

# Prayagraj JanAranya

Phase I Summary  
&  
Phase II Plan





# Our Tree Deficit

Where Do We Stand Today?

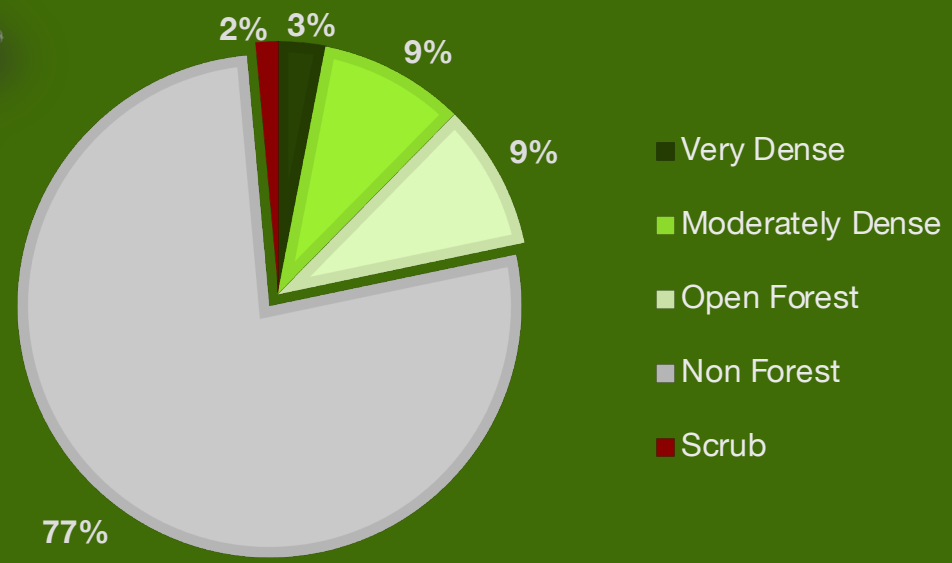


# India - At a Glance



National Green Cover: 24.62%\*

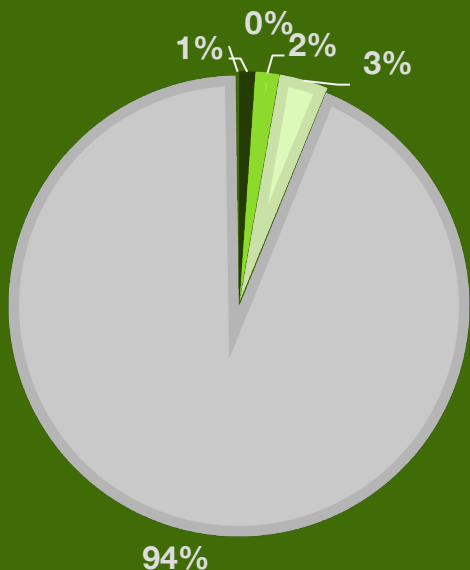
Total Carbon Stock : 7.2 BT





# UP Fares Much Poorer

- Overall Green Cover: 6.2%\*
- VDF ~ 1%; mostly along N/S boundaries



- Very Dense
- Moderately Dense
- Open Forest
- Non Forest
- Scrub



Courtesy: India State of Forest Report 2021

\* Includes Forest Cover as well as Tree Cover



# ...Prayagraj More So

- Overall Green Cover: 2.85%\*
- VDF ~ 0.1%



In sq km

Total Area	Very Dense Forests	Moderately Dense Forests	Open Forests	Scrubs
5482	6.16	26.19	123.92	28.32

\* Includes Forest Cover as well as Tree Cover



# Trees Per Capita



Country	Trees Per Person*
Globally	422
Russia	4461
USA	716
China	102
India	28

\*Crowther et al. (2015). Mapping tree density at scale. Nature.

Uttar Pradesh faces a bleak picture with less than 4 trees/person!



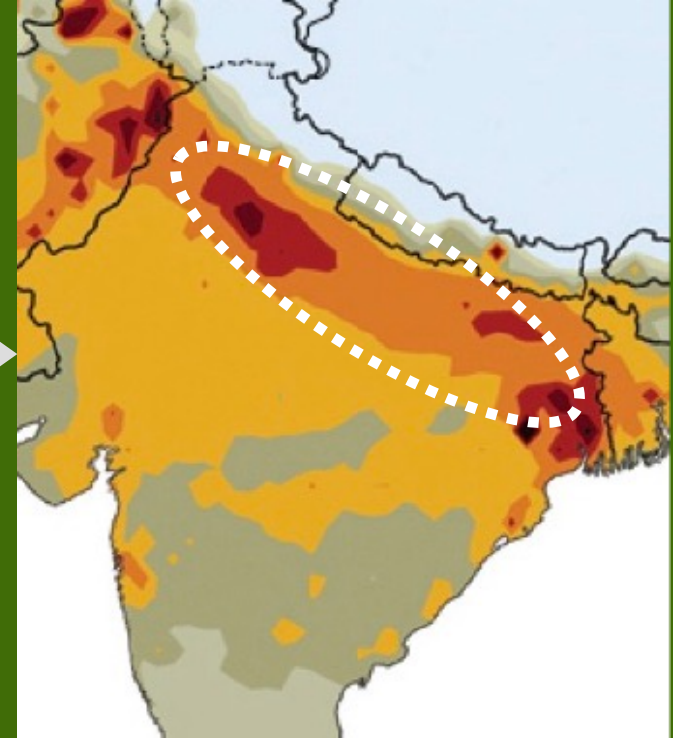


# An Obvious Correlation?

## Green-cover Map



## Air Pollution Map



No Surprises - The region hosts top most polluted cities!





# Remedial Actions

What have we done so far?



# National Forest Policy

- India responded to depleting forest early in 1988
- National Forest Policy came into existence with the principal aim of ensuring environmental stability and maintenance of ecological balance
- NFP 1988 set our national goal to have a minimum of 33.33% of the total land area of the country under forest or tree cover



We've made steady progress over past 3 decades but need to intensify our efforts to meet a challenge that's attained threatening proportions!



# JanAranya जनअरण्य

A Potentially Meaningful Action



I would like for people to recognize the cold, harsh reality that we only sustain our lives by being parasites to green plants. Restoring and regenerating real forests, the native forests by native trees with the greatest concentration of greenery—our hosts—is of utmost importance.

- Dr. Akira Miyawaki

# JanAranya Initiative

- A Green India initiative to effectively increase green cover in a sustainable manner
- The key objective is to raise manmade mini-forests closely resembling a natural forest
- JanAranya Forests are strongly inspired by the methods proposed by renowned plant ecologist Dr Akira Miyawaki
- Raises a dense forest in 15 years as opposed to 150 years as needed normally by unaided natural processes
- A diverse ensemble of strictly native species ensures a sustainable and thriving environment
- Designed to ensure an effective citizen participation - making it, truly, a JanAranya - a forest by the people, for the people



# JanAranya Features



- Dense Plantation – 3-4 Plants/m<sup>2</sup>
- Native Species – Strictly Nothing Exotic
- Focus on Biodiversity – Minimum 30 Species
- Multi-layered Plantation – Canopy, Tree, Sub Tree, Shrub
- Soil Preparation – To Mimic Forest Soil
- Seedlings Only – No Cuttings, No Hybrids
- Augmentation – Fringe & Mantle Species
- Community Engagement – Throughout the Project Duration
- Regular Maintenance – Including Tech-enabled Monitoring for 3 Years



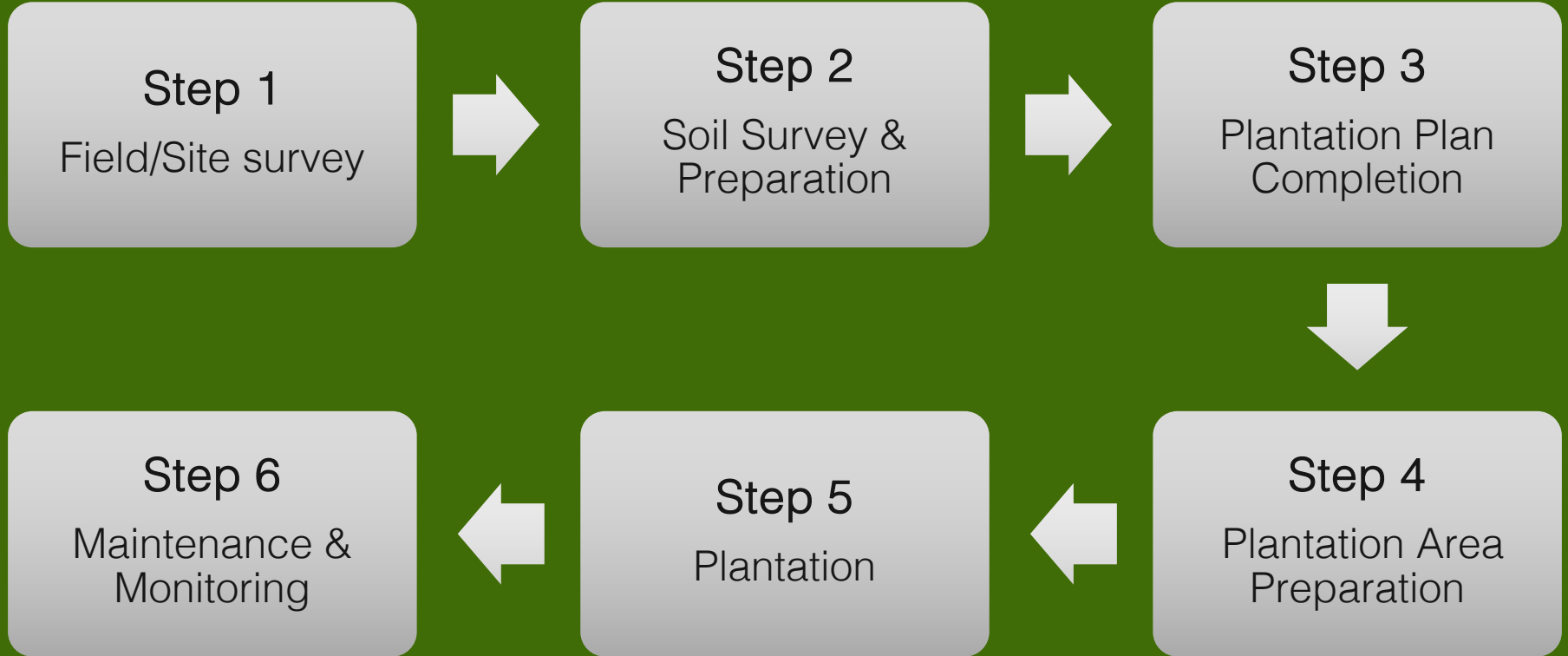
# Advantages over Conventional Methods



- Resembles a Native Forest – Dense/Multi-layered Plantation
- Biodiversity – Roughly 100x
- Faster Growth– 10x Faster than Unaided Natural Processes
- Dense Vegetation – 30x Denser
- Noise & Dust Reduction – Up to 30x More Effective
- CO2 Sequestering – Up to 30x More Effective
- Sustainability – Fully Self-reliant thriving ecosystem in 3 years
- Educational – Excellent Sites for Environmental Education
- VDF Cover– Improves VDF Coverage with ~100% Canopy Density



# JanAranya Process Flow







# JanAranya Activities

## Pre Plantation

- Field Survey for local Species & Ecology
- Site Survey/Selection
- Site Preparation
- Soil Preparation
- Citizen Participation Program
- Monitoring & Management Platform
- Plantation

Year 1

## Post Plantation

- Report Generation
- Geotagged Photography
- Maintenance
- Monitoring
- Replacement of Dead Plants
- Public Engagement

Year 1

## Post Plantation

- Report Generation
- Geotagged Photography
- Maintenance
- Monitoring
- Public Engagement

Year 2&3



# JanAranya – Prayagraj

Phase - I



# JanAranya - Prayagraj Phase I Details

- Prayagraj District Administration and Green India Foundation, in association with Atulya Ganga launched this ambitious project in 2022
- JanAranya locations: Six (06)
- The overall area covered: 30000 m<sup>2</sup>
- Plantation Capacity: roughly 100,000 saplings
- Covering a wide range of soil types and surroundings
- Challenging locations: barren lands/abandoned mines

JanAranya Site





# JanAranya - Prayagraj Phase I Highlights

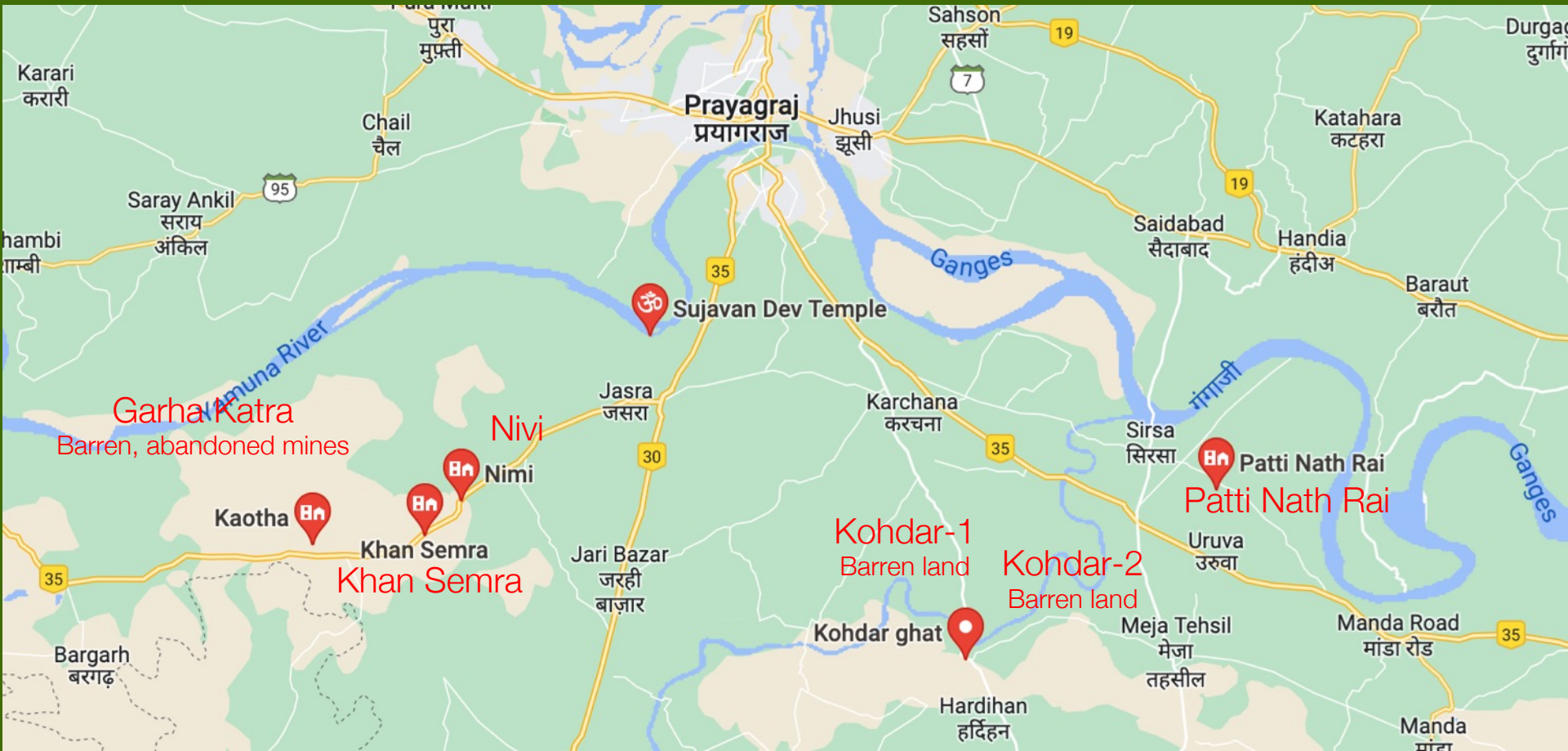
- Bio-diversity
  - More than 30 species of native species being planted
- Variety of soil and ultra-local environmental conditions
  - From very favourable to extremely challenging ones
- A tech-enabled mechanism
  - For regular monitoring, reporting, and necessary course correction; every quarter, for 3 years
- A comprehensive citizen reach program
  - To engage the local population - general public as well as eminent personalities
- Low sapling-mortality target
  - To achieve at least 95% sapling survival rate
- A comprehensive and transparent documentation
  - For authentic & verifiable journey-records of the mini-forests; available to public



# JanAranya - Prayagraj Phase I Tree Species

Sr	Species Name	Sr	Species Name	Sr	Species Name
1	बरगद Banyan	11	अकोला Ankol	21	अ्जुरन Arjun
2	जंगलजलेबी Jungle Jalebi	12	सीताफल Custard apple	22	सहिजन Sahjan/Moringa
3	पाकड़ White Fig	13	आँवला Alma	23	शीशम Shisham/Indian Rosewood
4	पीपल Peepal	14	अकेशिया Acacia	24	करंज Karanja/Indian Beech
5	अमरूद Guava	15	बेल Bael	25	अमलताश Amaltas
6	सेमिया Semia	16	महानीम Maha Neem	26	शमी Shami
7	महुआ Mahua	17	नीम Neem	27	बांस Bamboo
8	बहेडा Baheda	18	सागौन Sagvan/Teak	28	नींबू Lemon Tree
9	करोंदा Karonda	19	सिरसी Siris	29	गूलर Gular /Cluster Fig
10	जामुन Jamun	20	चिलबिल Chilbil/Indian Elm	30	आम Mango

# JanAranya - Prayagraj Phase I Locations





# Shortcomings & Learnings

- Site & Soil Preparation - The guidelines could not be followed effectively
- Too long a gap between site preparation & plantation
- Not enough quantity and diversity of saplings available
- Quality of saplings not up to mark for 2 sites
- Plantation was carried out without using Jeevamrit
- Mulching and support sticks could not be sourced
- Improper watering schedule at one site



# The Way Forward

- Regular watering of saplings
- Covering the bare land with mulch
- Replacement of dead saplings
- Quarterly Assessment Survey
- Refilling to increase density & bio-diversity
- Public participation
- Preparation of Phase II in view of the learnings from Phase-I
- An ambitious target of more than 300 sites across district has been planned for the upcoming season





# JanAranya – Prayagraj

Phase - II



# Phase – II Highlights

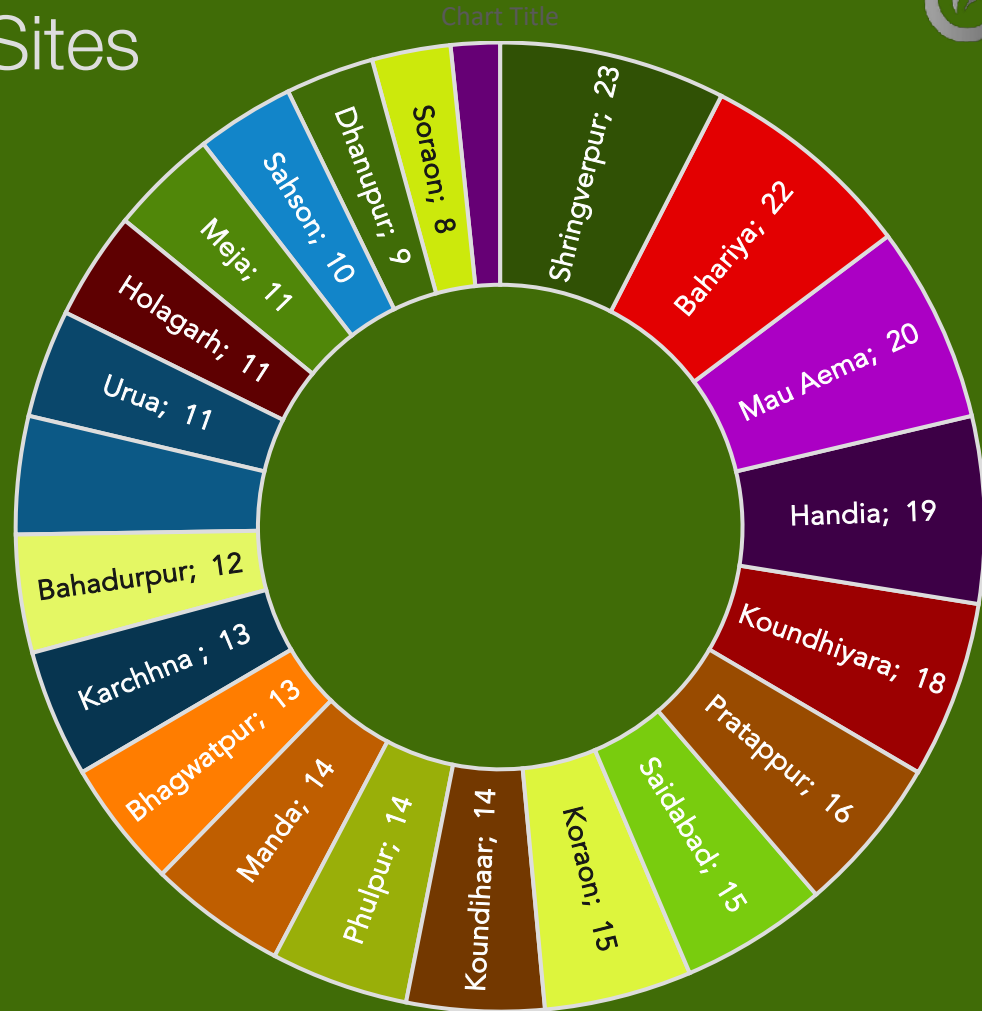
- Encouraged by an outstanding success of Phase I of the initiative, District Administration and Green India decided to proceed with an ambitious plan for Phase II -
  - To cover 22 of the 23 development blocks of the district
  - Total number of sites ~ 300+
  - Total Plantation Area ~ 5,00,000 sq m
  - Total Plantation Capacity ~ 17,00,000 + Saplings
- Preparations are in full swing at all sites for plantation during the ongoing monsoon season



# Phase – II: Distribution of Sites

305

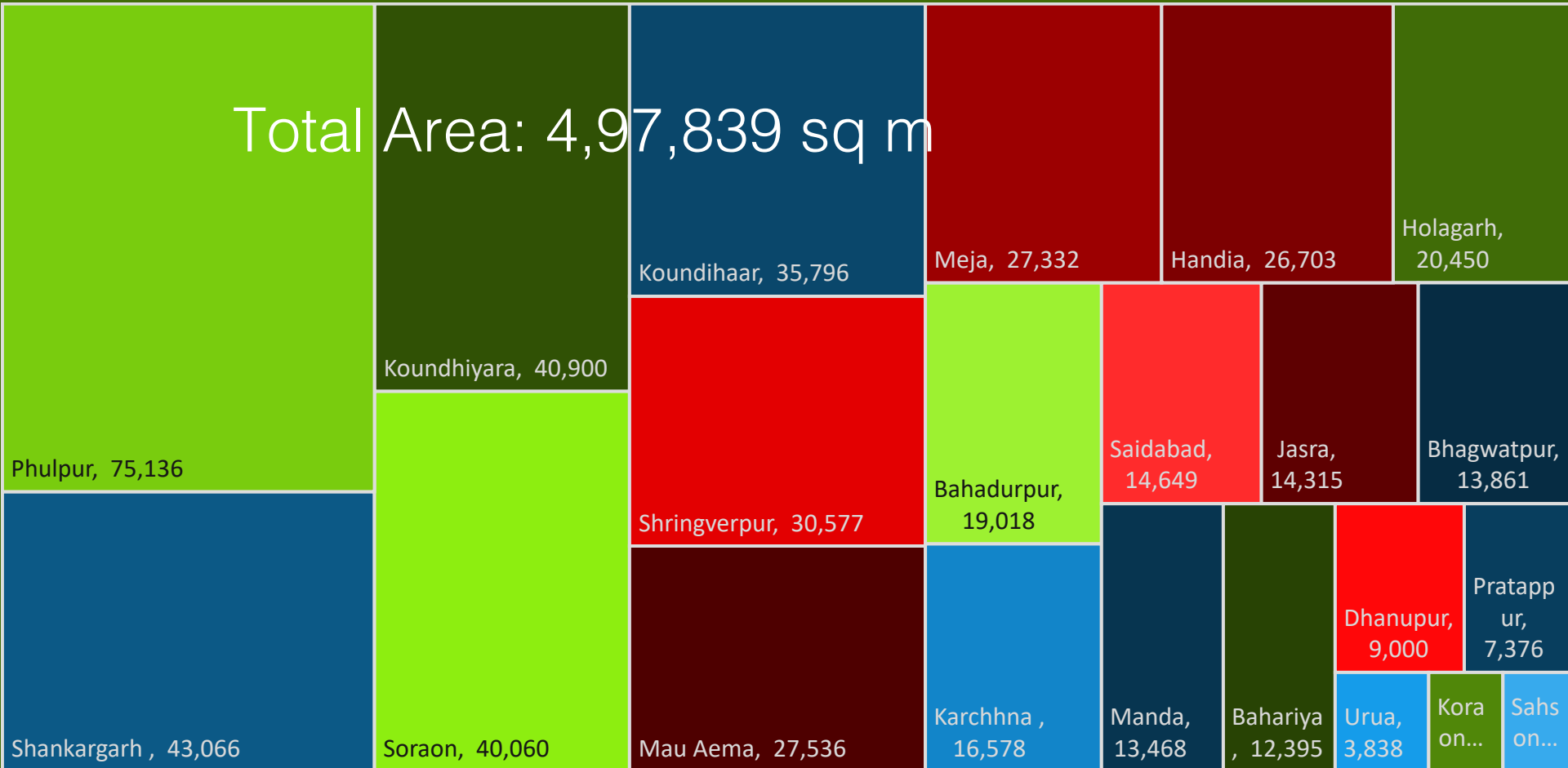
Total number of plantation sites undertaken





# Phase – II: Plantation Area Distribution

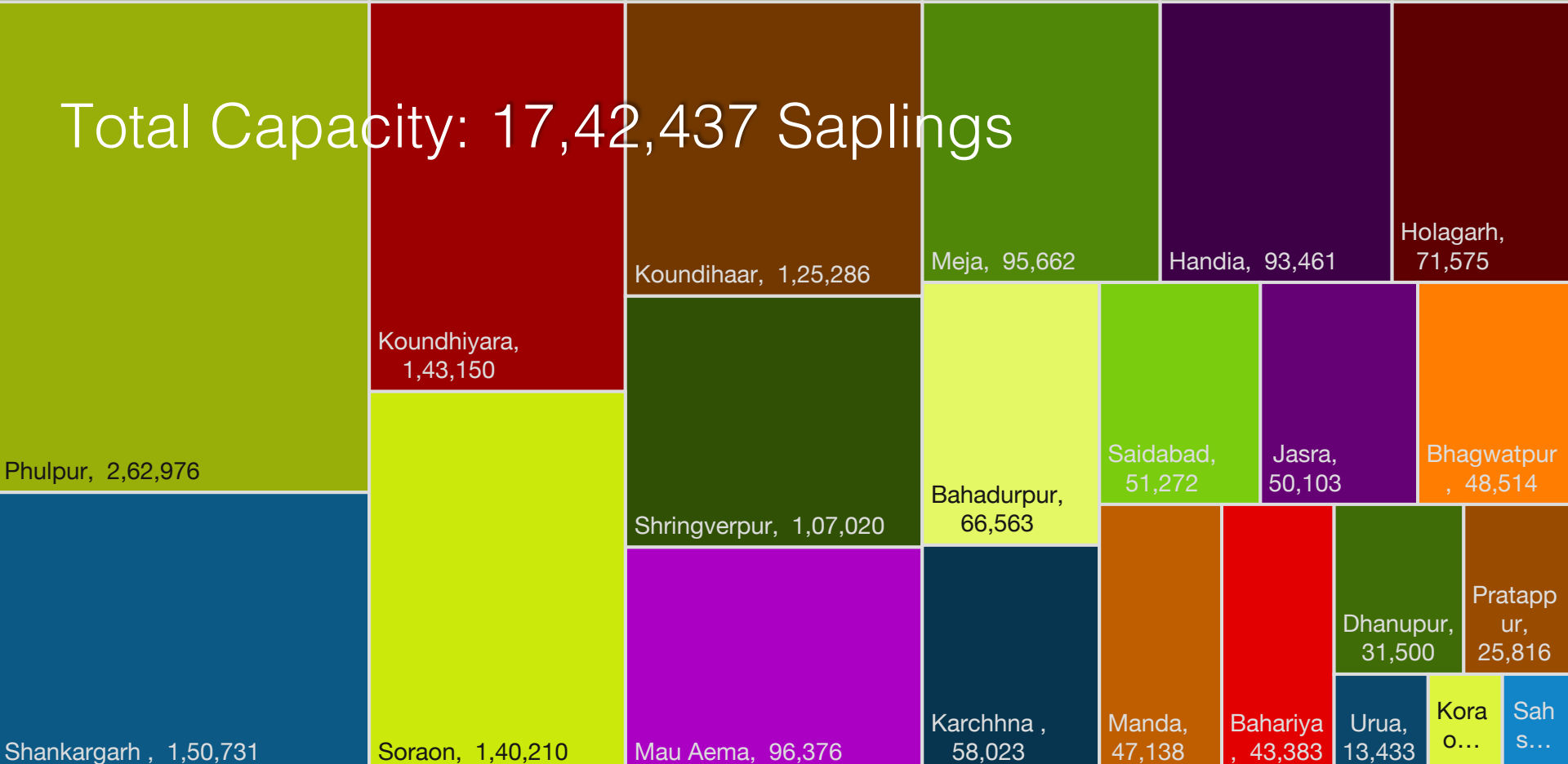
Total Area: 4,97,839 sq m





# Phase – II: Plantation Capacity Distribution

Total Capacity: 17,42,437 Saplings





# Join Hands with Us...

- Volunteer with us
- Provide financial assistance
- Provide logistic assistance
- Run awareness campaigns
- Plant or adopt a tree wherever,  
whenever possible





# Appendix

Glimpses from Phase - I



A representative site

## Garha Katra



- A challenging site
- Barren land
- Abandoned mines
- Poor soil quality
- Huge amounts of debris
- No water supply



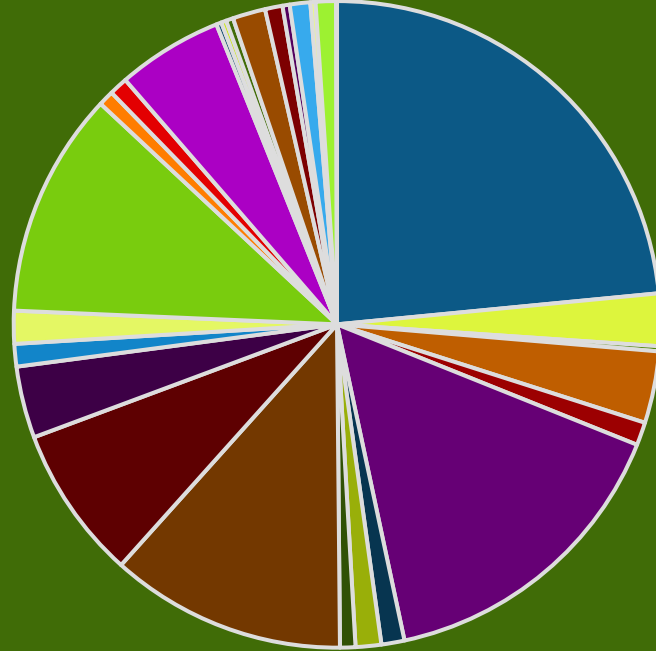


# Garha Katra - Preparation

- Roughly 11,000 sq m area cleared for plantation
- Debris removed as thoroughly as possible
- Fencing done with local stones and dried thorny shrubs
- Soil processed with organic supplements
- A Solar Pump installed for irrigation
- Employment Generated ~ 2000 Man days
- Total Sapling Count – 19,517



# Garha Katra – Sapling Distribution



- |        |         |            |              |           |           |          |         |         |          |
|--------|---------|------------|--------------|-----------|-----------|----------|---------|---------|----------|
| ■ शीशम | ■ नीम   | ■ वलईन नीम | ■ जंगल जलेबी | ■ गुलमोहर | ■ अकेशिया | ■ अर्जुन | ■ सहिजन | ■ जामुन | ■ सीरस   |
| ■ आवला | ■ सागौन | ■ इमली     | ■ महुआ       | ■ चिलबिल  | ■ अमरुद   | ■ सेमिया | ■ बहेर  | ■ समी   | ■ करौंदा |
| ■ बेल  | ■ बांस  | ■ ममरी     | ■ मदार       | ■ भटकटैया | ■ सेमर    | ■ करंज   | ■ पीपल  | ■ बरगद  |          |

# Glimpses Garha Katra - Before



# Glimpses Garha Katra - In Progress

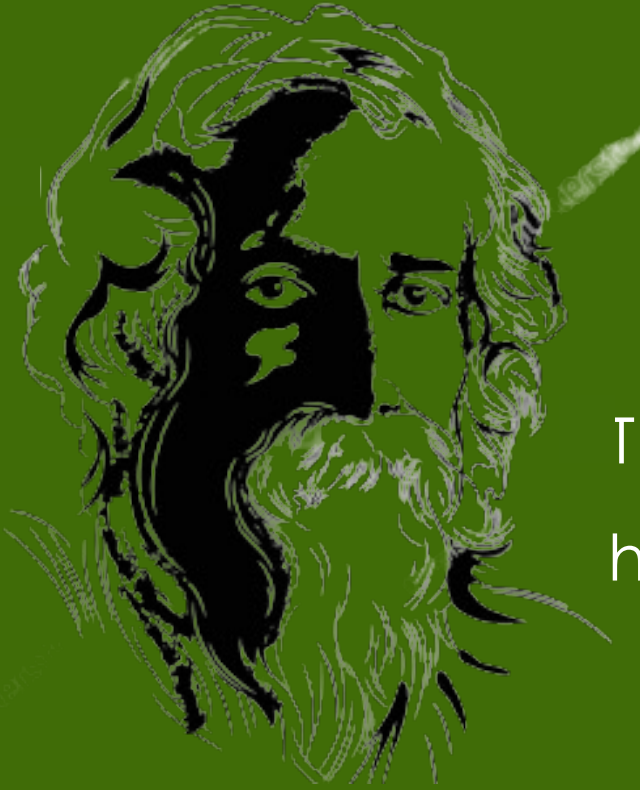


# Glimpses Garha Katra - After



# Glimpses Garha Katra - At 6-monthly Survey





The earth's sacrificial fire flames up in  
her trees, scattering sparks in flowers.

- Rabindra Nath Tagore