

Planting for Penitence

A Political Ecology & Legal Geography Perspective
on Court-Ordered Plantation Drives
in the Central Ridge, New Delhi

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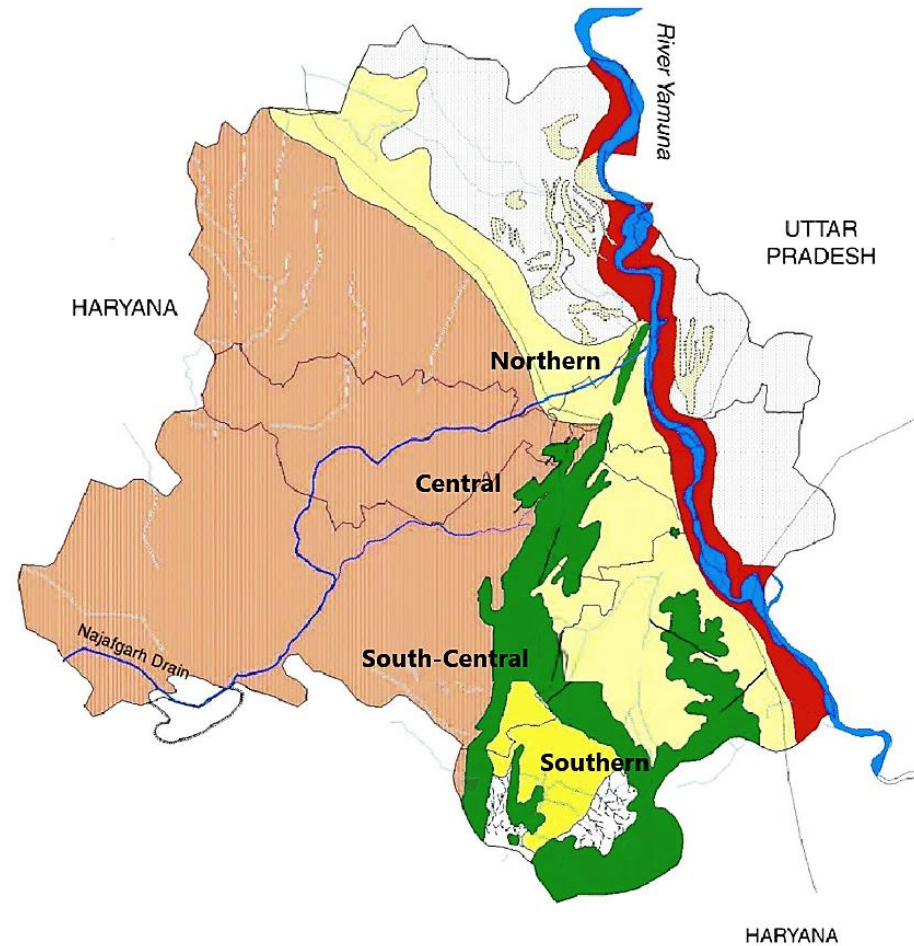
AAG Annual Meeting

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THE DELHI RIDGE

- Northernmost extension of the ancient Aravalli range (~1.8 billion years).
- Rocky projections and thin, sandy soil.
- Suited to support an open-canopied thorn forest (Maheshwari, 1963).
- Four administrative sections: Northern, Central, South-Central, Southern.



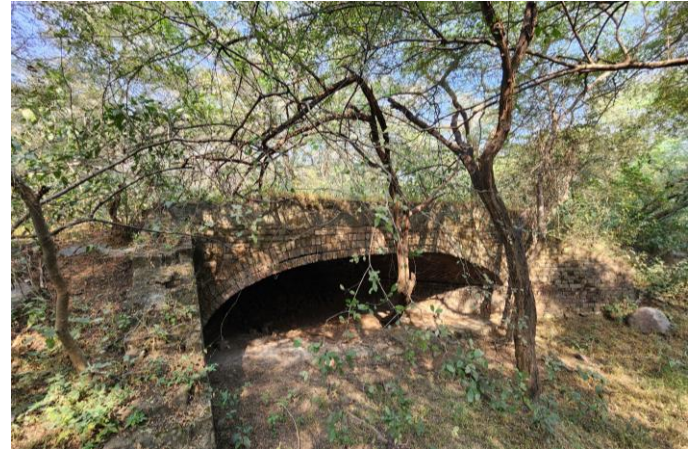
Geological map of Delhi. Source: Sarkar et al, 2016



The Central Ridge, touching the President's Estate is least accessible to the public.

“RESERVING” A “FOREST”

- Afforestation efforts by British bureaucrats preceded shifting of capital to New Delhi.
- Aesthetic borrowed from European cities.
- Nine villages razed & fenced to declare the Central Ridge a Reserved Forest in 1913 (Mann and Sehrawat, 2009).
- Indian Forest Act of 1878 employed for the first time in Delhi.



Bridge repurposed as check dam by Forest Department

THE CENTRAL RIDGE

- Divided into six pockets, controlled by various government and non-government agencies.
- Boundaries dominated by *Prosopis juliflora* (vilayati keekar) and *Leucaena leucocephala* (subabool).
- Native trees species dominate within, dozens of butterfly species, mushrooms pop up during the monsoon.









Welcome to Insaaf Bagh

Merck Sharp & Dohme Corp & Anr. vs Abhayakumar Deepak & Anr

On 11 March 2019, **Delhi High Court Judge Najmi Waziri** ordered respondents in drug patent case to plant 1,40,000 trees in the Central Ridge, in an area to be renamed **Insaaf Bagh** (Garden of Justice).

OBJECTIVES

Using insights from political ecology and legal geography, I aim to:

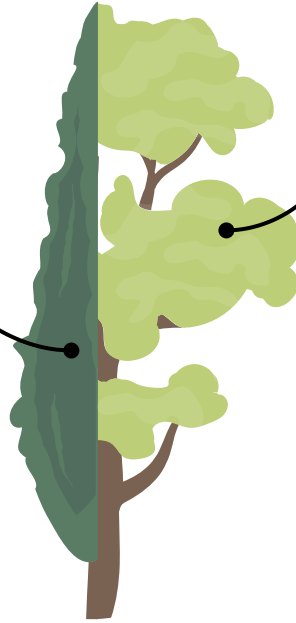
- Identify the discourses underlying the court orders on Insaaf;
- Investigate the processes through which they are actualized by state and non-state actors;
- Understand their ecological implications.



THEORETICAL PERSPECTIVES

POLITICAL ECOLOGY

- Challenges traditional “apolitical” ecology.
- Contextualizes environmental issues by factoring in political, economic and social factors.
(Robbins, 2019)



LEGAL GEOGRAPHY

- Examines how the legal and spatial are co-constituted.
(Braverman et al, 2015)

METHODOLOGY

01

ETHNOGRAPHY

2 years working with the Delhi Forest Department

02

CONTENT ANALYSIS

Delhi High Court orders & judgements from August 2018 to August 2022

03

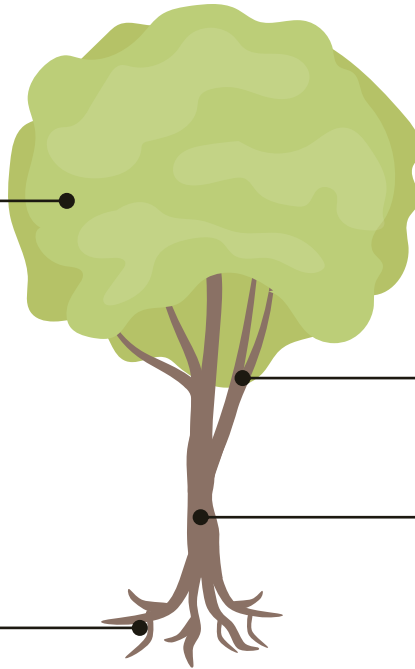
VEGETATION SAMPLING

20 plots of 10m x 10m across Central Ridge plantation sites, April 2022

04

LITERATURE REVIEW

Floras, books, scholarly articles





“the Central Ridge located in the heart of Delhi ...
will always have to be green. If nurtured optimally this
forest area can become a more responsive residual
carbon sump to serve the city for many future
generations.”

NAJMI WAZIRI

Merck Sharp & Dohme Corp & Anr. vs Abhayakumar Deepak & Anr

March 11, 2019

DISCOURSE 1: Tree planting is an intrinsic “good”

- Tree planting can compensate for “bads” (crimes) – **“Insaaf” (trans: justice)**
- It can solve Delhi’s pollution problem.
- The larger the crime the more number of trees must be planted.
- Central Ridge plantations must constantly be managed and under surveillance (photography, aerial videography, numbering, mapping) – **“Bagh” (trans: garden).**





“The Central Ridge and the area in the possession of the Forest Department is largely covered by Vilayati Keekar... As the name suggests the tree is vilayati – of foreign origin.... **It quietly spreads over a large area. Its canopy gives the impression of a green cover** but provides no real shade or carbon absorption.”

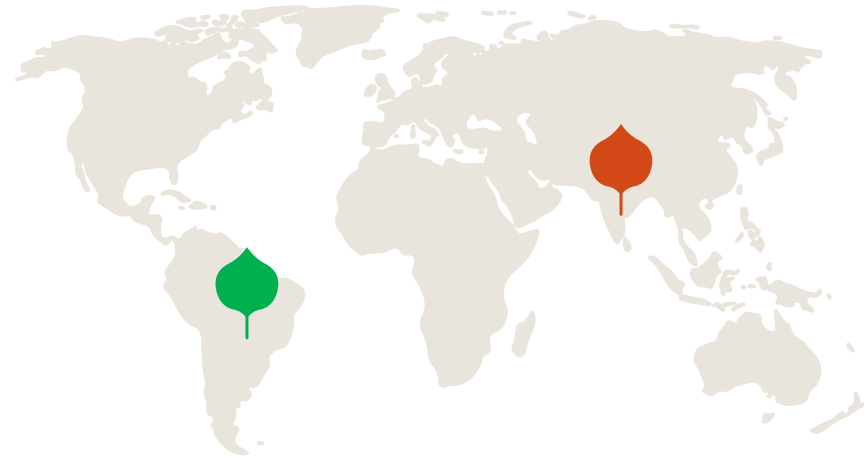
NAJMI WAZIRI

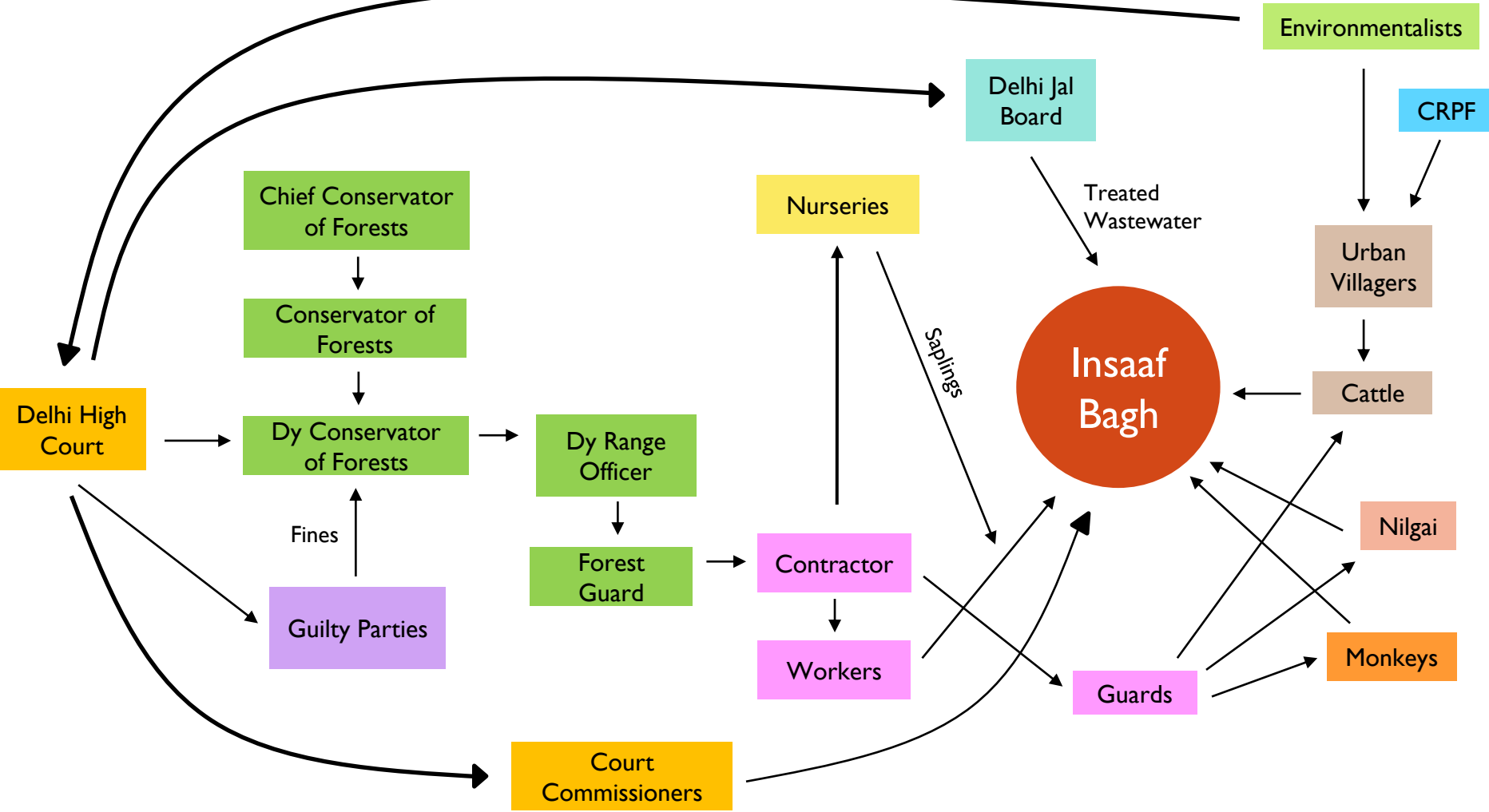
Merck Sharp & Dohme Corp & Anr. vs Abhayakumar Deepak & Anr

March 11, 2019

DISCOURSE 2: Natives “good”, invasives “evil”

- *Prosopis juliflora* only provides the illusion of green cover.
- Its presence makes plantations necessary in the Central Ridge.
- Trees planted must be of “**native deciduous**” variety.





Vague, lacking scientific names

Only broad-leaved species

Repetitions

- | | |
|--|-------------------------------------|
| (i) Gular (Cluster Fig) | (ii) Kadamba (Burflower Tree) |
| (iii) Pilkhan (White Fig) | (iv) Jaamun (Black Plum) |
| (v) Bargad (Banyan Tree) | (vi) Mango |
| (vii) Amaltas (Golden Shower)
[Indian Laburnum] | (viii) Mahua (Butter Tree) |
| (ix) Putranjiva | (x) Badh |
| (xi) Sagwan (Teak Wood) | (xii) Safed Siris (Albizia Procera) |
| (xiii) Kala Siris | (xiv) Anjeer |
| (xv) Kathal- Jackfruit | (xvi) Palash |
| (xvii) Arni | (xviii) Bistendu |
| (xix) Rohida | (xx) Medshingi |
| (xxi) Palash/Tesu/Dhak | |

Several species native to moist deciduous or evergreen forests

List initially prepared for plantations across the city

Native narrow leaved Ridge species missing.

DELHI HIGH COURT'S LIST OF SPECIES



**August to October
2018**

“indigenous deciduous
species”



October 2018

List of 21 species



November 2019

Removal of 3 broad-
leaved species

Addition of 3 Ridge
species



November 2021

New list of 16 Ridge
species

WHICH MIMOSA?



Prosopis juliflora



Vachellia leucophloea



Dichrostachys cinerea



Vachellia nilotica



Senegalia modesta



Senegalia senegal

THE CASE OF TWO KADAMBS



Neolamarckia kadamba

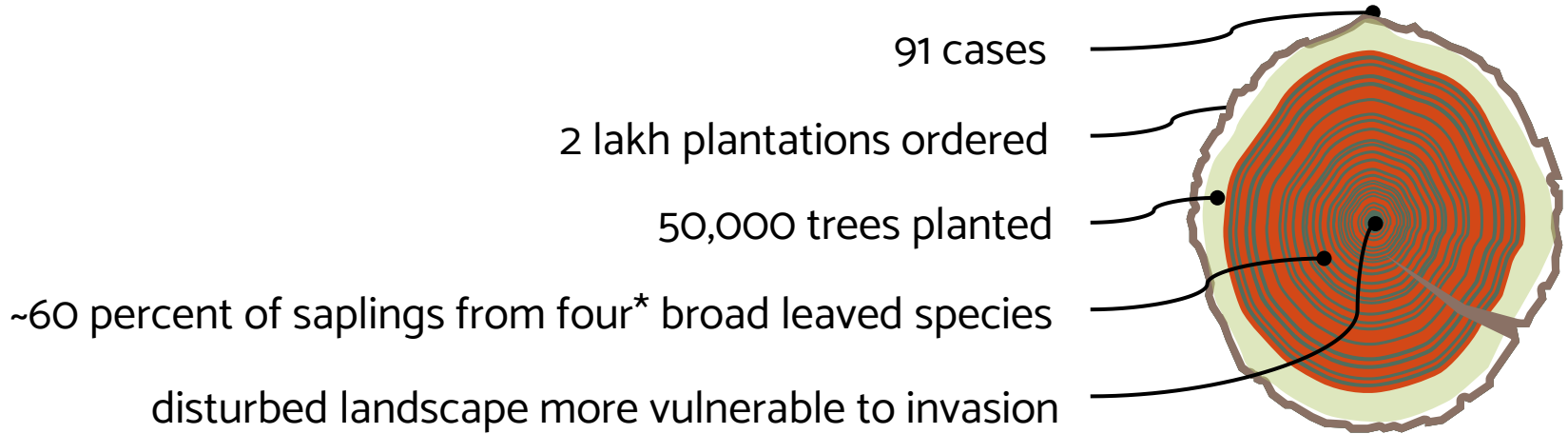
Broad leaved, native to moist deciduous forests



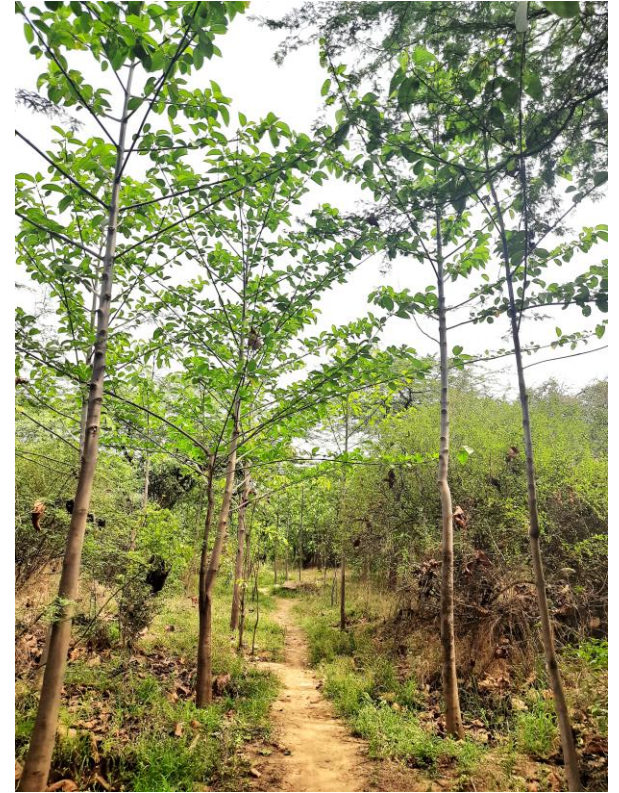
Mitragyna parviflora

Narrower leaves, native to northern Aravallis

ECOLOGICAL SCORECARD FOR INSAAF BAGH



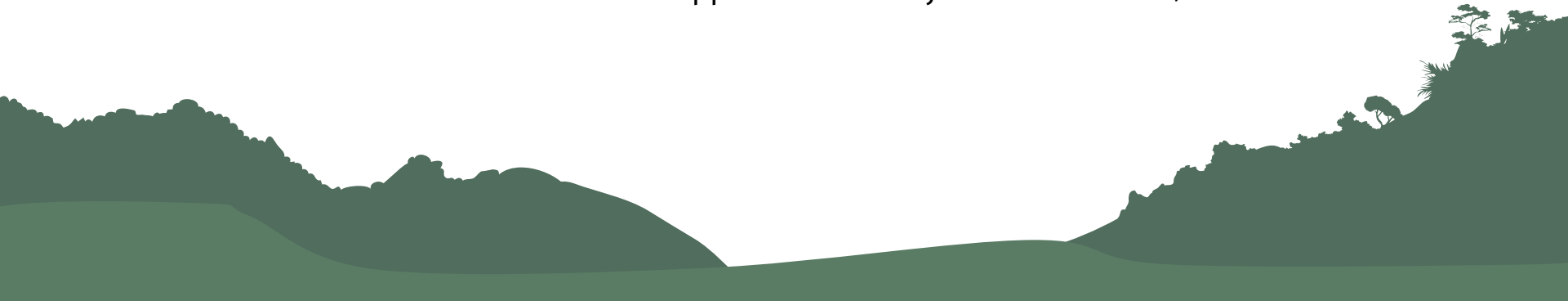
**Ficus virens, Ficus racemosa, Syzgium cumini and Neolamarckia kadamba*



Artificially watered *Ficus virens* (goolar) and *Neolamarckia kadamba* (kadam) plantations in April 2022.

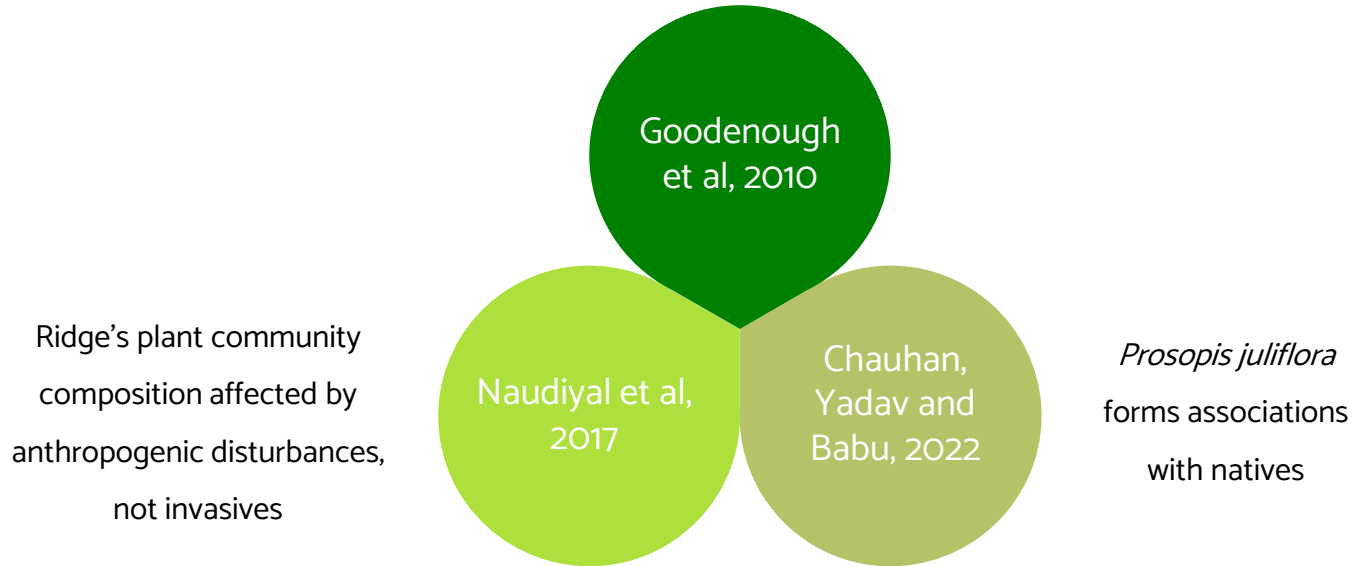
Is Large Scale Tree Planting “Good”?

- Entire ecosystems are responsible for carbon sequestration (Griscom et al, 2017).
- Forests can revive themselves through natural regeneration (Duguma et al, 2020).
- Naturally regenerated forests sequester more carbon (Lewis et al, 2019)
- Plantations require higher financial input and water resources (Fleishman et al, 2020).
- Diverse habitats are needed to support biodiversity (Fleishman et al, 2020).



Scientific literature on invasions problematizes the notion of *Prosopis juliflora* as a villain that must be eradicated.

Invasives' impacts range from positive to neutral to negative



INSAAF BAGH, CONTINUING TWO LEGACIES

1. Colonial legacy of **exclusionary plantations**.
2. Post-emergency legacy of **judicial adventurism**.



THE LANDSCAPE SPEAKS (THROUGH COURT ORDERS)

- Air pollution generates supports for tree planting.
- Even weather patterns shape court orders – following a thunderstorm when several trees fell, Waziri extended the ban on tree cutting.
- Rejection of broad leaved species by the rocky terrain leads the court to repeatedly revise its lists.



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