Major ongoing landscape restoration projects in India under differing ecological & social conditions and levels of political commitment

Do they pass the REDD+ Safeguards test?

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India's forest related NDC and its implications

- 2.5 to 3 billion tons of additional CO_2 sequestration by 2030
- Centrality of Adaptation with focus on reducing climate vulnerabilities of forest dependent communities
- This would require preference to Adaptation approaches that also proactively enhances mitigation opportunities
- Also activities should provide much more employment and economic opportunities to communities

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Cancun REDD+ Guidance

Activities must contribute towards stabilization of GHG at a level that would prevent dangerous anthropogenic interference with climate system within a time-frame sufficient to allow ecosystems to adapt naturally to climate change

Country-driven and voluntary options available to countries

Consistent with the objective of environmental integrity, take into account multiple functions of forests

Accord with national development priorities and national sustainable development goals

Consistent with the adaptation needs of the country

Promote sustainable management of forests

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Cancun Safeguards

Consistent with relevant national laws, international conventions and agreements

Respect for knowledge and rights of indigenous peoples and local communities,

Full and effective participation of relevant stakeholders, indigenous peoples and local communities,

Consistent with the conservation of natural forests and biological diversity, ensure their ecosystem services are incentivized, enhance other social and environmental benefits

Actions to address the risks of reversals

Actions to reduce displacement of emissions

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Implementation

- This target would require 22 Mha of new plantations by 2030
- Well organized and trained Forest departments
- Recently USD 100 billion was released by Compensatory Afforestation Fund Management and Planning Authority (CAMPA). Additional to the annual forest budget in each state
- Work is ongoing across the country

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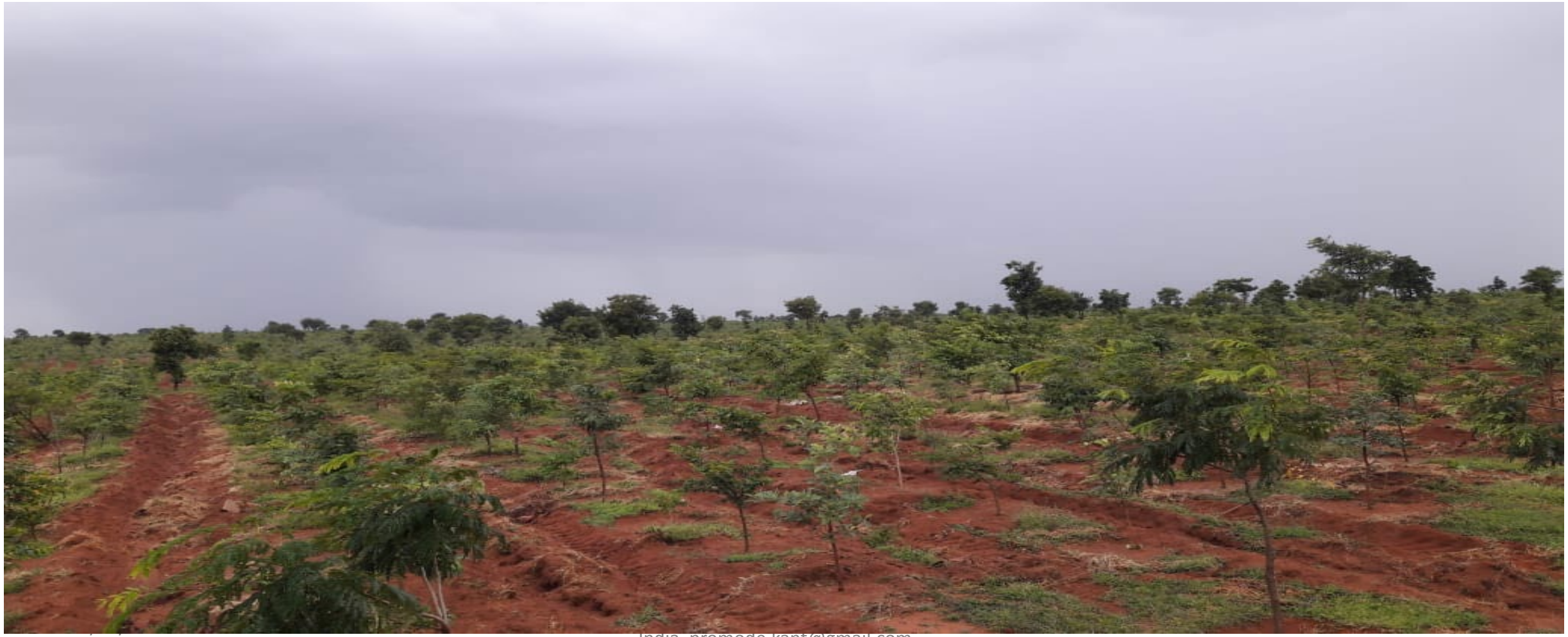
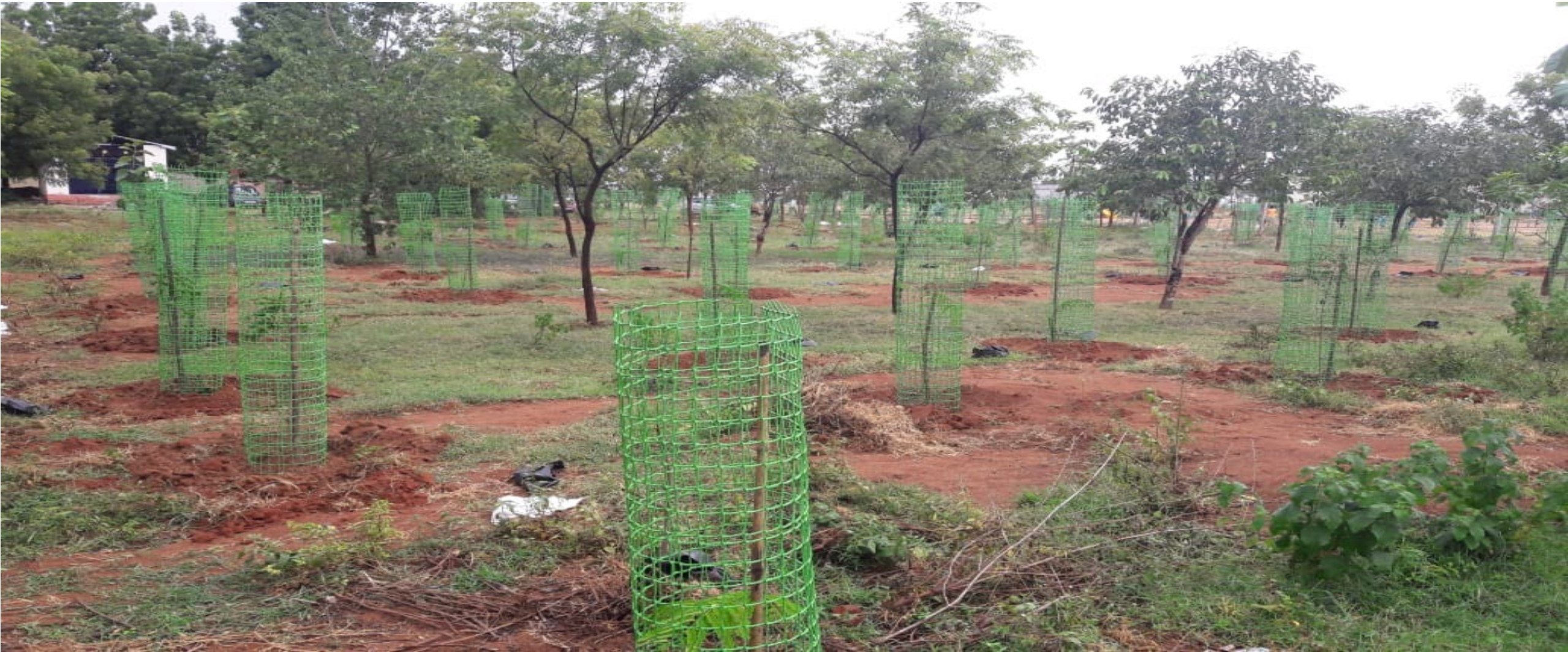
Throughout the country forest restoration work is going on: Telangana state Photo credits: Dobriyal IFS



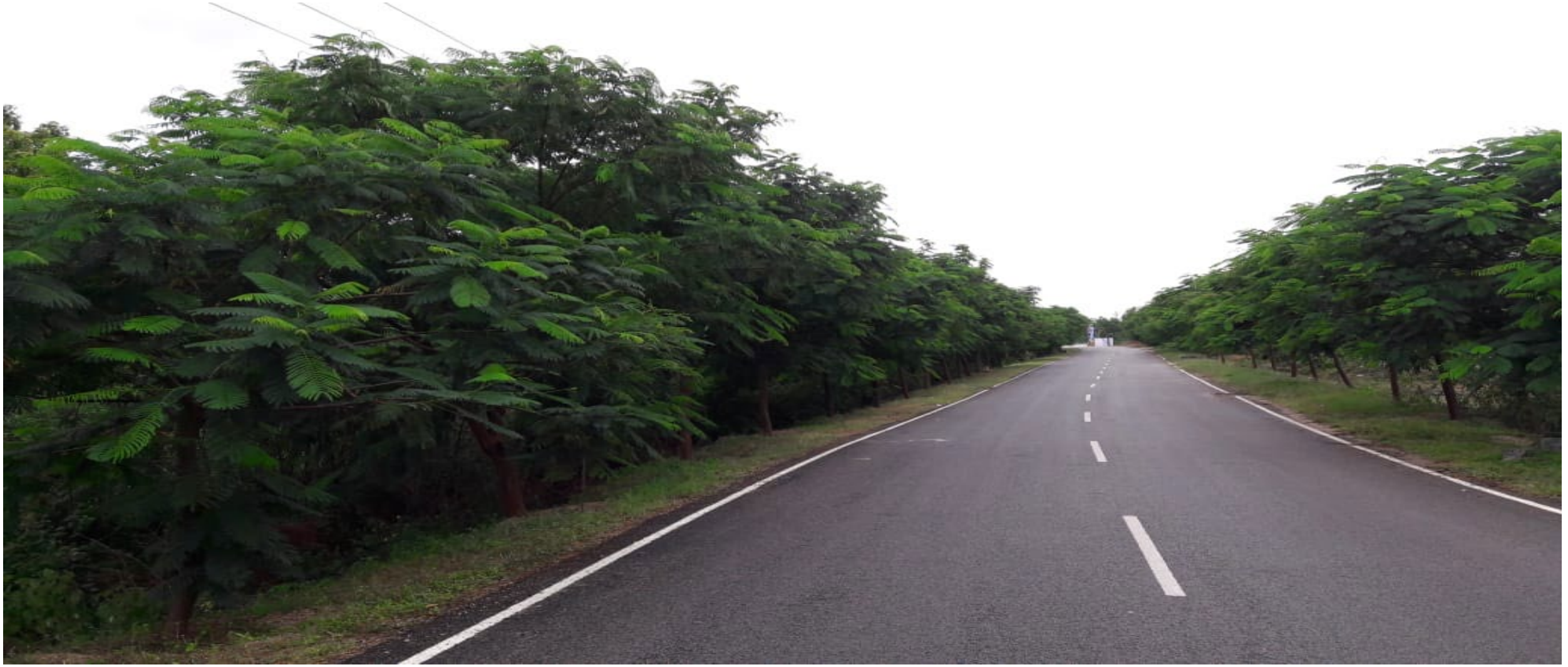
Telangana: high cost planting with individual tree guard to protect against heavy grazing

Photo credits: Dobriyal IFS

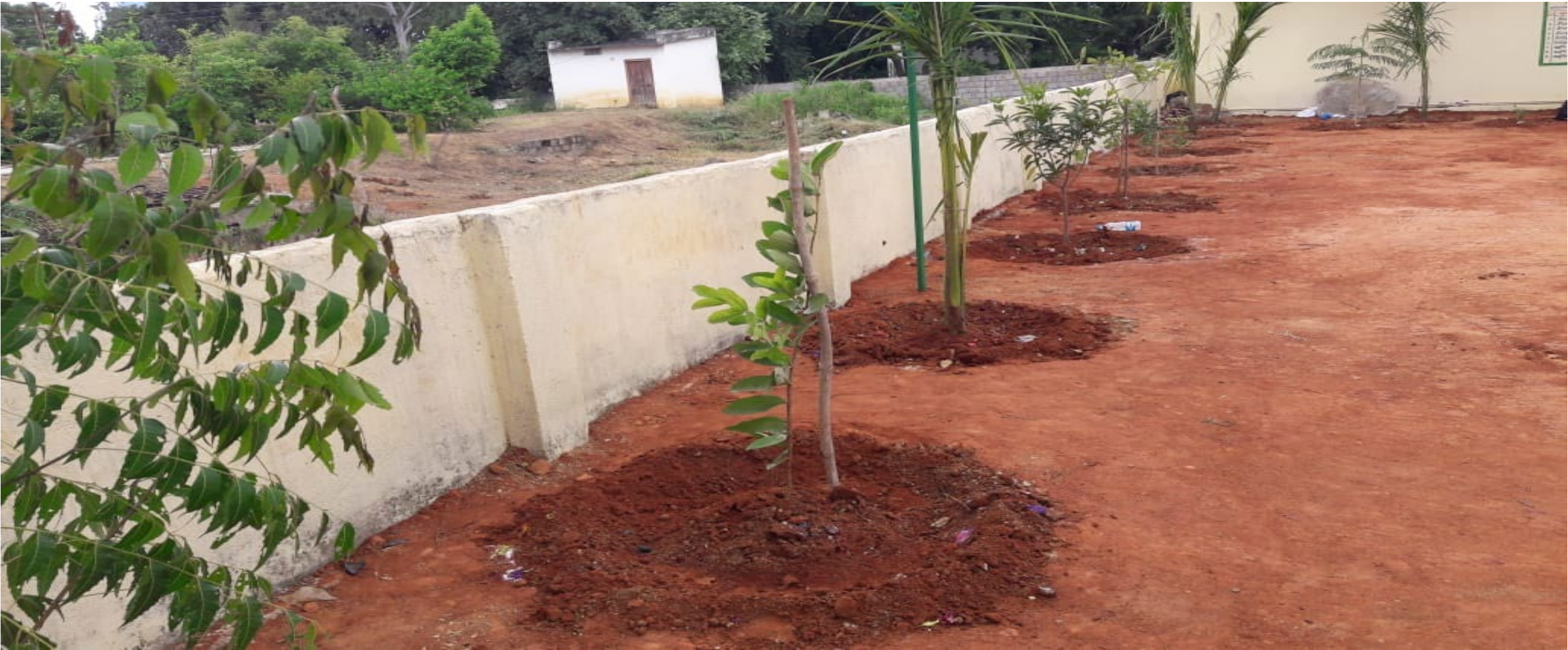


Telangana avenue planting

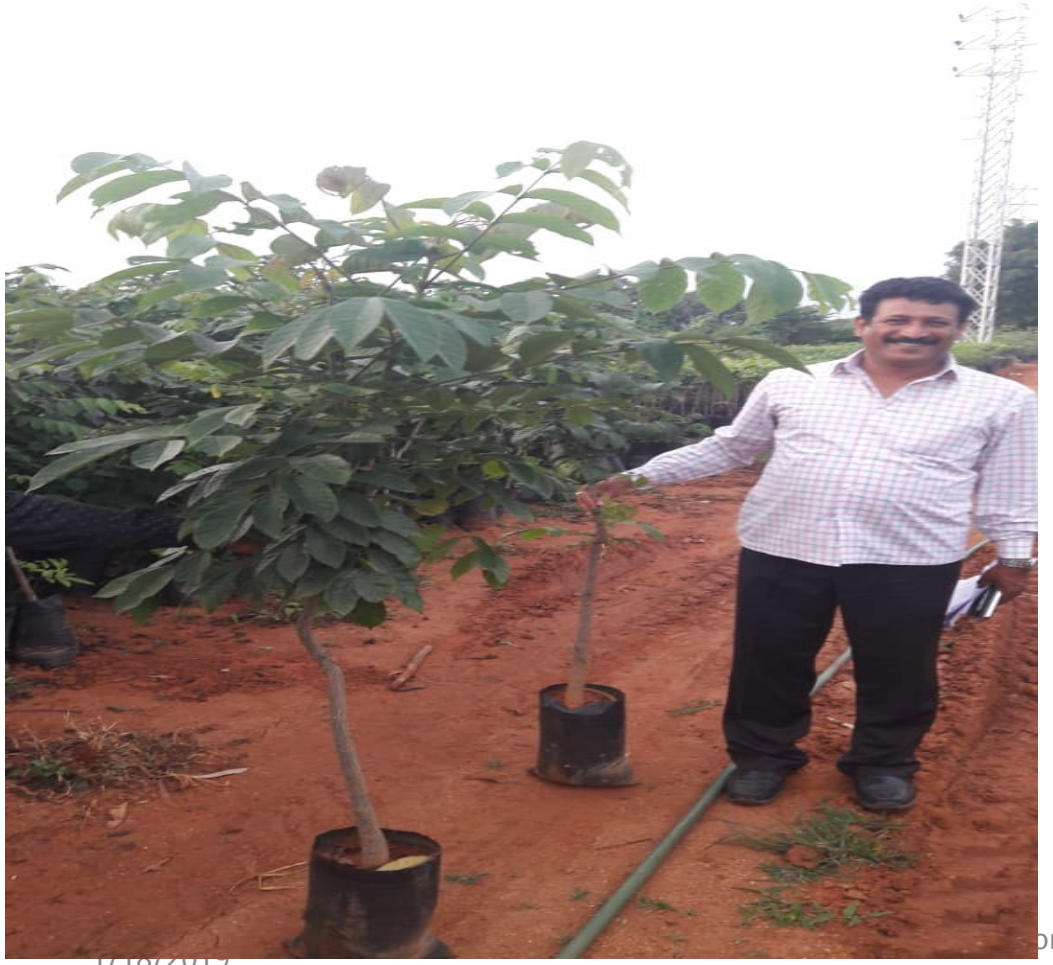
Photo: Dobriyal IFS

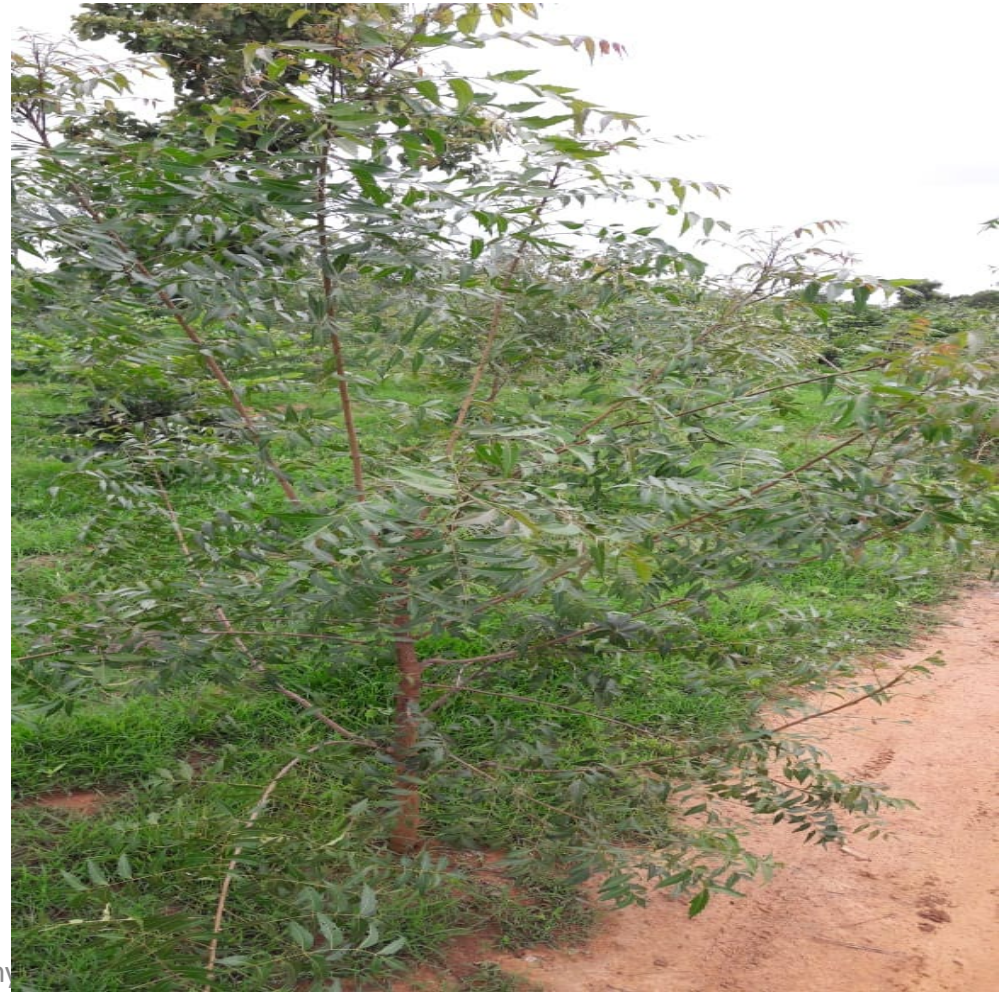


Telangana - planting in schools and other institutions – very high level of political commitment



Planting tall seedlings





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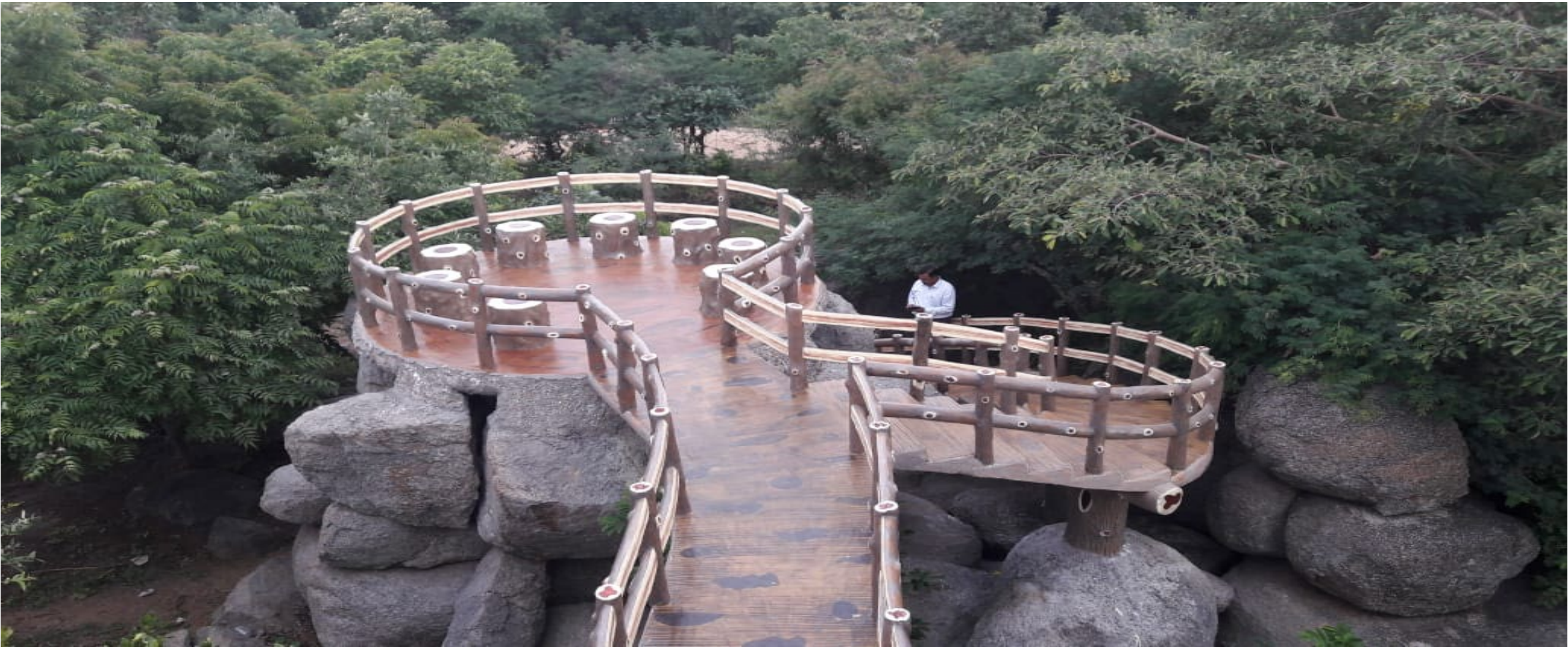
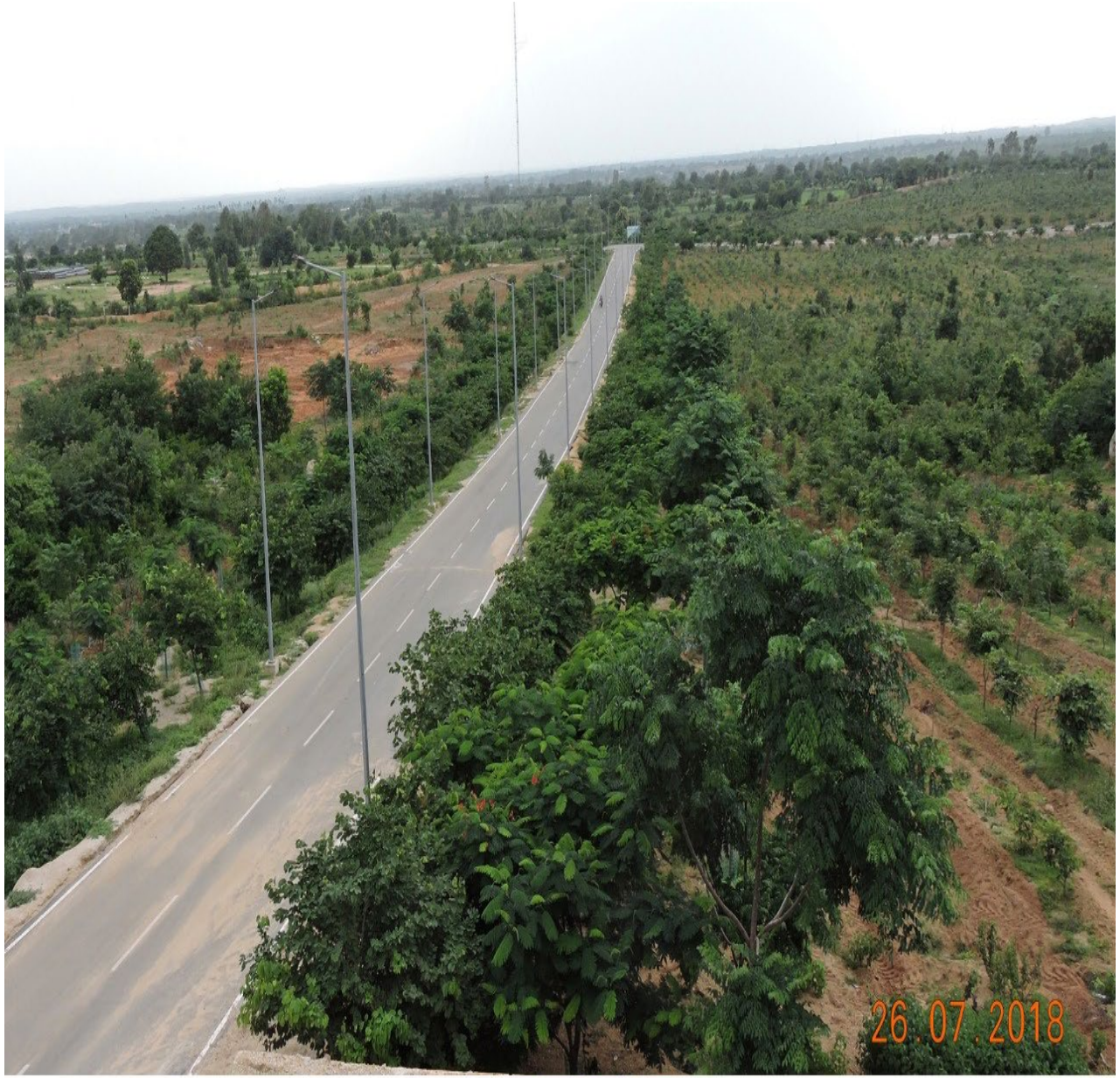
Ecotourism

Photo: Dobriyal



BEFORE



AFTER

Jammu & Kashmir state

Young assisted regeneration in a coniferous forest, Budgam Dn, J&K

Photo: Irfan Rasool, IFS

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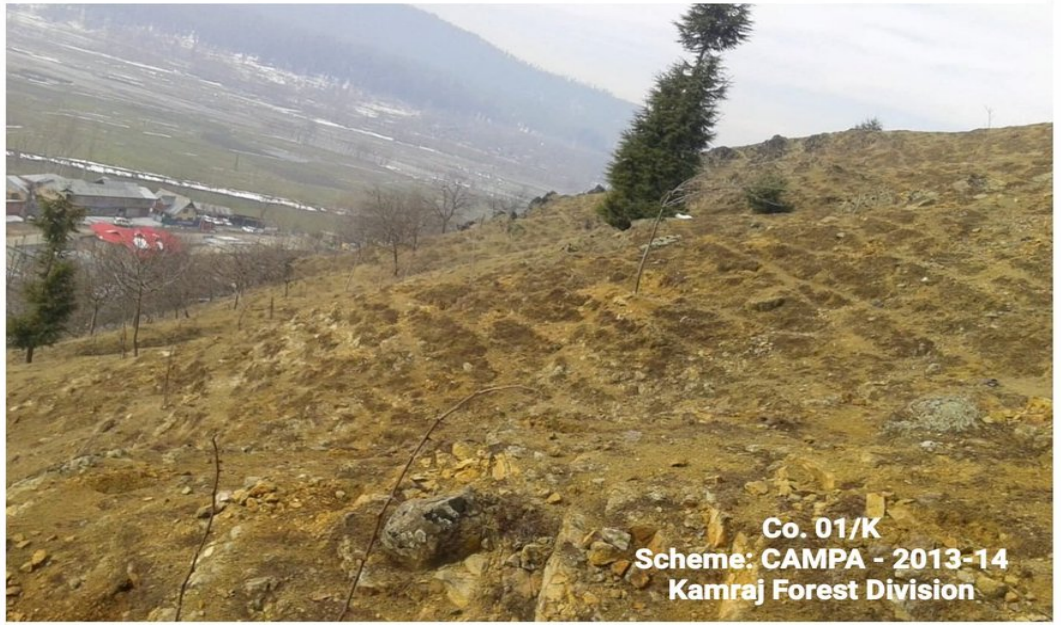
Restoration on a degraded land Kamraj Forest Division, J&K

Photo: Irfan Rasool IFS



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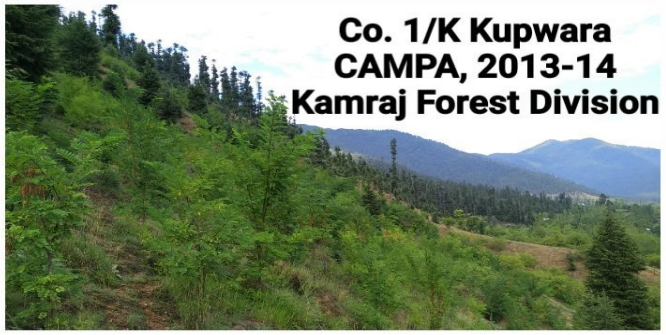
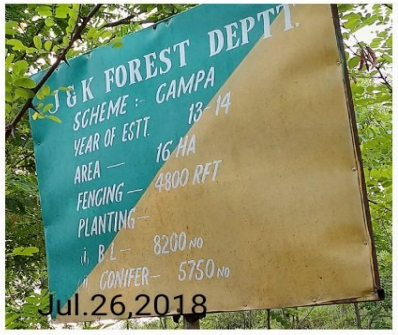
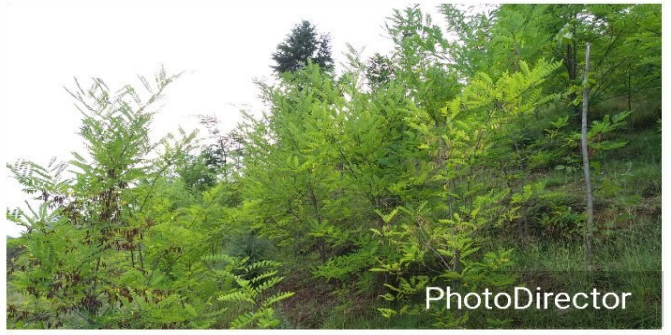
Kupwara, Kamraj Forest Dn, J&K

Photo: Irfan Rasool, IFS







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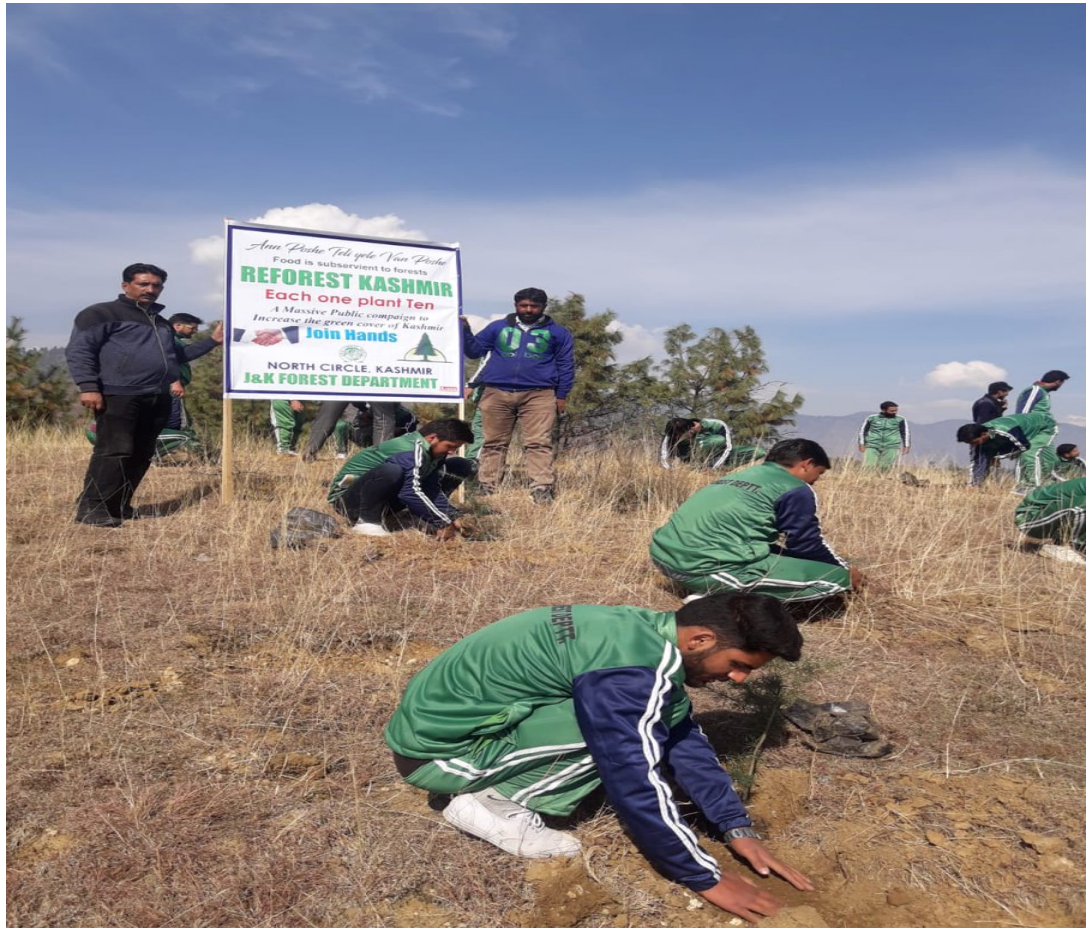
Planting on grasslands: biodiversity???



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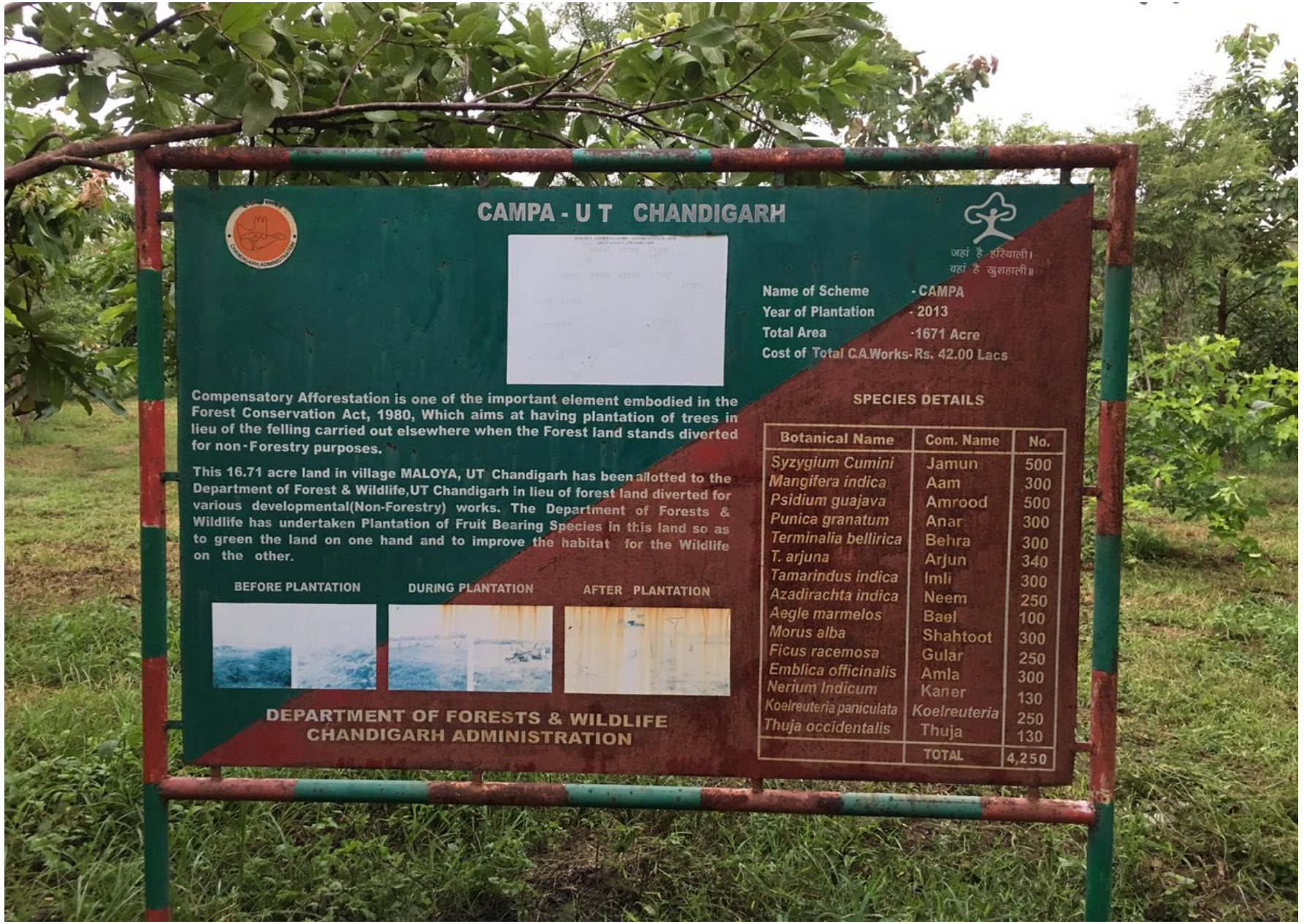
Urban forestry

Restoration at Malowa in Chandigarh

Photo credit: Dr Abdul Qayum IFS



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A “REDD+” (?) project in Northeast India

Location: East Khasi Hills District, Meghalaya, India
Operational Since: 2011
Project Coordinator: Khasi Hills Ecosystem (KHE)
Plan Vivo Carbon Certificates Issued to date: 1,18,404
Area of land under management: 15,217 ha REDD+ (9,270 ha Dense Forest, ANR over 5,947 ha Open Forest)
Participants: 62 village groups
Project intervention: REDD+ and Assisted Natural Regeneration
Milestones: Registration in 2013, Verified in 2017

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But the pace is very slow and target too huge

- Vacant land or waste lands are generally not available for planting
- Stiff competition from huge demand for land for non-forestry activities in rapidly developing economy
- Restoration must look at the opportunities within the open and medium density forests and in agroforestry
- India has Very dense forest 9.8 Mha, Medium density forests 30.8 Mha, Open forests 30.2 Mha

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This would require a fundamentally different way of restoration efforts

- Vast opportunities for restoration exists over forests degraded by poor natural regeneration, illegal felling, excessive firewood extraction, erosion, grazing, fires, and massive spread of weeds, insect attacks
- All forests - OF, MDF and VDF - to be brought under intensive management,
- Different types of restoration efforts over about 3 Mha/year needed for 10 years to achieve NDC target
- But the state forest departments can undertake the task only over 0.15 - 0.2 Mha every year at the most with their present staff strength
- A fundamentally different approach needed

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Adaptation centric management approach needed

- Appropriate thinning, heavy removal of dead and dying required to reduce vulnerability to pests and fires
- Trend towards lower precipitation higher temp - reducing surface runoff and increasing soil moisture crucial
- Intensive invasive and forest fire management needed
- Planting of tall saplings and long period of subsequent care needed in Open Forests
- Significant reduction in rotation age will also enable faster carbon sequestration

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Vulnerability status of Sal forests

- Increased exposure to severe attack of Sal borer
- Large number of standing dead and dying trees, intense heat and prolonged dry periods, increased fire risk, poor regeneration
- Extensive invasion by weeds, particularly lantana
- Increased soil desiccation due to warming
- Planting inside open forests has very limited success

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Renewed emphasis on soil and moisture conservation measures

- Trend towards lower precipitation and higher temperatures
- Reducing surface runoff and increasing soil moisture crucial for increasing productivity
- Locally suited soil moisture conservation measures should be adopted
- Already practiced in watershed areas but now investment in soil and moisture conservation measures would have to be significantly higher

Adapting to increased fire incidences

- Fire information system is technologically quite advanced but response mechanism and preventive measures require huge work
- Massive addition to fire lines of adequate width needed
- Ability to respond to the fire incidences relies too heavily on legal duty cast on people living close by. It no longer works.

Neelkurinji (Strobilanthes kunthianus) in Western Ghats: flowers once in 12 years

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Thanks

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