman Thirumalpad vs. Union of India--12.12.96 order	Extends the meaning of forests under the Forest (Conservation) Act, 1980 to include the dictionary definition of forests and any area recorded as forest in the government records regardless of ownership.
T.N Godavarman Thirumalpad vs. Union of India—13.11.00 order	States that until further orders, dereservation of forests, sanctuaries, and national parks is not permitted.
T.N Godavarman Thirumalpad vs. Union of India—29.10.02 order	Directs the central government to create a compensatory afforestation fund and managing authority to collect and distribute all the money received for compensatory afforestation; user agency shall also pay the net present value between Rs 5.80 - 9.20 lakh per hectare of forest depending on the quantity and density of land converted for non-forest use; all funds collected to date shall be transferred to the fund; the money shall be used for regeneration and protection of forests.
T.N Godavarman Thirumalpad vs. Union of India--26.09.05 order	Establishes the Kanchan Chopra Committee to examine the issue of net present value, identify parameters and methodology for valuation of forest land, and determine user costs and compensation for forest land.

Sources: The Indian Forest Act, 1927; The Forest (Conservation) Act, 1980; The Wildlife (Protection) Act, 1972; The National Forest Policy (1988); WP No. 202/1995 (12.12.96); I.A. No. 2 in WP No. 337/1995 (13.11.00); I.A. No 566 in WP (C) No. 202/1995 (39.10.02); WP (C) 202/1995 (26.09.05); Handbook of Forest (Conservation) Act, 1980 with Guidelines & Clarification, Ministry of Environment and Forests; PRS.

Forest Funds in Other Countries

Many countries have forest funds that collect money for conservation, forest regeneration, and related projects. The sources of revenue and utilization of the money differ by country, and some countries have multiple forest funds.¹²

Table 4: Some Forest Funds in Other Countries

Country	Details of the Funds
Brazil	Has multiple forest funds including a reforestation fund which is funded by a reforestation tax; a 2005 national forest development fund was created to manage funds received from public forest concessions
Indonesia	Collects income from tax on forest products and other materials in the reforestation fund; funds are spent for reforestation, rehabilitation of land, and plantation development in non-productive forest
Senegal	Includes money from sale of forestry goods and local auctions in forestry fund; fund is used for conservation of forests and wildlife including management and surveillance of forest areas, education, and information
United States	Has at least 23 trust funds and 47 special accounts at the federal level under the U.S. forest service; the Knuston-Vandenberg Fund is one of the larger funds and reserves 100% of sale of timber for reforestation or timber stand improvement; individual states also have their own forest trusts
Uruguay	Collects income from government payments, fines, loans, donations, etc in the forest fund; money is kept in the Bank of the Republic; money must be used for long-term forest development

Sources: Compiled from 'An Overview of National Forest Funds: Current Approaches and Future Opportunities', Food and Agriculture Organization, Jan 2001; New Brazilian forest law helps fight illegal deforestation, World Wildlife Fund News Archive, July 8, 2005; PRS.

Definitions

Clause 3(4i) The Bill states that all money collected for 'additional compensatory afforestation' and 'catchment area treatment plan' shall be deposited in CAF. The Bill does not provide a definition for either term.

Notes

1. This Brief has been written on the basis of the Compensatory Afforestation Fund Bill, 2008 , which was introduced in the Lok Sabha on 6th May 2008 and referred to the Standing Committee on Science & Technology, Environment & Forests (Chairperson: Shri V. Maitreyan). The Standing Committee is scheduled to submit its report in three months.
2. 'Forest Cover', State of the Forest (2005), Forest Survey of India. Ministry of Environment and Forests. Chapter 2, See <http://www.fsi.nic.in/sfr2005/chapter2.pdf>.
3. 'Forest Cover', State of the Forest (2005), Forest Survey of India. Ministry of Environment and Forests. Chapter 1, See <http://www.fsi.nic.in/sfr2005/chapter1.pdf>.
4. The Forest Survey of India classifies forest cover into three groups based on canopy density: (i) very dense forests (all land with canopy density of more than 70%); (ii) moderately dense forest (all land with canopy density between 40-70%); and (iii) open forest (all land with canopy density between 10-40%). Mangrove cover is also included in forest cover and is categorised based on density. Non-forest cover is classified into two categories: (i) scrub (all forest land with poor tree growth with a canopy density of less than 10%); and (ii) non-forest cover (any area not included in the previous groups).
5. See the Forest (Conservation) Act, 1980.
6. 'Details/Status of cases received for diversion of forest land for non-forestry purposes under the Forest (Conservation) Act, 1980 (25.10.1980 to 30.05.2008), Web Based Proposal Monitoring System, Monitoring Cell, Forest Conservation Division, Ministry of Environment and Forests. See <http://www.fcps.nic.in>.
7. Calculated by PRS based on data in 'Pending Projects', Forest Clearances Under the Forests Conservation Act, 1980, Ministry of Environment and Forests. See http://164.100.194.13:8080/allied_forclr/.
8. Order dated 30.10.2002 in respect of the T.N Godavarman Thirumalpad vs. Union of India case.
9. The percentage of compensatory afforestation achieved varies among states. States and union territories such as Delhi, Chandigarh, Daman & Diu, Jharkhand, and Pondicherry have completed less than 1% of compensatory afforestation. Madhya Pradesh and Karnataka completed close to 90% of all stipulated compensatory afforestation.
10. Handbook of Forest (Conservation) Act, 1980 with Amendments, Rules, Guidelines and Clarification (Up to June 2004). Ministry of Environment and Forests, Government of India.
11. India's forests are classified based on the 1968 Champion and Seth methodology. Forests are divided into 16 type groups according to temperature and moisture content. The 16 type groups are: (i) tropical wet evergreen forests; (ii) tropical semi-evergreen forests; (iii) tropical moist deciduous forests; (iv) littoral and swamp forests; (v) tropical dry deciduous forests; (vi) tropical thorn forests; (vii) tropical dry evergreen forests; (viii) sub-tropical broad leaved hill forests; (ix) sub-tropical pine forests; (x) sub tropical dry evergreen forests; (xi) montane wet temperate forests; (xii) Himalayan moist temperate forests; (xiii) Himalayan dry temperate forests; (xiv) sub alpine forest; (xv) moist alpine scrub; and (xvi) dry alpine scrub. The type groups are further classified into 46 subgroups and 221 subgroup types based on location specific climatic factors and vegetation formation. See http://unfccc.int/files/methods_and_science/lulucf/application/pdf/080626_india.pdf & http://164.100.194.13/allied_forclr/htmls/CECReport/ReportofCEC.htm.
12. Rosenbaum, Kenneth L & Jonathan M. Lindsay. 'An Overview of National Forest Funds: Current Approaches and Future Opportunities.' Food and Agriculture Organization (Italy), January 2001. See <http://www.fao.org/docrep/003/x6821e/x6821e00.htm>.

DISCLAIMER: This document is being furnished to you for your information. You may choose to reproduce or redistribute this report for non-commercial purposes in part or in full to any other person with due acknowledgement of PRS Legislative Research ("PRS"). The opinions expressed herein are entirely those of the author(s). PRS makes every effort to use reliable and comprehensive information, but PRS does not represent that the contents of the report are accurate or complete. PRS is an independent, not-for-profit group. This document has been prepared without regard to the objectives or opinions of those who may receive it.