



Harnessing Wild Edible Fruit Diversity of Western Ghats of India for Nutritional Security, Sustainable Livelihoods and Conservation

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1. Introduction to project:

- ❖ Western Ghats known for rich biodiversity
- ❖ The **344** edible fruits reported in Western Ghats (Dandin et al., 2016)
- ❖ Wild edible fruits (WEFs) are power of nutrients and valued for cultural and medicinal uses.
- ❖ These species are hardy and tolerant to biotic and abiotic stresses
- ❖ **59** species in the stage of threatened and **8 species** are endangered in nature
- ❖ Due to deforestation, overexploitation, home stays, encroachment and low awareness.
- ❖ Lack of studies on conservation, characterization, multiplication and creation of awareness



2. Project Objectives:



1. Survey, collection, conservation and documentation of wild edible fruit species of Western Ghats.
2. Morphological, biochemical and mineral characterization of wild edible fruit species of Western Ghats.
3. Establishment of field gene banks and nurseries for multiplication of quality planting materials through farmer participatory approach.
4. Creating awareness on WEFs through extension activities to different stakeholders (Trainings and Diversity shows).

3. Methodology and implementation approach(1):



2. Collect and characterize species for morphological , biochemical and mineral traits

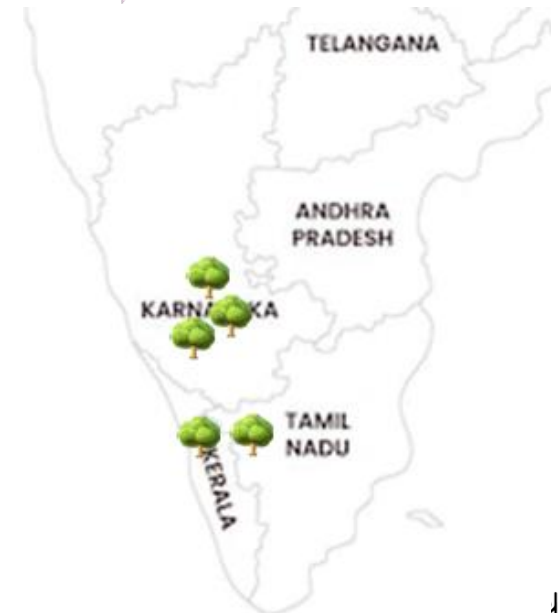
1. **Survey Western Ghats** (Kerala, Tamil Nadu, Karnataka) to identify and map underutilized wild fruit species

3. Document of ITKs and ethnobotanical information from local communities

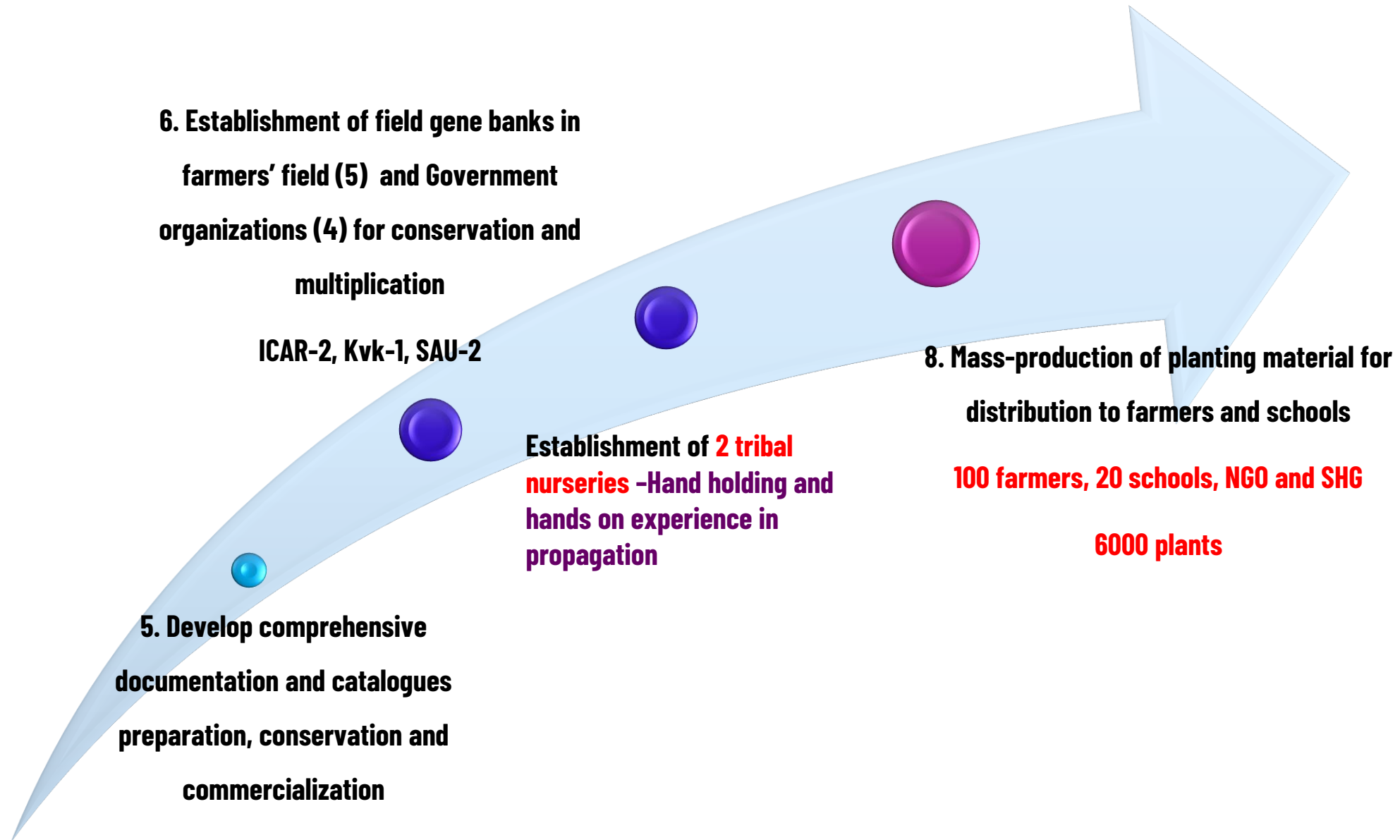
4. Organize trainings and diversity shows for farmers, school children's and stakeholders, Trainings-10, Diversity shows-2, Workshop-1



Chrysophyllum roxburghii



3. Methodology and implementation approach(2):



3. Time Frame



Sl. No	Activities	2025-26	2026-27	2027-28
1	Survey and collection and documentation of wild fruit of Western Ghats region of Karnataka, Kerala and Tamil Nadu.			
2.	Morphological, biochemical and mineral characterization of 50 collected fruits			
3.	Establishment of field gene banks in farmers fields and government organizations (10). Multiplication and distribution 6000 plants to farmers, schools			
4.	Awareness creation on wild fruits and its nutritional profile to farmers, consumers and other stakeholders through trainings, seminars and diversity shows			
5.	Preparation of catalogues, book and other publications and submission of report			

6. Social and nutrition impact pathway – Project outcomes/Impact:

- ❖ **Systematic Inventory:** Mapped wild edible fruit (WEF) diversity across Western Ghats
- ❖ **Scientific Validation:** Generated nutritional and mineral diversity profiles
- ❖ **Conservation:** Preserved genetic resources, ITKs and ethnobotanical knowledge
- ❖ **Biodiversity Protection:** Strengthened long-term conservation of underutilized species
- ❖ **Nutritional Security:** Promoted nutrient-rich WEFs to reduce malnutrition
- ❖ **Community Empowerment:** Built capacity and increased farmer and tribal participation
- ❖ **Public Awareness:** Enhanced understanding of WEF importance among public and policymakers

Slide 6. Environmental and climate advantages



- ☐ Climate-resilient and tolerant to drought, water logging and poor soils
- ☐ Improve soil health and **reduce erosion** through deep root systems
- ☐ **Enhance biodiversity** by supporting pollinators, birds and native fauna
- ☐ **Restore degraded landscapes, barren paddy fields** and forest-edge ecosystems
- ☐ Serve as reservoirs of genetic diversity for future crop improvement
- ☐ Integrate well into sustainable agroforestry and low-impact farming systems



7. Scaling, sustainability and cost efficiency:



- ❖ Increased awareness (10+2+1) and documentation of WEFs (Minimum 50)
- ❖ Formation of **community/SHG networks** for conservation and use (10+2)
- ❖ Improved **dietary diversity and nutrition** in rural and tribal households (100)
- ❖ Strengthened biodiversity conservation and ecosystem resilience.
- ❖ Integration of WEFs into food, nutrition, agroforestry and policy frameworks.



7. Sustainability and cost efficiency:

- ❑ Thrive naturally in marginal and diverse ecosystems.
- ❑ Lower cultivation and maintenance costs compared to commercial crops.
- ❑ Provide stable yields even under climate stress.
- ❑ Support long-term ecological balance and biodiversity.
- ❑ Offer income opportunities with very low investment.



8. Budget summary, risk and mitigation strategy



Details	2025-26	2026-27	2027-28	Total (US\$)
Pay and allowances for SRF* (1Nos.)	6750	6750	7000	20500
Consumables	3000	3000	0	6000
Transport Allowance	2000	2000	1000	5000
Organizing Trainings, diversity shows and seminars	750	1500	3000	5250
Establishment of FGB, Nurseries and Multiplication of Planting materials	5000	2500	2000	9500
Publications	0	1200	1000	2200
Contingencies	500	500	0	1000
Total	18000	24450	14000	49450

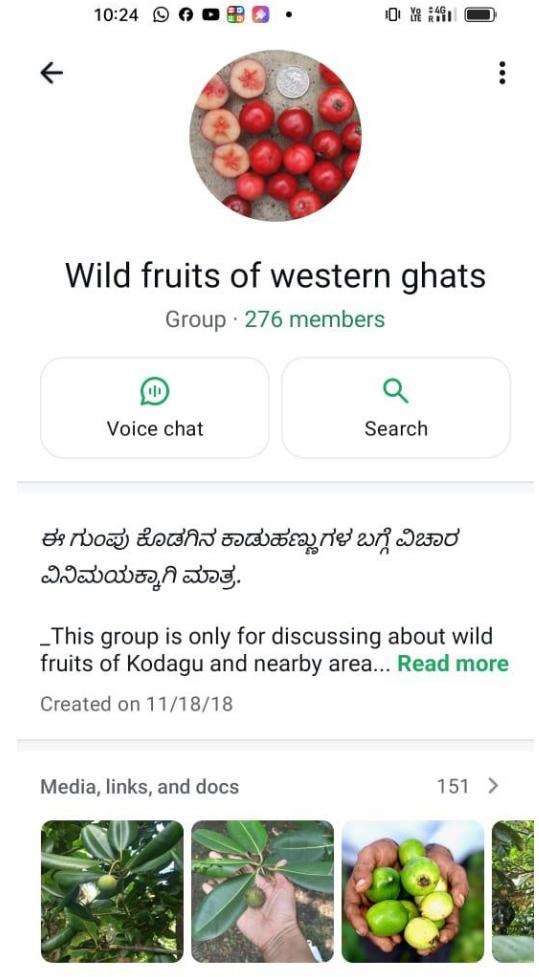
8. Risk :

- Awareness and Acceptance of WEFs

- Availability of planting materials-No organized nurseries

8. Mitigation strategy:

1. Creation of awareness through trainings, Radio talks, diversity shows
2. Scientific evidence will be generated
3. Establishment of Nurseries





Thanks

"Let food be thy Medicine and Medicine be thy food"

Hippocrates





Toddalia asiatica
Gonne hannu



Carissa carandas Karonda



Canthium coromandelicum
Kare hannu



Clausena indica
Majjige hannu



Alangium salviifolium
Ankole hannu



Uvaria narum Kodambale
hannu



Solanum nigrum
Ganike hannu



Rubus rugosa
Vale hannu



Rubus rugosa
Vale hannu



Rubus niveus
Vale hannu



Salacia wayanadica
Madike hannu



Cordia dichotoma
Lasoda



Eleocarpus variabilis
Kume hannu



Elaecarpus munronii
Idanji hannu



Physalis peruviana
Gommate hannu



Rourea minor
Huli hannu



Mimusops elengi
Ranjala hannu



Elaegnus conferta
Beeruguli hannu



Ziziphus rugosa
Kotte hannu



Scutia myrtina
Kurudi hannu



Glycosmis mauritiana
Somari hannu



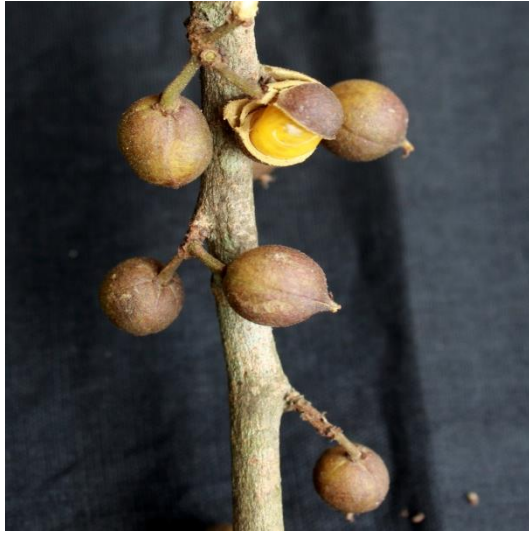
Zizipus oenopolia
Choori hannu



Flacourtia indica
Kakade hannu



Chrysophyllum roxburghii
Pale hannu



Aporos lindleyana
Yechi hannu



Bridelia sipularis
Akkare hannu



Artocarpus hirsutus
Hebbalasu



Persicaria chinensis
Sorale hannu



Canthium dioccum
Amme hannu



Garcinia xanthochymus
Benake puli