



CHIRP

POLY CULTURES

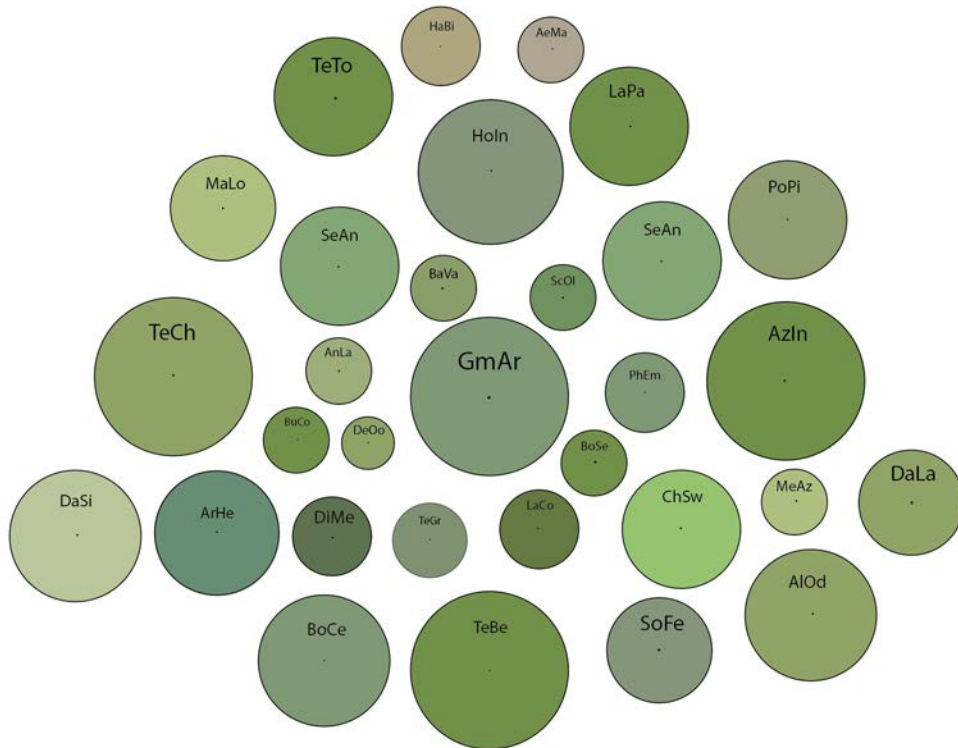
AGROFORESTRY IN CENTRAL INDIA
POLY CULTURE REPORT

April 2021¹

Upland Ecosystem Restoration

All Titles link to the plant database polyculture page

This polyculture contains plants with a variety of ecological functions aimed at restoring the different Upland ecosystems. Alter the layout of the plants to fit the needs of each microclimate.



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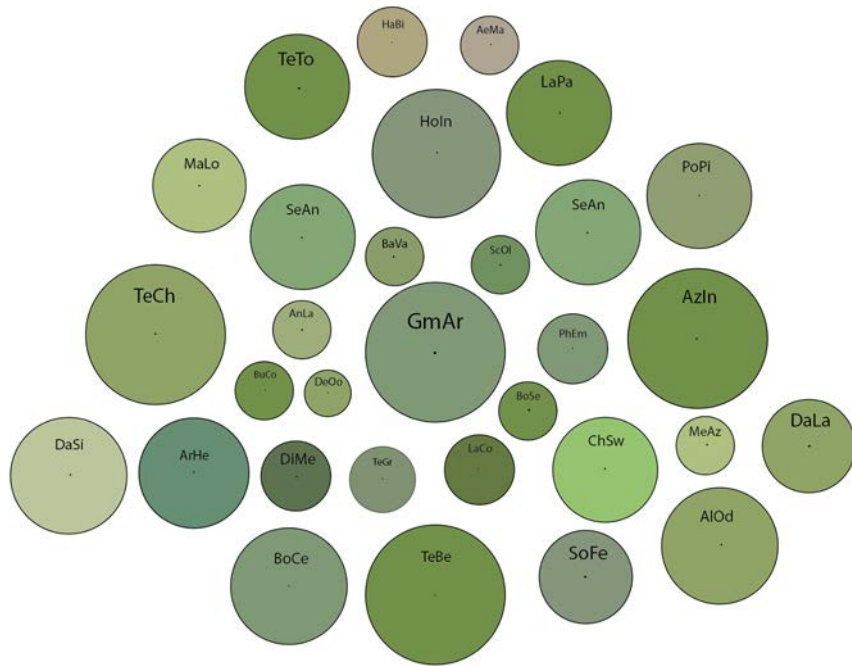
Human Uses

- Aromatics/Fragrance
- Biomass
- Cleanser/Scourer
- Compost
- Coppice
- Dye\Essential Oil
- Fiber
- Insecticide Spray
- Insect Repellent
- Medicine
- Oil
- Ornamental
- Pollard
- Resin or Polish
- Soap
- Wax
- Wood

Ecological Functions

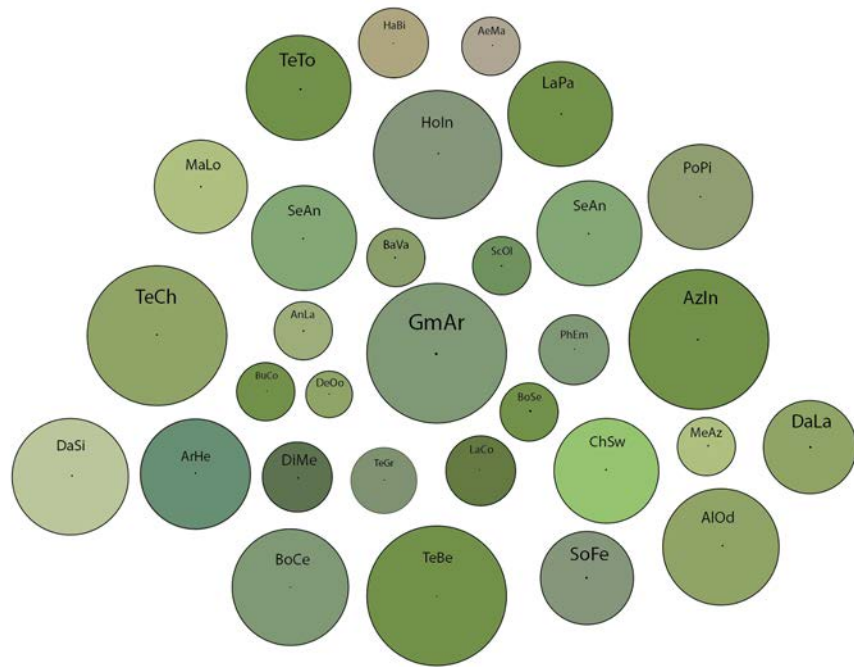
- Aromatic Pest Confuser
- Erosion Control
- Domestic Animal Forage
- Dynamic Accumulator
- Fungicide
- Hedge
- Insecticide
- Insectory
- Reclamator
- Nitrogen Fixer
- Nurse
- Soil Builder
- Soil Cultivator
- Toxin Absorber
- Water Purifier
- Wildlife Food
- Wildlife Habitat
- Windbreak

Upland Ecosystem Restoration Plant List page 1



Common Name	Scientific Name	Binomial
Achar	Buchanania cochinchinensis	BuCo
Anjan	Hardwickia binata	HaBi
Bael	Aegle marmelos	AeMa
Baheda	Terminalia bellirica	TeBe
Bhilwa	Semecarpus anacardium	SeAn
Bhira	Chloroxylon swieenia	ChSw
China Berry	Melia azedarach	MeAz
Chirol	Holoptelea integrifolia	HoIn
Dhaora	Anogeissus latifolia	AnLa
Emblic	Phyllanthus emblica	PhEm
Gumhar	Gmelina arborea	GmAr
Harra	Terminalia chebula	TeCh
Jackfruit	Artocarpus heterophyllus	ArHe
Jarul	Lagerstroemia parviflora	LaPa
Kachnar	Bauhinia variegata	BaVa
Karanj	Pongamia pinnata	PoPi
Kusum	Schleichera oleosa	ScOl

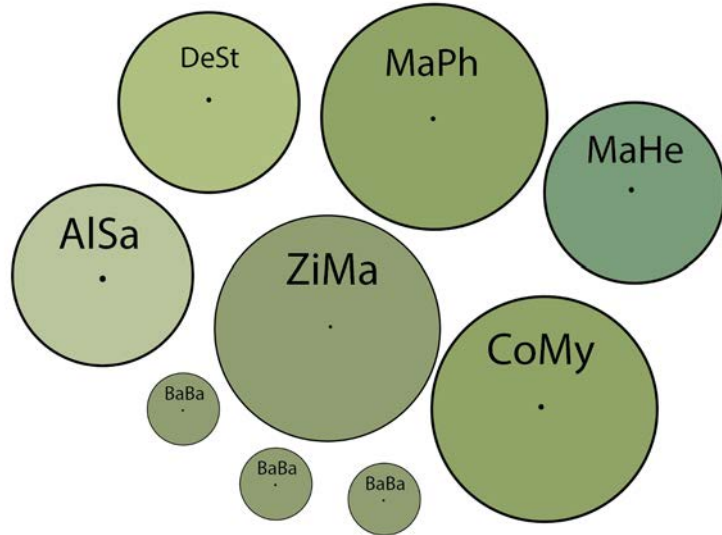
Upland Ecosystem Restoration Plant List page 2



Common Name	Scientific Name	Binomial
Mahua	Madhuca longifolia var. latifolia	MaLo
Moi	Lanea coromandelica	LaCo
Neem	Azadirachta indica	AzIn
Passi	Dalbergia lanceolaria sub. paniculata	DaLa
Rohini	Soymida febrifuga	SoFe
Saaj	Terminalia tomentosa	TeTo
Salai	Boswellia serrata	BoSe
Sandan	Desmodium oojeinense	DeOo
Semal	Bombax ceiba	BoCe
Siris	Albizia odoratissima	AlOd
Sisam	Dalbergia sissoo	DaSi
Teak	Tectona grandis	TeGr
Tedu	Diospyros melanoxylon	DiMe

Lowland Ecosystem Restoration

These plants will help create richer diversity, more fertile soils and greater yields. Take a look at the functions of each plant to understand how to apply them effectively throughout the property.



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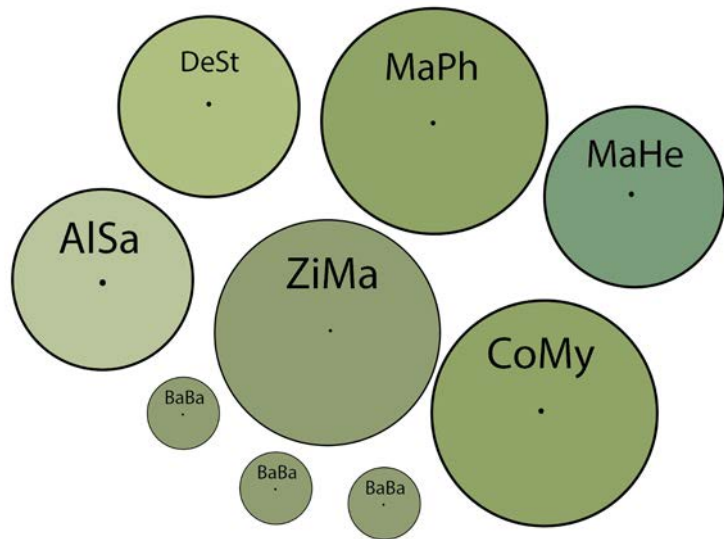
Human Uses

- Aromatics/fragrance
- Biomass
- Cleanser/Scourer
- Coppice
- Dye
- Essential Oil
- Fiber
- Food
- Insecticide Spray
- Medicine
- Oil
- Ornamental
- Pollard
- Resin or Polish
- Soap
- Wax
- Wood

Ecological functions

- Air Cleaner
- Aromatic Pest Confuser
- Domestic Animal Forage
- Erosion Control
- Fungicide
- Hedge
- Insecticide
- Insectory
- Reclamator
- Mulch Maker
- Nurse
- Soil Builder
- Windbreak
- Wildlife Food
- Wildlife Habitat

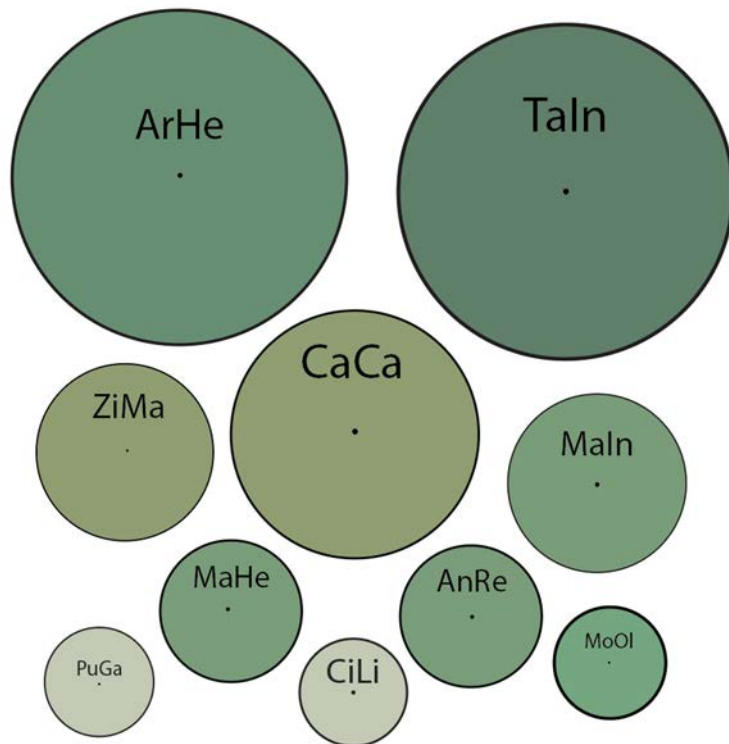
Lowland Ecosystem Restoration Plant list



Common Name	Scientific Name	Binomial
Ankol	<i>Alagium salviifolium</i>	AlSa
Ber	<i>Ziziphus mauritiana</i>	ZiMa
Cgondi	<i>Cordia myxa</i>	CoMy
Indian Thorny Bamboo	<i>Bambusa bambos</i>	BaBa
Khirni	<i>Manilkara hexandra</i>	MaHe
Putranjiva	<i>Putranjia roxburghii</i>	PuRo
Sinduri	<i>Mallotus philippensis</i>	MaPh
Solid Bamboo	<i>Dendrocalamus strictus</i>	DeSt

Wadi Ecosystem Restoration

Restoring Wadi's can produce significant gains in agricultural productivity. These plants will help with erosion control, water harvesting, soil fertility, vegetation cover and biodiversity.



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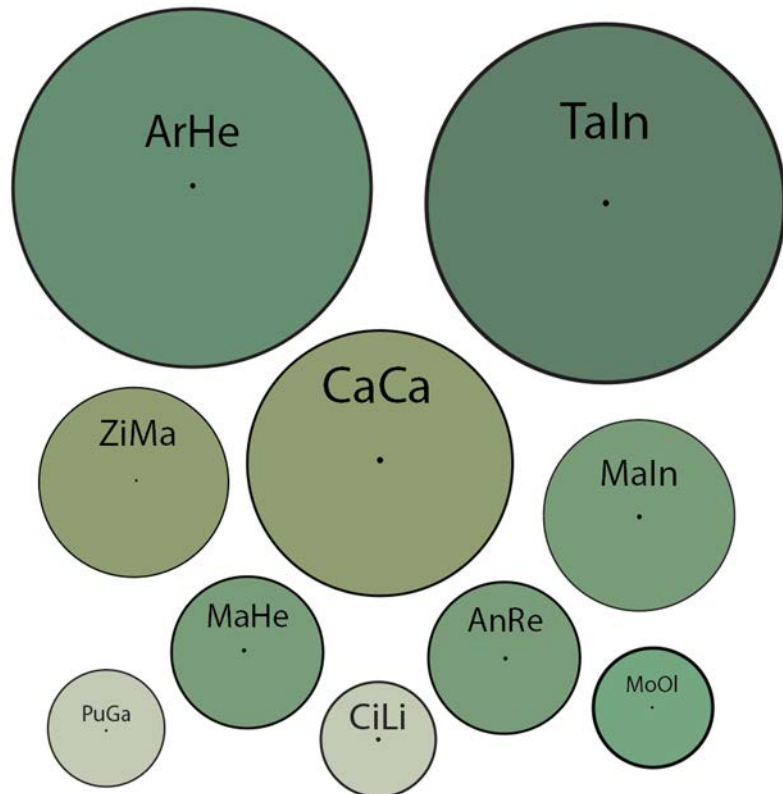
Human Uses

- Aromatics/Fragrance
- Biomass
- Cleanser/Scourer
- Compost
- Coppice
- Container Garden
- Dye
- Essential Oil
- Food
- Fiber
- Medicine
- Oil
- Ornamental
- Pollard
- Resin or Polish
- Soap
- Wax
- Wood

Ecological functions

- Domestic Animal Forage
- Erosion Control
- Hedge
- Insectory
- Insecticide
- Mulch Maker
- Nitrogen Fixer
- Nurse
- Reclamator
- Soil Builder
- Water Purifier
- Wildlife Food
- Wildlife Habitat
- Windbreak

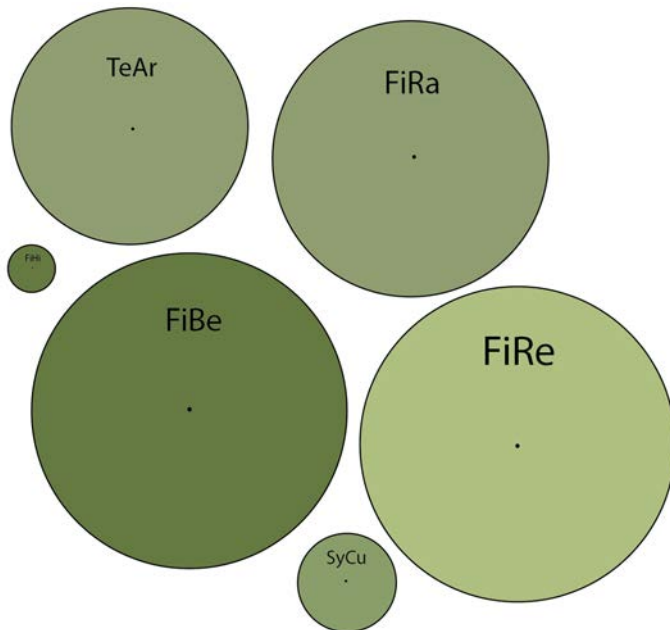
Wadi Ecosystem Restoration Plant List



Common Name	Scientific Name	Binomial
Ber	Ziziphus mauritiana	ZiMa
Custard-Apple	Annona reticulata	AnRe
Jackfruit	Artocarpus heterophyllus	ArHe
Karaunda	Carrisa carandas	CaCa
Khirni	Manilkara hexandra	MaHe
Lemon	Citrus Limon	CiLi
Mango	Mangifera indica	MaIn
Moringa	Moringa oleifera	MoOl
Pomegranate	Punica granatum	PuGr
Tamarind	Tamarindus indica	Taln

Watershed Areas of Streams and Water Bodies

Healthy watersheds provide many ecosystem services including, but not limited to: nutrient cycling, carbon storage, erosion/sedimentation control, increased biodiversity, soil formation, wildlife movement corridors, water storage, water filtration, flood control, food, timber and recreation, as well as reduced vulnerability to invasive species, the effects of climate change and other natural disasters. These goods and services are essential to our social, environmental and economic well-being. Combine these powerful trees with perennials, shrubs and grasses.



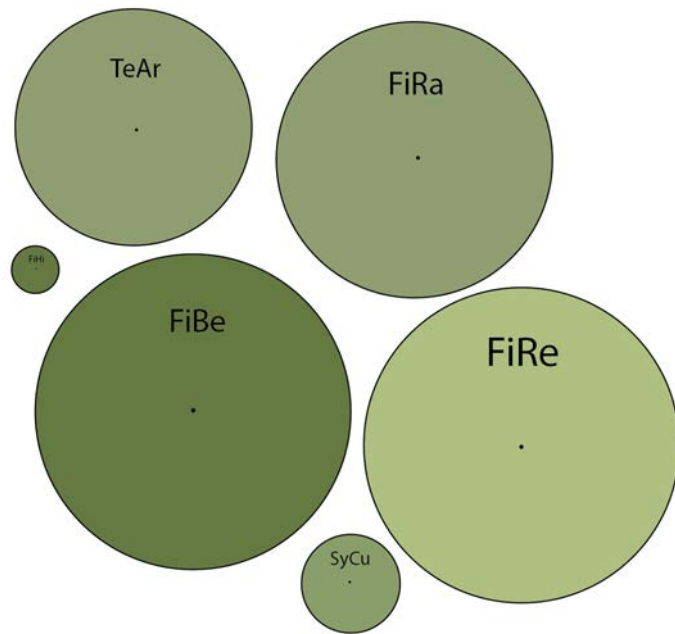
Human Uses

- Aromatics/Fragrance
- Biomass
- Cleanser/Scourer
- Container Garden
- Coppice
- Cut Flower
- Dye
- Essential Oil
- Food
- Fiber
- Medicine
- Oil
- Ornamental
- Pollard
- Resin or Polish
- Wax
- Wood

Ecological functions

- Air Cleaner
- Domestic Animal Forage
- Erosion Control
- Fungicide
- Hedge
- Insectory
- Mulch Maker
- Nurse
- Reclamator
- Toxin Absorber
- Water Purifier
- Wildlife Food
- Windbreak

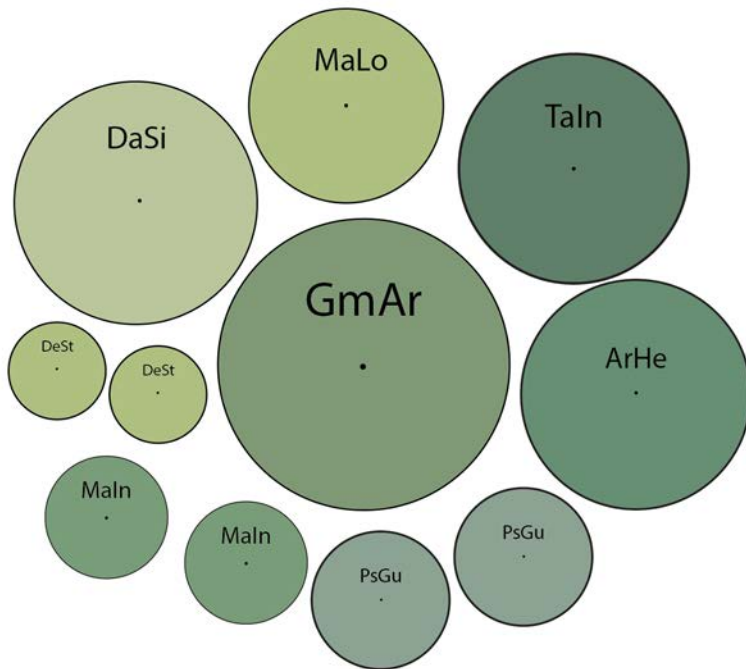
Watershed Areas of Streams and Water Bodies Plant List



Common Name	Scientific Name	Binomial
Arjuna	<i>Terminalia arjuna</i>	TeAr
Banyan	<i>Ficus benghalensis</i>	FiBe
Gular	<i>Ficus racemosa</i>	FiRa
Jamun	<i>Syzygium cumini</i>	SyCu
Kat Gular	<i>Ficus hispida</i>	FiHi
Mango	<i>Mangifera indica</i>	Maln
Pipal	<i>Ficus religiosa</i>	FiRe

Agroforestry

Effective agroforestry systems create environmental, economic and social benefits. These productive trees combined with functional bamboo can produce high yields. Combine shrubs and perennials of your liking for an even more productive understory.



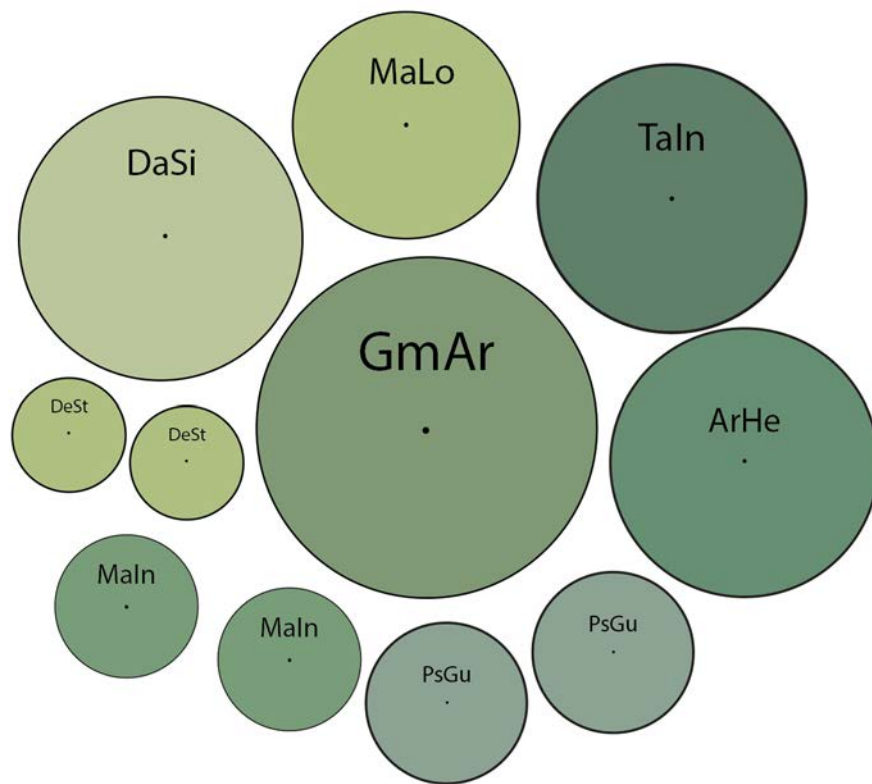
Human Uses

- Biomass
- Cleanser/Scourer
- Coppice
- Dye
- Essential Oil
- Fiber
- Food
- Medicine
- Oil
- Resin or Polish
- Ornamental
- Soap
- Wax
- Wood

Ecological functions

- Air Cleaner
- Aromatic Pest Confuser
- Domestic Animal Forage
- Erosion Control
- Fungicide
- Hedge
- Insecticide
- Insectory
- Reclamator
- Mulch Maker
- Nurse
- Soil Builder
- Windbreak
- Wildlife Food
- Wildlife Habitat

Agroforestry Plant list



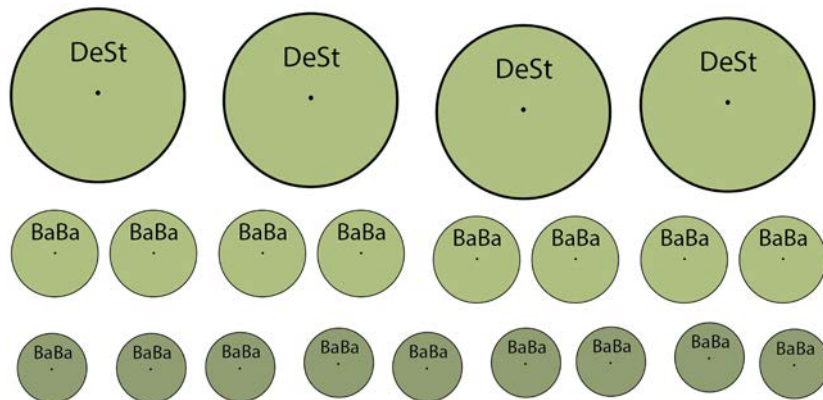
Common Name	Scientific Name	Binomial
Common Guava	<i>Psidium guajava</i>	PsGu
Gumhar	<i>Gmelina arborea</i>	GmAr
Jackfruit	<i>Artocarpus heterophyllus</i>	ArHe
Mahua	<i>Madhuca longifolia</i> var. <i>latifolia</i>	MaLo
Mango	<i>Mangifera indica</i>	Maln
Sisam	<i>Dalbergia sissoo</i>	DaSi
Solid Bamboo	<i>Dendrocalamus strictus</i>	DeSt
Tamarind	<i>Tamarindus indica</i>	Taln

Bamboo

Bamboo is one of the most versatile plants in the world.

Primary uses include:

- 1) Commercial production for use in construction
- 2) Domestic use around the farm
- 3) Ornamental, landscape and conservation uses



Human Uses

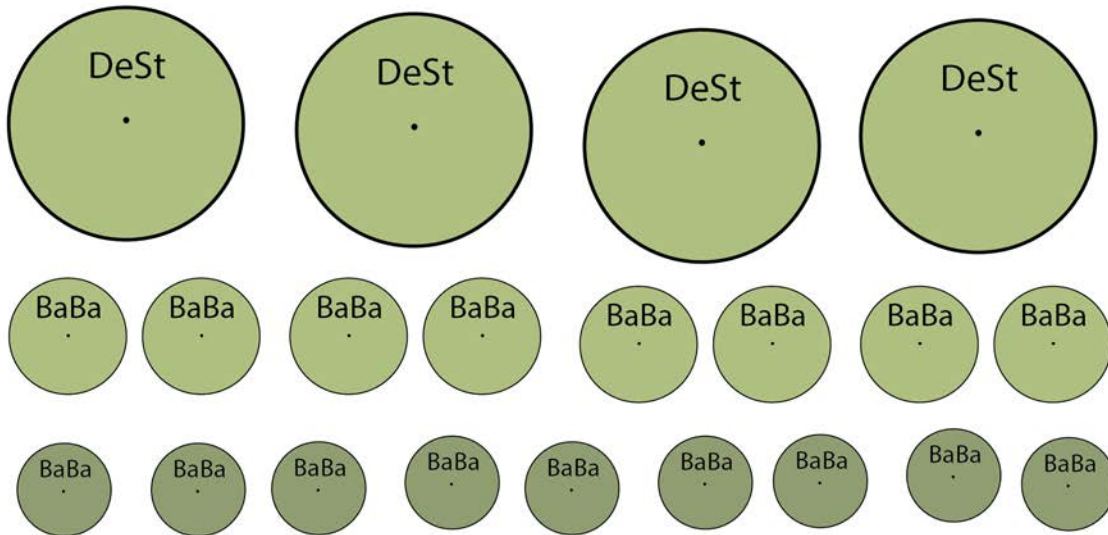
- Biomass
- Cleanser/Scourer
- Fiber
- Insecticide Spray
- Medicine
- Wood

Ecological functions

- Air Cleaner
- Domestic Animal Forage
- Erosion Control
- Hedge
- Mulch maker
- Reclamator
- Soil Builder
- Windbreak

Bamboo Plant List

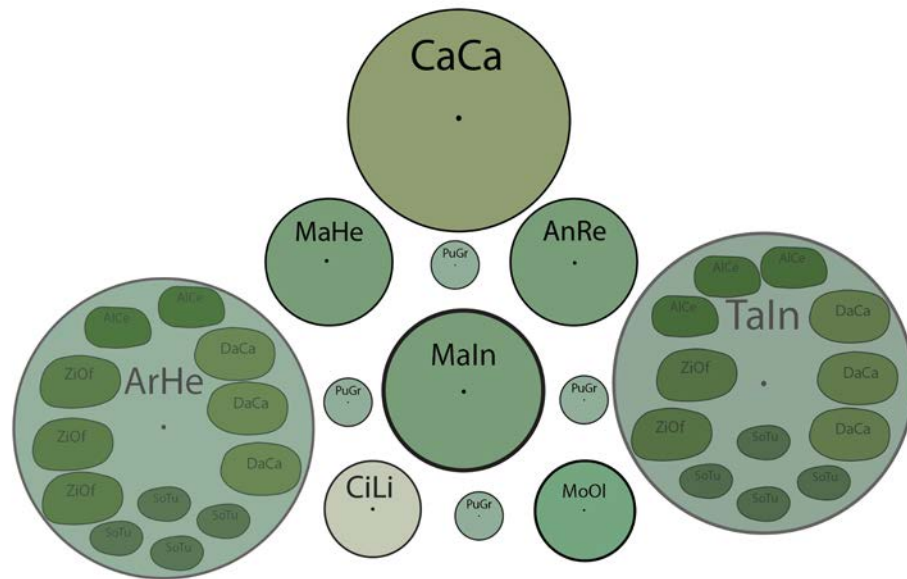
Common Name	Scientific Name	Binomial
Bhaluka	Bambusa balcooa	BaBa
Indian Thorny Bamboo	Bambusa bambos	BaBa
Solid Bamboo	Dendrocalamus strictus	DeSt



Food Forest Above and Below Ground Layers

[Link to Above and Below Ground Layer](#)
[Link to Canopy Layer](#)

This food forest guild is a representation of the combinations you can create with the above and below ground layers. Mimic the natural forest architecture with multi-functional edibles to create a perennial system that produces higher yields year after year.



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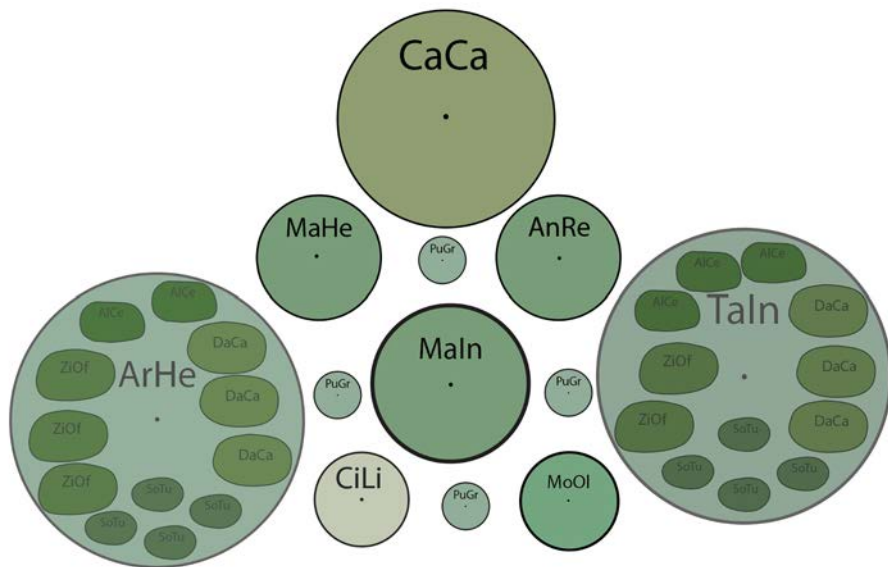
Human Uses

- Aromatics/Fragrance
- Biomass
- Container Garden
- Dye
- Essential Oil
- Food
- Insect Repellent
- Medicine
- Oil
- Resin or Polish
- Wax

Ecological functions

- Aromatic Pest Confuser
- Fungicide
- Insecticide
- Wildlife Food

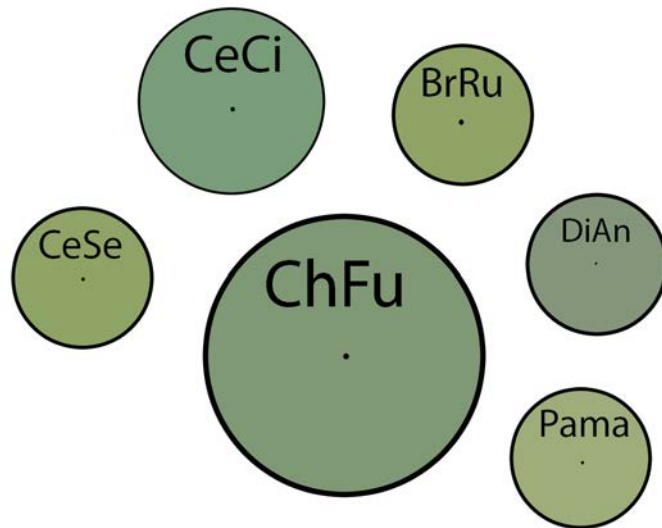
Food Forest Above and Below Ground Layers Plant List



Common Name	Scientific Name	Binomial
Custard-Apple	<i>Annona reticulata</i>	AnRe
Jackfruit	<i>Artocarpus heterophyllus</i>	ArHe
Karaunda	<i>Carrisa carandas</i>	CaCa
Khirni	<i>Manilkara hexandra</i>	MaHe
Lemon	<i>Citrus limon</i>	CiLi
Mango	<i>Mangifera indica</i>	MaIn
Moringa	<i>Moringa oleifera</i>	MoOl
Pomegranate	<i>Punica granatum</i>	PuGr
Tamarind	<i>Tamarindus indica</i>	TaIn
Carrot	<i>Daucus carota sativus</i>	DaCa
Ginger	<i>Zingiber officinale</i>	ZiOf
Onion	<i>Allium cepa</i>	AlCe
Potato	<i>Solanum tuberosum</i>	SoTu

Grassland

These grasses listed will provide valuable services to aid in livestock production, regulation of water flow and many other benefits that healthy grasslands offer.



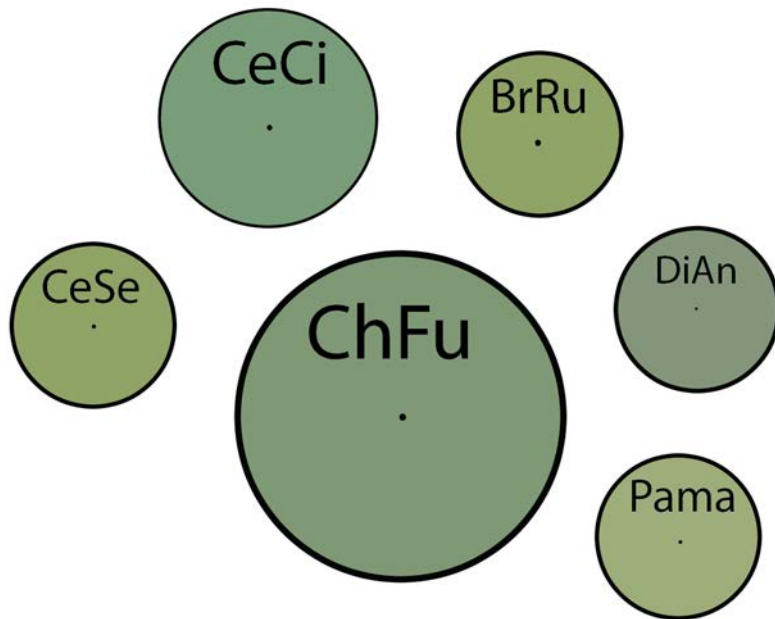
Human Uses

- Biomass
- Fiber
- Food
- Medicine
- Ornamental

Ecological functions

- Domestic Animal Forage
- Dynamic Accumulator
- Erosion Control
- Groundcover
- Mulch Maker
- Nitrogen Fixer
- Reclamator
- Wildlife Food
- Wildlife Habitat

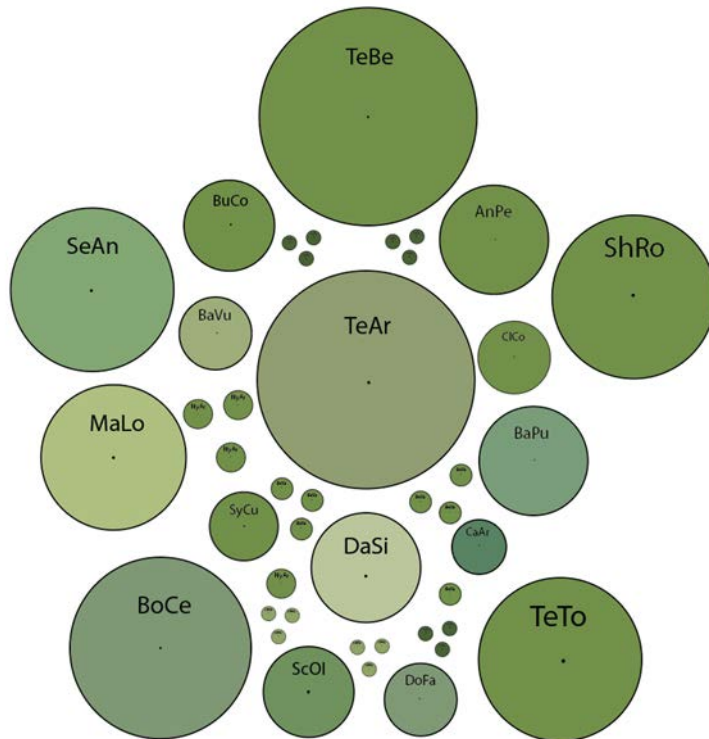
Grassland Plant List



Common Name	Scientific Name	Binomial
Birdwood Grass	<i>Cenchrus setiger</i>	CeSe
Buffel Grass	<i>Cenchrus ciliaris</i>	CeCi
Congo grass	<i>Brachiaria ruziziensis</i>	BrRu
Dhалу	<i>Chrysopogon fulvus</i>	ChFu
Guinea grass	<i>Panicum maximum</i>	PaMa
Kleerg's Bluestem	<i>Dichanthium ananlatum</i>	DiAn

Plantation Focused on Meeting the Immediate Needs for Fuelwood and Fodder

This highly productive guild is specifically designed to supply fuelwood and fodder quickly. Intersperse the smaller plants around the foundational trees to create a bountiful ecosystem.



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Human Uses

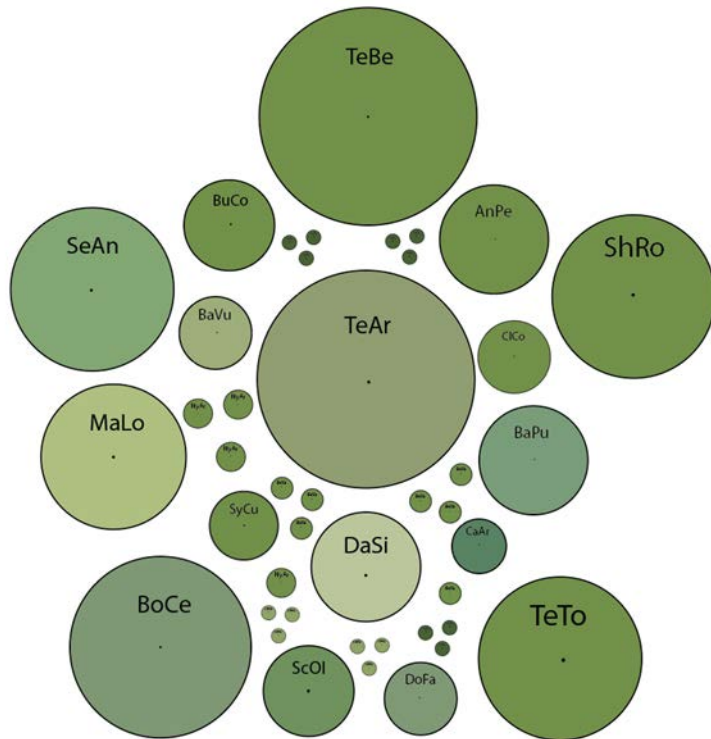
- Aromatics/Fragrance
- Biomass
- Coppice
- Compost
- Dye
- Essential Oil
- Food
- Insect Repellent
- Insecticide Spray
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- Soap
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Ecological functions

- Domestic Animal Forage
- Dynamic Accumulator
- Erosion Control
- Groundcover
- Mulch Maker
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- Reclamator
- Wildlife Food
- Wildlife Habitat

Plantation Focused on Meeting the Immediate Needs for Fuelwood and Fodder

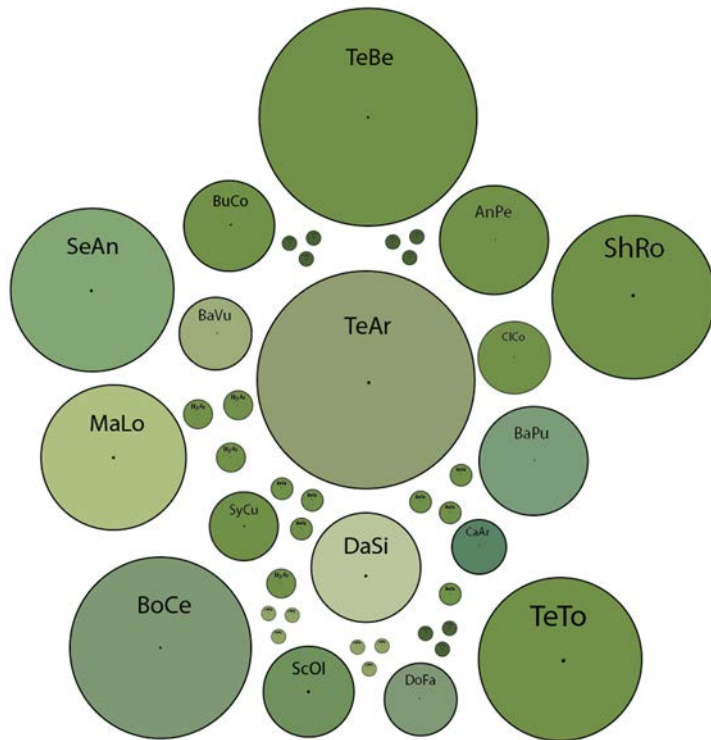
Plant List page 1



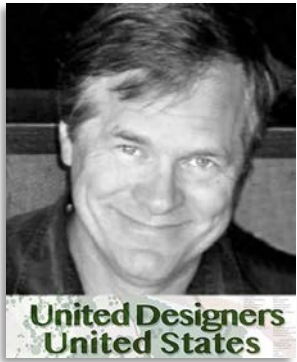
Common Name	Scientific Name	Binomial
Achar	Buchanania cochinchinensis	BuCo
Arjuna	Terminalia arjuna	TeAr
Baheda	Terminalia bellirica	TeBe
Bhilwa	Semecarpus anacardium	SeAn
Common Bamboo	Bambusa vulgaris	BaVu
Dhok Tree	Anogeissus pendula	AnPe
Jamun	Syzygium cumini	SyCu
Kadasali	Nyctanthes arbor-tristis	NyAr
Karra	Cleistanthus collinus	ClCo
Koliyari	Bauhinia purpurea	BaPu
Kudi	Holarrhena pubescens	HoPu
Kummi	Schleichera oleosa	ScOl
Mahu	Madhuca longifolia var. latifolia	MaLo

Plantation Focused on Meeting the Immediate Needs for Fuelwood and Fodder

Plant List page 2



Common Name	Scientific Name	Binomial
Pengu	<i>Celastrus paniculatus</i>	CePa
Saaj	<i>Terminalia tomentosa</i>	TeTo
Sal Tree	<i>Shorea robusta</i>	ShRo
Semal	<i>Bombax ceiba</i>	BoCe
Siadi	<i>Bauhinia vahlii</i>	BaVa
Sisam	<i>Dalbergia sissoo</i>	DaSi
Tutlani	<i>Dolichandrone falcata</i>	Dofa
White Leadtree	<i>Leucaena leucocephala</i>	leLe



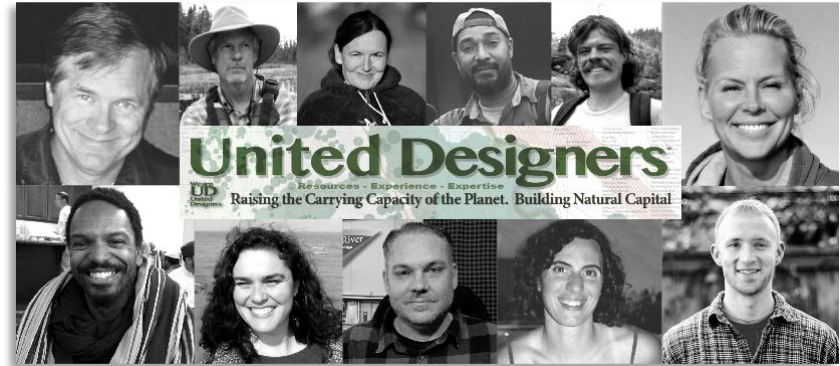
Lead Design:
Daniel Halsey



Project Lead:
Weruschca Kirkegaard



Plant Systems:
Brandon Dean



COMMONLAND
4 RETURNS FROM LANDSCAPE RESTORATION



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