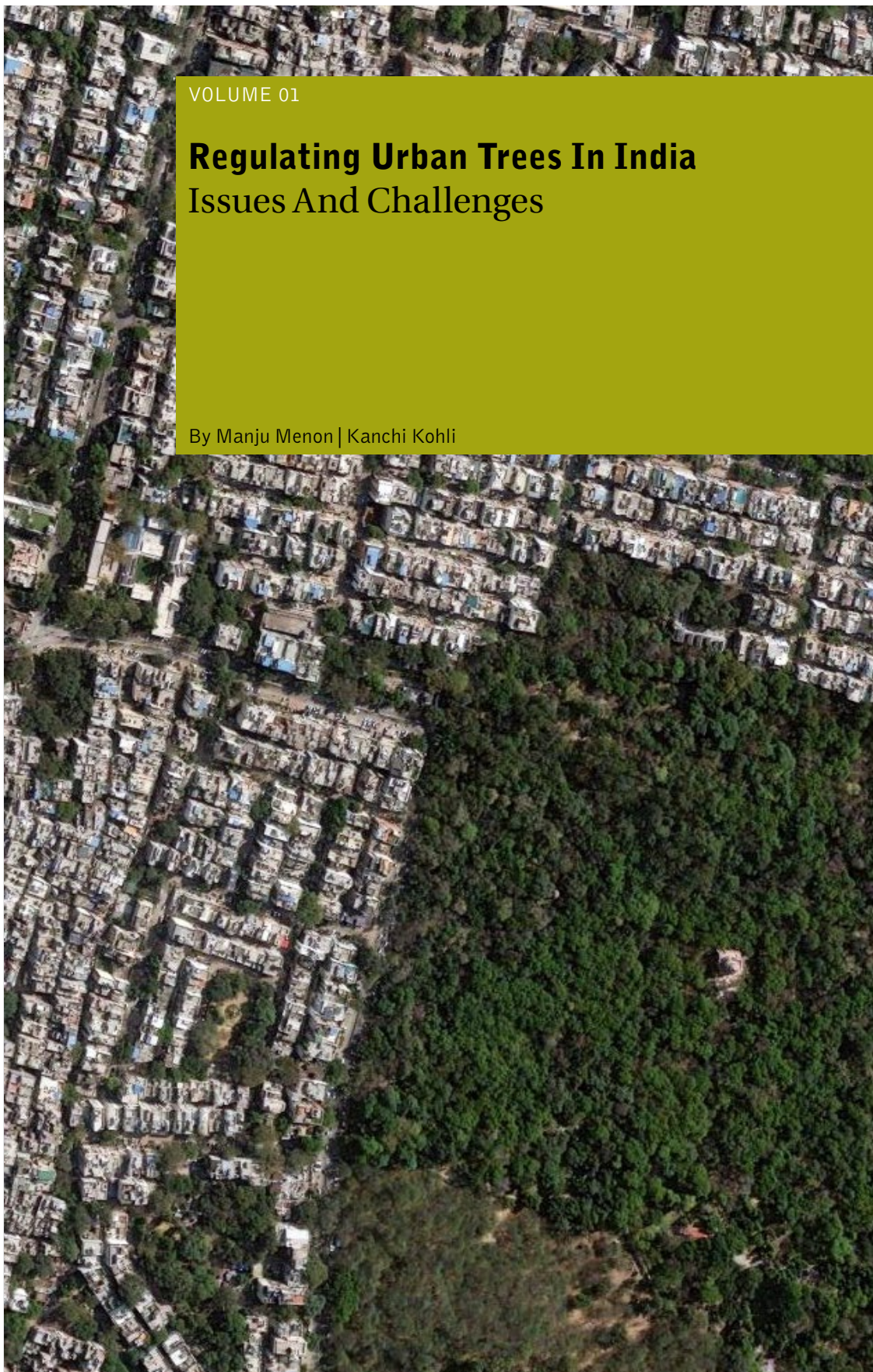


VOLUME 01

Regulating Urban Trees In India

Issues And Challenges

By Manju Menon | Kanchi Kohli



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HEINRICH BÖLL STIFTUNG

Volume 01

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Issues And Challenges

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Regulating Urban Trees In India

By Kanchi Kohli & Manju Menon

Edited by the Heinrich Böll Foundation 2021

Volume 01 (English Edition) in the publication series

Proof reading: Priya Ranjan Sahu

Cover photo: Julian Röder/OSTKREUZ (Foto.ID: 130000ju06)

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1. INTRODUCTION

Nearly half of the world's population now lives in cities and by 2050 nearly two-thirds of the world will live in cities. In India too, cities are home to growing numbers of people. Cities are seen as engines of economic growth and employment opportunities. The provision of services such as housing and transport are yet to catch up with the growing demands and are highly unequally distributed.

Contrary to the understanding that biodiversity and wilderness are present in rural areas, Indian cities contain within their jurisdictions, officially recognised “nature enclaves” of various sizes and kinds. These bounded spaces contain river or estuarine stretches, other waterbodies like ponds or lakes, and forests, parks and other treescapes like tree lined roads and canals. These open green spaces have an important role to play in stabilising local environments, enhancing biodiversity as well as regulate the causes and impacts of climate change. They also provide a multitude of physical, mental and psychological benefits to individuals and communities residing in densely populated urban areas. With the spread of the Covid pandemic in India in 2020, the importance of access to open, green spaces in Indian cities came into sharp focus. The role of trees as oxygen providers has always been a popular trope for urban tree lovers, but since the pandemic spread in India and specially due to the second wave where India witnessed a very high death toll due to the lack of oxygen supply for covid patients in hospitals, urban trees and their role in improving air quality and overall public health have gained significant attention from courts and citizens.

Given the social stratification of Indian cities along class, caste, gender and religion, not all get to enjoy the benefits of these enclaves without any hindrances. Safe and accessible green spaces are as unequally distributed in cities as living spaces and other services. In most Indian cities and towns, these spaces, irrespective of their official status, are used as multiple use areas such as for informal livelihoods like urban farming, fishing, grazing, street vending and other activities. Due to the lack of affordable and adequate social housing provided by governments, poor people, specially migrant workers in cities also depend on these lands to build homes. These enclaves are also threatened by capital intensive, urban processes such as city expansion and redevelopment. Projects that are purportedly taken up by governments and private entities to develop urban infrastructure have caused environmental harms such as air pollution, water shortages and loss of green cover. In all, these areas are integrated into urban space through urban planning and economic frameworks and not necessarily for their socio-ecological functions and uses. Schemes to “green”

and clean cities through plantation drives and afforestation projects are quite popular among politicians and bodies like educational institutions and civil society. Little is known of their social or ecological justifications or the outcomes of these programs that often fall heavily on the city's poor.

While urban access to clean air and water have become major concerns for policy planners, the importance and role of urban treescapes in Indian cities have not received sustained attention from these quarters. There are several research and advocacy organisations that study and comment on the legal and policy frameworks that govern forest conservation in agricultural and forest landscapes of rural India. However, relatively less is known about the policy directions and approaches adopted on urban forests and treescapes in India.

Urban treescapes are supposed to be protected by a range of laws and regulations. However the design and implementation of tree protection laws have to address several questions to play a constructive role in managing treescapes in urban India where large populations reside. What is the place for tree ecologies in well-established, growing and rapidly transforming Indian cities? In what ways do treescapes impact the urban quality of life and in what ways should they do so? Who are the beneficiaries and who are negatively affected by urban tree protection efforts? What are the main challenges to urban tree cover? And how are these tied up with the formal and informal economic and social arrangements of cities? Who is in charge of tree ecologies in the complex governance of Indian mega cities and in what ways and how have they performed? Which institutions are best to care for them, how and why?

These questions are not important for urban planners and implementation agencies alone but also for residents who may have varying associations with urban treescapes. This report presents an initial analysis of the current legal frameworks that govern the management of urban trees. The report highlights some aspects of the complex and contradictory efforts to manage treescapes in India's urban settings and the challenges posed by urban realities in India to these objectives. This report also presents some examples of campaigns and activities taken up by urban communities and environmentalists to protect trees. Urban tree protection campaigns have included extensive use of litigation, specially PILs as one of several strategies. These efforts are only growing as the concerns with climate change have taken on the scale and intensity of a global "emergency". Therefore the experiences and lessons in urban tree management and activism can provide a deeper understanding of the systemic issues challenging tree laws and their capacity to protect urban treescapes.

1.1 SERVICES AND BENEFITS OF TREES

Globally, treescapes and forests have gained a lot of importance in recent years. Scholars studying trees have shown that trees are far more than just a part of the web of life. They may, in fact, be the entities sustaining this web as “more than 80% of earth’s live carbon is in trees» and in the soils they are rooted in.¹ Healthy trees absorb CO₂ from the air. As stated by Nassar and Barbour, the higher levels of CO₂ in the air in winter, when most trees are dormant or less active, is proof of the hard work done by trees to make the air breathable.

Trees are also central to the water cycle because of their role in transpiration.² They can be described as green waterways as they carry huge amounts of water from the ground to the leaves which then evaporate. For these crucial ways in which trees create a habitable environment, scholars are of the view that trees may be understood to be the environment itself. Nassar and Barbour refer to “the dialogical tree” as trees create their environment, not merely transform or influence the environment. Recent studies have unravelled the social nature of treescapes and forests where trees and the networks of fungi in the soil transport and share water, food and other resources and communicate with each other. These studies point to how trees and the environments in which they grow cannot be seen as separate from each other. This understanding of trees renders trees not as passive objects in the environment but as active engineers of hospitable environmental conditions.

Urban trees are understood to provide a number of services to cities and their residents. The importance of trees, especially in urban areas for their cooling and shade providing effects and their uses to engineer urban water catchments, soil stability and cleaner air are gathering more attention. In congested and concretised cities, trees help to reduce the ‘urban heat island effect’ in their surrounding areas. Heat islands are caused by the trapping of heat by paved surfaces. Trees in neighbourhoods and around homes help to keep the surroundings naturally cool and bring down electricity usage for cooling. Tree lined streets are important shade shelters for pedestrians, street vendors, construction workers and others whose livelihoods keep them outdoors through the day. Studies have also shown

- 1 Dalia Nassar and Margaret Barbour. 2019. *Rooted*, AEON Magazine, October 16 as accessed from https://aeon.co/essays/what-can-an-embodied-history-of-trees-teach-us-about-life?utm_source=Aeon+Newsletter&utm_campaign=22486621d9-EMAIL_CAMPAIGN_2019_10_17_12_44&utm_medium=email&utm_term=0_411a82e59d-22486621d9-69544629
- 2 Fred Pearce. 2018, *Rivers in the Sky: How deforestation is affecting global water cycles*, YaleEnvironment360, July 24 (<https://e360.yale.edu/features/how-deforestation-affecting-global-water-cycles-climate-change>)

that urban trees help to reduce stress and anxiety and residents living closer to trees enjoy greater physical, mental and emotional well-being.

Many regulations around the world recognise “heritage trees”. These could be trees that have biological, cultural, ecological or historical interest to the public.³ This is also an acknowledgement that trees get better at being trees with age.⁴ Their abilities to sequester carbon increases with their age, so also their capacity to sustain and support other species dependent on them. Trees are also valued as markers of time. As seasons leave their signs on the body of trees in the form of tree rings, trees are important record keepers of the history of environmental change. Beyond the view of benefits or the ecological services of trees, several species or collections of species are held sacred by people of different cultures. Trees are worshipped in different parts of the world for fertility, longevity and prosperity. Many indigenous cultures identify certain trees and animals as their ancestors or members of their families, clans and tribes. For all these reasons, there have been recent legal debates on granting personhood rights to trees. While some observe the trees do not deserve rights because they are not autonomous and sovereign subjects, with abilities to move and “bodily boundaries”, others view the question of rights of trees as inherently tied to changing social values to see trees as subjects of value on their own.⁵

1.2 TREE PROTECTION IN INDIAN CITIES

Although the debates and discourses on urban treescapes have advanced especially in light of climate change, Indian cities are grappling with the objectives of tree protection using laws that barely recognise their role in urban areas or the challenges to them from mainstream approaches to city planning and development. Indian cities have been subject to large scale infrastructure development and building construction in the last two decades. Most of these developments cater to the privileged sections of society. Hussain Indorewala in his article on the priorities of city redevelopment in India quotes Samuel Stein's

- 3 Heritage Trees: <https://www.forestryfocus.ie/social-environmental-aspects/cultural-heritage/trees-and-folklore/heritage-trees/>
- 4 Gabriel Popkin.2016. *What the death of an Oak tree can teach us about mortality*, Aeon Magazine, 6 December accessed from https://aeon.co/ideas/what-the-death-of-an-oak-tree-can-teach-us-about-mortality?utm_source=Aeon+Newsletter&utm_campaign=ae55605bb8-EMAIL_CAMPAIGN_2017_09_05&utm_medium=email&utm_term=0_411a82e59d-ae55605bb8-69544629
- 5 Dalia Nassar and Margaret Barbour. 2019. *Rooted*, AEON Magazine, October 16 as accessed from https://aeon.co/essays/what-can-an-embodied-history-of-trees-teach-us-about-life?utm_source=Aeon+Newsletter&utm_campaign=22486621d9-EMAIL_CAMPAIGN_2019_10_17_12_44&utm_medium=email&utm_term=0_411a82e59d-22486621d9-69544629

book *Capital City*.⁶ Stein refers to the enormous influence that land speculation and land development have on city planning and the lives of urban residents, as the nature of a “real estate state”. In the article, Indorewala states that the impact on ecological spaces from development projects such as public housing and infrastructure is caused by the state’s holding up of prime value available land in the city for speculative purposes and luxury constructions. This allows the administration to maintain a false narrative of land scarcity for socially useful projects as well as grab urban livelihood and ecological spaces in the name of providing services to the city. The author also charges city administration of using transport and other service infrastructure as tools to further enhance the value of up-market areas of the city at the cost of greater social inequality and environmental impacts.⁷

If green spaces are seen as a public good by laws and policies, why are the benefits of green areas unequally distributed in cities. A study by Schwarz et al⁸ concluded, “Money may not grow on trees, but ...trees grow on money”. This study that compared the tree cover of several cities showed that high-income neighbourhoods tend to have high tree canopy cover, thereby proving that poor neighbourhoods not only experience a higher share of environmental burdens but also a lower share of environmental benefits. Studies such as this are important to provoke more in-depth investigations on the factors driving and determining urbanization and environmental change.

The state of urban trees is an important indicator of this political economy of city development. An analysis of a dozen ‘tree’ laws for various city and municipal jurisdictions shows that these laws are out of step with the processes of intense and rapid urbanisation and infrastructural development. They also do not factor in the multiple benefits that trees provide to urban societies or the changing social values about trees. Trees that are outside formally demarcated forest lands and which are under the jurisdiction of the forest department, are most affected by city development and the failures of formal urban planning. Urban trees are usually governed by a range of institutions at the municipal level and their exact roles and responsibilities with regard to tree protection is not clear and known to

6 Samuel Stein. 2019. *Capital City: Gentrification and the Real Estate State*, Verso Books, NY/London

7 Hussain Indorewala. 2019. *Indian Cities Have Been Reduced to Just Real Estate*-<https://thewire.in/urban/our-cities-prioritise-real-estate-over-ecological-sustainability>, The Wire, 9 October

8 Kirsten Schwarz , Michail Fragkias, Christopher G. Boone, Weiqi Zhou, Melissa McHale, J. Morgan Grove, Jarlath O’Neil-Dunne, Joseph P. McFadden, Geoffrey L. Buckley, Dan Childers, Laura Ogden, Stephanie Pincetl, Diane Pataki, Ali Whitmer, Mary L. Cadenass. 2015. *Trees Grow on Money: Urban Tree Canopy Cover and Environmental Justice*, PLOS Journal accessed from <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0122051>

the public. This makes institutions governing trees unaccountable to the public. The decisions regarding approvals to fell trees on a large scale to make way for construction or area development projects or the reactionary steps to afforest or “restore” specific areas of the city do not involve the public at all. As a result these decisions result in protests and litigation by urban residents who do not agree with the institutional decisions.

Tree plantation campaigns have become very popular the world over as trees are seen as necessary to stem biodiversity loss and the impacts of climate change. City planners across the world view treescapes as green infrastructure and invest in green areas and planting trees as an effective and cheap way to deal with air pollution, excessive heating effects, global warming, urban biodiversity loss and to provide a healthier living environment for city dwellers. But there are also examples where mass scale plantations are assumed to be a green solution to more systemic problems caused by urban development. In 2016, the Indian government announced a scheme to develop 200 urban forests across the country in five years. The Environment Minister re-announced the “Nagar Van” scheme to develop the urban forests in 2020, because it was unimplemented earlier. The scheme proposes to target “any forest land inside a city or any other vacant land offered by local urban bodies”. The forests are expected to be implemented in public private partnership (PPP) mode including corporates, local bodies and NGOs, and then maintained by the state government through fees collected from visitors.⁹ In 2010, the Bangalore Development Authority had decided to plant one crore saplings but it achieved only a little more than a quarter of its target in a decade.¹⁰ While several reasons have been stated for this shortfall, there is no careful evaluation of whether such target based creation of plantations by government agencies is even beneficial and compatible with existing forms of urban development, social needs and conservation of biodiversity.

Government’s policy actions in the name of tree protection have been mostly limited to growing plantations, compensatory afforestation and tree transplantation. These have been found to be poor solutions to the loss of urban trees and are discussed later in this report. Most of these schemes do not even materialise as they involve large funds, vast areas of space and other valuable resources like water that may not be readily available. Government regulatory procedures are simply unable or unwilling to make the inclusion of socio-ecological parameters a mandatory aspect of urban development and redevelopment. On the contrary, legal amendments and changes to policy objectives have targeted ecological

9 HT Correspondent. 2020, *200 urban forests to be developed in 5 years*, *Hindustan Times*, June 7 (<https://www.hindustantimes.com/india-news/200-urban-forests-to-be-developed-in-5-years/story-C2IPui9QCHBFF1aayVaXZL.html>)

10 Y Maheshwar Reddy. 2020. *How Bengaluru lost over 70 lakh+ trees*, *Bangalore Mirror*, March 2 (<https://bangaloremirror.indiatimes.com/bangalore/cover-story/how-bengaluru-lost-over-70-lakh-trees/articleshow/74431674.cms>)

spaces for intensive commercial and infrastructural development, recreational hubs and tourist attractions instead of viewing them as ‘urban commons’.^{11 12}

On the other hand, urban residents, environmentalists, youth groups and non-governmental organisations in many cities have engaged in creative initiatives to protect trees, in addition to opposing tree felling projects through protests and litigation. These activities are very different in scale and nature compared to the governmental “solutions”. Some examples of these are given below.

A public campaign was launched to save nearly 1000 banyan trees, many of which were more than 100 years old, from being felled for highway expansion project on the Chevella- Manneguda section of NH 163 between Hyderabad (Telangana) and Bijapur (Karnataka). Members of this campaign also drafted the first protocol for tree translocation in government projects so that they do not fell trees *en masse*.¹³

Many groups are involved in **tree mapping** exercises^{14 15} and on-ground surveys¹⁶ in specific areas that are earmarked for construction or development or in ecologically important areas. These efforts provide some data on tree numbers, species diversity, health of trees and other details in the absence of official tree census. These exercises illustrate to participants that urban areas are rich in biodiversity and that trees are well adapted to survive in urban spaces.

-
- 11 Naresh Fernandes. 2019. *Mumbai coastal road plan reflects elite’s lack of vision’: Interview with planner Rahul Mehrotra* accessed from <https://scroll.in/article/934131/mumbai-coastal-road-plan-reflects-elites-lack-of-vision-interview-with-planner-rahul-mehrotra> on September 7, 2021
 - 12 Manju Menon and Kanchi Kohi. 2020. *Save Delhi from sarkari sprawl*, March 17, Economic Times, as accessed from <https://economictimes.indiatimes.com/blogs/et-commentary/save-delhi-from-sarkari-sprawl/> on September 7, 2021
 - 13 Vadlamudi, Swathi. 2020. *Saved Banyans in Chevella found axed, mutilated*, The Hindu, June 1 accessed from <https://www.thehindu.com/news/cities/Hyderabad/saved-banyans-in-chevella-found-axed-mutilated/article31725121.ece> on August 26, 2021
 - 14 Akshatha, M. 2017. *Across India’s cities, volunteers map trees*, Citizen Matters, April 22 accessed from <https://citizenmatters.in/volunteers-map-urban-trees-india-4067> on September 7, 2021
 - 15 Gauree Malkarnekar. 2020. *Tree-mapping app helps citizens preserve data on God’s green cover*, Times of India, September 19 accessed from http://timesofindia.indiatimes.com/articleshow/78196369.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst on September 7, 2021
 - 16 Baishali Adak. 2019. *LokPATH starts tree mapping at Central Vista to gauge green impact of revamp project*, Hindustan Times, December 14, accessed from <https://www.hindustantimes.com/cities/lokpath-starts-tree-mapping-at-central-vista-to-gauge-green-impact-of-revamp-project/story-7TCANCYxPyABxTjWhTTx6I.html> on September 7, 2021



#SAVEDELHITREES #SAVECENTRALVISTA

HOW MANY MORE TREES CAN DELHI, WORLD'S MOST POLLUTED CITY, AFFORD TO LOSE ?

TREES AS OLD AS 100 YEARS AND 120 FEET TALL



PROPOSED PARLIAMENT SITE WITH DENSE TREE COVER IS TO BE CLEARED FOR NEW CONSTRUCTION

FOR MORE INFORMATION VISIT WWW.LOKPATH.IN

SIGN IN PETITION [HTTPS://BIT.LY/2VDYXXK](https://bit.ly/2VDYXXK)

Small groups of committed tree enthusiasts also offer assistance to residents who report uprooting or damage of trees in their vicinity. These groups provide information and logistical support to people on who to call and how to lodge complaints to report tree felling or damage as well as what emergency actions to take to prevent the tree from further damage.

Environmentalists have also mobilised initiatives during state elections to place matters related to urban ecology protection to political parties. Such exercises have provided platforms for residents to assess and evaluate the performance of the state government on environmental issues and present new ideas to political parties for their manifestoes.

HOW TO RESTORE AN UPROOTED TREE - II

Small steps make a BIG difference



A. Moist the soil around the tree. (Skip this step, if soil is moist)



B. Cut the dried, exposed roots at a length of 1'6" - 2' from the trunk. **Trim the tree if it is too big and keep 8' to 9' height from the base.**



C. Sprinkle wood-ash on the roots and soil.



D. Gently straighten the tree.



E. Give sufficient support.



F. Give enough soil to cover all the roots.






G. Apply a layer of mixture of Cowdung:Wood-Ash:Termite soil/ garden soil in 1:1:1 ratio on the trunk and cut-part of the tree.




H. Give sufficient water and cover the soil with dry leaves.

THE *Unmukt* GREEN ARMY
"Say Green, Save Green"

  @unmuktfoundation

 @unmuktFN

 Swatishree Pradhan



GREEN MANIFESTO

DELHI STATE ELECTIONS 2020

Compiled by:



**NEW DELHI
NATURE
SOCIETY**

NOTE

- The idea behind this manifesto was to bring out the views, expectations and suggestions of Delhiites and also to appraise the prospective candidates and political parties about the same since the elections for Delhi State Assembly have been announced.
- Delhi is facing the worst Air Pollution and it is necessary that the ensuing Government takes steps to address the environmental concerns.
- We tried to cover the major issues faced by Delhi.
- We thank all respondents for their valuable suggestions
- We expect that the political parties adopt these suggestions for the welfare of citizens of Delhi.

1.3 CRITIQUES OF URBAN TREE CAMPAIGNS

India has a long history of community based environmental efforts, especially for water management and forest protection. Nearly all the examples of such efforts that are documented are from rural areas. These have been described as “environmentalisms of the poor” as they focus on environmental protection for sustaining nature based local livelihoods¹⁷. These conservation efforts have also been criticised as they are based on land, water and forest management regimes that are historically exclusionary and discriminatory against marginalised communities especially *adivasis*¹⁸ and *dalits*^{19 20}. The nature and scale of urbanisation that has gained pace since economic liberalisation in India has also led to environmental consciousness in Indian cities. In recent decades, several cities have seen vocal, public protests against state or private projects that involve large scale felling of trees in urban areas. Global environmental, climate change and air pollution challenges have created more voices for the protection of urban trees. However tree lovers also face critiques of being “middle class environmentalists” or elitists as their concerns are seen as limited to “greening the city” and do not address the growing social inequality in Indian cities²¹. Middle class urban residents who speak about protecting ecology are seen as compromised by their own lifestyle choices that include cars, ACs and other environmentally damaging consumer goods. Urban environmentalism is also criticised by developmentalists who frame environmental concerns as blocking or delaying “public” projects such as roads and housing. Their demands for protecting nature are seen as being anachronistic in the city that has few markers of the “natural” world.

The field of political ecology has grown with studies about the conservation and development ideologies of the state, frameworks of land and property rights and their consequences for agricultural and forest ecologies and communities who depend on them. There are many studies that have analysed social movements that have sought to extract natural resources from traditional, unequal distributional frameworks and «recommon» ecologies and landscapes. However, we are yet to see informed and well-articulated urban green movements in India that challenge the elite appropriation of the city through technocratic frameworks such as the “smart city” and exclusionary planning tools like the masterplan.

- 17 Joan Martinez-Alier, 2002. *The Environmentalism of the Poor: A study of ecological conflicts and valuation*, Edward-Elgar
- 18 MD Madhusudan. 2005. *Of rights and wrongs: Wildlife conservation and the tribal bill*, Economic and Political Weekly, Vol 40, no 47, EPW Nov 19, 2005
- 19 Gail Omvedt. 1997, Why Dalits dislike environmentalists, The Hindu, June 24; and
- 20 Mukul Sharma. *Dalits and Indian environmental politics*, Economic and Political Weekly Vol 47, Issue No 23, June 9, 2012
- 21 Amita Baviskar. 2002. *The politics of the city*, Seminar No 516, August 2002

While new approaches to redevelop, commercialise and monetise the city have taken hold of urban institutions, public movements to protect urban greens are yet to extend their thinking towards recommoning the city as a habitat for all. There are few studies that investigate the state of urban tree ecologies in India in relation to the elite agendas and traditional exclusions that shape and reshape Indian cities. A crucial question for all urban green activists to ask is how do the social and economic inequalities of Indian cities reflect in the creation and management of urban treescapes and vice versa?

2. COMPARATIVE ANALYSIS OF TREE PROTECTION LAWS IN INDIA¹

¹ The authors acknowledge the assistance of Veera Mahuli for this section

The preservation and management of trees in India is a complex subject. Historically, the planting and felling of trees has been governed through different laws that are applicable to forest, revenue municipal or other public land. The enforcement of these laws rest with relevant administrative departments who have jurisdiction to govern such lands. For instance, afforestation and tree felling within officially recorded forests requires prior permission under central laws like the Forest Conservation Act, 1980 or state laws related to forest reservation and management. Tree plantations and cutting are also informed by agroforestry schemes and policies that are implemented in revenue lands.

In urban areas, trees can be found on private lands and lands managed and administered by a range of departments including municipalities or municipal corporations, private institutions, industrial complexes, public works department or the forest department. This has a direct bearing on which laws would be applicable in case a tree needs to be cut for any purpose such as building public use infrastructure like roads, metro rail, airports; institutional use by government or for private construction of shopping malls, residential complexes buildings. If the trees are located on officially recorded forest land or lands deemed as forests^{22 23} then the provisions of the FCA would apply. However, several state governments enacted laws to regulate the cutting of trees outside forest land, irrespective of whether it is on private land, government or institutional land.

In this section, we discuss twelve laws which have been enacted by different state governments with the stated objective to preserve trees and put in place the need for prior permissions before single or multiple trees are cut. Some laws were enacted as far back as the 1970s and others have been enacted as recently

²² Johnson, TA. 2020. *Explained: What are deemed forests, and why Karnataka wants to declassify some*, Indian Express, November 20 accessed from <https://indianexpress.com/article/explained/what-are-deemed-forests-and-why-karnataka-wants-to-declassify-some-7056577/> on September 7, 2021

²³ Mohan, Rohini. 2019. *What is a forest? India may have 29 definitions*, accessed from <https://www.straitstimes.com/asia/south-asia/what-is-a-forest-india-may-have-29-definitions-on-august-25>, 2021

as 2006. The jurisdiction and approach of these laws are also different. In some instances, the focus is the governance of particularly sensitive areas like hill regions or private estates. In other cases, the law has set its limits using urban or rural administrative boundaries. The primary objectives of these laws are not so varied. Most laws regulate how trees should be managed and set out detailed protocols of permissions, offences and dispute regulation. Very few of them set the proactive agenda for any state government to protect or preserve trees.

A tabular presentation of these twelve laws is given in this section. It provides a comparative understanding of these laws to address the following questions:

1. What is the preamble and stated purpose of tree protection laws?
2. What is the jurisdiction of tree protection laws? Do they cover both urban and rural geographies?
3. How is a “tree” and felling/cutting of trees defined in these laws?
4. How many states have special authorities for tree protection outside forest areas and what is their role?
5. What is the process to seek approval for tree felling and how is the felling of trees to be compensated?
6. How are the contraventions of law administered in tree protection laws?
7. How can one appeal against an order passed, i.e. for grant or rejection of permissions under tree laws?

2.1 PREAMBLE AND STATED PURPOSE OF STATE LEVEL LEGISLATIONS

The preamble of a law is important to understand the government’s stated intent to bring a law into force. It is the intent to inform the legal clauses based on which the objectives of the law are to be achieved. For instance, the law for Gujarat is focused primarily on curtailing unauthorized tree felling through a short and focused preambular text. Karnataka’s Tree Act gives detailed reasoning for which the law was brought into force, which includes to arrest the denudation of forests, famines and large-scale felling of trees. The word “preservation” does not occur in several of these tree laws. This indicates that tree laws may not require the government to take proactive steps to conserve existing trees but only lay down steps through which tree felling permissions are regulated.

STATE	State Legislation	Purpose of Enactment
Gujarat	The Saurashtra Felling of Trees (Infliction of Punishment) ACT, 1951 (Amended by Guj. 9 of 1960)	<p>For “heavier punishment for the unauthorised felling of trees and for certain other matters.”</p>
Tamil Nadu	The Tamil Nadu Hill Stations (Preservation Of Trees) Act, 1955	<p>As there is “ indiscriminate cutting of trees in hill stations in the State... involving large-scale deforestation and resulting in considerable soil erosion”</p> <p>Need for “prevent deforestation and soil erosion and also to preserve the special characteristics of the hill areas as regards landscape, vegetal cover and climate.”</p> <p>Therefore: “the regulation of the cutting of trees and the cultivation of land in hill areas in the State...”</p>
Maharashtra	Maharashtra (Urban Areas) Protection and Preservation of Trees Act, 1975	<p>Enacted in the context of “growing pace of urbanisation and industrialisation, there has been indiscriminate felling of large number of trees in the urban areas.”</p> <p>Need to make better provision for preservation of trees in urban areas in the State “by regulating felling of trees and providing for planting of adequate number of new trees” and other related matters.</p>

Karnataka	<u>The Karnataka Preservation of Trees Act, 1976</u>	<p>Heavy destruction of tree growth due to industrialisation and population pressure: “Trees which provide shade, mitigate the extremes of climate, render aesthetic beauty, purify the polluted atmosphere, mute the noise, have been one of the first casualties of pressure on space in our cities and towns.” A law is needed as “it is incumbent to legislate to restrict and regulate the felling of trees and prescribe growing of a minimum number where none exists.”</p> <p>Preamble also gives detailed context of denudation of forests across the state and that “drought and famine conditions have become recurring features.”</p>
Meghalaya	<u>The Meghalaya Tree (Prevention) Act, 1976</u>	For “regulating the felling of trees for purpose of protection of catchment areas and soil from erosion and to preserve the special characteristics of the hilly areas as regards landscape, vegetal cover and climate and to provide for matters connected therewith and incidental thereto.”
Uttar Pradesh	<u>The Uttar Pradesh Protection of Trees in Rural and Hill Areas Act, 1976</u>	To “provide for regulation of felling of trees and replanting of trees”

Kerala	<p>The Kerala Preservation of Trees Act, 1986 (arising out of Kerala Preservation of Trees and Regulation of cultivation in Hill Areas Ordinance, 1983)</p>	<p>To address “indiscriminate felling and destruction of trees” and “considerable soil erosion and destruction and loss of the timber wealth” and “prevent soil erosion and destruction and loss of the timber wealth”</p> <p>Need to “regulate the felling and destruction of trees”</p>
Goa	<p>The Goa, Daman & Diu Preservation of Trees Act 1984</p>	<p>To “provide for the preservation of trees in the Union territory of Goa, Daman and Diu.”</p>
Delhi	<p>The Delhi Preservation of Trees Act, 1994</p>	<p>Decline of forest area in NCTD declining due to increasing population and more construction “The trees are being axed indiscriminately” for “residential or commercial complexes or for widening of roads for free flow of increasing traffic.”</p> <p>To “safeguard the forest area and to provide for the preservation of trees”</p>
Madhya Pradesh	<p>The M.P.Vrikshon Ka Parirakshan (Nagariya Kshetra) Adhiniyam, 2001</p>	<p>For “the purpose of preservation and replanting of trees in Urban areas of Madhya Pradesh”</p>
Assam	<p>Assam (Control Of Felling and Removal Of Trees From Non-Forest Land) Rules 2002 (under Assam Forest Regulation, 1891)</p>	<p>For controlling the felling and removal of trees from non-forest lands in compliance with the WP (C) 202/1995 (Godavarman Case)</p>

West Bengal	<u>West Bengal Trees (Protection And Conservation In Non-Forest Areas) Act, 2006</u>	No specific justification in Preamble
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2.2 JURISDICTION OF STATE LEVEL ACTS AND RULES

Tree laws clearly define their area of jurisdiction. For instance, Gujarat’s legislation was only enacted for the Saurashtra region and amended in 1960 to cover the newly formed state of Gujarat. It now covers both rural and urban areas of the state. In Maharashtra and Madhya Pradesh, the tree legislation is only for urban areas and therefore the functions are associated with the urban local body like the municipality or municipal corporation. Maharashtra is the only state which has the provision of a Tree Cess and Tree Authority Fund (made up of cess, grants etc). Some laws are focused on particular areas of interest, like in the case of Tamil Nadu, the focus is on hill areas of the state where the law is administered through Special Hill Area Authorities chaired by the District Collectors, who is the head of revenue administration of a defined District boundary.

STATE	Name of Act and Year of Enactment	Area of Jurisdiction	Special Authority
Gujarat	The Saurashtra Felling of Trees (Infliction of Punishment) ACT, 1951 (Amended by Guj. 9 of 1960)	Across the state (urban and rural)	Not specified
Tamil Nadu	The Tamil Nadu Hill Stations (Preservation Of Trees) Act, 1955	Hill areas of the state	Special Hill Area Authorities constituted by the State Government chaired by the District Collector
Maharashtra	Maharashtra (Urban Areas) [Protection and Preservation of Trees Act, 1975	Across the state (urban)	Tree Authority constituted by urban local body chaired officials of municipalities or municipal corporations

Karnataka	The Karnataka Preservation of Trees Act, 1976	Across the state (urban and rural)	Tree Authority constituted by State Government for each urban area and each rural area
Meghalaya	The Meghalaya Tree (Prevention) Act, 1976	Municipality & Cantonment areas of Shillong (extendable to other areas)	Not specified
Uttar Pradesh	The Uttar Pradesh Protection of Trees in Rural and Hill Areas Act, 1976	Across the state (except forest area, cantonment & government land)	Tree Authority constituted by State Government. May be different for different classes of timber, fruit or other trees.
Kerala	The Kerala Preservation of Trees Act, 1986	Private Forests across the state	Not specified
Goa	The Goa, Daman & Diu Preservation of Trees Act 1984	Across the state (urban and rural)	Tree Authority constituted by State Government
Delhi	The Delhi Preservation of Trees Act, 1994	National Capital Region (NCR)	Tree Authority constituted by State Government
Madhya Pradesh	The M.P. Vrikshon Ka Parirakshan (Nagariya Kshetra) Adhiniyam, 2001	Across the state (urban)	Not specified

Assam	Assam (Control Of Felling and Removal Of Trees From Non-Forest Land) Rules 2002 (under Assam Forest Regulation, 1891)	Across the state (urban and rural)	Not specified
West Bengal	West Bengal Trees (Protection And Conservation In Non-Forest Areas) Act, 2006	Across the state (urban and rural)	Not specified

2.3 DEFINITION OF ‘TREE’ AND ‘FELLING OF TREE’ IN STATE LEVEL TREE LEGISLATIONS

What constitutes a tree, becomes significant to understand when individuals and institutions need to take prior permissions under specified tree laws. For instance, in Saurashtra cutting of shrubs and bushes will not attract the provisions of the relevant tree act. In Kerala, the tree act is focused on a few valuable tree species like sandalwood and rosewood. In Goa, an exhaustive definition excludes the Coconut tree. In Assam’s tree law, while a tree is not defined, the law makes itself applicable to all trees in non-forest areas, including plantations.

Equally important is the definition of what all is covered under the definition of tree felling. For instance, burning a tree even without physically cutting a branch or roots is also felling, and requires prior permission. Karnataka, Meghalaya, Goa, Delhi, Maharashtra and Madhya Pradesh laws also mention this. The Gujarat law does not specify a definition of felling, damaging or cutting a tree.

State Legislation	Tree	Felling of Tree
The Saurashtra Felling of Trees (Infliction of Punishment) ACT, 1951 (Amended by Guj. 9 of 1960)	Shall not include shrubs, bushes and such other varieties as may be notified by Government by notification in the <i>Official Gazette</i>	Not specified

<p>The Tamil Nadu Hill Stations (Preservation Of Trees) Act, 1955</p>	<p>Includes bamboo, but does not include brushwood</p>	<p>Not specified</p>
<p>Maharashtra (Urban Areas) [Protection and Preservation of Trees Act, 1975</p>	<p>Any perennial woody plant, whether in the seeding or sapling stage or fully-grown stage, and includes shrubs whose branches spring from the ground level</p>	<p>To fell a tree includes burning or cutting or [or in any way damaging a tree]</p>
<p>The Karnataka Preservation of Trees Act, 1976</p>	<p>Any woody plant whose branches spring from and are supported upon a trunk or body and which trunk or body is not less than five and a half centimetres in diameter and not less than one meter in height from the ground level and includes palms, bamboos, stumps brushwood, canes and seedlings of such tree but does not include sandal and rosewood trees</p>	<p>Severing the trunk from the roots, uprooting the tree and includes burning or cutting or girdling or applying arboricides to a tree to cause substantial damage thereto or destruction thereof.</p>
<p>The Meghalaya Tree (Prevention) Act, 1976</p>	<p>Any tree specified in the Schedule to this Act, and the State Government may, by notification, add to or modify, the Schedule</p>	<p>Includes burning, cutting, damaging, uprooting or lopping a tree to cause substantial damage or destruction thereto.</p>
<p>The Uttar Pradesh Protection of Trees in Rural and Hill Areas Act, 1976</p>	<p>Any woody plant whose branches spring from and are supported upon a trunk or body and whose trunk or body is not less than five centimetre in diameter at a height of thirty centimetres from the ground level and is not less than one metre in height from the ground level.</p>	<p>Cutting, girdling, lopping, pollarding or damaging a tree in, any other manner</p>

<p>The Kerala Preservation of Trees Act, 1986</p>	<p><u>Following Species:</u> Sandalwood (<i>Santalum album</i>), Teak (<i>Tectona grandis</i>), Rosewood (<i>Dalbergia latifolia</i>), <i>Irul</i> (<i>Xylia Xylocarpa</i>), <i>Thempavu</i> (<i>Terminalia toman-tosa</i>), <i>Kampakam</i> (<i>Hopea parvi-flora</i>), <i>Chempakam</i> (<i>Michelia chempaca</i>), <i>Chadachi</i> (<i>Grewia tiliaefolia</i>), <i>Chandana vempu</i> (<i>Cedrela toona</i>), <i>Cheeni</i> (<i>Tetra-meles nudiflora</i>).</p>	<p>Not specified</p>
<p>The Goa, Daman & Diu Preservation of Trees Act 1984</p>	<p>Any woody plant whose branches spring from and are supported upon a trunk or body and whose trunk or body is not less than five centimetre in diameter at a height of thirty centimetres from the ground level and is not less than one metre in height from the ground level.</p> <p>Does not include Coconut tree.</p>	<p>Severing the trunk from the roots, uprooting the tree and includes bull-dozing, cutting, girdling, lopping, pollarding, applying arboricides, burning or damaging a tree in any other manner</p>
<p>The Delhi Preservation of Trees Act, 1994</p>	<p>Any woody plant whose branches spring from and are supported upon a trunk or body is not less than five centimeters in diameter at a height of thirty centimeters from the ground level and is not less than one metre in height from the ground level</p>	<p>Severing the trunk from the roots, uprooting the tree and includes bulldozing, cutting, girdling, lopping, pollarding, applying arboricides, burning or damaging a tree in any other manner</p>

<p>The M.P. Vrikshon Ka Parirakshan (Nagariya Kshetra) Adhiniyam, 2001</p>	<p>woody plant, whose branches spring from and are supported upon a trunk or body and whose trunk or body is not less than 30 centimetres in girth at ground level and is not less than 2 metres in height from the ground level</p>	<p>Severing the trunk from the roots, up-rooting the tree and includes bulldozing, cutting, girdling, lopping, pollarding, applying poisonous substance, burning or damaging a tree in any other manner</p>
<p>Assam (Control Of Felling and Removal Of Trees From Non-Forest Land) Rules 2002 (under Assam Forest Regulation, 1891)</p>	<p>Tree not defined. Applicable to all trees in non-forest areas, including plantations. Following species excluded: "Aam (<i>Mangifera indica</i>), Jamun (<i>Syzygium cumini</i>), Kathal (<i>Artocaptus integrifolia</i>), Eucalyptus, Poplar, all species of home grown bamboo, Leteku, Paniol and Madhuriam (<i>Psyidium guajava</i>).</p>	<p>Not specified</p>
<p>West Bengal Trees (Protection And Conservation In Non-Forest Areas) Act, 2006</p>	<p>Same meaning as the Indian Forest Act, 1927, and includes any woody plant whose branches spring from an area supported upon a trunk or body and whose trunk or body is not less than ten centimetres in diameter at breast height from the ground level</p>	<p>Cutting, girdling, pollarding, uprooting or damaging a tree in any manner but shall not include lopping off of a limb of tree for such purposes as may be prescribed</p>

2.4 APPROVAL FOR TREE FELLING AND COMPENSATION

All laws discussed in this section include procedures by which permissions for tree cutting are to be secured. The laws rules provide formats based on which applications can be filed by individuals or institutions seeking to carry out tree felling. There are designated officers or authorities that are assigned for this purpose. Different laws locate the jurisdiction to regulate tree felling to different government departments. In some instances, it is the forest department, in others it is the revenue administration or the urban local body. Laws also specify instances when permissions for tree felling cannot be refused. For instance, in Madhya Pradesh tree felling permission cannot be refused if a tree “constitutes an obstruction to traffic or if necessary, for maintenance of power/telephone lines etc.”

Several laws require for the loss of trees to be compensated. However, in some cases the text of the law specifies the extent of compensation, but most others leave it to the “competent authority”, which could be an urban local body, revenue administration or the forest department. Therefore, the compensatory plantation numbers for trees outside forest areas may differ in different states. Where laws specify the numbers of trees as compensation, there is a provision for downward revision of this legal obligation rather than increasing the numbers. The Uttar Pradesh law is a case in point where the obligation is to plant two trees in lieu of each tree felled but this number can be reduced by the competent authority which is the forest department of the state. The laws also clarify the responsibility for compensatory plantation does not end with only planting of the saplings but includes both to “plant and tend”.

Legislation	Approval for Tree Felling	Compensation for Tree Felling
The Saurashtra Felling of Trees (Infliction of Punishment) ACT, 1951 (Amended by Guj. 9 of 1960)	Permission from District Collector, Village Panchayat or any other officer authorized by state government.	Not specified

<p>The Tamil Nadu Hill Stations (Preservation Of Trees) Act, 1955</p>	<p>State government to notify specific hill areas for the purposes of this law</p>	<p>Effective regeneration of equal number of the same or other suitable species of trees that have been felled. Deposit a sum “not exceeding” INR 100 for each tree.</p>
<p>Maharashtra (Urban Areas) [Protection and Preservation of Trees Act, 1975</p>	<p>Permission from Tree Officer appointed by the Tree Authority under the specific urban local authority</p>	<p>Plant another tree of the same or other suitable species, on the same site or other suitable place within thirty days from the date the tree is felled. Time can be extended by the Tree Officer</p>
<p>The Karnataka Preservation of Trees Act, 1976</p>	<p>Permission from the Tree Officer who is a forest officer appointed by the Conservator of Forests</p>	<p>Obligation to plant trees as prescribed by the Tree Officer</p>
<p>The Meghalaya Tree (Prevention) Act, 1976</p>	<p>Prior permission of the Divisional Forest Officer. <i>(Permission not to be refused in cases “dead, diseased, over-matured, wind-fallen” trees or it is dangerous to life and property or if felling is necessary for preventing or abating nuisance).</i></p>	<p>Not specified</p>

<p>The Uttar Pradesh Protection of Trees in Rural and Hill Areas Act, 1976</p>	<p>Permission from competent authority as appointed by the State Government</p>	<p>Bound to “plant and tend two trees in place of every tree” in the same area. Competent authority can allow lesser number of trees to be planted to trees to be planted in another area.</p>
<p>The Kerala Preservation of Trees Act, 1986 <i>(arising out of Kerala Preservation of Trees and Regulation of cultivation in Hill Areas Ordinance, 1983)</i></p>	<p>Permission in writing of the authorised officer who should be not below the rank of a Forest Ranger. <i>(Permission not to be refused in cases “dead, diseased, over-matured, wind-fallen” trees or it is dangerous to life and property or if felling is necessary for preventing or abating nuisance).</i></p>	<p>Not specified</p>
<p>The Goa, Daman & Diu Preservation of Trees Act 1984</p>	<p>Permission from Tree Officer who is a forest officer appointed by the government of NCTD</p>	<p>Security deposit for ensuring regeneration of the area and replantation of trees. Bound to plant trees in place of every tree felled. Number to be determined by authority which can also allow lesser number of trees to be planted to trees to be planted in another area.</p>

<p>The Delhi Preservation of Trees Act, 1994</p>	<p>Permission from Tree Officer who is a forest officer appointed by the government of NCTD</p>	<p>Security deposit for ensuring regeneration of the area and replantation of trees.</p> <p>Bound to plant trees in place of every tree felled. Number to be determined by authority which can also allow lesser number of trees to be planted to trees to be planted in another area.</p>
<p>The M.P. Vrikshon Ka Parirakshan (Nagariya Kshetra) Adhiniyam, 2001</p>	<p>Permission in writing of the Tree Officer who should be not below “a Gazetted Forest Officer, Commissioner, Municipal Corporation or Chief Municipal Officer” <i>(Permission not to be refused in cases “dead, diseased, over-matured, wind-fallen” trees or it is dangerous to life and property, causing obstruction to traffic etc).</i></p>	<p>Obligation to plant tree or trees on the same site, or as prescribed within 30 days.</p>
<p>Assam (Control Of Felling and Removal Of Trees From Non-Forest Land) Rules 2002 (under Assam Forest Regulation, 1891)</p>	<p>Permission from “<i>Forest Department, following the provisions prescribed by the Chief Conservator of Forests.</i>”</p>	<p>Not specified</p>

West Bengal Trees (Protection And Conservation In Non-Forest Areas) Act, 2006	Permission from competent authority (<i>gram panchayat in rural area or municipality/municipal corporation in urban area</i>) as appointed by the State Government	Bound to plant and tend trees in place of every trees. Number to be determined by authority
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2.5 ROLE OF TREE AUTHORITIES

Not all tree protection laws have the requirement of setting up Tree Authorities. In instances where the Tree Authority is present, the scope of the work also differs. For instance, in Maharashtra the Tree Authority appoints the Tree Officer responsible for reviewing permissions for tree felling. All four Tree Authorities discussed below in the table have the responsibility of carrying out a tree census. Only in two states out of the four where the law requires the constitution of tree authorities, do the laws specifically prescribe the role of tree preservation to them. In only one state, i.e. Maharashtra, there is a provision to set up a Tree Authority Fund, that is to be developed including the monies collected through a Tree Cess. This is also a unique provision in the Maharashtra law, however, neither the Act or the Rules elaborate on the purpose of this fund or give details on how it should be utilised.

	Maharashtra	Karnataka	Goa	Delhi
Government Department	Urban Local Authority	Forest Department	Forest Department	Forest Department
Chairperson	Mayor (Municipal Corporation); Governor (Municipality) etc	Forest Officer in-charge of Territorial Division; Head of Taluk Panchayat (<i>lands not belonging to State Govt or certain plantations</i>)	Development Commissioner or officer at level of Secretary	Secretary of Forests or any other officer not below the rank of Secretary

Prevention of Tree Felling	-	-	Undertake critical study of tree felling proposals , “whenever possible” with the objective of protecting existing trees and planting more trees.	Undertake critical study of tree felling proposals, “whenever possible” with the objective of protecting existing trees and planting more trees..
Preservation	All trees under jurisdiction.	All trees under jurisdiction.	All trees under jurisdiction. Demarcation/ Development of new areas for wood lots, parks, recreational areas etc.	All trees under jurisdiction. Demarcation/ Development of new areas for wood lots, parks, recreational areas etc.
Census	As directed by state government	Carry out census, including declaration of number of trees by owners, occupants	Carry out census, including declaration of number of trees by owners, occupants.	Carry out census, including declaration of number of trees by owners, occupants.
Standards	Specifying number and types of trees for each plot of land	Specify standards for number of kind of trees “which each locality, type of land and premises” should have	Specify standards for number of kind of trees “which each locality, type of land and premises” should have	Specify standards for number of kind of trees “which each locality, type of land and premises” should have

Nurseries	Development, maintenance, supply of seeds	Development, maintenance, supply of seeds	Development, maintenance, supply of seeds	Development, maintenance, supply of seeds
Plantation/ Transplantation	Planting and maintaining trees as prescribed by standards for roads, parks, banks or rivers/lakes	Planting, Transplanting, Replacement of trees felled due to buildings, roads etc.	Planting, Transplanting, Replacement of trees felled due to buildings, roads etc.	Planting, Transplanting, Replacement of trees felled due to buildings, roads etc
Advice and Education	Advice and technical assistance for tree preservation Organisation of flower, fruit, vegetable, tree or plant shows	Organising demonstration and extension services	-	-
Funds	Tree Authority Fund, including that from Tree Cess	-	-	-

2.6 FINES AND PENALTIES

Each law has provisions on fines and penalties for instances when clauses of these laws have not been adhered to. These are mostly for damage or felling of trees without prior permission. In some of these laws there are stringent clauses related to imprisonment in case of violations. The Maharashtra Tree Act has a higher level of imprisonment if tree felling takes place in “public premises” without prior permission. In most laws, the amount of fine is very low with a maximum of INR 5000. It is only in the 2001 Madhya Pradesh law that the fine is up to INR 50000. However, none of these laws specify whether this fine is applicable to the felling of a single tree, or a higher number of trees.

State Legislation	Fines and Penalties (related to illegal tree felling)
The Saurashtra Felling of Trees (Infliction of Punishment) ACT, 1951 (Amended by Guj. 9 of 1960)	Fine upto INR 1000 (and not be less than INR 50) unless exempted by Revenue officer inflicting the fine, gives the reasons for exemption in writing.
The Tamil Nadu Hill Stations (Preservation Of Trees) Act, 1955	Imprisonment which may extend to 1 year or with fine which may extend to INR 5000, or both.
Maharashtra (Urban Areas) [Protection and Preservation of Trees Act, 1975	Imprisonment upto extend to 1 year. If felling in public premises additional imprisonment upto 3 months.
The Karnataka Preservation of Trees Act, 1976	Seizure of property. Imprisonment that may extend to 3 months or with fine, which may extend to INR 1000 one thousand rupees or with both. The court may order forfeiting of property to State Government.

<p>The Meghalaya Tree (Prevention) Act, 1976</p>	<p>A fine not exceeding one thousand rupees. The magistrate may further order that any tree felled together with all tools and other articles used in felling shall be forfeited to the State Government (Section 12 repeals the Meghalaya Tree (Preservation) Rules, 1976)</p>
<p>The Uttar Pradesh Protection of Trees in Rural and Hill Areas Act, 1976</p>	<p>Imprisonment upto 6 months or fine upto INR 1000 or both</p>
<p>The Kerala Preservation of Trees Act, 1986 <i>(arising out of Kerala Preservation of Trees and Regulation of cultivation in Hill Areas Ordinance, 1983)</i></p>	<p>Imprisonment for a term not be less than 6 months, may extend to 2 years, with fine not be less than INR 500 extended to INR 2000. If second or subsequent offence, imprisonment not be less than 1 year, may extend to 3 years, with fine which not be less than INR 1000 extended to INR 5000.</p>
<p>The Goa, Daman & Diu Preservation of Trees Act 1984</p>	<p>Imprisonment upto 1 year or with fine upto INR 1000 or both.</p>
<p>The Delhi Preservation of Trees Act, 1994</p>	<p>Imprisonment upto 1 year or with fine upto INR 1000 or both.</p>
<p>The M.P. Vrikshon Ka Parirakshan (Nagariya Kshetra) Adhiniyam, 2001</p>	<p>Imprisonment upto 2 years or fine upto INR 50,000 or both. The fine, if not deposited within the prescribed time limit, will be recoverable as arrears of land revenue.</p>
<p>Assam (Control Of Felling and Removal Of Trees From Non-Forest Land) Rules 2002 (under Assam Forest Regulation, 1891)</p>	<p>Appropriate penalties as per the procedure contained in Chapter VIII of the Assam Forest Regulation, 1891.</p>

<p>West Bengal Trees (Protection And Conservation In Non-Forest Areas) Act, 2006</p>	<p>Imprisonment upto 1 year or with fine upto INR 5000 to or both and until the compensatory plantation of requisite number of trees are undertaken, shall be fined INR 50 for each day of default.</p> <p>Any person, or development agency failing to implement the plantation plan shall be punished with imprisonment which may extend to 2 years or fine upto INR 10000 or both.</p>
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2.7 APPEAL PROCEDURES IN STATE TREE LEGISLATIONS

All the laws specify the process through which appeals can be filed against orders issued under the law. The grievance can be against a grant or rejection of a permission and is not limited to only the applicant seeking tree felling permission. However, different laws have different designated officers before whom an appeal can be made, which is directly associated with the government department which has the jurisdiction to enforce the law. In most cases the time limit within which an appeal needs to be filed is 30 days. However, in Tamil Nadu it is two months and in Kerala it is 90 days. In Maharashtra the time frame for appeal is only 15 days. However, the manner in which the appeal has to be filed, heard and decided upon has not been elaborated and it is likely that different states have adopted different methods and procedures on how the appeals are to be decided. In most cases the appellate authorities are also located within the same government department which has the authority to take decisions to grant or reject tree approvals. The appeal provisions don't give an opportunity to accept complaints against the non-compliance of conditions with which tree felling approvals are granted, for instance, the location of compensatory plantations or the maintenance of saplings or any additional studies which may need to be carried out.

State Legislation	Appeal Procedure
The Saurashtra Felling of Trees (Infliction of Punishment) ACT, 1951 (Amended by Guj. 9 of 1960)	Fine or action of the Revenue is subject to appeal before the of the District Collector within a period of 30 days. The Collector delegate their powers to the Assistant Collector or any subordinate Deputy Collector.
The Tamil Nadu Hill Stations (Preservation Of Trees) Act, 1955	Any person aggrieved by an order refusing to grant permission can appeal within 2 months. In writing to the “government” (<i>i.e. state government</i>)
Maharashtra (Urban Areas) [Protection and Preservation of Trees Act, 1975	Appeal before the Tree Authority within 15 days of the decision of the Tree Officer.
The Karnataka Preservation of Trees Act, 1976	Appeal shall be filed within 30 days from the date the decision is communicated to the owner or occupier of the land.
The Meghalaya Tree (Prevention) Act, 1976	Appeal against the order of the Divisional Forest Officer can be made to the Conservator of Forests within 30 days.
The Uttar Pradesh Protection of Trees in Rural and Hill Areas Act, 1976	Any person aggrieved by the decision of the competent authority may make a representation within 30 days from the date of the decision, to the Revising Authority, as appointed by the State Government.
The Kerala Preservation of Trees Act, 1986 (<i>arising out of Kerala Preservation of Trees and Regulation of cultivation in Hill Areas Ordinance, 1983</i>)	Any person aggrieved by an order refusing to grant permission under may, within 90 days of the receipt of such order, prefer an appeal to the appellate authority. The delay can be condoned by the appellate authority if they are “satisfied” if “sufficient cause” for delay.

The Goa, Daman & Diu Preservation of Trees Act 1984	An appeal shall be against the order or direction of the Officer to the Appellate Authority within a period of 30 days.
The Delhi Preservation of Trees Act, 1994	An appeal can be filed within a period of 30 days of passing order or direction by the Tree Officer.
The M.P. Vrikshon Ka Parirakshan (Nagariya Kshetra) Adhiniyam, 2001	Any person aggrieved by an order of the Tree Officer, may appeal to the appellate authority within a period of 30 days of such an order.
Assam (Control Of Felling and Removal Of Trees From Non-Forest Land) Rules 2002 (<i>under Assam Forest Regulation, 1891</i>)	As per Assam Forest Regulation,, 1891 (Regulation VII of 1891)
West Bengal Trees (Protection And Conservation In Non-Forest Areas) Act, 2006	An appeal within 30 days of every order of the competent authority to the appellate authority (appointed by the State Government).

2.8 LITIGATION ON IMPLEMENTATION OF TREE LAWS

Several aspects of the above tree laws have been litigated upon and different courts have passed orders and judgements that clarify or direct implementation of procedures for tree protection laid out by these laws. The following cases are illustrative of the types of issues being brought to the court's attention and which are crucial to the functioning and outcomes of the various tree protection laws.

In a response to a complaint filed by Delhi based Saurabh Sharma on the lack of suo moto²⁴ disclosure by the forest department, Government of National Capital Territory of Delhi GNCTD, in charge of implementing the Delhi Preservation of Trees Act (DPTA), 1994, the Chief Information Commissioner Shri Shailesh

²⁴ “Suo motu is a Latin legal term which means «*on its own motion*» or “*where a government agency acts on its own cognizance*, “ (Source: <https://www.collinsdictionary.com/submission/8861/suo+motu> as accessed on August 26, 2021)

Gandhi, on Aug 5, 2011, directed²⁵ that important **information** on the following aspects be made available on the department's website from 1st September 2011 onwards:

"1) Details of permissions given for felling and pruning trees, together with the details of applicants, the number of trees, locations, the status of the application and detailed reasons for approval or rejection of the same. This shall be done for all applications received after 1st September 2011.

2) Details of complaints received on the tree helpline, together with the details of the number of trees threatened/ cut, location(s), the status of the complaint and status of prosecution undertaken till the date of final disposal. This shall be done for all complaints received after 1st September 2011.

3) The department shall also publish details regarding monitoring done, if any, for effective implementation of the Directions of the High Court of Delhi in the matter of Kalpavriksh vs. Union of India & Others W.P (C) 1772/2007, with regard to de-concretization carried out by various civic agencies. All documents and correspondences done with the civic agencies in this regard shall be published on the website.

4) The department shall also publish on the website the projects/studies/surveys undertaken, if any, regarding Biodiversity in neighbourhood parks.

5) All civic agencies carrying out any construction work shall also display along with the monetary costs and details of the project, the environmental cost, indicating the number of trees being felled and the location of compensatory plantation."

This was a comprehensive set of directions from the Information Commissioner. However, details of the implementation of the Tree Act and work undertaken by the implementing agencies for the protection of trees is not in public domain. In WP 812/2017, petitioner Aditya Prasad moved the Delhi High Court seeking directions to the Respondents, Govt of NCT, to implement the above clauses of the Central Information Commission on publishing information. Even today, public information available on the implementation of the Trees Act is patchy and far from useful to understand the status of implementation of the law. Moreover, without timely information, citizens concerned about tree felling are unable to make objections or support the department in tree protection efforts.

Tree laws also fail to provide opportunities for citizens to **participate in decision-making** on tree felling and other aspects of implementation of tree laws. A petition was filed by a resident of Thane, Maharashtra, to challenge a May 22, 2019 order passed by the tree authority of the Thane Municipal Corporation

²⁵ Central Information Commission Decision No. CIC/SG/C/2010/001439/13885 and Complaint No. CIC/SG/C/2010/001439 (https://ciconline.nic.in/cic_decisions/CIC_SG_C_2010_001439_13885_M_64270.pdf)

(TMC), to fell several trees and allow transplantation. The petitioner stated that although he had objected to the proposal, he was not allowed a hearing by the Tree Authority. In response to this petition, the Bombay High Court held that the tree authority need not grant a hearing to those objecting to the felling or transplantation decisions of the Tree Authority. The bench stated that the Maharashtra (Urban Areas) [Protection and Preservation] of Trees Act, 1975, “does not contemplate the opportunity of hearing that an objector may claim as a matter of right” and that the grant of such a hearing is discretionary.^{26 27}

An aspect of tree protection that has been litigated is tree damage due to concretisation around trees, pavement laying and pruning. Trees pruned too much or badly tend to become unstable. Trees whose roots and trunks are blocked due to concrete around them can also fall or die.

Several cases have been filed seeking the court’s directions to civic agencies to refrain from concretization of tree trunks, especially on pavements, central road avenues and parks. Such cementing and concretization upto the tree trunks affects the foundation of trees and directly affects the growth of the roots. It also leaves little space for a tree to absorb air and water. In 2007 the High Court of Delhi issued directions to immediately stop the “choking of trees” with concrete and take remedial action on the damage caused. The court’s directions came in response to petition filed by Kalpavriksh, an environmental action group (W.P (C) 1772/2007). In April 2013, directions were also issued by the National Green Tribunal (O.A. 82/2013, Aditya N. Prasad v. Union of India & Ors) to remove concrete from within 1.25m radius of the base of every tree.²⁸ The order also directed that any agency found to be in violation would be fined INR 10,000 per tree. Although the court appointed commissions, concerned citizens have, until recently, pointed to the non-implementation of these orders and directions.²⁹ In 2019, a case (Original Application No. 346/2019) related to tree concretisation in

²⁶ High Court of Bombay order in PUBLIC INTEREST LITIGATION NO. 95 OF 2019

²⁷ Kanchan Chaudhari. 2020. *Authority not bound to grant hearing to those objecting to tree-cutting proposals: Bombay HC*, Hindustan Times, August 5 <https://www.hindustantimes.com/india-news/authority-not-bound-to-grant-hearing-to-those-objecting-to-tree-cutting-proposals-bombay-hc/story-EIXUgosVLPawhrdpj3ThZJ.html>

²⁸ Times News Network. 2015, *Concrete choking trees even two years after NGT order*. Times of India, August 8 (http://timesofindia.indiatimes.com/article-show/48399074.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst)

²⁹ Times News Network. 2019. *Six years after NGT order, PWD drive to free trees of concrete bases*, Times of India, June 18 (<https://timesofindia.indiatimes.com/city/delhi/6-yrs-after-ngt-order-pwd-drive-to-free-trees-of-concrete-bases/articleshow/69832918.cms>)

Mohali, Punjab was filed in the NGT by Environment Protection Society drawing upon the previous directions of the Tribunal.

Damaged trees are seen as a “danger” to public safety. Damage to trees caused by the above activities then become a pretext for felling them. A number of tree felling applications are filed by residents and RWAs with the reason that they could fall and cause damage to life and property.

In October 2020, the Delhi High Court heard a case challenging the Delhi government’s plan to concretise and construct a shelter around an old banyan tree in Chirag Dilli. The court ordered that the concrete platform being built around “the victimized tree” be removed³⁰. This case also brought to light the issue of heritage trees in cities and the lack of records or monitoring and restoration efforts for them. The court not only fined the construction for damaging the tree but also ordered that the tree be restored.^{31 32}

Numerous cases of project construction related mass scale tree felling or damage have been heard by various courts. These mainly include area development or building projects and linear projects for transportation such as metro rail, highways, flyovers and bridges. Transportation projects have largely been seen by courts as public interest projects as well as environmentally friendly even though they cater to the needs of exclusive sections of society and involve extensive environmental impacts. Moreover, these projects are taken up in a phased manner and therefore the total impacts of these projects are rarely known. Tree felling approvals are granted by institutions under Tree Acts under each phase of the project and so the total number of trees lost run into thousands by the time the project is completed, even if some care is taken by project authorities to reduce tree mortality by measures such as changing the alignment, building stations and tracks underground or on stilts. In some instances, the courts have taken this issue seriously and given directions that are in favour of protection of trees for the services they provide to society at large.

A group of local residents have been doggedly following up cases involving the “disappearance” of trees in a 2 km stretch of a road in Vasant Kunj, that is part of the project for the expansion of the Mehrauli-Mahipalpur road in Delhi. The residents have chased the government agencies involved such as the Public Works Department (PWD) and the Delhi Development Authority (DDA) as well

30 W.P.(C) 8515/2020 & CM APPL. 27438/2020

31 W.P.(C) 3433/2020 & CM APPL. 12178/2020;

32 Richa Banka and Soumya Pillai. 2020. *How can you do this to a 300-year-old tree? Anguished HC pulls up Delhi govt, civic body*, Hindustan Times August 7 <https://www.hindustantimes.com/delhi-news/how-can-you-do-this-to-a-300-year-old-tree-anguished-hc-pulls-up-delhi-govt-civic-body/story-9a9ZA-V3wMBrNn4crMJA3EN.html>

as the forest department that is meant to protect urban trees according to the DPTA. They have also pursued litigation in the National Green Tribunal(NGT) and in the Delhi High Court³³. In 2015, the Delhi High Court had appointed Ms. Sunita Narain as amicus curiae to submit a report to the court on the tree felling done for the project.³⁴ When the residents did a tree enumeration on this road stretch in 2016, they found 1615 trees missing although the PWD had obtained permission to remove 810 trees in 2014 for road widening. The agencies claimed that the residents survey was wrong and pleaded for the need to cut more trees. The residents argued that their environment has been adversely affected due to so many trees missing on just 2 kms stretch of road and the ad-hoc road activities for which an Environment Impact Assessment (EIA)was never done.

The road expansion itself seems like an impossibility due to the proposed alignment passing through densely populated areas that cannot be evacuated easily. Yet, tree cutting has been proposed, approved and implemented by agencies involved. As part of the ongoing proceedings of the case, the Delhi High Court directed the forest department to form committees comprising independent experts which may evaluate tree felling applications, pruning and compensatory afforestation proposals. However subsequent hearings on this matter have not taken place.

In September 2020, the Delhi government's environment minister Gopal Rai forbade the Forest department from giving any tree felling approvals and instead took charge of those decisions upon himself.³⁵ This was contrary to the procedures of the DPTA which requires an Authority made up of knowledgeable members to take these decisions. However, the government claimed that this would help to examine all proposals and applications more carefully.³⁶

In 2018, a comprehensive case was filed in the Karnataka High Court (KHC) by Bangalore Environment Trust highlighting that the authorities responsible for preservation of trees in Bengaluru city “actually facilitated the very damage to the tree cover that they were constituted to prevent.” The petition pointed to the “**failure of authorities**” to carry out their statutory duties as required in the

33 Mohammad Iqbal.2015, *Court stays order for felling trees in Vasant Kunj*. The Hindu, January 9 (<https://www.thehindu.com/news/cities/Delhi/court-stays-order-for-felling-trees-in-vasant-kunj/article6769745.ece#>)

34 Express News Service. 2015, *HC appoints Sunita Narain to look into Vasant Kunj tree felling*, Indian Express, March 17 (<https://indianexpress.com/article/cities/delhi/hc-appoints-sunita-narain-to-look-into-vasant-kunj-tree-felling/>)

35 Letter No. No. FMOE/2020/1654 from Office of Minister, Environment, Forest and Wildlife dated 9.9.2020

36 Shivam Patel. 2020. *No nod to cut trees for projects in Delhi until further orders, says Gopal Rai*, Indian Express, September 17 accessed from <https://indianexpress.com/article/cities/delhi/no-nod-to-cut-trees-for-projects-in-delhi-until-further-orders-says-gopal-rai-6599032/> on 31 August 2021

Karnataka Preservation of Trees Act (KTPA), 1976 and provided several instances of violations to support their contention. The petition was filed by a group of experts, activists and professionals engaged in bringing public attention to environment issues. The petition raised concerns that the rampant felling of trees was causing “irreversible and irreparable harm to the ecology and environment of the city of Bengaluru.” It argued that such rampant disregard of provisions of the tree act was violating the principle of inter-generational equity and fundamental rights of citizens.

The petitioners requested the court to carry out monthly monitoring of the implementation of the tree act and also set up a committee or task force to ensure that the Tree Officer and Tree Authority carry out their designated functions. The petition also asked for directions for a tree census for Bengaluru city. Two prayers were also related to public disclosure. Firstly, that no tree felling permission for a public project is granted without a public notice under the KPTA, 1976 and secondly that all tree felling permissions are uploaded on the website 15 days before on site tree felling activity can commence.

The KHC has been hearing this case regularly and has issued several crucial orders in line with the prayers made in the petition. The Court is also monitoring the implementation of the Tree Act in Karnataka and its directions. One set of orders related to the setting up of a Tree Expert Committee (TEC) and that transplantation should be recommended or accepted only as a last option when the TEC is assessing projects involving tree felling. But the TEC that was set up was very casual in their approach, as per the court’s observation and did not display “application of mind”³⁷

As part of this case, the court is hearing the matter of tree felling by Bangalore Metro Rail Corporation Limited (BMRCL). In this matter, the company claimed that the provisions of the Karnataka Trees Act was not applicable to certain species of commercially important trees like coconut and cashew. However, the court held that the state government and the company should protect even these trees as these resources are held in public trust.³⁸

In a case filed by the Association for Protection of Democratic Rights on the building of five rail overbridges, first in the Calcutta High Court and then challenging its decision in the Supreme Court, the CJI asked why the assessment

37 Citizen Matters News Desk. 2021. *How High Court is curbing mindless tree felling in Bengaluru*, <https://bengaluru.citizenmatters.in/tree-removal-permissions-pil-high-court-62654> accessed from on September 7, 2021

38 Ambarish, B. 2020. *Protect trees even if they are not covered under law*, says HC, Deccan Herald, December 10 accessed from <https://www.deccanherald.com/city/bengaluru-infrastructure/protect-trees-even-if-they-are-not-covered-under-law-says-hc-925552.html> on August 31, 2021



Source: Hindustan Times, September 12, 2020

of the environmental impact of tree felling does not include the value of oxygen produced during the lifetime of a tree. The court suggested that experts should calculate the real value of trees by accounting for the services provided by them such as air purification. The CJI was of the view that projects must incur the additional costs involved in protecting trees because those costs will not be greater than the value of oxygen provided by trees.³⁹ According to the SC appointed 5 member expert committee set up in this case, heritage trees that are over 100 years old could be valued at more than a crore each. In this case, the value of a tree was recommended as the age multiplied by Rs 74,500. As the project involved cutting of 356 trees to build railway over bridges, the total tree worth was calculated as more than 220 crores⁴⁰.

³⁹ Times News Network. 2020. *What is a tree's value? SC to ask economists and environmentalists*, Times of India, February 19 (http://timesofindia.india-times.com/articleshow/74199943.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst)

⁴⁰ Utkarsh Anand. 2021. *What's the value of a tree? Age multiplied by IN74.5k: SC panel*, Hindustan Times, February 24 accessed from <https://www.hindustantimes.com/india-news/whats-the-value-of-a-tree-age-multiplied-by-74-5k-sc-panel-101612377235565.html> on September 7, 2021

Although the value of trees as oxygen producers has gathered much importance in recent times where cities are dealing with air pollution, the calculation of oxygen production by trees is complex and dependent on a variety of factors⁴¹

Science, Tech, Math › Science

How Much Oxygen Does One Tree Produce?

Oxygen Produced by Photosynthesis

f SHARE F FLIP ✉ EMAIL

PRINT



In December 2019, Writ Petition(s)(Civil) No(s).1472/2019 [SHEELA BARSE Petitioner(s) VERSUS THE STATE OF UTTAR PRADESH & ORS. Respondent(s)]. was filed in the Supreme Court that argued for trees to be considered as **“living entities”**. The petition was triggered by the proposal by the Uttar Pradesh government to remove 64,000 Trees for the purposes of a defence expo. The petition asked for an urgent intervention of the Supreme Court highlighting that the state government *“wants the area to be completely cleared by January 15, 2020”* While the immediate cause of action was the felling of trees for the defence expo, the petition raised a larger legal question on why trees and other living beings should not be considered as legal entities as *“Every living being has the right to life”*. The petitioner raised several instances where tree felling, including of old and fully grown trees was being carried out which was against inter-generational equity. The petition argued:

“Trees are one of the three sources of Oxygen. Trees are pro-life performers in climate change. Destruction of huge number of trees is direct assault on INTER-GENERATIONAL EQUITY.” The petition sought immediate relief for the felling of trees for the Defence Expo and also included a prayer for the Supreme Court to direct: “the Union of India and all State Governments to formulate policies so that trees are not cut for future events”

41 Source: <https://www.thoughtco.com/how-much-oxygen-does-one-tree-produce-606785>

There were two hearings in this case. First, on 18 December 2019, where notices were issued and the date for arguments listed for 9 January 2020. However, on that day the matter was “dismissed as withdrawn”. The reasons cited was that there was another case pending in the Allahabad High Court (P.L. Civil No.33959 of 2019) where the felling of trees for the Defence Expo was under question and where the state government stated that “they are not going to do any felling of trees.”⁴² Since the Supreme Court petition was withdrawn the question of whether trees should be considered as living entities was not adjudicated.⁴³

42 *(Supreme Court order dated 9.1.2020 in Writ Petition(s)(Civil) No(s).1472/2019.*

43 <https://www.livelaw.in/top-stories/recognize-trees-as-living-entities-sc-issues-notices-on-plea-against-felling-of-trees-in-up-read-petition--150940>;
<https://www.barandbench.com/news/supreme-court-issues-notice-in-pil-to-recognise-trees-as-living-entities-with-rights>

3. GOVERNMENT MEASURES TO MANAGE TREE LOSS

(Compensatory Afforestation and Transplantation)

The loss, shifting and replanting of trees to offset the ecological effects of urbanization and infrastructure development has a profound impact on urban residents and ecology. The legal frameworks that have developed since the 1950s to protect trees and regulate tree loss testify to the importance of trees for the varied functions they perform. Yet the implementation of these laws has not been integrated with urban planning. Besides urbanization and infrastructure development directly affecting treescapes by causing tree removals on a mass scale, the regulatory measures to offset the loss of trees have been equally damaging. The offset measures are based on a poor understanding of trees and of the socio-ecologies involved in planting and the implementation of these measures greatly lacks the knowledge inputs needed for these measures to be planned. Most importantly, sites where offset measures are undertaken are themselves not protected from tree removals.

The two offset measures adopted by governments at the central and state levels to mitigate tree loss are compensatory afforestation and more recently, tree transplantation. Both these measures are based on a flawed developmentalist notion that trees are in the wrong place and that moving them or growing them in another location offers the same socio-ecological benefits provided by those trees that are ‘in the way of development’. Despite gaps in the official justification of tree offsets and the repeated failures in their implementation on the ground, these offset measures are upheld by governments as they allow them to carry out development projects that generate profits for investors and developers.

3.1 COMPENSATORY AFFORESTATION

Compensatory afforestation is a management measure legalized by the legal frameworks for forest governance in India. An analysis of the twelve laws discussed in this report shows that the legal need for compensating for tree loss goes to as far back as the 1950s. The Tamil Nadu Hill Stations (Preservation of Trees) Act, 1955 required an “effective regeneration” of equal number of the same or other suitable species of trees that have been felled. It also mandated the loss of each tree be compensated with the deposit of sum “not exceeding” INR 100.

At present, both tree laws and the Forest Conservation Act (FCA), 1980 that

regulates diversion of forest land for non-forest use⁴⁴ mandate the requirement of compensatory plantation or compensatory afforestation to mitigate the loss of forests and trees. It involves the identification of suitable land and species to grow in lieu of the ones cut to make way for felling of trees including for development projects. The number of trees to be grown to compensate for the loss of fully grown, mature trees is outlined in the laws used to grant approval for the tree felling. These details of location, species and number of trees to be planted as compensatory measures are also stated as conditions of approval in the tree felling approval letter.

Compensatory afforestation has been routinely used to permit mass scale tree felling in urban areas also. For example, the Delhi Preservation of Trees Act, 1980 mandates 10 times the number of trees to be planted as compensation for trees cut by projects. In the case of the 16000 trees that were proposed to be felled in the 7GPRA project (discussed in Section 2 on Public Campaigns), the Ministry of Housing and Urban Affairs (MoHUA) justified the loss of trees by stating:

“Compensatory plantation of trees is being carried out in a ratio of 1:10, i.e. ten trees are being planted against the loss of one tree. Thus, 1,35,460 trees shall be planted, which will create an “urban forest”.

However, this shows a shallow ecological understanding of our decision-makers, when it comes to trees and their habitats, including where compensatory afforestation is to take place.

For the seven GPRA project the plantation was to be carried out in Zone O in the Delhi Development Masterplan (MPD) which is the floodplain of the Yamuna river that runs along the boundary of the National Capital Region from North to South. It covers an area of about 9,700 hectares as per MPD 2001. This area is regularly used for compensatory afforestation projects in Delhi.⁴⁵ This practice is not preceded by an ecological study on whether floodplains are the best place for afforestation. It also does not account for the numerous social uses already existing in the flood plains. Flood plains are important spaces for rivers and for

⁴⁴ The FCA defines non forest use as “ *the breaking up or clearing of any forest land or portion thereof for- but does not include any work relating or ancillary to conservation, development and management of forests and wildlife, namely, the establishment of check-posts, fire lines, wireless communications and construction of fencing, bridges and culverts, dams, waterholes, trench marks, boundary marks, pipelines or other like purposes.*” [Section 2, Explanation]. Such “Non forest” purposes include the cultivation of tea, coffee, spices, rubber, palms, oil-bearing plants, horticultural crops or medicinal plants and for any purpose other than reforestation.

⁴⁵ Mishra, Siddhanta. 2018. *Land row trips Tughlaqabad power project* <http://www.newindianexpress.com/thesundaystandard/2018/may/13/land-row-trips-tughlaqabad-power-project-1813861.html>, The New Indian Express, May 13

people but they are often seen as empty space by government bodies.⁴⁶ Courts have made some important observations which question the use of floodplains as wasted land or dumping grounds. For instance in judgment on the controversial Art of Living ⁴⁷event on the Yamuna banks the National Green Tribunal concluded: *“Flood plains of river are not waste lands. These should not be treated as lands lying fallow...”* (OA 65 of 2016)

Compensatory plantations done far away from the city and which take several years to grow do not benefit the residents of the city as existing trees do. In his article “ No tree for a tree”⁴⁸, author of Trees of Delhi, Pradip Krishen describes the compensatory tree plantations raised by the Forest Department in the outskirts of Delhi. The land that is taken up for this is the most degraded and least arable land within village boundaries. It would hardly support tree growth. Since it is difficult to get much land to put to plantations, saplings are crammed into small plots. Since water and other resources are not easily available, the Forest Department uses non-native, fast growing species that deplete the water table and soil quality. If they use native species, the saplings hardly survive if watering is withdrawn after a couple of years.

The state forest department, the implementing agency for compensatory afforestation schemes, has to undertake these activities and show compliance to the law. But, the final result of such plantations is very poor. A 2018 report of the CAG report concluded that the shortfall of compensatory plantations in Delhi from 2014-17 was as much as 67%. Referring to the compensatory afforestation of a one particular redevelopment project the report observed: *“NBCC obtained permission to fell 1,123 trees during 2014-17 for East Kidwai Nagar Project on security deposit of Rs 4.51 crore. DCF (South) had issued this permission but the division did not do any compensatory tree plantation during 2014-17 whereas NBCC planted 1,354 trees against a requirement of 8,165 trees. There was no evidence in the files of the forest department to show whether it ensured tree plantation by NBCC.”*⁴⁹

⁴⁶ Menon, Manju and Kohli, Kanchi. 2018. *Compensatory Afforestation Is Not the Ultimate Solution to Delhi's Tree Fellings*, The Wire, <https://science.thewire.in/society/urban/compensatory-afforestation-is-not-the-ultimate-solution-to-delhis-tree-fellings/> , June 29

⁴⁷ More details about this event can be accessed at <https://www.thehindu.com/news/national/ngt-holds-sri-sris-art-of-living-responsible-for-damaging-yamuna-floodplains/article21289249.ece> and <https://economictimes.india-times.com/news/politics-and-nation/disappointed-with-ngt-verdict-will-move-supreme-court-art-of-living/articleshow/61963129.cms?from=mdr>

⁴⁸ Pradip Krishen. 2018. *No tree for a tree*, <https://indianexpress.com/article/opinion/columns/delhi-tree-cutting-forest-cover-pollution-ngt-5243047/>, July 3

⁴⁹ Report of the Comptroller and Auditor General of India on Social, General and Economic Sectors (Non-Public Sector Undertakings) for the year ended 31 March 2017 [Report No. 3 of the year 2018]

DELHI NEWS

Lack of records, staff shortage, frequent fires fail replantation drive in Delhi's northern outskirts

At Garhi Mandu, officials were found struggling to manage the compensatory plantations for projects dating back decades. They said till seven years after compensatory plantation begins, there is hardly any stock-taking for the number of trees that are actually planted or survived by the severely short-staffed Delhi government's forest department.



A view of dried out forest area at Garhi Mandu village, near Shahdara on the outskirts of Delhi. (Sonu Mehta/HT Photo)

Updated on Jun 27, 2018 03:05 PM IST



 Hindustan Times, New Delhi | By Soumya Pillai and Joydeep Thakur

“Officials at the plantation site keep no records of trees planted and there is hardly any stocktaking. Even though the compensatory plantation for the NBCC project is yet to take off, a sprawling 750-acre land in Garhi Mandu paints a different picture from what is being painted in press briefings”

Source: Hindustan Times, June 17, 2018

The problems of making land available for compensatory tree plantations has dogged all projects that occupy treescapes, whether within or outside officially recorded forest lands. For projects that have been granted approval to divert forest land (under FCA, 1980) for other “non-forest uses”, compensatory afforestation has been difficult from the time the law came into existence. At first the law intended compensatory afforestation to be done on an equal area of private land after it was acquired. Such acquisition was a non-starter and so different categories of lands broadly classified as non-forest revenue lands were targeted. But when revenue lands also became difficult to bring under plantations, compensatory afforestation schemes were undertaken on twice the extent of “degraded” forest land. The FCA’s original intent to bring private lands under forest plantations to compensate for the loss of forest areas did not materialize. Moreover, the afforestation efforts in degraded forest lands are also poorly

implemented. This has attracted the criticism of the higher courts, regulators like the Comptroller and Auditor General (CAG) and environmentalists alike.

Over the years, compensatory afforestation has become the favourite tool of agencies to legitimise large scale felling of trees or allowing for vast forest lands (including in urban areas) to be diverted. It rests on the belief that altering ecology is easier than changing the present course of development.

Home > Nation

Environment ministry relaxes plantation norms for highway projects

The NHAI, under the Ministry of Road, Transport and Highways (MoRTH), wanted a relaxation in forest clearance rules to seemingly skip finding non-forest land for compensatory afforestation.



Published: 02nd September 2020 03:12 AM | Last Updated: 02nd September 2020 10:29 AM



Representational Image. (File Photo)

By Express News Service

NEW DELHI: The Union Environment Ministry has relaxed norms of forest clearance for national highway projects, allowing state agencies to take up compensatory afforestation in degraded forest land instead of non-forest land, as per existing rules.

The NHAI, under the Ministry of Road, Transport and Highways (MoRTH), wanted a relaxation in forest clearance rules to seemingly skip finding non-forest land for compensatory afforestation (CA) while forest land was diverted for development of highway infrastructure.

“It has been decided that MoRTH/Central agencies will be entered as a ‘user agency’ in the online application form in such cases, where work that is of central sector projects and is owned, developed and maintained by the central government but the execution is carried out by a state agency. As the user agency is the central government or a PSU, the dispensation of CA over double the degraded forest land, instead of equivalent non-forest land will be available in such cases,” said an order.

The forest advisory committee of the environment ministry in May considered and observed that the scope of expansion of this dispensation for CA, as decided in the meeting of Group of Infrastructure (GoI), needs proper understanding of the process of execution of infrastructure work by the NHAI in states.

Source: Indian Express, September 2, 2020

3.2 TREE TRANSPLANTATION⁵⁰

Moving trees to plant them in specific locations is called transplantation. Tree transplantation involves uprooting and relocating the whole tree in order to save it. It is also called replanting of trees, but a more accurate term for this practice is translocation of trees.⁵¹

Transplantation involves the use of semi grown trees in nurseries mostly for landscaping and aesthetic purposes in Europe and the US. This is part of governmental policy in these countries. From the experiences of replanting from nurseries or tree banks and translocation of trees, it is known that successful tree transplantations are a major exercise that involve great care, time, and substantial resources are required. Advanced technology is needed to shift trees from the original place and grow them successfully in the new locations. This poses major questions on the feasibility of tree transplantation as a measure to manage the environmental impacts of large projects. The basic issues related to tree transplantation are as follows:

- Transplantation may work for small and young trees with small root structures, not for large trees with large canopies and root structures. Most faulty transplantations involve pruning of the crown and roots to such an extent that the tree dies or never recovers from ‘transplant shock’.
- Transplantation may potentially work for individual trees or on a small scale. They certainly cannot be accepted on a large scale for a variety of reasons such as financial costs and the extent of care they need.
- Transplantation may work in high moisture air and soil conditions and should be done strictly during seasons when water is available the most. Yet, transplantation may not be feasible due to erratic monsoons and weather disturbances due to climate change.
- The success of transplantation also depends on the after-care that the trees get. Trees may do well only if they are planted in suitable and protected locations and taken care of and tended well by accomplished gardeners or horticulturists.

Transplantation may work only if the many slow and painstaking steps before, during and after the transfer the trees are done with great care. As transplantation of trees is a costly exercise, it should be undertaken only at a very small scale

⁵⁰ The authors acknowledge the assistance of Smriti Jalihal for this section

⁵¹ Proposed Tree Translocation Protocol. Nature Lovers of Hyderabad (<https://savebanyansofchevella.blogspot.com/2020/01/proposed-tree-translocation-protocol.html>)

of a few trees and with careful preparation of conditions for the tree to survive after it is transplanted. The few occasions in India when transplanting seems to have been successful is when NGOs and citizens looked after it with dedication. It is not certain that public agencies will be able to look after such trees on a sustained basis until they stabilise.

Green scam? Over ₹10L goes waste in transplantation

Documents And Ground Reality Reveal Poor Survival Rate, Raises Questions On Proposed Plans

Mumbai, July 15 (PTI)

It was like walking into a graveyard of trees. There was no survival rate. The only thing in the pots, one in the hundreds, and a handful of trees. Over a year back, the national highway authority (NHAI) had spent ₹10 lakh on the purchase and transplantation of trees. In the past few months, they have found that most of the trees have died. They have been replaced in some large numbers and they are planted in a garden in a field with some maintenance and soil treatment.

SECOND LIFE CUT SHORT

But of 1,000 trees, only 100 have survived. The rest have died. The NHAI has spent ₹10 lakh on the purchase and transplantation of trees. In the past few months, they have found that most of the trees have died. They have been replaced in some large numbers and they are planted in a garden in a field with some maintenance and soil treatment.

The NHAI has spent ₹10 lakh on the purchase and transplantation of trees. In the past few months, they have found that most of the trees have died. They have been replaced in some large numbers and they are planted in a garden in a field with some maintenance and soil treatment.



Source: Times of India, July 15, 2019

In India, the practice of tree transplantation is relatively recent due to the prohibitive costs and need for technology. For a country as vast as India with different climatic zones, soil types, availability of land and other factors it is not possible to prescribe a national policy or practice of this kind. However, such policies are gaining attention due to the need to ‘green’ large projects. The National Highways Authority of India has set out a detailed protocol for assessment of trees to arrive at the costs and suitability of such measures⁵². The protocol also contains a basic cost-benefit matrix to help project proponents decide on tree transplantation measures.

52 Transplanting Growth, Greening our highways. NHAI and Yes Bank, 2016

Delhi: 9,435 trees to be cut for Dwarka Expressway, 400 go 'missing'

TNN | Jan 27, 2020, 04:29 AM IST



NEW DELHI: As many as 9,435 trees will have to be cut for the Dwarka Expressway project. Of these, 400 have already gone "missing", a submission made by the principal chief conservator of forest (PCCF) to National Green Tribunal has revealed.

The report stated that an inspection carried out by the forest department staff revealed that at least 400 trees were buried under construction debris. A fine of Rs 2.4 crore was imposed on National Highways Authority of India, it added.

"Notices were issued to NHAI, its contractors and other agencies working adjacent to the site where the trees were found buried under the construction debris. After giving sufficient opportunities to all the parties concerned, the tree officer disposed of the matter with a direction to NHAI to pay Rs 2.4 crore for the missing trees," the report stated.

To meet the compensatory plantation norms, PCCF Ishwar Singh said 90,350 saplings would have to be planted, for which 90.4 hectares of land had been identified. The report stated that 6.2 hectares at Aravalli Biodiversity Park, 5.5 hectares at Tughlakabad Biodiversity Park, 15 hectares along Yamuna floodplain and 63.6 hectares of land under DDA's "green belt" had been identified. The entire 90.4 hectares of land belongs to DDA.

"This much area of the land bank submitted by NHAI is found suitable and sufficient to accommodate 90,350 saplings, fulfilling the criteria as mandated under the Delhi Preservation of Trees Act," the report stated.

The submission made before the tribunal also stated that of the 9,035 trees now, 5,717 would be transplanted. Rules mandate at least 80% of the trees to be transplanted from the construction site. The agency concerned also needs to ensure that at least 80% of the trees transplanted survive the process after a year.

The Delhi tree transplantation policy drafted and publicised in 2019⁵³ is based on a faulty expectation of the government to successfully engage in industrial scale compensatory afforestation and tree transplantation despite the proven non-feasibility of these "green-cover management" approaches. The policy seeks to legalise the transplantation of 80% of trees that stand in potential project sites. This is equal to vacating trees on a mass scale to reduce the encumbrances to building projects. Successive governments have routinely made such arguments to get rid of trees. This policy does the same, albeit indirectly. The policy aims to remove trees from the areas where they are well integrated with the local biodiversity, the microclimate and social uses. The policy states that these removed trees would be grown in places such as "PWD roads" and "special land banks"

53 Nikhil M Babu.2020, Tree transplantation policy may get Cabinet nod soon, The Hindu, May 30 (<https://www.thehindu.com/news/cities/Delhi/tree-transplantation-policy-may-get-cabinet-nod-soon/article31712724.ece>)

identified across Delhi even though these places are not likely to be any safer for trees.

The Delhi government finalized this policy in December 2020⁵⁴. However, even after nearly a year, there is no transparency regarding various aspects of the policy. Data on number of trees permitted for felling, transplantation, compensatory afforestation, the location of these activities and other information is not available to the public. The Forest department states that as per the policy, citizens audits on trees will begin in 2022 and that each forest division has formed a citizens committee which will undertake the audit. The government states that the transplantation success rate will determine the payment to the transplantation agency⁵⁵.

There are already several examples even within NCT to show that these practices destroy urban ecology. In one court case (Appeal No. 25 of 2017), the Forest Department submitted an affidavit that tree transplanting is not feasible in Delhi. The calculation done by a committee for New Delhi's Pragati Maidan tree transplantation process shows that out of 1700+ trees only 36 would survive if transplanted. On tree transplantation for the Dwarka expressway, NHAI has spent many crores of rupees but the results were very poor. These practices are costly on the public as they are resource intensive both environmentally and monetarily. The reasons for the failure of these methods are very hard to overcome for any government in today's times.

In a recent issue of the construction of a new Parliament in New Delhi, the matter of tree loss and tree transplantation became a major challenge. The Delhi government granted permission to transplant all trees from the proposed construction plot to a location near India Gate, but CPWD, which is in charge of project construction, transported the uprooted trees 22 km away and at night, attracting the media and state government's attention to the problems of tree transplantation.⁵⁶ The trees were transplanted in the Badarpur "eco park" that was earlier the site of the NTPC thermal power plant. The plant was decommissioned in 2018.

54 The Delhi Transplantation Policy can be accessed from http://forest.delhi-govt.nic.in/wps/wcm/connect/doi_forest/Forest/Home/Tree+Transplantation+Policy/

55 Jasjev Gandhiok. 2021. *8 mths after policy launch, no data yet on trees felled*, Times of India, August 31 accessed from <https://timesofindia.indiatimes.com/city/delhi/8-mths-after-policy-launch-no-data-yet-on-trees-felled/article-show/85781026.cms> on September 7, 2021

56 Nikhil. M. Babu. 2020. *404 trees being transplanted for new Parliament*, The Hindu, November 24 (<https://www.thehindu.com/news/cities/Delhi/tree-transplantation-policy-may-get-cabinet-nod-soon/article31712724.ece>)



3,800 trees transplanted to make way for Dwarka Expressway — many don't make it through the year

The delayed project, which aims to ease the pressure on the Gurgaon expressway, will eventually see over 10,000 trees being transplanted. The first 3,800 were transplanted under the first phase in different areas in Dwarka.

Written by **Mallica Joshi** | New Delhi |
Updated: October 18, 2020 9:46:06 am



Opposite the cemetery in Dwarka's Sector 24. The project will eventually see over 10,000 trees being transplanted

Just a few metres on the narrow trail that starts opposite the cemetery in Dwarka's Sector 24, outlines of dry trees, their crisp leaves hanging lifelessly, begin to appear on the right. A year ago, these trees were growing alongside what is now the under-construction Dwarka Expressway, which will connect Mahipalpur in Delhi to Kherki Daula toll plaza in Gurgaon.

Source: Indian Express, October 18, 2020



New home: Trees uprooted from near Parliament as part of the Central Vista redevelopment project in New Delhi being taken for replantation on Friday. • SUSHIL KUMAR VERMA

Source: *The Hindu*, November 21, 2020.

Also accessible at <https://www.thehindu.com/news/cities/Delhi/tree-transplantation-for-new-parliament-violates-govt-terms/article33172875.ece>

At a policy level, transplanting cannot be a solution to tree felling in urban areas, like compensatory afforestation has become. If we accept that it is okay for ecologically important lands to be vacated for real estate or other projects, soon the transplanted trees will have to make way for more projects. Tree transplantation is a complex science and a costly process. Not only are there numerous pre-conditions needed to make transplantation a possibility, there are several uncertainties associated with the outcomes. Climate change, lack of land and water stress make tree transplantation very challenging. Due to the non-feasibility of tree transplantation in these times, tree felling and removals have to be limited to the rarest exceptions. All existing trees have to be integrated into all proposed project plans and designs that do not factor them in their plans should be avoided or rejected. Trees and other landscape features need to be kept in mind while planning the scale and scope of projects.

Due to the reasons that can lead to failures, tree transplantation policies amounts to vacating healthy trees on a mass scale to reduce “encumbrances” to building projects. It would be a violation of the environmental rights of urban people if projects are allowed to persist with such practices that are necessarily going to fail.

4. PUBLIC CAMPAIGNS TO PROTECT TREES IN URBAN AREAS

In this section we discuss two public campaigns from the last five years that demonstrated popular collective sentiments around felling of trees in cities and raised larger legal questions about urban and environmental planning. Central to these campaigns to protect urban ecology were issues of participatory governance, social justice and the government's duty to act in public trust. The campaigns discussed took place in Mumbai and Delhi, two metropolitan cities with high concentrations of populations and presently undergoing major changes in terms of scale and nature of urbanisation. Both cities have severe environmental challenges that affect them intensely bringing major economic activities and social life to a near stop. Delhi is known for its life threatening air quality and Mumbai is flooded out multiple times every monsoon season.

The sites of these case studies in relation to their cities is contrasting. The Aarey forests are at the margins of Mumbai city and constantly encroached on by the expanding urban space. The GPRA colonies of Delhi were built in the 1960s for central government employees at the heart of the central government office area. The legal status of Aarey land in Mumbai was contested as being “forest” within the city's municipal limits while the legal status of residential colonies in Delhi was firmly lodged as “residential” land in urban plan documents (discussed in detail further in this section). The case studies show that in both these types of urban locations, treescapes are cherished by city residents and threatened by urban processes.

4.1 TREES OF AAREY FORESTS IN MUMBAI

“I have raised them like my own children,»...“It would be a shame if something were to happen to them.»⁵⁷

The “Aarey forests” is an important socio-ecological space for Mumbai, India’s financial centre and capital of the Western Indian state of Maharashtra. It includes several warli tribal hamlets which depend on the forests for their livelihoods and have generations of cultural association with the area.⁵⁸ Citizen environmentalists and trained ecologists regard Aarey to be a biodiverse habitat supporting many species of animals and plants. There are many testimonies by Mumbai residents, recalling their childhood memories of treks, picnics in the 1300 hectare area in Northern Mumbai with close to five lakh trees, to experience time away from crowded city life.

Aarey is referred to “Mumbai’s second-largest green cover”⁵⁹ or the city’s “last green lung”⁶⁰. It is contiguous with the Sanjay Gandhi National Park, a 104 sq km (40 sq miles) protected area under India’s Wild Life Protection Act. However, the legal status of the Aarey Milk Colony’s land was under contestation, until very recently. It has also been pointed out that Aarey’s land area has been gradually encroached upon or used for other land uses.⁶¹ According to a 2017 Indian Institute of Science as reported in the Mint newspaper the Aarey colony “has been reduced to two-thirds of its 3,262-acre space due to land allotment to the zoo, Film City and housing projects.”⁶²

Since 2015, there was opposition against the construction of a car shed in 33 hectares of Aarey for the laying of a metro line by the Mumbai Metro Rail Corporation Ltd (MMRCL). This area, part of the Aarey colony would require felling of approximately 2700 trees. Ever since the proposal was announced residents

57 65 year old gardener in Aarey who prefers not to be identified (as reported in Mint newspaper): Khandekar Omkar, 2019. *The truth about Aarey’s trees* <https://www.livemint.com/mint-lounge/features/the-truth-about-aarey-s-trees-11570787606899.html>; The Mint, October 11.

58 ANUPAMA KATAKAM. 2020. Battle for Aarey, Frontline Magazine, February 2020 accessed from <https://frontline.thehindu.com/social-issues/article30682340.ece on August 31, 2021>

59 Kanchan Srivastava. 2019, *Aarey “forest” has fired-up Mumbai’s poll scene* <https://india.mongabay.com/2019/10/aarey-forest-has-fired-up-mumbais-poll-scene/>

60 <https://www.bbc.com/news/world-asia-india-47959685>

61 Kamakshi Ayyar. *Aarey: The Wild Heart of Mumbai*, <https://round.glass/sustain/urban-jungle/aarey-wild-heart-mumbai/>

62 Khandekar Omkar, 2019. *The truth about Aarey’s trees* <https://www.livemint.com/mint-lounge/features/the-truth-about-aarey-s-trees-11570787606899.html>; The Mint, October 11.

of neighbouring colonies and citizens collectives had raised concerns with the proposals, and also highlighted that this was a move towards gradual “urbanisation” of Aarey:

“They are adamant on destroying the ecosystem by bringing the car shed into Aarey. We are not going to let that happen. We will go all out and protest against it. The forest is very close to our heart. One can understand its importance only by observing how the temperature suddenly drops when one passes through Goregaon.” -Disha Singh, Aarey Conservation Group and resident of Goregaon (as reported in The Hindu)⁶³

There were several legal questions that were raised by Mumbai residents. They approached regulatory authorities and subsequently the High Court pointing to why the Metro shed should not be constructed. Residents also demanded multiple public hearings before land use change was notified in favour of the metro shed construction. One participant at the hearing described the public hearing held in mid 2019 as:

“People attended the hearing in large numbers. BMC had made no arrangements to do a proper hearing. The Hall had seating arrangement for only 250 people while more than 600 people came for the hearing. The concern for protection of Aarey was so much that many people were standing outside the auditorium. And all strongly opposed the Metro car shed project that will destroy the most important lung space of Mumbai.” Amrita Bhattacharjee, Aarey Conservation Group as quoted in the online portal Green Minute⁶⁴

Throughout this campaign several legal questions came up around whether a metro shed can be set up in an ecologically sensitive zone near a protected area and whether or not Aarey was an officially recorded forest. Both these became crucial to the public campaign and litigation to protect Aarey and continues till date.

Trees within officially recorded forest lands are regulated by different laws like the Indian Forest Act, 1927, the Forest Conservation Act, 1980 or the Wildlife Protection Act, 1972. Tree felling permissions for trees on Maharashtra’s urban areas is

⁶³ Shelar Jyoti. 2019. *Environment Ministry clears Metro car shed in Aarey; activists see red*

<https://www.thehindu.com/news/cities/mumbai/Environment-Ministry-clears-Metro-car-shed-in-Aarey-activists-see-red/article16769439.ece>. The Hindu, 7 December

⁶⁴ Green Minute News. MUMBAI CITIZENS’ CLARION CALL FOR SAVING AAREY FORESTS IN PUBLIC HEARING, <https://greenminute.in/2019/07/14/mumbai-citizens-clarion-call-for-saving-aarey-forests-in-public-hearing/>, July 27

governed under the Maharashtra Preservation of Trees Act, 1975. The then state government in power claimed that Aarey is not a forest, and therefore only the 1975 law would be applicable. This was upheld by the Mumbai High Court. This decision and the felling of trees was challenged in the Supreme Court in October 2019 and since then there has been a stay on further tree felling, even though the construction of the metro shed was not curtailed.⁶⁵

On the night of 4 October 2019, there was a massive uproar and protests against the sudden felling of trees by Mumbai Metro Rail Corporation Limited (MMRCL). The tree felling had been initiated after the Mumbai High Court dismissed four petitions⁶⁶ and concluded that Aarey was not an officially recorded forest. The High Court concluded that the permission granted by the Municipal Corporation of Greater Mumbai for felling of trees under The Maharashtra (Urban Areas) Preservation of Trees Act, 1975 was legally valid. Within 24 hours of the court pronouncement, MMRCL allegedly cut 2,134 trees out of 2,646 trees likely to be affected by the metro shed⁶⁷. Concerned nature lovers had been carrying out regular vigil to ensure that no tree felling and construction work takes place while litigation was pending. It was reported that MMRCL cut down trees during the night, when there were fewer activists on guard.^{68 69}

Upon hearing the news of the tree felling in the night, hundreds of people including school students gathered around the site of the metro shed to protest the felling. There were altercations between the police personnel guarding the site and the protesters. Twenty nine people were arrested including school children and were later released on bail.

65 Press Trust of India. 2019. *Supreme Court Extends Order Banning Further Tree Felling In Aarey Forest*, accessed <https://www.ndtv.com/india-news/supreme-court-extends-order-banning-further-tree-felling-in-aarey-forest-2149848>, December 12

66 Press Trust of India. 2019. *Bombay HC Dismisses Petitions on Forest Tag, Tree Felling in Aarey Colony* as published on <https://thewire.in/law/bombay-hc-dismisses-petitions-on-forest-tag-tree-felling-in-aarey-colony>, October 14

67 Hussain Indorewala. 2019. *Indian Cities Have Been Reduced to Just Real Estate* <https://thewire.in/urban/our-cities-prioritise-real-estate-over-ecological-sustainability>, The Wire, 9 October

68 Purva Chitnis and Chandrashekar Srinivasan. 2019. *2,141 Trees Cut In Aarey Colony, Construction Will Happen: Mumbai Metro*, <https://www.ndtv.com/india-news/aarey-mumbai-2-141-of-2-185-trees-cut-in-aarey-colony-says-mumbai-metro-2113168>, October 7.

69 The Print Team. 2019. **Supreme Court stops cutting of Aarey trees for now, orders release of arrested activists**, accessed from <https://theprint.in/judiciary/supreme-court-stops-cutting-aarey-trees-for-now-orders-release-arrested-activists/302139/> on 1 September, 2021

“They arrested my wife. What was her fault? We have planted many trees and treat them like God. We do not even touch leaves after evening and they butchered it in front of our eyes at night. We have been told that they will chop many more trees in future and we will fight against it lawfully.” “Prakash Bhoir, a tribal resident in Aarey Colony (as reported in Hindustan Times)⁷⁰

MMRCL claimed that they had received all permissions for tree felling and therefore were entitled to fell the trees and also carry out the metro shed construction. Soon after the protests broke out, the state government also invoked legal provisions to restrain public vigils in the area, so that tree felling could be carried out uninterrupted.⁷¹

Linked to the conservation of Aarey forests are the bonafide land and livelihood rights of tribal communities, who await legal recognition of their rights in Aarey.⁷² In 2019, several residents filed their claims under the Forest Rights Act, 2006:

“We are compiling documents and will begin a process of mapping the lands,” said Santosh Ahade, a resident of Khade Pada inside Aarey. “Almost everyone cultivates vegetables, while some hamlets also have fairly large paddy plantations.”⁷³ (as reported in Indian Express)

Aarey tree felling became an important political issue in the 2019 state election due later in the month of October 2019. Bhartiya Janata Party (BJP), the party in power, lost the elections and the political alliance of Shiv Sena, Indian National Congress (INC) and Nationalist Congress Party (NCP) was elected. Aarey’s

⁷⁰ Naidu Jayaprakash. 2019. *What was our fault?: Citizens, arrested for protesting tree felling in Aarey Colony, get bail*

<https://www.hindustantimes.com/mumbai-news/aarey-chaos-citizens-arrested-for-protest-granted-bail-by-court/story-i1deWQypwIXSmwo3w7fUUL.html>, October 7

⁷¹ FP Staff. 2019. *Mumbai Police arrests 29 activists protesting tree cutting at Aarey Colony; leaders across party lines slam state govt*

<https://www.firstpost.com/india/mumbai-police-arrests-29-activists-protesting-tree-cutting-at-aarey-colony-leaders-across-party-lines-slam-state-govt-7457241.html>, Firstpost, 5 October

⁷² Badri Chatterjee. 2020. *Maharashtra officially declares 328.9 hectare reserved forest at Aarey Colony in Mumbai*, Hindustan Times, October 9 accessed from

<https://www.hindustantimes.com/mumbai-news/maharashtra-officially-declares-328-9-hectare-reserved-forest-at-aarey-colony-in-mumbai/story-WfzJDKJliRQPQEOkoDQ2DJ.html> on September 7, 2021; and Revenue and Forest Department, Government of Maharashtra Notifications No. FLD-11/2020/C.R.190/F-3 and No. FLD-11/2020/C.R.190/Part -1/F-3. dated 12.10.2020

⁷³ Iyer, Kavita. 2019. *Mumbai: Aarey’s tribals set to battle for rights over land, seek to use FRA*, <https://indianexpress.com/article/cities/mumbai/aaray-colony-mumbai-goregaon-tribals-bombay-high-court-5734381/>, Indian Express, May 19

protection was the Shiv Sena's political promise. After they took charge of the state as part of the ruling alliance, the Chief Minister passed an order in October 2020 notifying the proposal to declare Aarey as a reserved forest⁷⁴. Subsequently, the government also identified another alternate site for the metro shed which currently under litigation.⁷⁵

4.2 DELHI TREES SOS AND REDEVELOPMENT OF GOVERNMENT HOUSING COLONIES

*We would not allow the trees to be felled. Just like the Chipko movement, we would hug the trees if anyone comes to cut them," Verhaen Khanna, tree conservationist (as quoted in Hindustan Times)*⁷⁶

In mid 2018, hundreds of residents from Delhi and the National Capital Region (NCR) engaged in emergency measures to protect the over 16000 trees that were marked for felling to make way for what came to be popularly known as the 7GRPA "redevelopment" project.⁷⁷ The seven government colonies that are part of this project are Netaji Nagar, Sarojini Nagar, Nauroji Nagar, Kasturba nagar, Thyagraj Nagar, Srinivaspuri and Mohammadpur. These colonies that housed clerical and middle level government staff and also provided affordable rental housing in the city, comprised a contiguous area of 571 acres to the north and south of the Delhi's Ring Road near the All India Institute of Medical Sciences (AIIMS).

74 Bhalerao, Sanjana. 2020. 328.9 hectare in Aarey declared as reserve forest, <https://indianexpress.com/article/cities/mumbai/328-9-hectare-in-aarey-declared-as-reserve-forest-6716632/>, October 9

75 Scroll Staff. 2020 Bombay HC stays transfer of Kanjurmarg land for Mumbai metro car shed, orders status quo on project, accessed from <https://scroll.in/latest/981396/bombay-hc-stays-transfer-of-kanjurmarg-land-for-mumbai-metro-car-shed-orders-status-quo-on-project> on September 7, 2021

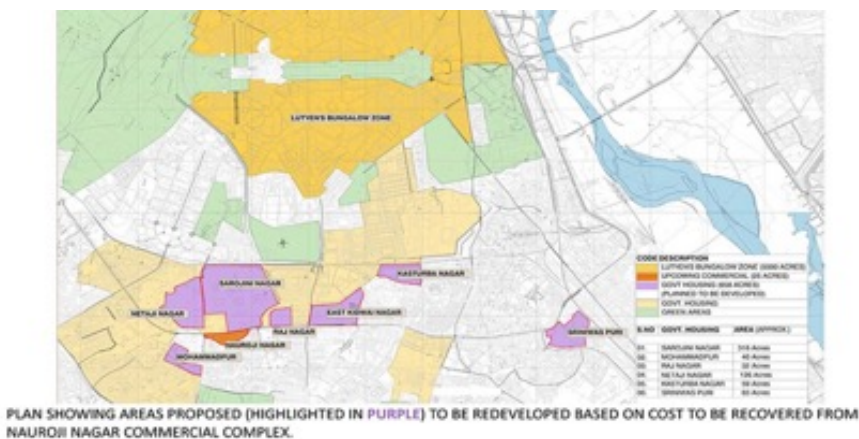
76 HT Correspondent. 2018. Delhi participates in 'Chipko' movement to save 14,000 trees from felling <https://www.hindustantimes.com/delhi-news/delhi-participates-in-chipko-movement-to-save-14-000-trees-from-felling/story-4QfK3m3ule-QXYv3Qe86WGO.html>, Hindustan Times, June 24.

77 The seven GPRA colonies in South Delhi are Netaji Nagar, Sarojini Nagar, Nauroji Nagar, Kasturba nagar, Thyagraj Nagar, Srinivaspuri and Mohammadpur



Source: #DelhiTreesSoS Campaign Poster highlighting the location of the seven GPRA colonies

The project was approved by the Union Cabinet in July 2016 with the justification that housing facilities for central government officials needs to be upgraded. The revenue model adopted by the Ministry of Housing and Urban Affairs was to combine the land area for seven physically dispersed housing colonies and pool the total legally permissible area for commercial development. The project envisaged the construction and sale of exorbitantly priced commercial space in a World Trade Centre in Nauroji Nagar and other commercial facilities in Sarojini and Netaji Nagar. According to the project, this sale of commercial real estate would finance the construction of seven gated government housing complexes. The areas of Sarojini Nagar, Netaji Nagar and Nauroji Nagar were proposed to be developed by the National Buildings Construction Corporation (NBCC) and the Central Public Works Department (CPWD) was to implement the project in Kasturba Nagar, Thyagraj Nagar, Mohammadpur and Srinivaspuri.



The proposed loss of trees due to this redevelopment project triggered the formation of a citizens led initiative called the #DelhiTreesSoS launched on social media in May-June 2018. It brought together people from different age groups, including children who organised online campaigns, street marches, candle light vigils and street protests, citizen led tree census and bird counts. Those living in these areas got together to carry out night patrols to ensure that trees were not cut illegally. This was important as the Delhi Forest Department had not granted tree felling approvals under the Delhi Preservation of Trees Act, 1994 for five out of the seven housing colonies in question. Subsequently the night vigils were also to ensure that there the court orders restraining tree felling were being adhered to by project developers and contractors. #DelhiTreesSoS also organised public panel discussions to highlight the social, ecological, urban planning, legal and political dimensions of the redevelopment proposal.⁷⁸ The participants in these actions also raised larger issues affecting Delhi's environment particularly air pollution and the water crisis.



“In a city where residents suffer from the effects of year round air pollution, large scale deforestation and tree felling, and water crisis, and where social housing is in such short supply, the decisions on these projects seem more critical than pre-election assurances.”- Pradip Krishen (in his article in Indian Express)⁷⁹

⁷⁸ Full video of the panel discussion can be accessed here: <https://www.ndns.in/trees-discussion/>
⁷⁹ Krishen, Pradip. 2018, *No Tree for a Tree*, The Indian Express, July 3

The public campaign grounded the issue of tree felling within diverse concerns of city governance,⁸⁰ tree ecology,⁸¹ compensatory plantations, public participation, commercialisation of public land,⁸² and the right to clean air.

“Given Delhi’s toxic air levels it is difficult to believe that large scale demolition of well built flats and massacre of thousands of trees is considered development. So we celebrate “Vrikshabandhan” and tie Rakhees to trees who are our saviours. Hope the government can hear us and save trees today tomorrow and forever.”: Asheer, Student (as reported in The Quint)⁸³

The litigation on the 7GPRA project in the High Court went for twenty months.⁸⁴ In mid-June 2018, around the same time the #DelhiTreesSoS was taking shape, a petitioner Dr. K.K. Mishra, an Orthopedic surgeon and resident of Delhi, approached the High Court of Delhi. At first this petition focussed on the restraining on tree felling related to this project in the light of growing concerns of air pollution. In early July 2018, High Court allowed the petitioner to file the petition raising additional legal aspects including that of violation of Delhi’s Master Plan and environmental approvals. The High Court also asked the several government departments to submit details of the existing government housing facilities vacant in Delhi and justify if the redevelopment needs to be carried out. By early July 2018, the court issued a stay on all tree felling and construction activity.⁸⁵ At this point of time the tree felling had already been completed and digging for construction had started in Nauroji Nagar, one of the seven colonies and the site of the proposed World Trade Centre.

80 Delhi Redevelopment Collective. 2018. *What the government must do to rethink urban redevelopment in Delhi*, <https://timesofindia.indiatimes.com/blogs/author/delhi-redevelopment-collective/>, Times of India, August 1

81 Yes, No, Its Complicated debate published in The Hindu titled ‘Is planting saplings a solution to the felling of trees’, *Is planting saplings a solution to the felling of trees*

<https://www.thehindu.com/opinion/op-ed/is-planting-saplings-a-solution-to-the-felling-of-trees/article24403077.ece>, July 15, 2018

82 Menon Manju and Nath Meenakshi. 2018. *Three Myths About the Centre’s ‘Self-Financing’ Model of Urban Redevelopment*, <https://thewire.in/urban/three-myths-about-the-modi-governments-self-financing-model-of-urban-redevelopment>, November 27

83 Quint Neon. *Celebrate ‘Vrikshabandhan’ With Us On Rakhee Say These Children*, <https://www.thequint.com/neon/tie-a-rakhee-to-save-a-tree-vrikshabandhan-my-right-to-breathe>, 3 August 2020 (first published on 12 August 2019)

84 Kohli, Kanchi and Menon Manju. 2018, *Delhi trees: Like mines, redevelopment projects must also face tough environmental approval process*, Scroll.in, July 25

85 Delhi High Court order dated July 4, 2020 in W.P.(C) 6680/2018, CM Nos.25413-14/2018 & 2596112018 (KK.Mishra v/s Union of India & ORs)

The matter was heard by five separate judicial benches which changed either due to the transfer of the judges hearing the matter or change of the court's roster. One of the main questions that the bench had to decide was whether "the project" comprises of seven fragmented parts or is one integrated whole. This legal question had to be examined by the court as the project proponents pooled in the land area to maximise the commercial potential of the land under Delhi's master plan, but were seeking separate environment clearances for each housing colony. In October 2018, the Delhi High Court ordered that the project proponents i.e. MoHUA and the NBCC revert to the environment ministry to seek fresh environmental approvals for six housing colonies and continued to hear the grievances related to the Nauroji Nagar.⁸⁶ The matter continued to be heard till November 2019, when the judgment was reserved. In the meantime, the MoHUA and NBCC secured revised or fresh environmental approvals for the six housing colonies.

In February 2020, the judgment of the High Court was issued in favour of the Ministry of Housing and Urban Affairs and the project developer M/s NBCC.⁸⁷ However, the question of tree protection continued to be live one in the colonies where permission for tree felling has not been granted by the Delhi state government.



⁸⁶ Delhi High Court order dated July 4, 2020 in W.P.(C) 6680/2018, CM Nos.25413-14/2018 & 2596112018 (KK.Mishra v/s Union of India & ORs)

⁸⁷ Press Trust of India, 2020. *Nauroji Nagar redevelopment project gets High Court nod*, The Hindu, Feb 26

Citizen's continue to protect trees even as the demolition of government houses and other infrastructure has been completed. Even after two years after this campaign had started Citizen's groups have continued to push for the need for environment impact assessments before the construction of the colonies is initiated.⁸⁸ The #DelhiTreeSoS, a collective which has evolved into an ongoing initiative to protect the city's tree cover and raise larger environmental issues of waste management, land use change and air pollution.

⁸⁸ HT Correspondent. 2020, *Consider environmental impact before approving Nauroji Nagar plan, NDMC urged*, <https://www.hindustantimes.com/delhi-news/consider-environmental-impact-before-approving-nauroji-nagar-plan-ndmc-urged/story-Snveo7cCrif8USpDaoJetJ.html>, Hindustan Times, August 8

5. CONCLUSION

This report highlights the scope and functions of a dozen tree laws implemented in different states in India. The implementation of these laws has come to public focus in recent years due to the growing number of cases of large-scale tree felling in Indian cities. The government use of mechanisms like compensatory afforestation and tree transplantation adopted to make up for large scale tree losses and the lack of information, transparency and public participation in tree regulation procedures have also been criticized by public campaigns on tree protection. The content and outcomes of these laws also indicate that they are not equipped to deal with rapidly changing urban realities and the intense pressure on ecologies from real estate and urban infrastructure growth. They also do not speak to the biggest environmental issues of our times such climate change, biodiversity loss, water scarcity and air pollution.

The protection and management of trees in cities cannot be seen as a regulatory exercise separated from urban processes and ecologies. Urban planning processes cannot continue to accommodate trees and other environmental features without relating to their socio-ecological functions. The issues of tree planting and afforestation, tree protection or conservation and regulation of tree felling need to be addressed through discussions and deliberations that involve not just experts such as urban planners and ecologists but residents of cities who use city spaces and treescapes in multiple ways, formal and informal.

6. ANNEXURES

6.1 SAMPLE FORMAT FOR COMPLAINTS REGARDING TREE FELLING OR PRUNING

BEFORE YOU FILE THE COMPLAINT:

1. Check where the tree felling is taking place: e.g. “forest land”, land of a government department, private land, public park, or road.
2. Check for what purpose trees are being felled: e.g. road construction, building, tents for public function
3. Is the full tree being felled or some branches being cut?
4. Check who is carrying out tree felling: e.g. Highway Authority, Private Builder, Municipal Corporation/Municipality?
5. Which Zone or Circle of the State Forest Department is the tree felling taking place: e.g. North, South, West?
6. Check with the person felling trees or the above officials if any permission has been received/granted for felling of these trees.

COMPLAINT

Date:

*Name of Official

Tree Officer | Divisional Conservator of Forest

*Zone

*Address

Subject: Complaint regarding felling/pruning of xxxxxxxxx number of trees being carried out at xxxxxxxx [*address] in alleged violation of:

- Delhi Preservation of Trees Act, 1994 or its specific guidelines related to pruning of tree branches [*for trees not on forest land e.g Park, Colony*]
- Forest Conservation Act, 1980 [*e.g trees being cut inside the Delhi Ridge Forest or any other officially recorded forest land*]

Dear xxxxxxxx

We would like to bring to your attention the following instance of illegal felling/ pruning of trees.

Location	No. of Trees (Approx)	Permission Available?	Name of individual /institution/ company	Name of law being violated
<i>*address including name of plot/ colony*.</i>		<i>Yes/No/Unsure</i>		<i>DTPA, 1994/FCA, 1980 (mention clause if readily available)</i>

As supporting documents for this complaint the following evidence, supporting documents is attached [Tick the appropriate box(es)]:

Photograph (with date)	Photograph (without date)	Video	News article(s)	Previous complaint letters
Official Letter with full or partial permission	RTI application filed on status of permission	Court Judgment restricting/ regulating felling	Any Other	Any Other

We therefore ask to you to [Tick the appropriate box(es)]:

Order a restrain on felling/ pruning	Carry out a site inspection along with complainant	Direct the Tree Authority to do a detailed enquiry	Make available all documents related to the felling/ pruning	Any other
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Sincerely

Name of Complainant
Contact Details
(including phone number)

Annexures

6.2 RIGHT TO INFORMATION RESPONSE ON STATUS OF TREE CENSUS IN DELHI



F.12(76)/RTI/HQ/2020/ID- 2568/ 969
GOVERNMENT OF NATIONAL CAPITAL TERRITORY OF DELHI
DEPARTMENT OF FORESTS AND WILDLIFE,
Website forest_delhigovt.nic.in

A-Block, 2nd Floor, Vikas Bhawan,
I. P. Estate, New Delhi-110002
Tele: 23370679 Fax: 23378513
Dated: 15/07/2020

To,

Sh. Kanchi Kohli,
E 180, Greater Kailash 2
Ground Floor,
Delhi - 110048

Sub: Reply of RTI applications dated 18.02.2020 - reg.

Sir,

Kindly refer to your RTI application dated 18.02.2020 on the subject mentioned above received in this office through online. In this regard, the requisite information is mentioned below:-

S.No.	Information sought	Reply
1.	Tree census – please provide details including but not limited to file notings, note sheets, meeting minutes, draft and final census reports related to 1. Tree censuses in Delhi from 2010-2020 2. Tree counts, data base and census in NDMC area from 2000-2020.	As per records available in the Department of Forests & Wildlife, GNCT of Delhi, Tree Census has not been carried out.

Sunil K. Rao
15/7/2020
PIO (HQ)

In case you are not satisfied with reply as per Section 19 of RTI Act, you may file an appeal to the 1st Appellant Authority within 30 days of issue of this letter whose particulars are given below:

**Chief Conservator of Forests (Admin) (Department of Forests & Wildlife)
A-Block, 2nd Floor, Vikas Bhawan, I.P. Estate, New Delhi-110002**

6.3 TREE PROTECTION LAWS ANALYSED IN THIS REPORT

Gujarat	<u>The Saurashtra Felling of Trees (Infliction of Punishment) ACT, 1951 (Amended by Guj. 9 of 1960)</u>
Tamil Nadu	<u>The Tamil Nadu Hill Stations (Preservation Of Trees) Act, 1955</u>
Maharashtra	<u>Maharashtra (Urban Areas) [Protection and Preservation of Trees Act, 1975</u>
Karnataka	<u>The Karnataka Preservation of Trees Act, 1976</u>
Meghalaya	<u>The Meghalaya Tree (Prevention) Act, 1976</u>
Uttar Pradesh	<u>The Uttar Pradesh Protection of Trees in Rural and Hill Areas Act, 1976</u>
Kerala	<u>The Kerala Preservation of Trees Act, 1986</u> <i>(arising out of Kerala Preservation of Trees and Regulation of cultivation in Hill Areas Ordinance, 1983)</i>
Goa	<u>The Goa, Daman & Diu Preservation of Trees Act 1984</u>
Delhi	<u>The Delhi Preservation of Trees Act, 1994</u>
Madhya Pradesh	<u>The M.P. Vrikshon Ka Parirakshan (Nagariya Kshetra) Adhinyam, 2001</u>
Assam	<u>Assam (Control Of Felling and Removal Of Trees From Non-Forest Land) Rules 2002</u> (under Assam Forest Regulation, 1891)
West Bengal	<u>West Bengal Trees (Protection And Conservation In Non-Forest Areas) Act, 2006</u>

Regulating Urban Trees In India Issue and Challenges

By Manju Menon | Kanchi Kohli

This report highlights the scope and functions of a dozen tree laws implemented in different states in India. The implementation of these laws has come to public focus in recent years due to the growing number of cases of large-scale tree felling in Indian cities. The government use of mechanisms like compensatory afforestation and tree transplantation adopted to make up for large scale tree losses and the lack of information, transparency and public participation in tree regulation procedures have also been criticized by public campaigns on tree protection. The content and outcomes of these laws also indicate that they are not equipped to deal with rapidly changing urban realities and the intense pressure on ecologies from real estate and urban infrastructure growth. They also do not speak to the biggest environmental issues of our times such climate change, biodiversity loss, water scarcity and air pollution.