

ENVIRONMENTAL ACCOUNTING AND ENVIRONMENTAL SUSTAINABILITY ON FOREST: TOWARDS SUSTAINABLE DEVELOPMENT GOALS

¹Dr.E.Prema, ²Dr. P.R.L.Rajavenkatesan, ³Dr.S.Parthiban

¹Assistant Dean & Associate Professor (Senior), VIT School of Law, Vellore Institute of Technology, Chennai- 600127.

²Associate Professor (Senior), VIT School of Law, Vellore Institute of Technology, Chennai- 600127.

³Assistant Professor, Department of Politics and Public Administration, University of Madras, Chennai-600 005.

ABSTRACT

Environmental accounting has assumed significance and played major role in policy and decision making and directly linked with the Sustainable Development Goals (SDG) due to the globalization, urbanization, and industrialization. In recent days, there are mushrooming companies and other organizations involved in environmental management to deal with the environmental issues and to carry out environmental conservation activities. Environmental accounting is a mechanism to supplement environmental management. There are authorities to look after the environment accounting in India such as System of Integrated Environmental and Economic Accounting etc., The purpose of environmental accounting plays a major role in identify resource use, measures and communicate costs of a company's or national economic impact on the environment. The cost is as follows: clean up contaminated sites, fines, and taxes, buying of pollution prevention technologies and waste management costs. On the other hand, environmental sustainability is much debatable issues after the 2030 agenda for sustainable development adopted by all United Nations Member States in 2015. The For instance, Compensatory Afforestation Fund Management and Planning Authority (CAMPA) focuses on principle of ecosystem accounting which provides platform for payment of ecosystem services. The environmental accounts, on basis of CAMPA, is linked with SDG 15 for the forest ecosystem. This study focuses on environmental accounting and sustainability keeping the sustainable development in mind and also to discuss the contemporary issues of environmental sustainability on forest.

Keywords: *Afforestation, Forest, Environmental accounts, Pollution, Sustainable development goals and Urbanization.*

INTRODUCTION

The International Monetary Fund (IMF) predicts that by 2027, India would become third largest economy in the world. According to the statements of Prashant Bhushan “ the right to environmental protection has been whimsically applied by individual judges according to their own subjective preferences usually without clear principles guiding them about the circumstances in which the court issue a mandamus for environmental protection. It appears that when socio-economic rights of the poor come into conflict with environmental protection

the court has often subordinated those rights to environmental protection. On the other hand, when environmental protection comes into conflict with what is perceived by the court to be 'development issues' or powerful commercial, vested interests, environmental protection is often sacrificed at the altar of 'development' or similar powerful interests." As an indispensable tool, environmental accounting bridges the gap in application of the concept of sustainable development. Environmental accounting extends its role to measure environmental conservation and also designated for the measurement of adverse environmental impacts. The environmental accountability is considered as major concept and have wider international attention. In the last few decades, the world underwent rapid transformation in terms of development, trade, urbanization, and human growth. These transformations did not happen in a day. There is a connectivity between environmental sustainability and forest. Man made sustained efforts to progress the human civilization to the present times of rapid exponential growth. Now, human beings, on account of these transformations, enjoy seamless travel experiences, instant connectivity, and mobility. But these progresses come at the cost of environmental degradation. Every human progress, in the last few decades, was made by destroying forest life and its allied ecosystem. Forest land occupied much of the space and possessed resources which were of necessity to human beings. Man sensed this requirement and began to trespass into forest land in search of resources and slowly encroached it. Over a period, forest land faced depletion and it is during this time world community began to sense the need to protect and safeguard the green cover and began to reverse the loss of forests. This process is known as compensatory afforestation. "Compensatory Afforestation (CA) is defined as the process of [afforestation](#), and associated regeneration activities are done to compensate for destroyed forest land that has been diverted to non-forest activities." (Ghosh 2017).

RESEARCH METHODOLOGY

The nature of the study done is doctrinal in nature with the usage of primary and secondary sources available related to the topic. The primary resources used for the study include international conventions and national legislations and national and international judgments while the secondary sources consist of articles, journals, books, and other sources related.

Research Question

The research questions are:

1. Is there a shift of environmental accountability from the powerful to the powerless?
2. Is environmental accountability implemented in a stricter sense or not?
3. Can environmental sustainability be achieved with stringent penalization for environmental crimes done?

REVIEW OF LITERATURE

Polluter-Pays-Principle: The Cardinal Instrument for Addressing Climate Change by *Mizan R. Khan* is an article that details and gives a clear understanding of the polluter pays principle. The author raises a question of the need of hour, that "why do the polluters not take responsibility for their actions, instead let the global society suffer?" The author here expresses his concern about the population of people being affected by the actions of the polluters and the need for them being called to pay without doing any harm to the environment. He talks

about the payment of carbon tax, an emerging consensus, also by the victims rather than the polluters. (Khan, 2015, 638).

Environmental Law, a book written by **Dharmendra S. Sengar**, Former Director of the Indian Law Institute, talks about the Environmental law in detail. The author has spoken about the need for sustainable development and the way the Indian Constitution has made protecting the environment a fundamental duty to all the citizens of the republic country. He also explains the various environmental issues present in different sectors and the legal framework available for it (SENGER, 2007).

Environmental Law, a book written by **Dr. S. R. Myneni**, an expert in the field of law, who has written many books detailing various forms of law, has given detailed information about environmental aspects, the present issues being faced, the national and international aspects of environmental law. He has explained the various principles underlying in the context of environmental law with a much detailed view about the polluter pays principle. The book that almost every law student turns to, has also explained about the fundamental duties of every citizen of the nation to be done in lieu with protecting the environment, in a way safeguarding himself and also the future generations (Dr. S.R. Myneni, 2008).

The "Polluter Pays Principle": Should Liability Be Extended When The Polluter Cannot Pay?, is an article written by **James Boyd and Daniel E. Ingberman**. This article as the title suggests, conveys a clear understanding about the polluter pays principle and the liability issues included in it. The authors in their study have found out that while extending the liability under the principle in discussion from the polluters to the contractors of them, the contractors if they are wealthy they are required to pay equally as like the polluter. But, contractors may avoid a given polluter simply because less wealthy contractors purchase from it. This is an interesting study conducted decades ago but still applicable (Boyd & Ingberman, 1996).

Accountability in Global Environmental Governance: A Meaningful Tool for Action?, written by **Teresa Kramarz and Susan Park**, is an article that emphasizes the need of Environmental Accountability for governance. The authors in their research have given means by which accountability can act as a powerful tool in light of Global environmental governance. The interesting findings that the authors have found in their study is that environmental accountability is present and is being practiced, but it's still considered to be weak as it is just used as a tool for monitoring and compliance rather than the actual purpose being served. They also found out that this situation arises when stakeholders in environmental concerns are consulted after constitutive bounds of what is feasible, already been defined by public, private, or voluntary governments (Kramarz & Park, 2016).

Environmental Law, a book written by **Sumeet Malik**, talks about environmental law being followed in India. The author also gives information about International environmental law, various international conventions and meetings being conducted in the international forum and about various international multilateral agreements and treaties signed between parties. The author of the book has explained the principles of environmental law including the sustainable development principle, the polluter pays principle with sufficient judgments pronounced (Malik, 2008).

Forest and Environmental Sustainability

There is interface between forest and sustainable development. The massive eradication of forest land in India led to many environmental effects which had negative effects on the climate of India. Rapid urbanization, construction of factories on forest land, undertaking of large-scale transportation systems in forest area and a plethora of activities led to ill effects of drastic environmental degradation and depletion of forest cover. This worried many public spirited persons in India. T.N. Godavarman Thirumulpad was one such kind human being India witnessed. Popularly known by various names like 'Green man of India', 'Architect of Forest Protection', he championed the cause of forest protection from depletion. It is pertinent to quote a news article published in *The Telegraph* on his demise – *"A revolt against his family members had awakened the environmentalist in T.N. Godavarman Thirumulpad, born in the royal household Nilambur Kovilakam in Kerala's Malappuram district. The passion grew with time and finally took him to the Supreme Court with a PIL in 1995 to save the precious tropical rain forests that make up the Nilgiri biosphere from the timber mafia. The forests were taken over by state governments from the Kovilakam.*

Subsequent judicial intervention on his petition, which remains open to this day, laid the basis for India's environmental jurisprudence. "The Supreme Court's intervention in the case enlarged the scope of the Forest Conservation Act and to some extent the Wildlife Protection Act of 1972. The petition has since been kept alive by the court by way of what is called a continuing mandamus. Hundreds of environmental litigation have been added to the original petition. The orders saved thousands of hectares of forest across the country from being diverted for non-forest purposes," said P.P. Pramod, deputy conservator of forests (forest resources). Subsequent litigation in the Godavarman case led to the setting up of the landmark Compensatory Afforestation Funds Management and Planning Authority (CAMPA) under chairmanship of the union environment and forest minister to oversee the management of funds raised from those diverting forest land towards afforestation purposes."

It is important to discuss about Supreme Court judgement on forest. The legal genesis for Compensatory Afforestation Fund Management and Planning Authority (CAMPA) was sown by T.N. Godavarman Thirumulpad by filing of a writ petition in Supreme Court. In this instance, the issue is one of forest and ecological conservation, preservation, and protection. The main question under consideration is what steps must be taken to make up for the loss of forest land and to mitigate the effect on the ecology when forest land is used for non-forest purposes. In the case, the Judges took note of the vital role played by the forest in balancing the environment and observed in the opening paragraphs of the judgment as – "Natural resources are the assets of entire nation. It is the obligation of all concerned including Union Government and State Governments to conserve and not waste these resources. Article 48A of the Constitution of India requires the State shall endeavour to protect and improve the environment and to safeguard the forest and wild life of the country. Under Article 51A, it is the duty of every citizen to protect and improve the natural environment including forest, lakes, rivers and wild-life and to have compassion for living creatures. Forests are a vital component to sustain the life support system on the earth. Forests in India have been dwindling over the years for a number of reasons, one of it being the need to use forest area for development activities including economic development. Undoubtedly, in any nation development is also necessary but it has to be consistent with protection of environments and not at the cost of degradation of environments. Any programme, policy or vision for overall development has to

evolve a systemic approach so as to balance economic development and environmental protection. Both have to go hand in hand. In ultimate analysis, economic development at the cost of degradation of environments and depletion of forest cover would not be long lasting. Such development would be counterproductive. Therefore, there is an absolute need to take all precautionary measures when forest lands are sought to be directed for non forest use.”

Contentious Issues Considered by the Court

The question at hand is whether the user agency of such land should not be obliged to make up for any lost benefits resulting from the diversion of forest land for non-forest uses before the diversion occurs. If so, shouldn't the user agency be obliged to pay the Net Present Value (NPV) of the diverted land in order to use the funds received to eventually recoup the benefits that were lost as a result of the diversion? What standards ought to be established for NPV calculation? Should rules be the same for everyone? How is NPV calculated? Is it appropriate to exempt certain projects from paying NPV? These are the primary factors that need to be investigated and determined in light of the many laws. The Supreme Court instructed the Ministry of Environment and Forests (MOEF) to develop a plan that stipulates that in the event that authorization is granted for the conversion of forest land to a non-forest use and that the permission includes a requirement for compensatory afforestation, the entity in question shall assume user agency and be obliged to set aside a certain amount of money for carrying out the necessary actions. In such a scenario, the State Government will be required to supply or make land available for reforestation, and the State Government may choose to pay the user-agencies or its own costs for this land.

Birth of Compensatory Afforestation Fund Scheme

The Supreme Court took note of the recommendations of the Central empowered Committee (CEC) which formed the basis for enactment of an Act by the Central Government. This Committee formulated its recommendations based on the guidelines issued by the environment ministry. Hence it becomes pertinent to quote some of the recommendations –

“(a) in addition to the funds realized for compensatory afforestation, net present value of the forest land diverted for nonforestry purposes shall also be recovered from the user agencies, while according approval under the Forest (Conservation) Act, 1980;

(b) a 'Compensatory Afforestation Fund' shall be created in which all the monies received from the user-agencies towards compensatory afforestation, additional compensatory afforestation, penal compensatory afforestation, net present value of forest land, Catchment Area Treatment Plan funds, etc., shall be deposited. The rules, procedure and composition of the body for management of the Compensatory Afforestation Fund shall be finalized by the Ministry of Environment & Forests with the concurrence of Central Empowered Committee within one month;

(c) the funds received from the user-agencies in cases where forest land diverted falls within Protected Areas i.e. area notified under Section 18, 26A or 35 of the Wild Life (Protection) Act, 1972, for undertaking activities related to protection of biodiversity, wildlife, etc., shall also be deposited in this Fund. Such monies shall be used exclusively for undertaking protection and conservation activities in protected areas of the respective State/UT;

.....

(e) besides artificial regeneration (plantations), the funds shall also be utilized for undertaking assisted natural regeneration, protection of forests and other related activities. For this purpose, site specific plans should be prepared and implemented in a time bound manner;

....

(h) an independent system of concurrent monitoring and evaluation shall be evolved and implemented through the Compensatory Afforestation Fund to ensure effective and proper utilization of funds.”

The Court considered the judgment in *MC Mehta* case wherein it held that After taking into account the opinions of numerous well-known writers and international rulings on ecology and the environment, this Court concluded that the idea that the public has a right to expect that certain lands and natural areas will maintain their natural features is beginning to find its way into the legislation of the land. The public trust doctrine was established on the tenets that certain common properties, like rivers, seashores, forests, and the air, were held by the government in trusteeship for the unrestricted and free use of the general public. The Court acknowledged the doctrine's applicability. For the benefit of humanity as a whole, these natural resources are of such importance that putting them under private ownership would be completely unreasonable. According to the doctrine, the government must safeguard the resources so that everyone can enjoy them, as opposed to allowing private or commercial use. It was decided that the public trust doctrine is a component of the jurisprudence of our English common law legal system. Since natural resources are intended for the general public's use and enjoyment, the State is the custodian of these resources. These resources are for the benefit of the general public. It is legally required of the State, acting as a trustee, to safeguard these natural resources. In the said case (*MC Mehta*) referred above, it was held – *"We are fully aware that the issues presented in this case illustrate the classic struggle between those members of the public who would preserve our rivers, forests, parks and open lands in their pristine purity and those charged with administrative responsibilities who, under the pressures of the changing needs of an increasingly complex society, find it necessary to encroach to some extent upon open lands heretofore considered inviolate to change. The resolution of this conflict in any given case is for the legislature and not the courts. If there is a law made by Parliament or the State Legislatures the courts can serve as an instrument of determining legislative intent in the exercise of its powers of judicial review under the Constitution. But in the absence of any legislation, the executive acting under the doctrine of public trust cannot abdicate the natural resources and convert them into private ownership, or for commercial use. The aesthetic use and the pristine glory of the natural resources, the environment and the ecosystems of our country cannot be permitted to be eroded for private, commercial or any other use unless the courts find it necessary, in good faith, for the public good and in public interest to encroach upon the said resources."*

Compensatory Afforestation Fund Act, 2016

After taking note of submissions made by the parties and recommendations of the Central Empowered Committee (CEC), the Supreme Court passed the following orders which paved way for the Central Government to enact the Compensatory Afforestation Fund Act, 2016 – “1. Except for government projects like hospitals, dispensaries and schools referred to in the body of the judgment, all other projects shall be required to pay NPV though final decision on this matter will be taken after receipt of Expert Committee Report.

2. The payment to CAMPA under notification dated 23rd April, 2004 is constitutional and valid.
3. The amounts are required to be used for achieving ecological plans and for protecting the environment and for the regeneration of forest and maintenance of ecological balance and ecosystems. The payment of NPV is for protection of environment and not in relation to any propriety rights.
4. Fund has been created having regard to the principles of intergenerational justice and to undertake short term and long-term measures.”

The Compensatory Afforestation Fund Act, 2016 – Regulatory Framework

The Supreme Court judgment in writ petition filed by T.N. Godavarman Thirumulpad referred above paved way for the Central Government to enact the Compensatory Afforestation Fund Act, 2016 which mandated setting up of –

1. National Compensatory Afforestation Fund ;
2. State Compensatory Afforestation Fund ;
3. National Compensatory Afforestation Fund Management and Planning Authority ;
4. State Compensatory Afforestation Fund Management and Planning Authority.

The Act mandated setting up of authorities (both at central and state level) consisting of persons of eminence including high ranking officials starting from environment minister to secretaries in the environment ministries both at central and state level and experts from the field of social sciences, forest management, scientists and economists. Further, the Act provided rules respecting manner of utilization of funds namely –

“6. Disbursement and utilisation of State Fund.—*Save as otherwise provided in this Act, the monies available in a State Fund shall be disbursed and utilised in the following manner, namely:—*

(a) the money received for compensatory afforestation, additional compensatory afforestation, penal compensatory afforestation, catchment area treatment plan and for any other site-specific scheme may be used as per site-specific schemes submitted by the State along with the approved proposals for diversion of forest land under the Forest (Conservation) Act, 1980 (69 of 1980);

(b) the monies received towards net present value and penal net present value shall be used for artificial regeneration (plantation), assisted natural regeneration, forest management, forest protection, forest and wildlife related infrastructure development, wildlife protection and management, supply of wood and other forest produce saving devices and other allied activities in the manner as may be prescribed;

(c) the interest accrued on funds available in a State Fund and the interest accrued on all monies collected by the State Governments, which has been placed under the ad hoc Authority and deposited in the nationalised banks, in compliance of the directions of the Supreme Court dated the 5th May, 2006, shall be used for conservation and development of forest and wildlife in the manner as may be prescribed;

(d) all monies realised from the user agencies in accordance with the decision taken by the Standing Committee of the National Board for Wild Life constituted under section 5A of the Wild Life (Protection) Act, 1972 (35 of 1972) or the orders of the Supreme Court involving cases of diversion of forest land in protected areas shall form the corpus and the income therefrom shall be used exclusively for undertaking protection and conservation activities in

protected areas of the State including facilitating voluntary relocation from such protected areas and in exceptional circumstance, a part of the corpus may also be used subject to prior approval of the National Authority;

(e) ten per cent. of amount realised from the user agencies, which has been credited directly into the State Fund in a year shall be transferred to the National Fund to meet expenditure as provided in clause (b) of section 5;

(f) the non-recurring and recurring expenditure for the management of a State Authority including the salary and allowances payable to its officers and other employees may be met from a part of the interest accrued on the amounts available in the State Fund, in the manner as may be prescribed;

(g) in case of trans-boundary forestry or environmental implication of diversion of forest land for non-forest purposes in a particular State, if found expedient and necessary by the National Authority, it may, in consultation with the concerned State Authorities order that such sum as may be justified for reparation of the trans-boundary effects, be transferred to State Fund of such State or States;

(h) State Authority shall release monies to agencies identified for execution of activities in predetermined instalments as per the annual plan of operation finalised by steering committee of such State Authority and executive committee of the National Authority.”

Linkage Between Sustainable Development Goal 15 (SDG 15) and Compensatory Afforestation

The roadmap to a brighter and more sustainable future for everybody is found in the Sustainable Development Goals. They tackle the world's problems, such as those pertaining to poverty, existence of inequalities between varied section of people, the environment, climate change, peace, and justice. The accomplishment of all 17 Goals by 2030 is crucial if we are to leave no one behind because they are all interconnected. SDG 15 seeks to – *“Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.”* Carrying forward this agenda, India enacted, among other notable measures, the Compensatory Afforestation Act, 2016, the significance of which the legislature thought it fit to highlight in the preamble of the Act itself as –

“An Act to provide for the establishment of funds under the public accounts of India and the public accounts of each State and crediting thereto the monies received from the user agencies towards compensatory afforestation, additional compensatory afforestation, penal compensatory afforestation, net present value and all other amounts recovered from such agencies under the Forest (Conservation) Act, 1980; constitution of an authority at national level and at each of the State and Union territory Administration for administration of the funds and to utilise the monies so collected for undertaking artificial regeneration (plantations), assisted natural regeneration, protection of forests, forest related infrastructure development, Green India Programme, wildlife protection and other related activities and for matters connected therewith or incidental thereto.”

CONCLUSION

In the words of Justice Y.K. Sabharwal, “The country’s forest resource is under tremendous pressure. Note has been taken of the fact that India’s biological diversity is

reflected in the heterogeneity of its forest cover. It is one of the 12 'mega-diversity' countries of the world. India is also at the meeting zone of three major zone of three major bio-geographic realms, namely, the Indo-Malayan (the richest in the world), the Eurasian and Afrotropical. India also has the two richest bio-diversity areas, one in the northeast and the other in the Western Ghats. The biological diversity is being conserved through a network of biosphere reserves, national parks and sanctuaries, however, the challenges for conservation emanate from population pressures, adverse impacts of industrialization and intensifying threat from illegal trade."

Degrading the environment has time and again proved to be disastrous to the well being of the entire ecosystem. Past experiences and scientific studies has underscored the need to conserve and present ecosystem to further stop eradication of lives on this planet. World countries felt the need to protect, preserve and promote the ecology in order to ensure happier living on this planet. It is these efforts which paved the way for development of Sustainable Development Goals (SDG) in world arena and enactment of the Compensatory Afforestation Fund Act, 2016 in India. It is suggested that measures adopted in India and the world on forest conservation will be successful only if there is a strong political will prevailing in the minds of the law makers. Commitment, coupled with actual ground level implementation of the eco-schemes will pave the way in ensuring sustainable future for the generations ahead. Further, environmental accountability should be more effective one to achieve the sustainable development goals.

REFERENCES

- [1] Boyd, J., & Ingberman, D. E. (1996). The "Polluter Pays Principle": Should Liability be Extended When the Polluter Cannot Pay? *THE LAW AND ECONOMICS OF INSURANCE*, 21(79), 182 - 203. <https://www.jstor.org/stable/41954091>
- [2] Compensatory Afforestation Fund Act, 2016, § 6, No. 38, Acts of Parliament, 2016 (India).
- [3] Compensatory Afforestation Fund Act, 2016, Preamble, No. 38, Acts of Parliament, 2016 (India).
- [4] Dr. S.R. Myneni. (2008). *Environmental Law*. Asia Law House.
- [5] Ghosh, S. (2017). Compensatory afforestation: 'Compensating' loss of forests or disguising forest off sets? *Economic & Political Weekly*, LII, 38, 67-75 (2017).
- [6] Khan, M. R. (2015, September 23). Polluter-Pays-Principle: The Cardinal Instrument for Addressing Climate Change. *Laws*, 4(3), 638 - 653.
- [7] Kramarz, T., & Park, S. (2016). Accountability in Global Environmental Governance: A Meaningful Tool for Action? *Global Environmental Politics*, 16(2), 1 - 21. https://doi.org/10.1162/GLEP_a_00349
- [8] M.C. Mehta v. Kamal Nath & Ors. [(1997) 1 SCC 388].
- [9] Malik, S. (2008). *Environmental Law* (2nd ed.). Eastern Book Company.
- [10] SENGHER, D. S. (2007). *ENVIRONMENTAL LAW* (3rd ed.). PHI Learning.
- [11] T.N. Godavarman Thirumulpad v. Union of India & Ors., AIR 2005 SUPREME COURT 4256::2005 AIR SCW 5110.

- [12] The Telegraph Online, <https://www.telegraphindia.com/india/the-father-of-india-s-environmental-jurisprudence-is-no-more/cid/1516271>, (last visited April 23, 2024).
- [13] United Nations, <https://sdgs.un.org/goals/goal15> (last visited April 23, 2024).