Peer - Reviewed & Refereed Journal

The Law Journal strives to provide a platform for discussion of International as well as National Developments in the Field of Law.
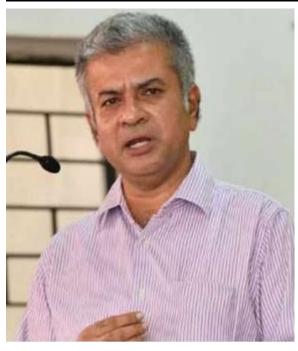
DISCLAIMER

No part of this publication may be reproduced or copied in any form by any means without prior written permission of Editor-in-chief of White Black Legal – The Law Journal. The Editorial Team of White Black Legal holds the copyright to all articles contributed to this publication. The views expressed in this publication are purely personal opinions of the authors and do not reflect the views of the Editorial Team of White Black Legal. Though all efforts are made to ensure the accuracy and correctness of the information published, White Black Legal shall not be responsible for any errors caused due to oversight or otherwise.

EDITORIAL
TEAM

Raju Narayana Swamy (IAS) Indian Administrative Service officer

Dr. Raju Narayana Swamy popularly known as Kerala's Anti Corruption Crusader is the All India Topper of the 1991 batch of the IAS and is currently posted as Principal Secretary to the Government of Kerala . He has earned many accolades as he hit against the political-bureaucrat corruption nexus in India. Dr Swamy holds a B.Tech in Computer Science and Engineering from the IIT Madras and a Ph. D. in Cyber Law from Gujarat National Law University . He also has an LLM (Pro) (with specialization in IPR) as well as three PG Diplomas from the National Law University, Delhi- one in Urban Environmental Management and Law, another in Environmental Law and Policy and a third one in Tourism and Environmental Law. He also holds a post-graduate diploma in IPR from the National Law School, Bengaluru and a professional diploma in Public Procurement from the World Bank.

Dr. R. K. Upadhyay

Dr. R. K. Upadhyay is Registrar, University of Kota (Raj.), Dr Upadhyay obtained LLB , LLM degrees from Banaras Hindu University & Phd from university of Kota.He has succesfully completed UGC sponsored M.R.P for the work in the ares of the various prisoners reforms in the state of the Rajasthan.

Senior Editor

Dr. Neha Mishra

Dr. Neha Mishra is Associate Professor & Associate Dean (Scholarships) in Jindal Global Law School, OP Jindal Global University. She was awarded both her PhD degree and Associate Professor & Associate Dean M.A.; LL.B. (University of Delhi); LL.M.; Ph.D. (NLSIU, Bangalore) LLM from National Law School of India University, Bengaluru; she did her LL.B. from Faculty of Law, Delhi University as well as M.A. and B.A. from Hindu College and DCAC from DU respectively. Neha has been a Visiting Fellow, School of Social Work, Michigan State University, 2016 and invited speaker Panelist at Global Conference, Whitney R. Harris World Law Institute, Washington University in St.Louis, 2015.

Ms. Sumiti Ahuja

Ms. Sumiti Ahuja, Assistant Professor, Faculty of Law, University of Delhi,
 Ms. Sumiti Ahuja completed her LL.M. from the Indian Law Institute with specialization in Criminal Law and Corporate Law, and has over nine years of teaching experience. She has done her LL.B. from the Faculty of Law, University of Delhi. She is currently pursuing Ph.D. in the area of Forensics and Law. Prior to joining the teaching profession, she has worked as Research Assistant for projects funded by different agencies of Govt. of India. She has developed various audio-video teaching modules under UGC e-PG Pathshala programme in the area of Criminology, under the aegis of an MHRD Project. Her areas of interest are Criminal Law, Law of Evidence, Interpretation of Statutes, and Clinical Legal Education.

Dr. Navtika Singh Nautiyal

Dr. Navtika Singh Nautiyal presently working as an Assistant Professor in School of law, Forensic Justice and Policy studies at National Forensic Sciences University, Gandhinagar, Gujarat. She has 9 years of Teaching and Research Experience. She has completed her Philosophy of Doctorate in 'Intercountry adoption laws from Uttranchal University, Dehradun' and LLM from Indian Law Institute, New Delhi.

Dr. Rinu Saraswat

Associate Professor at School of Law, Apex University, Jaipur, M.A, LL.M, Ph.D,

Dr. Rinu have 5 yrs of teaching experience in renowned institutions like Jagannath University and Apex University. Participated in more than 20 national and international seminars and conferences and 5 workshops and training programmes.

Dr. Nitesh Saraswat

E.MBA, LL.M, Ph.D, PGDSAPM
Currently working as Assistant Professor at Law Centre II, Faculty of Law, University of Delhi. Dr. Nitesh have 14 years of Teaching, Administrative and research experience in Renowned Institutions like Amity University, Tata Institute of Social Sciences, Jai Narain Vyas University Jodhpur, Jagannath University and Nirma University.
More than 25 Publications in renowned National and International Journals and has authored a Text book on Cr.P.C and Juvenile Delinquency law.

Subhrajit Chanda

BBA. LL.B. (Hons.) (Amity University, Rajasthan); LL. M. (UPES, Dehradun) (Nottingham Trent University, UK); Ph.D. Candidate (G.D. Goenka University)

Subhrajit did his LL.M. in Sports Law, from Nottingham Trent University of United Kingdoms, with international scholarship provided by university; he has also completed another LL.M. in Energy Law from University of Petroleum and Energy Studies, India. He did his B.B.A.LL.B. (Hons.) focussing on International Trade Law.

ABOUT US

WHITE BLACK LEGAL is an open access, peer-reviewed and refereed journal providededicated to express views on topical legal issues, thereby generating a cross current of ideas on emerging matters. This platform shall also ignite the initiative and desire of young law students to contribute in the field of law. The erudite response of legal luminaries shall be solicited to enable readers to explore challenges that lie before law makers, lawyers and the society at large, in the event of the ever changing social, economic and technological scenario.

With this thought, we hereby present to you

EVOLUTION OF REDD+ AND THE RESPONSES OF TWO TROPICAL COUNTRIES: INDIA AND BRAZIL

AUHTORED BY - SHIVAM BOSE

LLM, University of Sydney

This paper will compare the two countries of India and Brazil to examine whether there has been a positive impact on the actual forest cover after the implementation of REDD+, the Glasgow climate pact and their respective policies/regulations. Countries are required to submit progress reports and situation reports to REDD+ authorities, which will aid in examining the change in forest resources in real time. It is important to examine these two countries specifically because Brazil was very recently a victim of devastating forest fires and the government's actions post this period would be relevant to examine in the context of safeguarding forest resources. On the other hand, India is seeing mass demonstrations against their leaders who plan to further reduce the country's forest cover for, what some would describe as, unnecessary infrastructural projects. The examination can also help us understand how these two countries will align their interests with international obligations.

Keywords: *Afforestation, climate change, forest resources*

1. INTRODUCTION

As the world moves into a new decade, it is important to evaluate how the fight against global warming has taken shape at the international forum. A vast majority of the research and writings on climate change focus on greenhouse gas emissions and mitigation strategies specifically aimed at developing economies, but more generally on a global scale. However, what the international forum was lacking is a discussion about deforestation and the greenhouse gas emissions from forest cover loss.[1]

---

[1] Rosemary Lyster, 'REDD+, Transparency, participation and resource rights: the role of law' page 1 (2011) 14 (2) *Environmental Science and Policy,* 118, 118.

Although the Copenhagen Accord[2] is not legally binding, it was a step in the right direction directing a flow of funds from developed to developing economies to stop emissions related to deforestation and the loss of a carbon sequestering landmass. This included the sustainable management of current forest resources and future growth in forest resources via various methods in developing countries (REDD+).

Forest resources in tropical countries such as Brazil and India continue to decline as the march towards progress gains pace, and thereby reduces the total forest resources available to combat climate change. As the international community began to give more importance to Carbon reduction through the use of forest resources, the "Reducing Emissions from Deforestation and Degradation" (REDD+) programme came into existence. The program incentivises protecting forest resources by transferred financial resources from developed nations to developing nations. This is done to off-set some of the economic loss incurred to protect and cultivate forest cover and forest resources.[3] It is estimated that around 14% of carbon emissions occur from deforestation.[4]

The current climate change impacts are felt greatly by developing nations, who rely heavily on natural resources for their survival and sustenance. Consequently, these are the States that have done the least damage to the climate in the present day. As States move from developing economies to developed economies, they ultimately use natural resources emitting a lot of carbon throughout this process.

In this scenario REDD+ comes in at the international forum to show just how important forest resources are when combating climate change and makes developed countries pay their fair share (through financing) to protect these resources. Tropical and developing countries choose to clear forest resources for a number of reasons ranging from industrial development to agriculture, and without monetary incentives to not clear forests, it would be hard to maintain the continued growth they aim for.

---

[2] UNFCCC, Decision 2/CP.15, *Report of the Conference of the Parties on its fifteenth session, held in Copenhagen from 7 to 19 December 2009,* FCCC/CP/2009/11/Add.1 <https://unfccc.int/resource/docs/2009/cop15/eng/11a01.pdf> at 5 – 10.

[3] Marafe, Lawal Mohammed et al., 'Ten years of REDD+: A critical Review of the Impacts of REDD+ on Forest Dependent Communities' (2016) 8(7) *Sustainability, 620, 621.*

[4] Duncan Brack, 'Background study prepared for the fourteenth session of the United Nations Forum on Forests' (United Nations Forum on Forests, 2019) <https://www.un.org/esa/forests/wp-content/uploads/2019/03/UNFF14-BkgdStudy-SDG13-March2019.pdf> page 8.

1.1. IPCC Sixth Assessment Report

The IPCC 6th Assessment Report (Working Group III) opens with an argument detailing the negative effects to ecosystems due to observed increases in frequency extreme weather events and a warming climate including drought and fire weather. This has resulted in a higher number of drought related tree mortality.[5] Unsustainable land use and land cover change including deforestation has an adverse impact on communities and their adaptive capabilities for future climate change, especially indigenous communities who directly rely on forest resources to meet their basic needs.[6]

More than 90% of the forest resource loss that took place between 1990 to 2020 was concentrated in tropical forests increasing tree mortality and reducing the regenerative ability of these forests.[7] Reduction in forest biodiversity is linked to reduced efficacy of Sustainable Development Goals related to climate, poverty, health and land. The report also links changes in the hydrological cycle and weather events to deforestation and forest loss, thus merely mitigating GHG emissions will no longer be enough to hold back climate change and its negative effects, but requires a concerted effort to reduce deforestation and forest degradation is of the utmost importance.[8] Agriculture is by far the highest driver of tropical forest land contributing to nearly 95% of the forest area loss in certain parts of the Americas.

Many developing countries identify weak forest administration, poverty and illegal activity of drivers to forest degradation, while international markets and commodity demand also put pressure on forest resources.[9]

With rising temperatures, the IPCC has been examining the physical effects on forests, and whether they have the physiological capacity to adapt to the changing conditions. Evidence shows that tree do have the adaptive capacity to continue normal photosynthetic operation in moderately higher temperatures than the current mean, but a rise of more than 2C would result in a change in leaf biochemistry limiting photosynthetic processes which would further increase tree mortality.[10]

---

[5] IPCC, 'Climate Change 2022: Impacts, Adaptation and Vulnerability – Summary for Policy Makers'
<https://www.ipcc.ch/report/ar6/wg2/downloads/report/IPCC_AR6_WGII_SummaryForPolicymakers.pdf> page 9.
[6] Ibid. page 12.
[77] IPCC, 'Climate Change 2022: Impacts, Adaptation and Vulnerability – Full Report'
<https://report.ipcc.ch/ar6/wg2/IPCC_AR6_WGII_FullReport.pdf> page 2370
[8] Ibid 2375
[9] Ibid
[10] Ibid 2376

The result of this increase is that forest canopy for tropical forests will turn from a carbon sink into a carbon source as respiration rates of leaves goes up. The intrinsic water use efficiency of tropical tree species goes up as the level of carbon in the atmosphere increases. Changing climactic conditions can also be foreseen to affect the plant-soil microbial interaction resulting in changes to the species composition and biodiversity within tropical ecosystems.[11]

Evidence shows that policy responses to forest degradation and ecosystem conservation have been largely unsuccessful. Since the signing of the New York Declaration on Forests, average humid tropical forest loss has only grown by 44% per year. Thus, it is no longer sufficient for policy measures to only prevent deforestation, but also tackle the direct and indirect drivers leading to deforestation.[12]

2. STATE OF THE WORLD'S FORESTS

2.1. Global Perspective

Approximately 31% of the world landmass is covered in forests, but almost half of all forest cover is contained within just five countries namely Russia, Brazil, Canada, USA and China.[13] Thus, it becomes important as a part of conservation efforts to not supply a catch-all plan to forest resource conservation and engage in careful study of the resource to give it the best chance at thriving.

REDD+ would not be necessary if the state of the world's forests was not in danger, and if the planet did not have a declining forest cover over the last half century. Since 1990 to the present, we have seen a 2.5% decrease in total forest cover, which amounts to a net loss of 178 million hectares of forest resources across the world. Some countries have seen an overall decline in forest cover while others have seen an increase.[14]

The State of the World's Forest Report 2020 states that national reports on deforestation currently are on a downward trend, meaning the rate of deforestation has decreased since the start of data collection in 1990. It is estimated that the deforestation rate has decreased by 6% compared to the 1990s between the 2010-2015 period.[15]

---

[11] Ibid 2377
[12] Ibid
[13] Food and Agriculture Organisation of the United Nations, 'The State of the World's Forests: Forests, Biodiversity and People' (UN Environment Programme 2020) <https://www.fao.org/3/ca8642en/ca8642en.pdf>, page 10.
[14] Ibid.
[15] Ibid at 13.

Deforestation is not the only threat to forest resources, and global data attempts to take into account forest degradation. 58 countries have attempted to measure the health of their forest resources through one metric or another. Natural disturbances to forest resources include wildfires, invasive species, diseases and extreme weather events. Forest fires in some instances have been seen as necessary to maintain ecosystem dynamics, and about 90% of all forest fires are quickly and efficiently contained accounting for only 10% of the forest cover loss. South America and Africa account for the largest majority of loss due to forest fires and especially Brazil and its rainforests are acutely aware of the damage caused by wildfires.[16] The warming climate is making it easier for fires to start and spread faster and with greater frequency.

2.2. History of forest conservation prior to REDD+

As early as 1977, the first paper was published talking about the importance of forest carbon sinks to combat any negative consequences of climate change and to offset the consistent increase in global emissions. In that paper Dyson attempted to argue that it would be possible to plant enough trees and increase the carbon sinks enough to avert an ecological crisis if one should arise due to CO2 emissions from burning fossil fuels and other industrial activities.[17]

Since then, various events have occurred resulting in a significant spike in annual C02 emission from both developed and developing countries outpacing any previous projections,[18] coupled with a consistent decline in forest resources.[19] 20 years later the Kyoto Protocol had developed this idea of creating carbon sinks and focused on the suitability of land use and where it would be more efficient and cost effective to increase forest resources.[20] The IPCC released its paper on Land use, Land Use Change and Forestry (LULUCF), which noted that it would cost less for forest resources to be grown and protected in tropical countries compared to non-tropical countries.[21]

Since the science was new, it was thought that increased forest cover in any part of the world would offset carbon emissions from other parts of the world. Under the UNFCCC carbon sinks via forests were being used as bargaining chips and a negotiating tool at the international forum.

---

[16] Ibid at 23.

[17] Freeman J. Dyson, 'Can we Control the Carbon Dioxide in the Atmosphere' (1977) 2 (3), *Energy,* 287, 288

[18] Hannah Ritchie, Max Roser and Pablo Rosado, *"CO₂ and Greenhouse Gas Emissions"* (OurWorldInData 2020) at <https://ourworldindata.org/co2-and-other-greenhouse-gas-emissions>.

[19] Hannah Ritchie, Max Roser and Pablo Rosado, 'Forests and Deforestation' (OurWorldInData 2021) at <https://ourworldindata.org/forests-and-deforestation>.

[20] Maria Gutierrez, 'Forest Carbon Sinks Prior to REDD: A Brief History of Their Role in the Clean Development Mechanism' in Stephanie Paladino and Shirley Fiske (ed.) *The Carbon Fix* (Routledge New York, 2016, 1st Edition) 60, 61.

[21] IPCC 'Land Use, Land-Use Change and Forestry' (Cambridge University Press, 2000) <https://archive.ipcc.ch/ipccreports/sres/land_use/index.php?idp=0> Chapter 5.2.3.

Many developing countries saw carbon sinks as their only way to participate in the Kyoto market and force developed countries to agree to more substantive carbon emissions targets and environmental protection.

The Clean Development Mechanism[22] (CDM) would allow developed countries (Annex I) to finance projects in developing countries to offset their own carbon emissions, this led to many developed States choosing to finance projects in the Global South, rather than reduce their own emissions to meet the Kyoto Protocol targets. Brazil was a country that vehemently opposed the inclusion of deforestation prevention under the CDM as it felt unwise to tie up land in projects that might have otherwise been used for national development.[23]

A majority of the carbon forest credits under CDM were through afforestation and reforestation strategies, by 2008 almost 44% of all of these projects had shifted to the maintenance of existing forest resources instead of afforestation. The Kyoto Protocol was not perfect and was quickly expiring in 2015, this necessitated a new more inclusive and comprehensive approach. The negotiations leading up to the adoption of the Paris Agreement in 2016 had two notable instances. The Bali Action Plan in 2007 opened the door for more robust forest resource protection ideology and then at COP15 cemented the idea of the REDD programme specifically for the protection of forest resources through financial and technological assistance from developed countries. No longer were forests sought to be carbon offsets but were now resources that needed protection on their own. This was in response to studies showing forest degradation and deforestation are the second highest emitters of carbon into the atmosphere. This is also when the old REDD programme was rebranded to REDD+.

The Paris Agreement and the sustainable Development Goals reaffirmed the idea of 100 billion dollars annually[24] being given to developing countries from developed countries for the sole purpose of environmental protection. These finances, if distributed properly would allow developing countries the financial space to grow their economy without exploiting the natural environment. The idea of REDD+ was to take a holistic approach to forest preservation by taking all the functions of forest resources into account and allowing the project to be country driven,

---

[22] Kyoto Protocol to the United Nations Framework Convention on Climate Change' (United Nations 1998) Article 12.
[23] Supra note 11 at 64.
[24] Kennedy Muthee et al., 'A Review of Global Policy Mechanisms Designed for Tropical Forests Conservation and Climate Risks Management' (January 2022) *Frontiers in Forests and Global Change* <https://www.frontiersin.org/articles/10.3389/ffgc.2021.748170/full>.

because they would be best able to identify and implement adaptation within their borders.[25]

REDD+ gained a lot of attention as it was thought to be a method to both preserve forest resources and biological diversity, while not hampering social and economic growth. Until now, developing countries had to choose between using forest resources to bolster economic growth, or hamper growth at the cost of preservation, and most countries chose the former. REDD+ would become a method, in an ideal scenario, to remedy that trade-off.

Decision 1/CP.16 of COP 16 set procedures that countries participating in REDD+ had to follow to procure funding under the project. Participants needed to develop a national strategy, a forest reference emission level and a national monitoring system. The methodology applied to REDD+ was that it would be practiced in three distinct phases. Phase I would involve the ideation and dissemination of policy and action plans from the specific country on how it wishes to protect its natural resources, phase II would be the implementation of the policies and strategies from Phase I, and finally phase III would be the verification and measurement of how effective the national policies have been in what they set out to do.[26]

The Forest Carbon Partnership Facility (FCPF) is an international organisation that works with all stakeholders from governments to indigenous people to facilitate advancement in REDD+ strategies and policies through the sharing of technological and financial assistance. This is but one of the many ways developing countries can acquire funding for their REDD+ project implementation. The FCPF also assists countries build robust monitoring systems to ensure that there are accurate measurements about the success or failure of national policies and regulations.

However, many have voiced concerns about this triple win strategy of REDD+ stating that countries might pose a threat to local communities and their use of the forest resources, something they have been using sustainably for generations. The fear arises because local communities might get pushed out of their native homelands to accommodate MNCs and their needs. Hirokawa likens the policy implementation and negotiations of REDD+ at the international stage to the "Stranger King" narrative. Where the developed countries come in with devastating consequences of climate change and a solution to solve it with the use of their money and technology, their guidance to

---

[25] Supra Note 2 at 623.
[26] United Nations Framework Convention on Climate Change, '*Report of the Conference of the Parties on its sixteenth session, held in Cancun from 29 November to 10 December 2010*' (Report 15 March 2011) para 73, 74.

solve the crisis through adjusting community practices and norms.[27]

This might be too grim a take considering the program is voluntary, and it has safeguards against these problems. The Advance Negotiating Texts promote certain safeguards within parties undertaking REDD+ activities. These include taking account of and respecting indigenous knowledge and cultural practices while at the same time advising member states to take into account the rights of all stakeholders, including local communities.[28]

Whether REDD+ has been a success in its triple goal of sequestering carbon from the atmosphere, preserving ecosystems and biological diversity and promoting socio-economic growth among local people is not an easy question to answer. Different countries will have different experiences and implementation methodologies. There are currently 350 different REDD+ projects ongoing across the participating nations and we shall be looking at two tropical rainforest countries of India and Brazil in the following sections.

3. INDIAN PERSPECTIVE

3.1. India's current forest conservation strategy

24% of India's landmass is covered by forested area.[29] The calculation metric for this is for the Forest Survey of India to count within it any area larger than 1 hectare with tree canopy cover greater than 10%. They do not differentiate between whether the area is naturally forested, artificially preserved or even the type of trees, and whether the land is publicly or privately owned.[30] Under the current regime, the Ministry of Environment uses a dual approach of satellite monitoring to plot squares on the map, which might be considered as forest cover or might not. Areas, which the MoE cannot accurately identify as forested through satellite observation due to various factors, are then investigated through ground truthing by human observation to ensure measurement of forest resources is accurate and up to date. These doubt points are then investigated through ground truthing through human observation to ensure measurement of forest resources is accurate and up to date.[31]

---

[27]Keith H. Hirokawa, 'REDD+ as the Stranger King' (2022) *Albany Law School Research Paper Forthcoming,* < <https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4002599> page 3.
[28] Supra Note 1 at 119.
[29] Forest Survey of India, 'India State of the Forest Report 2021', *Ministry of Environment, Forest and Climate Change*, page 13.
[30] Ibid at 20.
[31] Ibid at 25.

This method is not perfect, and there are multiple problems that do arise while carrying out assessment. Some of these problems include inability to collect data through cloud cover and shadows, the non-availability of seasonal data and phenological changes in forest cover leads expert to make more inaccurate interpretations. Due to the nature of data collection, i.e., through satellites there is sometimes a mixing of crop cover (such as sugarcane and cotton) with forest cover when they are grown in close proximity. Even with these challenges, the Forest Survey of India estimates that their estimation accuracy hover around 92%.[32]

Under the Paris Agreements Nationally Determined Contribution scheme, India has submitted a goal to increase its forest cover to 33% of the geographical landmass and increase the total forest carbon sink by 2.5 -3 billion tonnes by 2030.[33] Between the previous assessment period and the latest ISFR (2019-2021) there has been a net increase of 79 million tonnes in the forest carbon stock, and a total increase of 541 million tonnes since the 2011 assessment.[34]

The submission by the Indian Government to towards its REDD+ strategy has one goal in mind, development without destruction. This idea is enshrined within the Indian constitution as well, Article 48A charges the government with the protection and improvement of the environment including forests and wildlife, and the Supreme Court of India has led that every citizen has a fundamental right to a clean environment.

India states that there is a commitment to protect the natural resources and wildlife, including forests resources within the legislature and different national policies. Some of these legislations include the *Indian Forest Act* (1927) [Amended in 2017] which aims to protect forests and forest produce, which the government says when utilised properly will be able to maintain the ecosystems of forest resources and enhance REDD+ performance. The other notable piece of legislation is the *Forest (Conservation) Act*, 1980. This legislation aims to reduce the diversion of forest area for non-forest uses. Since the enactment of the act, the diversion of forest resources to non-forest use has gone down from 1.6 million hectares per annum to just 32,000 hectares per annum since 1980 to 2016.

---

[32] Ibid at 49.

[33] Government of India, 'India's Nationally Determined Contribution: 2021-2030' (August 2022), <https://unfccc.int/sites/default/files/NDC/2022-08/India%20Updated%20First%20Nationally%20Determined%20Contrib.pdf> page 3.

[34] Forest Survey of India, 'ISFR 2021' (Report, 2021), *Ministry of Environment, Forest and Climate Change*, page 194, 201.

Other notable legislations include the *National Forest Policy* (1988), *National Environment Policy* (2006), *National Afforestation Policy* (2014) and the *National Working Plan Code* (2014) which specifically mentions REDD+ objectives and how India plans to achieve these.[35] The Government has also released the *National Action Plan on Climate Change* that has 8 missions as part of its long-term integration strategy. The submission made under the National REDD+ Strategy is to facilitate implementation of the program while being in conformity with the UNFCCC decision in Cancun and the Warsaw Pact,[36] and the legislations and national plans listed above seek to make that promise a reality.

The Indian Government lists two drivers of deforestation and degradation, these are planned and spontaneous. Planned drivers of deforestation include industrial activities such as mining activities, road and railway corridors and hydroelectric projects on riverfronts and expansion of urban areas. While the unplanned drivers mainly include illegal activities such as unauthorized uses of forest resources for fuelwood, illegal logging and felling, coupled with illegal encroachment of forest land for agriculture and illegal mining activities.[37]

India currently has a well-established forestry institution carrying out research in both scientific and policy fields to implement projects and to achieve their national targets. Ministry of Environment, Forest and Climate Change (MoEFCC) aims to assist State Forest Departments with capacity building by setting up training programs for officials and local communities so that they can build friendly relationships in protecting forest resources. The Indian Council on Forest Research and Education has been formed to ensure the smooth functioning of these programs and devise the structure for need-based research into forest preservation. While the Wildlife Institute of India researches the ecosystem costs of gains and loss in forest cover and resources.[38] The policies and institutions set in place highlight the importance of research and training for the proper institution of REDD+ strategies and activities.

The required economic assistance will be gained through both internal programs like the Namami Gange Programme,[39] and external sources from UNFCCC mechanisms. The *Compensatory*

---

[35] Ministry of Environment and Forests, 'National Working Plan Code – 2014', *Government of India,* para 17, 26.

[36] Ministry of Environment, Forest and Climate Change, 'national REDD+ Strategy: INDIA', *Government of India* (2018) <https://redd.unfccc.int/files/india_national_redd__strategy.pdf> page 15.

[37] Ibid at 22.

[38] R. S. Rawat et al., 'Opportunities and Challenges for the Implementation of REDD+ activities in India' (2020) 119(5), *Current Science (Bangalore)*, 749 750, 751.

[39] Department of Water Resources, River Development & Ganga Rejuvenation, "National Mission for Clean Ganga: Namami Gange Programme', (September 2022), *Government of India* < https://nmcg.nic.in/NamamiGanga.aspx>.

Afforestation Fund Act (2016) was established to utilise the funds gained from diverting forest resources for commercial purposes to raise plantations and protection measures in other areas of the country. The fund at the time of reporting had 6.1 million dollars that would be dispersed as and when necessary.

3.2 Examples Of REDD+ Initiatives

Notable REDD+ initiatives around the country include the 'Khasi Hills Project' which was initiated in 2010. The project sought cooperation of the 10 villages that had been granted legal control over the forest resources of the area under the constitution. The project was designed as a capacity building exercise for the Khasi tribes to see how effective indigenous knowledge and management would be in controlling drivers of deforestation with the aid of forest officials.[40]

Under this plan, the federation of local communities known as *Synjuk* seek to implement a 30-year plan for climate adaptation, building resilience in agricultural activity and management of forest resources. The staff at Community Forestry International have aided in the share of financial and technological resources with the community leaders, and under the REDD+ Framework this plan received REDD+ registration under 'Plan Vivo' standards in 2013. The successful registration of this plan meant that it was the first REDD+ initiative in Asia being carried predominantly by tribal leaders on community land and had the possibility of being replicated in other areas of the country as well.[41]

Thanks to the support and funding from REDD+, the Khasi project was able to issue 21,805 tonnes of carbon certificates, of which 5193 tonnes were sold to various entities across the world. Roughly $26000 has been made through the issuance of the carbon offsets, and a further $100,000 is expected to reach the beneficiaries of the project each year thanks to their efforts.[42] While monetary benefits are appreciated, the ecological benefits are always easily visible. Since the initiation of the project, forest fire numbers have been drastically reduced due to a melding of local action to prevent the unauthorised use of forest resources, to state initiatives such as fire line construction and fire control groups.[43]

---

[40] Marl Poffenger, 'Khasi responses to forest pressures: A community REDD+ project from Northeast India', in Katila P. et al., *'Forests under pressure: Local responses to global issues'* International Union of Forest Research Organisations, 2014)*,* 235.
[41] Ibid at 236
[42] Ibid at 239
[43] Ibid.

Other projects include the *Garo Hills Project*, which was launched after study of the area revealed multiple causes of forest degradation including the rise of anthropogenic utilisation of forest resources. The proposed solution was innovative solutions under REDD+ and a community led initiative to control illegal logging.[44]

India's approach to forest management involved the Joint Forest Management (JFM) partnership scheme which promised local communities a share of the profits in return for managing their local resources. Madhya Pradesh is a State with a large portion of its forest cover under JFM management. The state has been plagued by many issues to its forests, largely due to climate change, which adversely affects the 22,600 villages living in close proximity to, and utilising forest resources. The problem that JFMs and many of these forest communities face is that under the REDD+ scheme, the State would have to show comprehensive datasets for deforestation trends and the change in trends thanks to proposed action plans. The Finance Commission carried out a test for the plan when it dispersed financial aid to multiple JFMs for conserving forests in Madhya Pradesh.[45]

3.3 Data Submission by India for REDD+

As stated above, the REDD+ regime asks all the participating countries to submit a Forest Reference level (RL), and India made its submission in 2018 calculated through data collected between 2000 to 2008. This RL was submitted to be -49.70 million tonnes of C02 equivalent.[46]

This submission has been analysed by the UNFCCC while noting some gaps in the assessment and how India could improve this Reference Level for future submissions and assessments. The assessment team notes that the data submitted by India is partially transparent, but not complete thus not in accordance with the guidelines. India worked extensively with the UNFCCC assigned representatives carrying out the technical assessment of their Forest Reference Level (FRL) submission with back-and-forth communication including explanations and clarifications for data used.[47] However, it is noted that the submission does not include any plans for future changes to

[44] Indu K. Murthy et al., 'Experience of Participatory Forest Management in India: Lessons for Governance and Institutional Arrangements Under REDD+' in Emmanuel O. Nuesiri (ed.) 'Global Forest Governance and Climate Change (Palgrave Macmillan, 2018), 175, 183.

[45] Madhu Verma et al., 'Economics of REDD+ as a mitigation strategy for Climate Change in Madhya Pradesh' in Madhya Pradesh State Climate Change Knowledge Management Centre (ed.) '*Climate Change in Madhya Pradesh: A compendium of expert views*' (2013) page 12, 18.

[46] Ministry of Environment, Forest and Climate Change, 'national REDD+ Strategy: INDIA', *Government of India* (2018) <https://redd.unfccc.int/files/india_national_redd__strategy.pdf> page 4.

[47] UNFCCC, 'Report of the Technical Assessment of the Proposed Forest Reference Level of India Submitted in 2019', (October 2018) para 19-21

national policy and legislation and is solely based on historical data and legislation/plans that already exist.

The technical assessment identified areas for improvement in the submission. Some of these improvements included providing publicly available data with the submission itself so that the data can be reproduced and checked for accuracy.[48] The data used was collected from multiple continuous cycles while creating their National Forest Inventory, not just taking the data from three different time periods within the assessment cycle to reduce uncertainty of estimation. Creating a separate estimation of carbon stocks created through new forest areas as enhancements in carbon stocks.[49] Additionally, any future reports should specifically point to ongoing REDD+ activities and their effectiveness in growth of carbon stocks to increase the accuracy and transparency of future updates to the FRL.[50]

As a final note, the technical assessment advises the Indian Authorities to create a more detailed definition of forest resources which would include areas such as orchards, bamboos, etc. in addition to the one being used currently which only distinguishes between forested area density. This would allow for more accurate estimation of carbon stocks.[51]

Whether India incorporates these changes is yet to be seen as no new submission has been made by the Government addressing the points of improvement as listed out in the Technical Assessment. Currently however, national documents such as the State of the Forest Report still only consider Forest resource classification according to canopy density and not by type of vegetation.[52] Furthermore, it seems that the current government seems to be moving away from protecting the environment, to maximising company profits. The latest Environmental Impact Assessment Rules drastically limit the ability for the public, an important stakeholder, to comment on new potentially dangerous projects.

3.4 Latest Developments

For the most part, the ability for the public to comment on upcoming developments has been lowered to just 20 days.[53] The Notification also makes room for projects that have been started

---

[48] ibid para 20.
[49] Ibid Para 22.
[50] Ibid para 29.
[51] Ibid Para 30-31.
[52] Forest Survey of India, 'India State of the Forest Report 2021', *Ministry of Environment, Forest and Climate Change* page 20.
[53] Ministry of Environment, Forest, and Climate Change, 'EIA Draft Notifications 2020' (Government of India, March 2020) <http://environmentclearance.nic.in/writereaddata/Draft_EIA_2020.pdf> annex 1 3.1.

illegally i.e., those started without prior environmental clearance, will now be allowed to get the said clearance after the fact, making it a provision for the grant of post-facto approvals.[54] This runs counter to a supreme court judgement where they clearly stated that retrospective Environmental Clearance is an alien concept when it comes to environmental jurisprudence and can lead to irreparable degradation.[55]

Perhaps the most astonishing of these is Rule 5(7) which allows the Central government to declare any project as 'strategic' which makes it possible for the project to not have to go through public consultation and no information relating to the project needs to be revealed to the public.[56] The Central Vista project approved in 2020, soon after the finalisation of the new EIA rules used many of the new laxer rules to get approval. The Central Government even prohibited any audio/visual recordings of the work taking place on the project until completion.[57] Many other environmental concerns were also raised, but ultimately the project was granted environmental clearance, and the Supreme Court upheld the clearance. The Delhi State Expert Appraisal Committee, which is the body that should have been the regulatory authority, was side-lined and instead submitted its own concerns for the project on whether they would be successful in transplanting 80% of the trees being removed for construction.[58]

More recently, since July of this year people across the city of Mumbai have been protesting the government's decision to build a railway car shed within the 13,000 hectares of the Aarey forest, which is known to the locals as the "green lung" of the city. Even with thousands of citizens and opposition members suggesting alternate routes and locations, the government stays firm on its decision to fell the trees and disturb/uproot nearly all of the 27 Adivasi communities that live in the area. This project was also deemed to not need public hearing or an impact assessment, even though it has been proposed in an ecologically sensitive area.

A report by the Committee on State Agrarian Relations under the aegis of the Department of Land Resources shows that the tribal population is disproportionately suffering, they have accounted for 40% of the total number of displaced people due to development projects. Massive transfers

[54] Ibid at 22(3).
[55] *Alembic Pharmaceuticals Ltd. v Rohit Prajapati* Civil Appeal No 3175 of 2016 para 23.
[56] Supra Note 43 at 5(7).
[57] The Tribune, '*Photography, video recording prohibited at Central Vista construction site*', (News Report, May 2021) <https://www.tribuneindia.com/news/nation/photography-video-recording-prohibited-at-central-vista-construction-site-251898>.
[58] Outlook, 'PM's 'Vanity Project', Environmental Concerns: The Many Controversies, Myths About Central Vista' (News Report, September 2022) <https://www.outlookindia.com/national/pm-s-vanity-project-environmental-concerns-the-many-controversies-myths-about-central-vista-news-221719>.

of forest land have occurred for industrialisation without a thought for the ecological impact or the impact to marginalised communities.[59]

These are just some of the many instances in the past half decade where the government has chosen development over environmental protection, especially in forested areas and ecologically sensitive zones. 38,846 hectares of protected forest land has been cleared for mining since 2011.[60]

Other problems in implementing REDD+ activities also exist, and they go far beyond the simple lack of initiative by leaders. There are currently no guidelines for Private sector entities to provide financial support to starting up these projects through their Corporate Social Responsibility. Forest fires are another concern that has been raised multiple times. With the rising global temperatures and increase in dry seasons across the country, with reports from 2016 and 2018 reporting 33,664 and 37,059 fires respectively[61] with the number jumping up to 52,785 detected forest fires between 2020 and 2021.[62] The Forest Survey under Forest fires lists out how to identify the signs of forest fire, but no concrete solution to tackle forest fires at a national scale.

Even though official documents show a positive trend in forest resources, as noted above, many citizens around the country are suffering deeply from the actions of the government to prioritise development in forest areas.

4. BRAZILIAN PERSPECTIVE

4.1. State of Brazil's forests

Brazil ranks second in the world for total forest cover, with 490 million hectares of its area under forest cover.[63] With such a large part of the country dominated by equatorial rainforest, the government must constantly be vigilant about changes in its ecosystem and forests, whether these be planned or through illegal activities. Brazil is also a developing country that submits periodic documents under the REDD+ program to receive result-based payments towards further preservation of forest resources.

---

[59] Department of Land Resources, 'Report of Committee on State Agrarian Relations and the Unfinished Task in Land Reforms' (Report, Government of India, June 2017) page 8.
[60] Shweta Sengar, 'No Mining, or Factories Within 1-km Radius of National Parks, Sanctuaries: Here's What SC Said' (India Times, June 2022) <https://www.indiatimes.com/news/india/no-mining-or-factories-within-1-km-radius-of-national-parks-sanctuaries-rules-supreme-court-571282.html#:~:text=not%20be%20permitted-,The%20Supreme%20Court%20of%20India%20has%20ruled%20that%20there%20can,(ESZs)%20across%20the%20country>.
[61] Supra Note 29 at 755
[62] Forest Survey of India, 'India State of the Forest Report 2021', *Ministry of Environment, Forest and Climate Change* page 122.
[63] Food and Agriculture Organisation of the United Nations, 'Country profile: Brazil' <https://www.fao.org/countryprofiles/index/en/?iso3=BRA>.

As a part of its Paris Agreement responsibility, Brazil has submitted an updated Nationally Determined Contribution in 2020 outlining its responsibility to combat climate change. Most notably it states that it has updated its national laws to be some of the strictest in the world for the preservation of forest resources, with 50-60% of the countries land area being classified as protected under its national laws. Yet, it aims to eliminate all forms of illegal deforestation by 2080.[64]

Brazil has made many efforts in the last decade to accomplish this promise. It submitted its Forest Reference Level in 2014, making it the first developing country to do so. Data from 2004 to 2010 shows that there was a marked decrease of nearly 70% in its carbon emission through deforestation.[65] Brazil's own Ministry of Science Technology and Innovation estimates that total emissions fell by almost a billion tonnes of CO_2 from 1990 to 2012 largely in part to a significant drop in deforestation rates which went from an annual deforestation rate of 27,700km in 2004 to 5000km in 2014.[66]

4.2 National Policy in Place for the Protection of Forest Resources

Due to the nature of requiring consistent and precise data for monitoring forest resources under the REDD+ initiative, Brazil had to come up with a new way to monitor its forests due to the sheer size of the area that needed to be monitored, and the vast amount of data that needed to be collected. Systems monitoring annual forest degradation, real time deforestation detection and to continuously check on the land use status of previously deforested areas.

An action plan was prepared for the Prevention and Control of Deforestation in the Legal Amazon (PPCDAm) which is being utilised till today with constant updates.[67] The plan was aimed at addressing the drivers of deforestation through inter-ministerial coordination across three broad areas of environmental monitoring, land tenure and planning and finally growth of sustainable

[64] Federative Republic of Brazil, 'Nationally Determined Contribution' (March 2022) <https://unfccc.int/sites/default/files/NDC/2022-06/Updated%20-%20First%20NDC%20-%20%20FINAL%20-%20PDF.pdf> page 9.

[65] Yvonne Hargita, Sven Gunterpage, 'Brazil submitted the first REDD+ reference level to the UNFCCC—Implications regarding climate effectiveness and cost-efficiency' (2016) 55, *Land Use Policy*, 30, 342.

[66] Brazilian Ministry of Environment, 'ENREDD+: National Strategy for Reducing Emissions from Deforestation and Forest Degradation, and the role of Conservation of Forest Carbon Stocks, Sustainable Management of Forests and Enhancement of Forest Carbon Stocks' (Secretariat for Climate Change and Environmental Quality, 2016) <http://redd.mma.gov.br/images/publicacoes/enredd_english_web.pdf> page 11-12.

[67] Brazilian Ministry of Environment, 'Second Summary of Information On How The Cancun Safeguards Were Addressed And Respected By Brazil Throughout The Implementation Of Actions To Reduce Emissions From Deforestation In The Amazon Biome' (Secretariat for Climate Change and Environmental Quality, July 2018) <https://redd.unfccc.int/files/2sumariosalv_br_final.pdf> page 12.

activities and economic instruments. This idea of protecting forest resources spawned many action plans and policies, among these were the Environmental Conservation Support Group – Green Grant, Legal Land Program, Community and Family Forest Management Program, Amazon Protected Areas Program, among many more.[68] The start of the 21st century saw a shift to large scale preservation of the Amazon in the Brazilian territory. The PPCDAm also encouraged and promoted the *Soy Moratorium* which brought together private actors, the government and non-governmental organisations to stop the encroachment of amazon rainforests through soybean farming.

The Brazilian Development Bank manages The Amazon Fund created in 2008 to disburse result-based payment for actions combating deforestation and forest degradation and is an integral part of the country's REDD+ strategy. The utilisation of funds and the results achieved are reported and handled in an easy to access and transparent manner. It publishes an annual report that details the application of fund resources. This is the foundation stone for Brazil's REDD+ strategy,[69] also known as ENREDD+.

A national REDD+ committee has been formed with the express responsibility of monitoring and overseeing the implementation of the REDD+ strategy, while also coordinating the 15+ governmental committees involved in various areas of the countries REDD+ strategy including finance, livestock, foreign affairs as well as involvement from the various state governments.[70] Under the committee exists the Working group of Technical Experts on REDD+ that carry out research and produce possible plans to implement in various areas of the country. They are also the body that originally prepared the reference level for the country.[71]

In the current iteration of its FRL, it only includes the Amazon biome, i.e., forests with a dense canopy cover, but hopes to, at a later stage, include other biomes within its territories as well to expand its ability to raise result-based payments. Brazil's latest Biome Environmental Monitoring Program and National Forest inventory will produce enough data to be able to calculate the reference level for more biomes in the near future.[72]

---

[68] Ibid.
[69] Supra note 57 at 13 and 14.
[70] Brazilian Ministry of Environment, 'ENREDD+: National Strategy for Reducing Emissions from Deforestation and Forest Degradation, and the role of Conservation of Forest Carbon Stocks, Sustainable Management of Forests and Enhancement of Forest Carbon Stocks' (Secretariat for Climate Change and Environmental Quality, 2016) <http://redd.mma.gov.br/images/publicacoes/enredd_english_web.pdf> page 22.
[71] Ibid at 26.
[72] Ibid at 27

In the 2016 report of ENREDD+ the Brazilian officials note that their forest protection strategy can continue to improve in at least 2 aspects. The first involves developing an impact matrix to better understand the effectiveness of undertaken initiatives so that in the future better decisions can be made for optimal resource allocation. The second aspect involves better data collection from REDD+ projects concerning the social, economic and environmental benefits for investor risk assessment.[73]

As a part of the requirements for REDD+ results-based payments, participating countries must build an information summary informing potential investors and international bodies about how the safeguards are being addressed. A report containing the same was submitted to the UNFCCC in 2015, with the assistance of technical experts and public consultation.[74] A combination of these studies and submissions will be used to create the REDD+ Safeguards Information System (SISREDD+) for beneficiaries and participant of REDD+ projects as well as the public, government officials, investors, and the international community to access reliable and cost effective data on ongoing projects and their benefits achieved.[75] A submission for this system under the Cancun Agreement has already been made.

The development of these safeguards was headed by the Ministry of Environment in consultation with A Brazilian University who also issued a public call for volunteers to aid in the process. Four workshops and 2 Thematic Advisory Board meetings have been dedicated to this topic. The Government clarifies how it intends to improve its SISREDD+ safeguards through a flowchart in its submission to the Technical Assessment panel of REDD+. These include monitoring the action that created the result and the initiative that originally received funding.[76] The aggregation of information for public viewing has resulted in the creation of the site <http://redd.mma.gov.br/pt/component/content/article/90-assuntos/salvaguardas/991-entenda-o-sisredd-do-brasil?Itemid=0> and can be accessed by project proponents and the public, as is required by the Cancun Agreement and according to Decision 12/CP. 17.

---

[73] Ibid at 23.
[74] Ibid at 25
[75] Ibid at 24.
[76] Brazilian Ministry of Environment, 'Second Summary of Information On How The Cancun Safeguards Were Addressed And Respected By Brazil Throughout The Implementation Of Actions To Reduce Emissions From Deforestation In The Amazon Biome' (Secretariat for Climate Change and Environmental Quality, July 2018) <https://redd.unfccc.int/files/2sumariosalv_br_final.pdf> page 73.

The National REDD+ Committee aims to establish guidelines and criteria for entities wishing to raise funds for result-based payments under REDD+ and these guidelines will be periodically reviewed against national legislation and past performance of certified entities. The aim is to have an equitable distribution of received/raised funds between local communities, indigenous peoples and other communities who can make a positive difference in forest resources.[77]

Brazil currently hosts 48 REDD+ projects, which makes it the country with the greatest number of active projects, however experts argue that comparing the number of projects to the total percentage of a country's forest area under protection shows that Brazil lags behind others like Kenya and Cambodia.[78] The question arises is this because of the nature of national legislation which differs between states or because Brazil currently only accounts for the amazon Biome under its REDD+ policy and excludes other forest biomes.

4.3 Examples of Past Projects Under REDD+

Studies conducted of the REDD+ initiatives in Brazil have found mixed results. A project in Alta Floresta Municipality found insignificant deforestation reduction through its use and even though it was funded by the Amazon Fund. The study suggests that the less than stellar outcome was due to pre-existing levels of deforestation in the area being extremely law, and the implementation of the project could not have made a good situation any better for the project area.[79]

A similar result was seen in the Bolsa Floresta project in the Amazonas State, one of the oldest REDD+ projects in the country started in 2012. Given the remoteness of the area chosen for the project was under little threat in the first place. While only 4 out of the 12 sites receiving funding from the Amazon Fund for REDD+ activities showed any improvement to deforestation rates, however marginal. While all the others showed no change.[80]

The Projeto assentamentos Sutentaveis na Amazonia (PAS) was examined in close detail to understand the benefit it brought to the area in terms of ecological protection and whether the 350 households received any benefit from this REDD+ project. The examination found that the project saved on average 7-10% forest cover over the course of its operation. While there was also a

[77] Supra note 60 at 28.
[78] Sven Wunder, 'Forests and Carbon' in Arild Angelsen et al. (ed.) *Transforming REDD+ Lessons and New Directions* (Centre for International Forestry Research, 2018) page 119.
[79] Caue D. Carrilho et al., 'Permanence of avoided deforestation in a Transamazon REDD+ project (Para, Brazil)' (2022) 201 (107568) *Ecological Economics*, page 2.
[80] Ibid

perceived societal benefit with locals reporting an increased level of well-being while being part of the project area. When the project was not renewed in 2017, the funding was cut off and experts carried out an analysis of the area again in 2019 to evaluate the effects the project had on the area. [81]

Unfortunately, the project had no lasting impact on the protected area and once funding for the project ceased, the deforestation numbers rose back to pre-project levels and the perceived social well-being of the communities in the area also declined. When the trends in forest conservation were compared to a neighbouring Amazon biome without a REDD+ project active, it showed significantly less levels of deforestation for the period the project was active, but then deforestation levels stabilised after the project was halted. [82]

Evidence also showed that REDD+ projects that slowed deforestation in certain areas did not mean that other areas saw greater deforestation numbers meaning deforestation activities did not just transfer over to other non-protected areas. These results were only temporary unfortunately, and forest loss in almost all the projects studied resumed once funding stopped, but there was a net gain in forest cover because of the years that forest resources were protected under REDD+ projects. [83]

4.4 Situation on the Ground

Does this mean that Brazil is on its way to effective forest governance? Do we just blindly trust the government submissions? I believe the answer to both these questions is no. Even the latest submissions to the UNFCCC Secretariat by Brazil only note its deforestation levels up to 2016, which show a decline as compared to the previous decade and the FRL, [84] while a study of the carbon emissions from deforestation and forest degradation after 2016, till 2019 show a sharp increase.

Since Jaro Bolsonaro took office as president of Brazil, the Environmental authorities have gone through some tough times, and the administration has done its best to hinder its activities nationally, while portraying itself as a paragon for preservation internationally. Deforestation in

---

[81] Ibid at 7.

[82] Ibid at 7.

[83] Ibid at 9.

[84] Brazilian Ministry of Environment, 'Technical Annex I: Results Achieved By Brazil From Reducing Emissions From Deforestation In The Amazon Biome For Redd+ Results-Based Payments' (Biennial Update Reports, July 2021) <https://unfccc.int/sites/default/files/resource/BUR4%20-%20Amazon%20-%20Technical%20Annex_08jul2021.pdf> page 54.

the Amazon grew by 180% in 2019 as compared to the previous year, due to rampant forest fires burning 7 million hectares of forest.[85] The President in a message to the UN noted that a majority of the forest fires were started by the natives and indigenous communities.[86]

In 2020 Brazil recorded the sixth highest primary forest loss in the world, and an increase from 2019 by about 13%. Between January and April 2021, Brazil saw a loss of 175,000 hectares of forest loss already.[87] The president has confirmed that fires in the Amazon rainforest are not natural, but rather are started by people for various reasons. The indigenous population suffering in the area state that illegal ranchers, cattle farmers and loggers are burning away large swathes of forest for commercial purposes. [88] The President has even been noted, without evidence, claiming that Leonardo Di Caprio is funding illegal deforestation efforts in the Amazon.

These statements, coupled with budget cuts across the environmental agencies in both 2020 and 2021 mean that as fires and deforestation get worse, the agencies empowered to protect forests have even less resources. Due to the fall in resources, the prosecution for environmental crimes has fallen sharply by 42% in 2020 compared to the previous year. [89]

5. COMPARING THE CURRENT STATE OF FOREST CONSERVATION

It seems that both India and Brazil took relevant and swift action at the start of the previous decade to combat deforestation. They updated their existing legislation, created new ways to collect and examine data that would work best for their specific situation and even set up institutions to coordinate conservation efforts between the government and locals. India has its Forest Institute that runs capacity building workshop while Brazil has its REDD+ Committee and its ancillary departments working with all stakeholders.

---

[85] Rainforest Foundation US, '2020 Amazon Fire Season' (Website, 2020) <https://rainforestfoundation.org/our-work/special-initiatives/2020-amazon-fires/>; National Institute for Space Research, Brazil 'Queimadas (Fires)'<https://queimadas.dgi.inpe.br/queimadas/aq1km/>.
[86] Anthony Boadle, '*Brazil's Bolsonaro blames indigenous people for Amazon Fire in UN Speech*' (Reuters, News Report, September 2020) <https://www.reuters.com/article/un-assembly-brazil-idUSKCN26E0AM>.
[87] Finer M., Mamani N., 'As Brazil negotiates with world, Amazon Deforestation continues in 2021' *MAAP 138* (Amazon Conservation, Report, April 2021) <https://www.amazonconservation.org/maap-138-as-brazil-negotiates-with-world-amazon-deforestation-continues-in-2021/>.
[88] Linda Givetash, 'The Amazon is still on fire. Conservation groups blame illegal logging and criminal networks' (NBCN News, News Report, September 2019) <https://www.nbcnews.com/news/world/amazon-still-fire-conservation-groups-blame-illegal-logging-criminal-networks-n1056236>.
[89] Sue Branford and Thais Borges, '*Brazil guts agencies, 'sabotaging environmental protection' in Amazon: Report'* (Mongabay, February 2021) <https://news.mongabay.com/2021/02/brazil-guts-agencies-sabotaging-environmental-protection-in-amazon-report/>.

Merely examining documents and official submissions would make a viewer assume that both these countries are working diligently to combat deforestation and forest degradation in their own way, but these are just official documents and submissions, and the actual situation on the ground is sometimes the polar opposite of these official documents.

Take for example India's Forest Survey for 2021. It identifies 77.5 million hectares of forest cover in the country, but most independent experts say that India's authorities calculate forest land incorrectly, to inaccurately show a larger area under forest cover than actually exists. An examination of official forest surveys shows that approximately 28.5 million hectares of forest classified land does not actually have any forest cover or forest resources.[90] The FSI report does not clarify why this discrepancy exists between actual forest cover and reported forest area, but it is unlikely to be a clerical area considering 34% of the total forest area listed is not actually under forest cover. An example of inaccurate calculation of forest cover can be seen as early as 1999 in Sonitpur, Assam, where satellite imaging clearly shows a loss in forest cover, but the Forest Survey has reported a 44% forest cover increase in the area.[91] The purpose of the Forest Survey is to accurately depict forest land in the country to assist organisations to come up with strategies for forest conservation, not to elicit a "feel good" response from the international community about the efforts India is putting into its forests.

Brazil on the other hand has many more submissions to the UNFCCC Secretariat for its REDD+ projects than India, but in its current state, where Amazon Forest fires rage, and the authorities are blaming everything apart from their own actions, or lack thereof. Budget cuts and administrative changes make the job of officials more difficult. The decline in rainforests of the Amazon continues to grow whether it's because of illegal logging or because the administration wants to use those resources for development, it doesn't change the fact that we are losing forests, and the ones empowered to protect them, are not doing much, if anything at all.

[90] Anil Agarwal Dialogue, 'The Forest Survey of India and Actions for Green India' (2022) *Centre for Science and Environment* <https://www.youtube.com/watch?v=_fCqBDk-AeY&t=659s> 10:00 – 19:20.
[91] Ibid at 40:00 – 42:00.