

MINOR CROPS IN SPATE IRRIGATION



Diversification



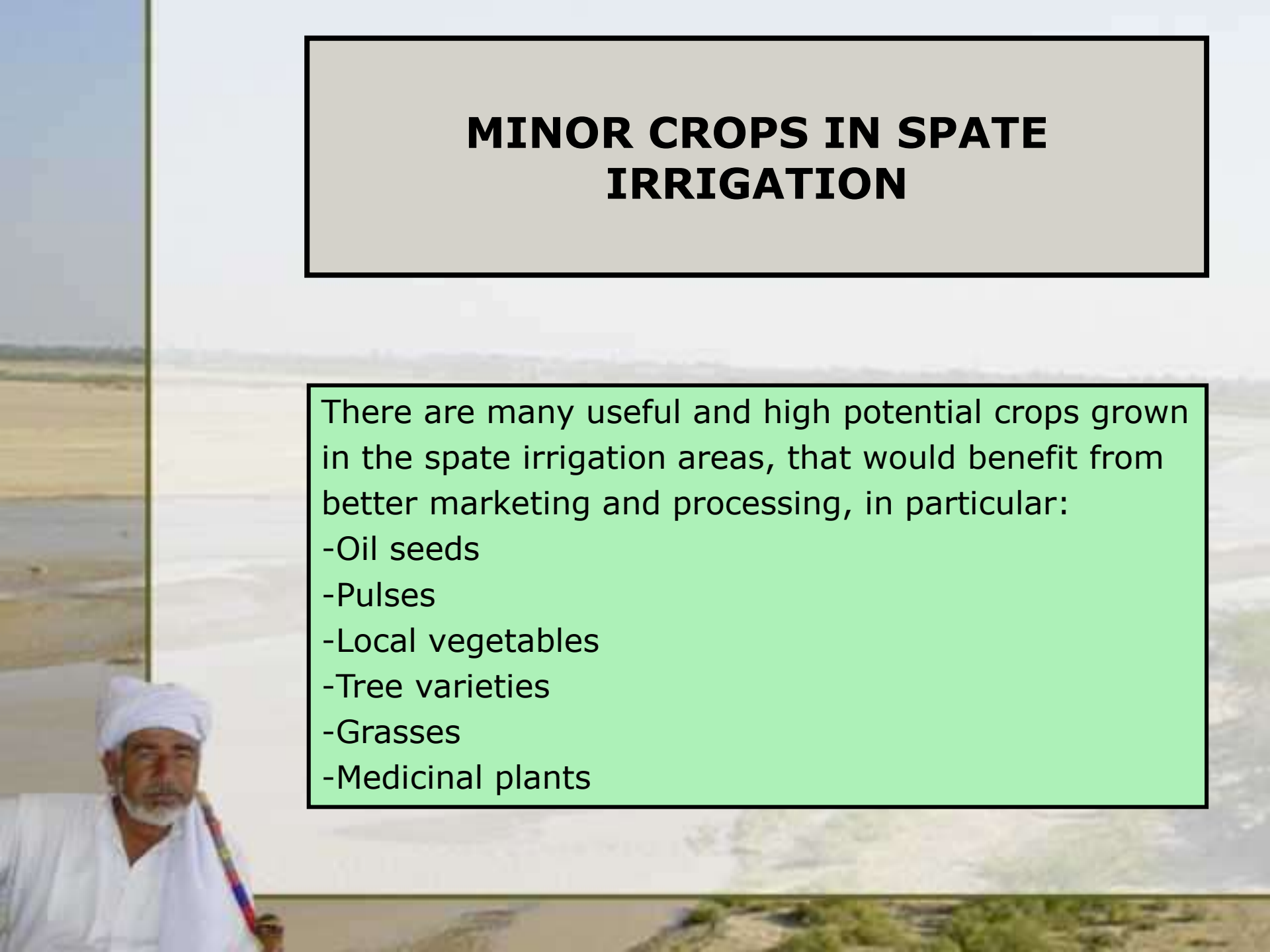
Innovation and Response



MINOR CROPS IN SPATE IRRIGATION

There are many useful and high potential crops grown in the spate irrigation areas, that would benefit from better marketing and processing, in particular:

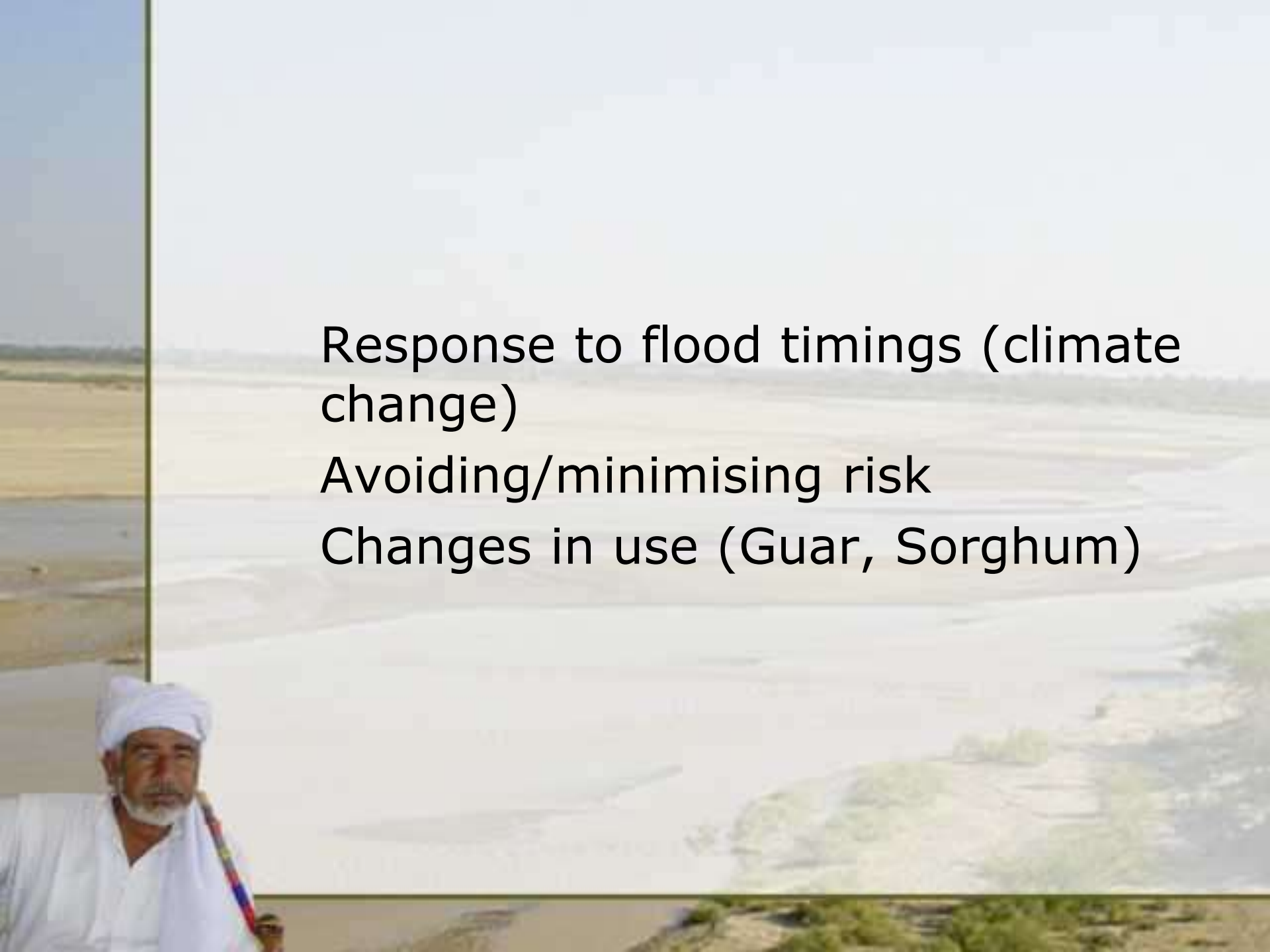
- Oil seeds
- Pulses
- Local vegetables
- Tree varieties
- Grasses
- Medicinal plants



Minor crops – much potential

- Some 'wild', others are cultivated
- Many native species
- Low external inputs – largely free from pesticides and chemical fertilizer, organic farming
- Local knowledge needs to be documented, presented and disseminated
- Processing and market linkages need to be strengthened
- Research organizations need to be involved including private sector



A photograph of a man in a white turban and shirt standing in front of a large river. The river is wide and has a sandy or silty bed. The background shows a hazy, distant shoreline. The text is overlaid on the right side of the image.

Response to flood timings (climate change)

Avoiding/minimising risk

Changes in use (Guar, Sorghum)

Sorghum







SUNFLOWER



Common in some regions

Highly cash crop

Less duration

No by-products



CASTOR



- **Common cash crop in spate irrigation area of Lasbela district Balochistan (Gash Region in Sudan)**
- **Perennial crops**
- **Suitable for off season spate flow**
- **Commercial Use**



SESAME



Common in all regions (depending on the soil)
Cash crop – locally and for confectionary industry



Kidney beans



Common in Sindh
Short Duration
Used locally and marketed
Intercropped, Leguminous, By-products



Guar (cluster bean)



Drought resistance
Cash Crop
Multiple uses
Leguminous
High potential



Mung bean



Common crop in all regions
Intercropped, short duration
Leguminous
Locally used and also marketed



Intercropped sorghum and mung beans

Fixes nitrogen –
Improves soil fertility
Commonly cropping
strategy



TORI FLOWERS



Common in some regions especially remote villages

Mostly consumed locally

Highly useful for balanced diet among poor

Intercropped



Cucumber



Cash crop mostly in Sindh and Balochistan
Mostly marketed



Pumpkin



Sown in Sindh and Balochistan
Used locally and also marketed



CHUNGA VEGETABLES



Common in all regions (natural)
Cash crop
Medicinal value
Cheap source of food



TEETAK VEGETABLES



Common in DI Khan, DG Khan and Rajanpur
Drought resistant
Multipurpose uses – vegetable, seed, skin,
pickles, fodder



WILD TEENDA



Common in some regions
Cash crop
Wild and also planted
Good source of local food



Melons





Tamarix

**Common in all regions
Grows naturally (Bush
and Tree varieties)**

**Multipurpose Tree
(commercially)**

**Branches and poles
used for diverting
spate water**



Trees

- There is scope to grow more trees in spate irrigated areas – either under on bunds, along riverbanks, in outwash areas or even in fields as tree plantations (planted or spontaneous)
- Protection against livestock and fencing is required however
- Also in several areas (DI Khan for instance) ownership rights need to be resolved – as traditionally only (usually absent) landlords have shares in the trees – and hereditary tenants do not have these – some innovations are being done in DI Khan however with 50-50 partnership arrangements



Salva Doar (Pilu)



Common in many areas

Multipurpose – Medicinal (dental care), fruit, fodder, shade tree and also commercial value

Refugee for wildlife and also resting place for local flocks and farmers

Karita



Common in all regions
Grows naturally
Multipurpose (Food, fodder, construction)



LANA SHRUB, USED FOR MAKING LOCAL SOAP



Common in most marginal lands
Used for locally manufactured soap
Charcoal
Camel fodder



Gum Arabica



Common in Sindh, Naturally grown, exported
Very high value – used in confectionary industry



Zizyphus (ber)



Common Tree in all regions, local verities

Honey production, multipurpose uses. Fodder, fruit, timber, shade, drought resistance, can be grafted

Naturally grown



Kalora Grass



Common in all regions
Sprouts after watering
Used as fodder



Boi



Common in many regions

Naturally grown

Multipurpose uses, fodder, fire wood, filling material



Dhrubb Grass



Common in some regions

Grows naturally

**Multipurpose use (fodder, stabilization,
commercial)**

Hard to eradicate



AK FLOWERS



Common in all regions
Medicinal plant
(Goat/Sheep favorite feed
Some commercial use of wood



Local medicinal Plant



Common in Sindh
Naturally grown
Used in treatment of jaundice



Brumba



Common in all areas

**Naturally grown, multipurpose uses, fodder,
medicinal value**





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Somalilands

Reactive Approach

Local knowledge to new generation

Low inputs

Market forces

Good results



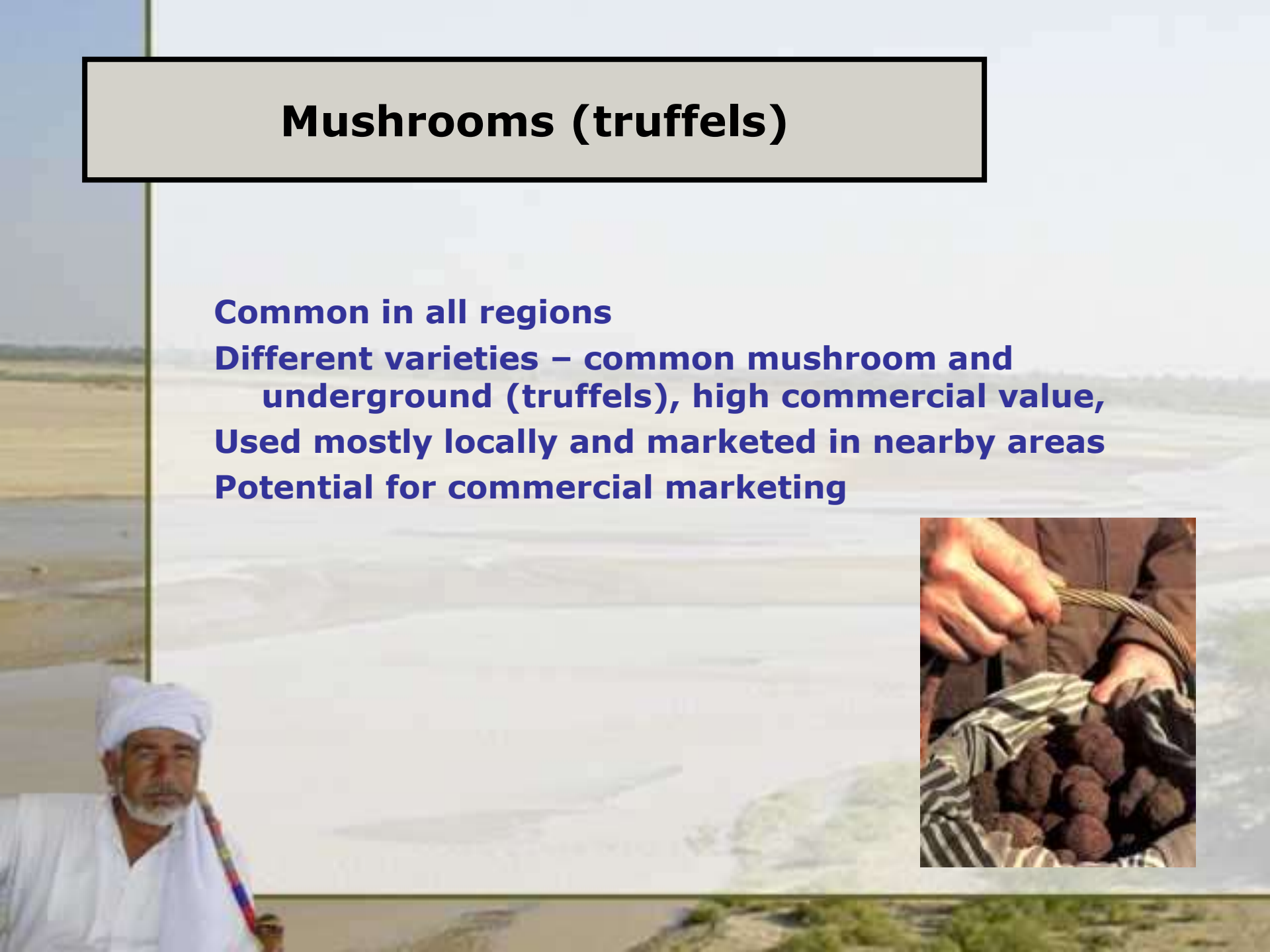
Mushrooms (truffels)

Common in all regions

Different varieties – common mushroom and underground (truffels), high commercial value,

Used mostly locally and marketed in nearby areas

Potential for commercial marketing



Spate Network

Information and experience
sharing

Expertise

Exchange of seeds and know how



