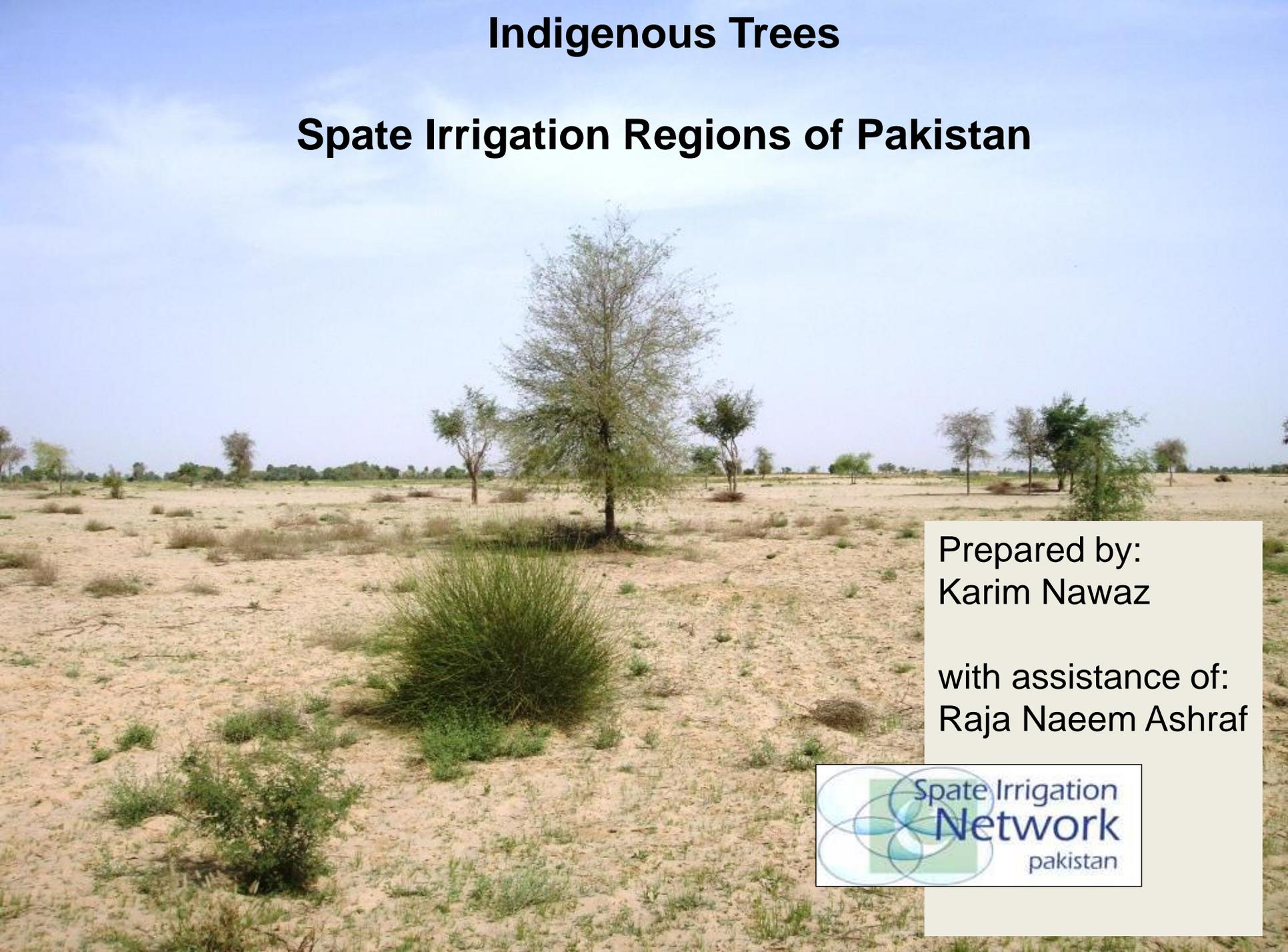


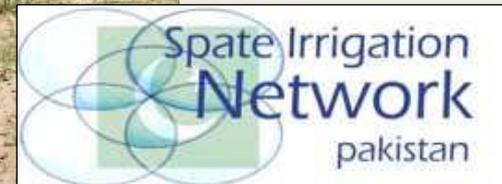
Indigenous Trees

Spate Irrigation Regions of Pakistan



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These trees are backbone of spate agricultural farming system

Trees in spate irrigation system are more than canal and perennial irrigation as marginal lands are enough and don't occupy the main fields

These trees are considered blank cheques for farmer and are reserve fund for them

These trees are drought resistance and can survive in extreme harsh conditions

Trees serve many purposes and are of multiple use – shade, timber, food, fibre, fire wood, construction material, furniture, agricultural implements, arms, toys, utensils, medicinal and industrial and commercial use, environmental protection, aesthetic value, abode for human, animals and bird, soil conservation and fertility etc etc.

Are praised in poetry and literature

Are symbols of religion – pipal, date palm, x-mass tree, cedar, Maple leaf, Kandi, etc etc.

Silvadora oides

Local Names: Jaal/Jaar/Pilo



Mostly found in sandy and desert areas – also found in graveyards and near shrines

High resistance to drought

3 meters to 7 meters height

Large and thick canopy

Found in Tree and Bush types

Slow growing



Major Benefits

Multipurpose Tree of Arid Areas

Useful for sand dune stabilization and soil conservation

Thin branches are used as tooth brush and have medicinal value.

People trim the tree carefully to get these brush sticks periodically.

Each brush stick costs Rs.12 each (10 US cents)

Has been praised in poetry

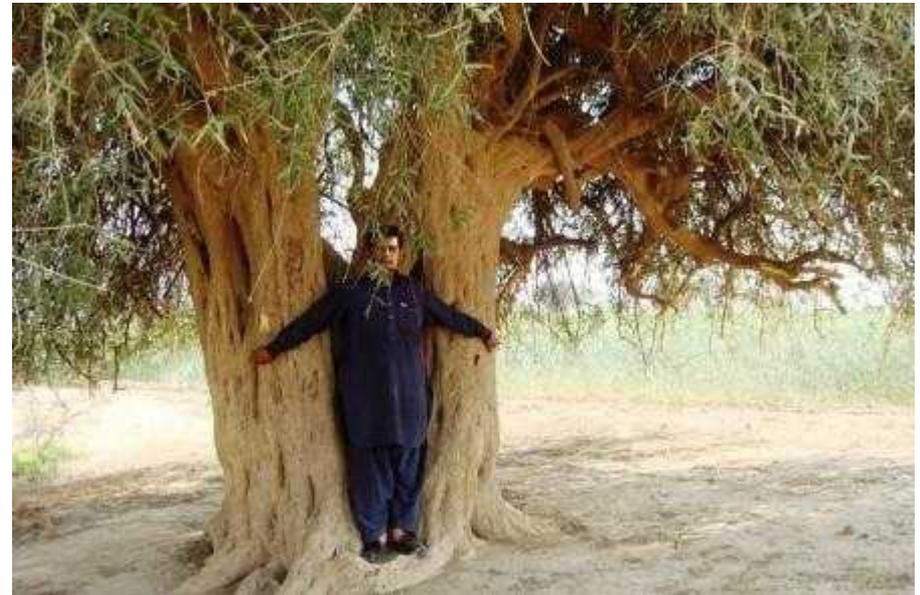


Branches are used to divert water during spate flow

Fruit is liked

Best abode for birds and wildlife as they can hide inside easily

One of the oldest trees in this area with a diameter of more than 26 feet



Zizyphus mauritiana /

Local Name: Berr - Berry



The Miracle Tree

Can survive during drought conditions

Height can reach up to 10 meters

Tree has different varieties

- o Timber variety is tall with thick trunk and its fruits are widely used

- o Fodder variety is in the shape of bush and has maximum thorn and also used for field fencing



At flowering stage bees like its flower for honey collection

Its honey is most costly in Pakistan as it does not freeze

Source of wood, fruit

Timber is used in construction, roofing material, agricultural implements and furniture

Fruit variety has no thorns or very few and its leaves are excellent as goat fodder



Tree is trimmed carefully every year during winter season by shepherds



Local varieties can be easily grafted for improved varieties

There is a good market for fruit of improved variety which is sold at 1US\$/KG



Its dry branches are best for field fencing and widely used – after being used for fencing it is used as firewood



*Prosopis
cineraria/
spicegera*
Jand - Kandi



Religious tree among indigenous tribes of Thar Desert in Pakistan

Drought resistant

Tall growing and can reach up to 20 meters in height

Leguminous in nature thus helps to increase soil fertility

Timber used as main beam in the roof

Used for agricultural implements



Has different varieties – tree and bush

Its pods are used as goat and sheep fodder

Branches are trimmed seasonally

– green part is used as fodder and remaining dry part is used for firewood and field fencing due to thorns

Excellent for firewood and used in local brick kilns



A rare and old tree having circumference of 18.5 feet

This tree has been conserved by local community



Tamarisk *Aphylla/Tamarix articulata*
Local Names:Frash, Gaz/Lai

**Tamarisk in Spate River bed (Naeen
Gaaj) in Sindh, Pakistan**



Highly drought resistant

Can grow in hot and cold to arid and even riverine areas easily

Height can reach 12 meters easily

Different varieties

- tall, medium, bush and deciduous
- one variety produces sugar and used as medicine

Tree can reach up to 15 meters height and circumference can reach up to 20 feet but becomes hollow at old age



Excellent for local bed (Charpai)
and is light weight

Branches have no thorns and
liked for firewood

Saw waste is costly and
marketed

Green branches are liked by
camels for fodder

Branches are used to divert
spate flow

Wood used for firewood and
costs US \$50/ton



The specie grown in rivers has thin, straight and long branches.

It is used for making different items:

- Baskets,
- Mats,
- Handles for agricultural implements,
- Roof thatches



Leaves are mixed with mud for construction reinforcement

Bark and seed are used in tanning industry

Bark is also used in dyeing industry – carpet wool especially

Leaves are also used to clean utensils

Old tree's trunk becomes hollow and birds like it for nesting and living

Very good for sand dune stabilization



Wood is very light and used for:

- furniture
- construction of houses
- agricultural implements

This tree is a best shade for humans and animals

Excellent for making baskets used at household level to construction industry

Branches used for roofing mats

Leaves are mixed with mud during construction for strength



Capparis decidua

Local Name: Karita/Karir

Found in all four provinces of Pakistan including coastal zones (hot climate zones)

Mainly found in dry areas and is drought resistant

Height can reach up to 4 meters

Mostly in bush shape but occasionally can grow as a tree

Bush variety is extremely thick and tree variety has thick canopy



Its wood has a bitter taste thus not attacked by ants and liked for construction material mostly roofing material such as beams

Camels like it for fodder

Used mostly for firewood in brick kilns

Liked by wildlife to hide inside

Some special grasses and plants grow under it and get protected against eating/use.



Has flowers and fruit – flower liked by honey bee

Flowers appear in March and fruit is matured in May/June

Fruit at early stage is used to make pickles

Useful against wind erosion and also serves as a wind break around spate agriculture fields

Thorny specie/variety is used for fencing around fields

Wood used in Brick kilns



Accacia Nilotica

Kikar/Babool



Predominant tree in arid areas and found in all four provinces – mainly in low lands and coastal areas

Leguminous in nature

Drought resistant and equally can survive in wet areas

Grows fast when watered

Has many varieties - Bush type and tree type

Tree type can reach 18 meters in height

Some varieties are more thorny and others less so



It is mostly liked by birds for nesting due to its canopy

Branches are trimmed every year during peak winter season and used as goat/sheep and camel fodder

Dry branches are used as firewood, in brick kilns and fencing of fields

Flowers are yellow and liked by bees

Pods are eaten by goats and sheep

It produces gum (inferior quality) and is used in sweets and other confectionary items



Wood is used for many purposes:

- in house construction as main beam, central beam and smaller beams
- agricultural implements
- furniture
- planks

Medium poles are used in mining industry to support the mine tunnels

Cost of secondary beam (pole) of 180x8x8cm size is 1.3 US\$

Excellent firewood and also used in brick kilns



Flowers come out during
august/September and
Pods appear during
spring
Its pods are excellent for
sheep and goat fodder

Its poles are used in hut
making

It has different varieties

