



ECONOMIC STAKE IN CONSERVATION

**Biodiversity Conservation for Natural Resource
Management, Food Security and Poverty Reduction
through processing, value addition and marketing
conservation strategies for small millets**

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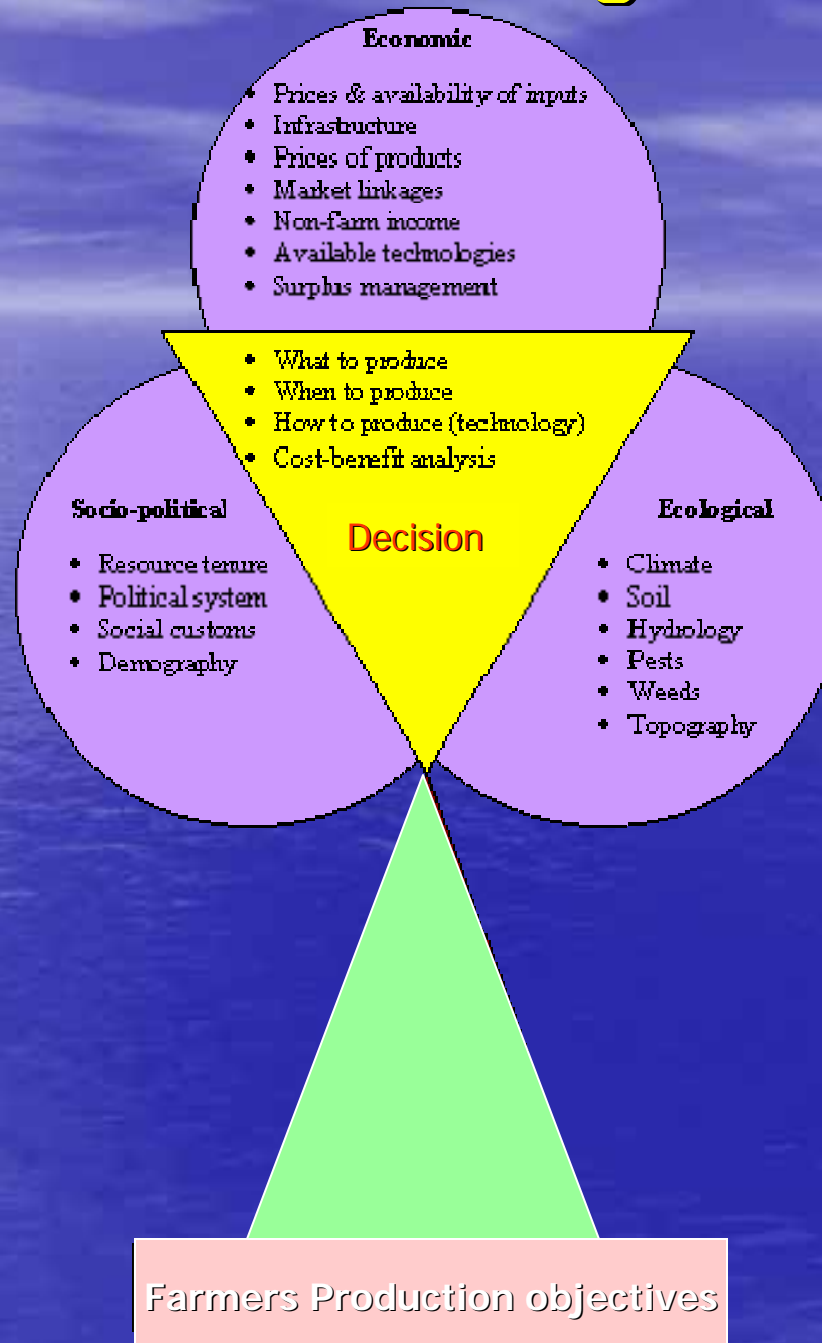
NAMAKKAL



Transaction strategies of Agrarian Tribes

- Barter, Labor, Non-biological material (Gold Silver)
Value embedded material (coins and rupees)
- Biodiversity is central focus for all kinds of such transactions
- Narrowing down of Food basket
- Adding commercial value and Economic stake to species brings them into conservation

Farmers decision making in agriculture



Kolli Hills



Malayali Tribe



Hut



Tribal Settlement



Terraced Fields



Paddy field

Minor Millets in Kolli Hills



- Little millet (Samai)
- Italian millet (Thinai)
- Common millet (Panivaragu)
- Kodo millet (Varagu)
- Finger Millet (Kelvaragu)

Panicum sumatrance
Setaria italica
Panicum miliaceum
Paspalum scrobiculatum
Eleusine coracana





MILLETS IN KOLLI HILLS

- Millets are nutritionally rich in:
protein, minerals, vitamins,
folic acid and fiber
 - Rich in diversity
- Traditionally cultivated
- Organically produced

Mixed Millet Landscapes



Samai Field



Thinai Field

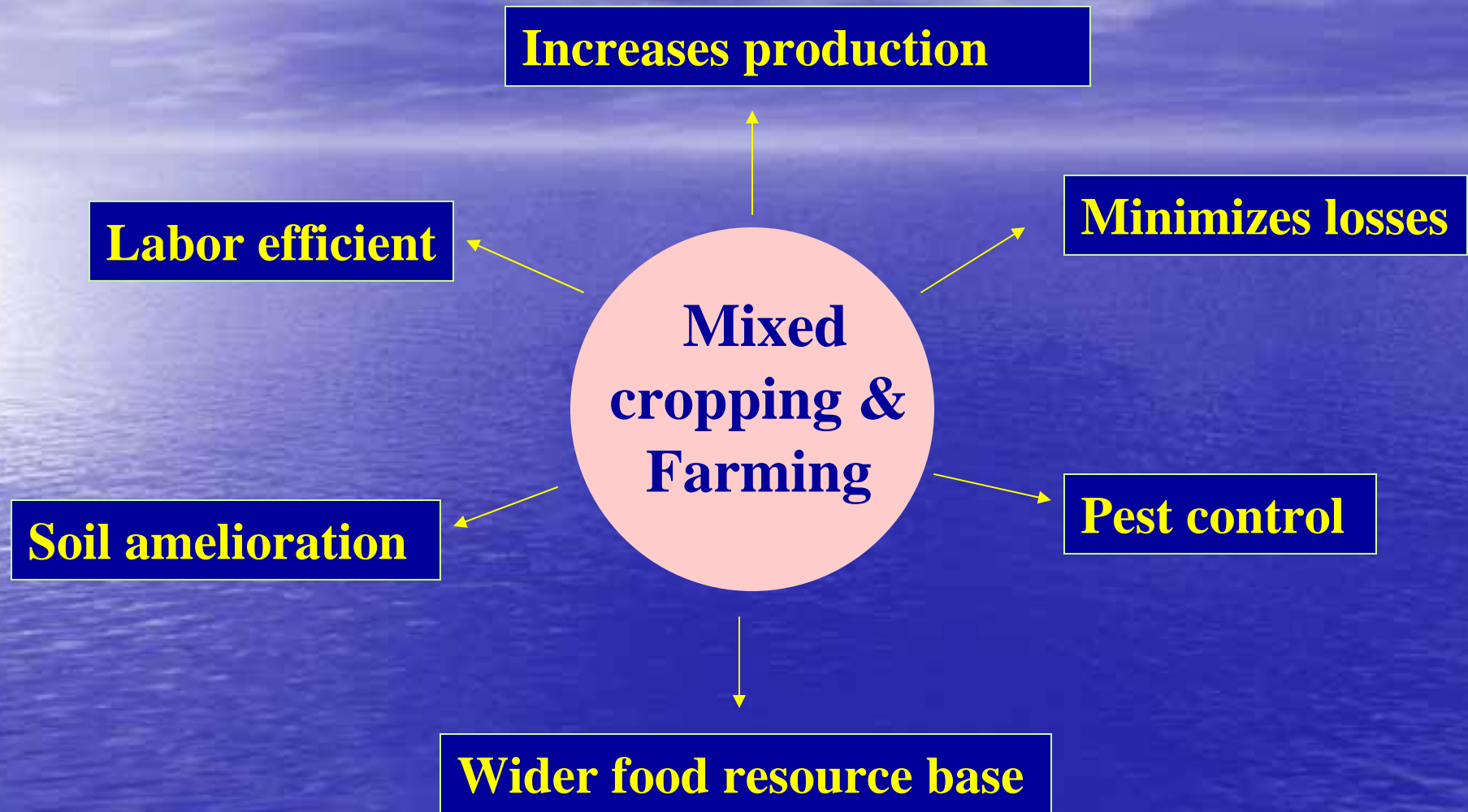
Traditional mixed cropping pattern in Kolli hills



Crops	Botanical name	Duration (days)	Sequence of Harvest
<i>Ragi</i>	<i>Eleusine coracana</i>	150-160	IV
<i>Thinai</i>	<i>Setaria italica</i>	100-110	II
<i>Maize</i>	<i>Zea mays</i>	125-130	III
<i>Avarai</i>	<i>Purpureus lab lab</i>	190-240	VI
<i>Cucubits</i>	<i>Cucumber spp.</i>	150	V
<i>Amaranthus</i>	<i>Amaranthus spp.</i>	60-70	I

Traditional crop rotation pattern in Kolli Hills

Type of Land	Crop Rotation
Vayal-Low land	Paddy (One year)-Banana (Two years)
Mettunilam	Paddy-Coriander+ <i>Motchai</i> -fallow
	Paddy-coriander- <i>panivaragu</i>
	Paddy-coriander-sorghum
	Paddy- <i>Motchai</i> - <i>Panivaragu</i>
	Paddy- <i>Motchai</i> -Sorghum
	Tapioca-mixed crops (two year rotation)



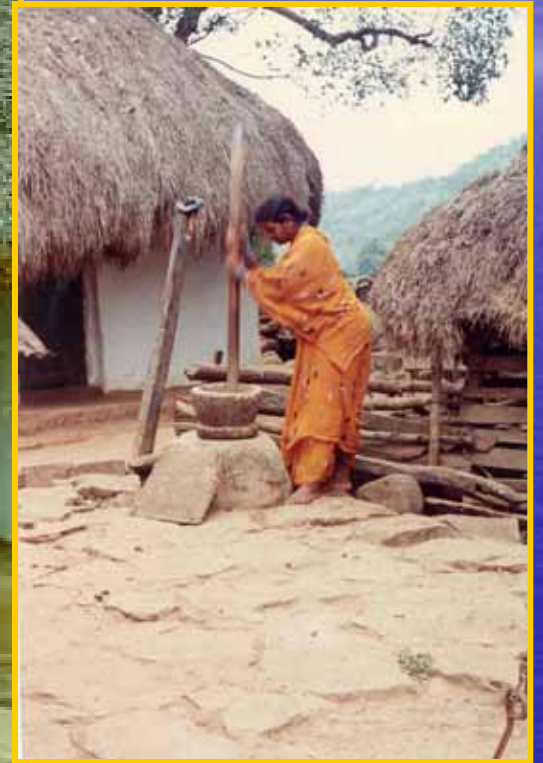


Tapioca harvesting and Marketing

Problems

- Decline in millet cultivation
- Defunct seed storage system
- Diluted seed exchange practice
- Lack of marketing avenues
- Drudgery in Pounding
- loss in agro-genetic biodiversity
 - Change in food habits
- malnourishment among children and Adults





Drudgery in Pounding

Grassroot institutions Capacity Building



ADI 18 festival



Participatory
Research



Folk
Theatre



Millet product
Stall



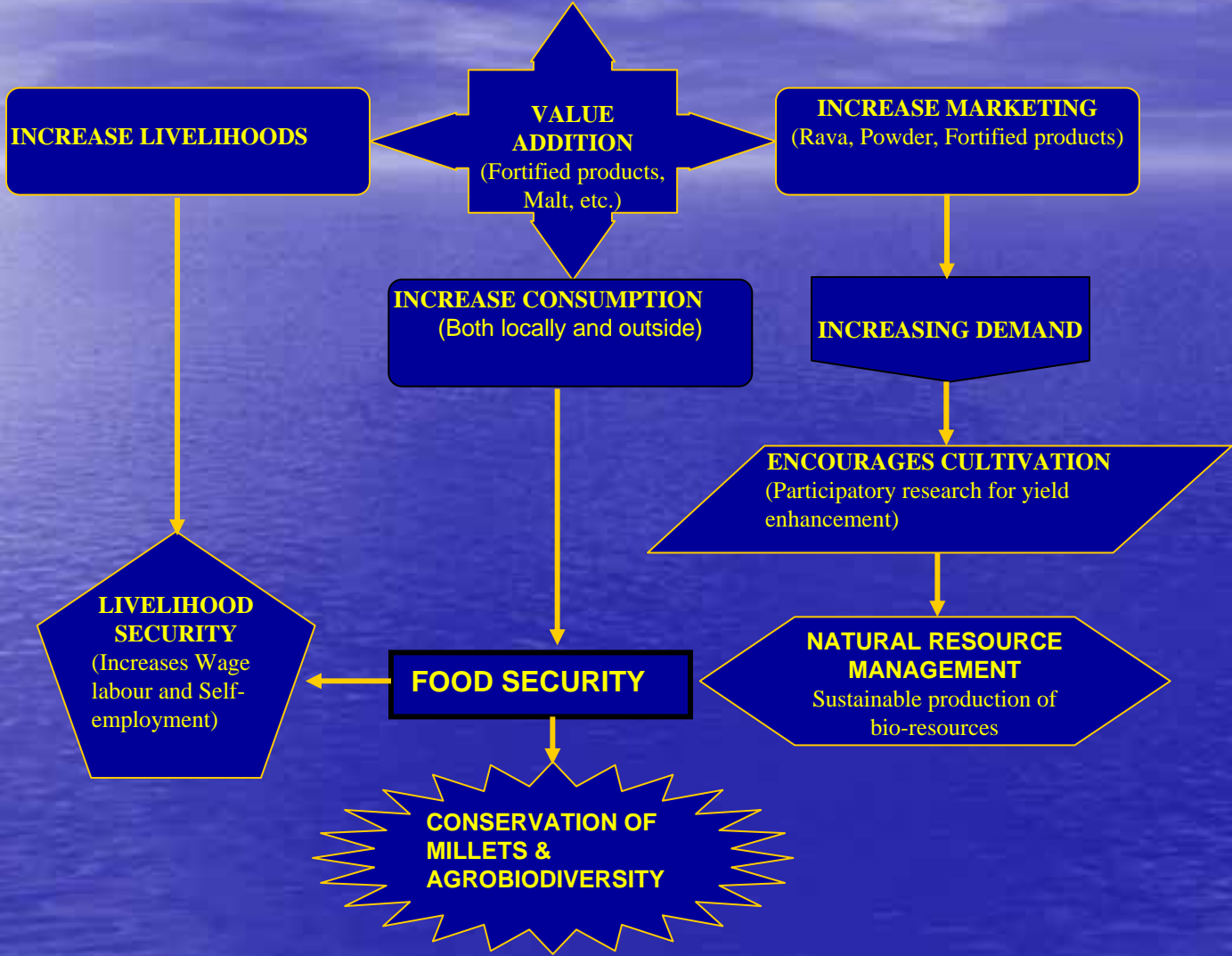
Millet
Exhibition

Millet Marketing Strategies



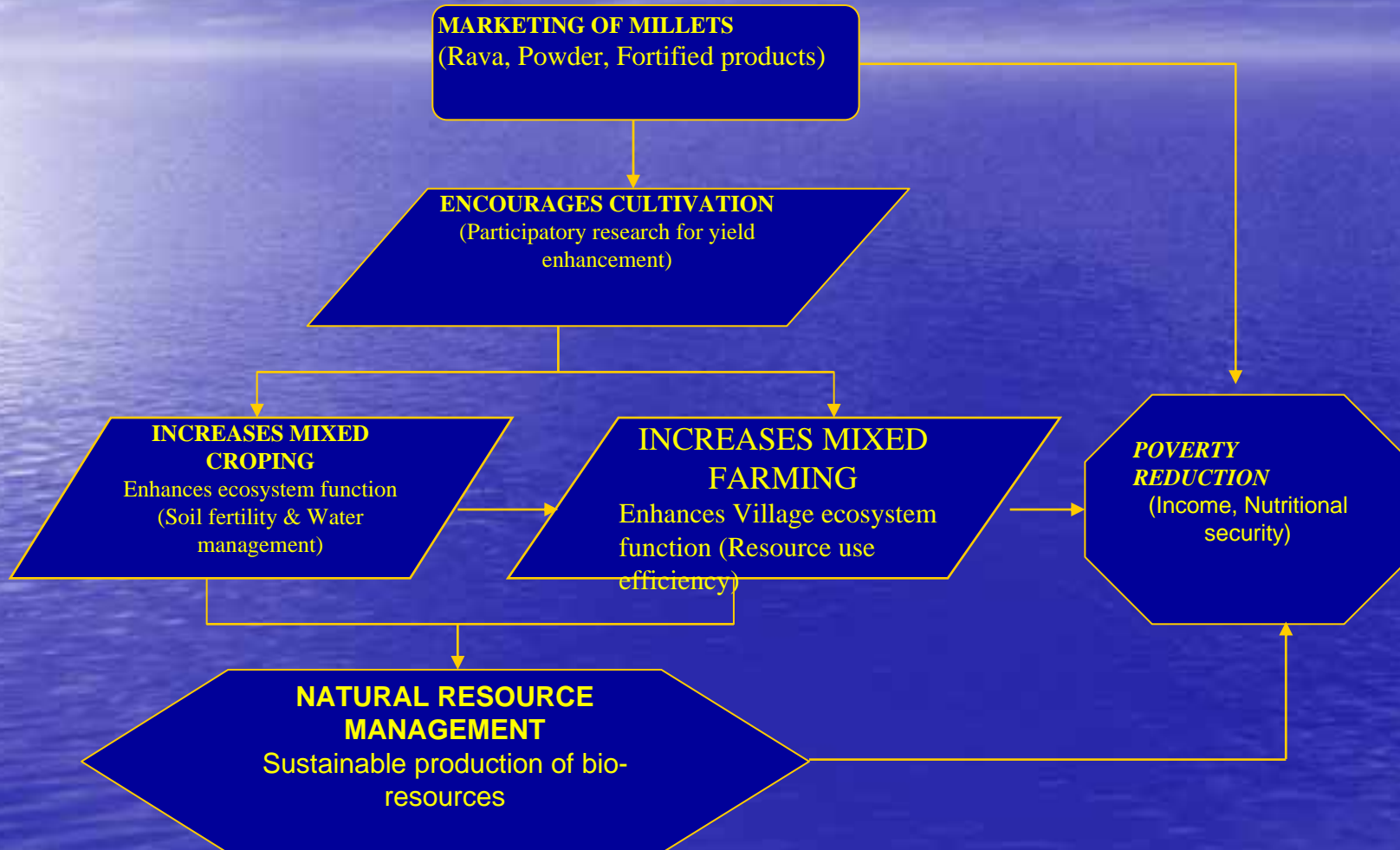


Commercialization efforts of millets and their Conservation

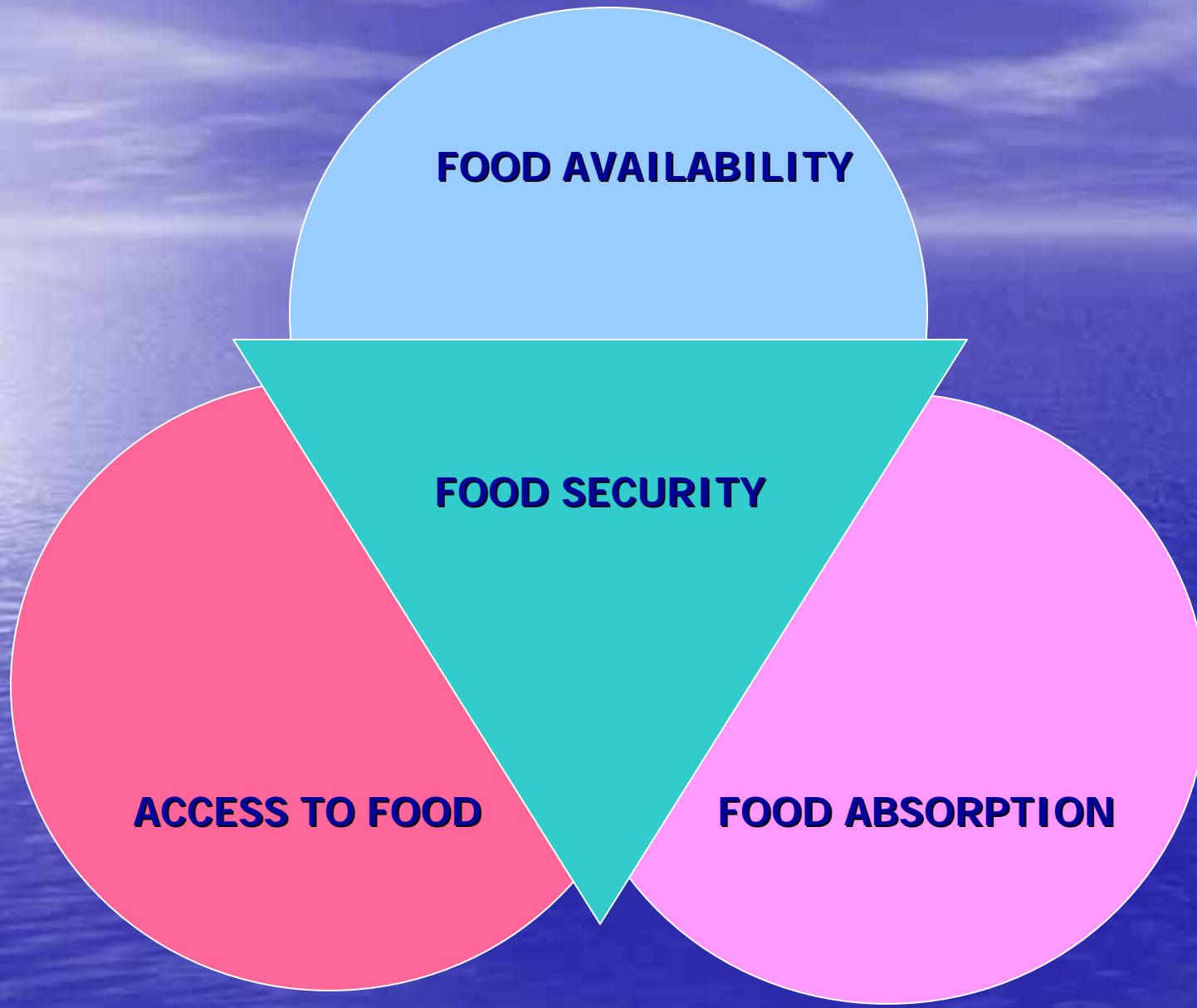




Commercialization of Millets for Natural Resource Management and Poverty Reduction



DIMENSIONS OF FOOD SECURITY



FOOD SECURITY

FOOD ACCESS

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**PARTICIPATO
RY RESEARCH**
Breeding and
Varietal
selection

ORGANIC FARMING

Improved agronomic
practices

THOMBAI

Seed Storage
&
Seed exchange

**GROUP
MOBILISATION
AND CAPACITY
BUILDING**
SHG, Farmers
Club, Association

AGRIBUSINESS

Value addition &
Marketing

**STORAGE, PROCESSING
AND DISTRIBUTION**
Seed bank, Grain bank,
Mill for de-husking, de-
stoning and powder,
Collection centre, Cool
Chamber

**INCREASING
CONSUMPTION**

Processing, Value addition &
Reviving mixed farming

**TRAINING AND
EXPOSURE VISIT**

Vegetable, Medicinal
plant Millets and
animal nutritive value

Model creation

Medicinal garden
Kitchen garden
Backyard poultry unit

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Seed Multiplication



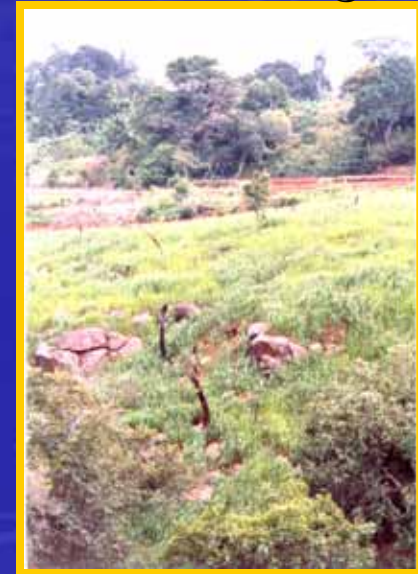
Seed Storage - Thombai



Seed exchange



Seed Distribution



Millet cultivation



Dehusking Mill



Processing



Packing



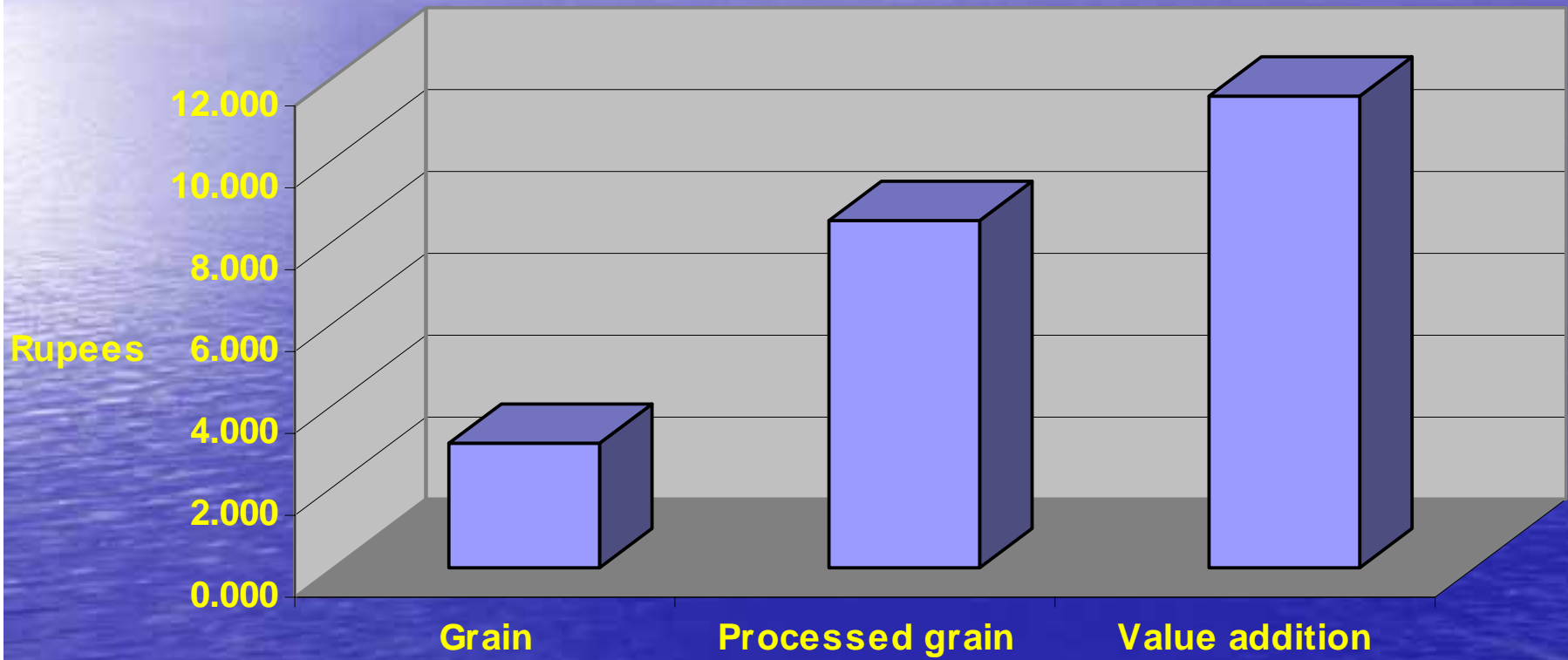
Urban Market linkage



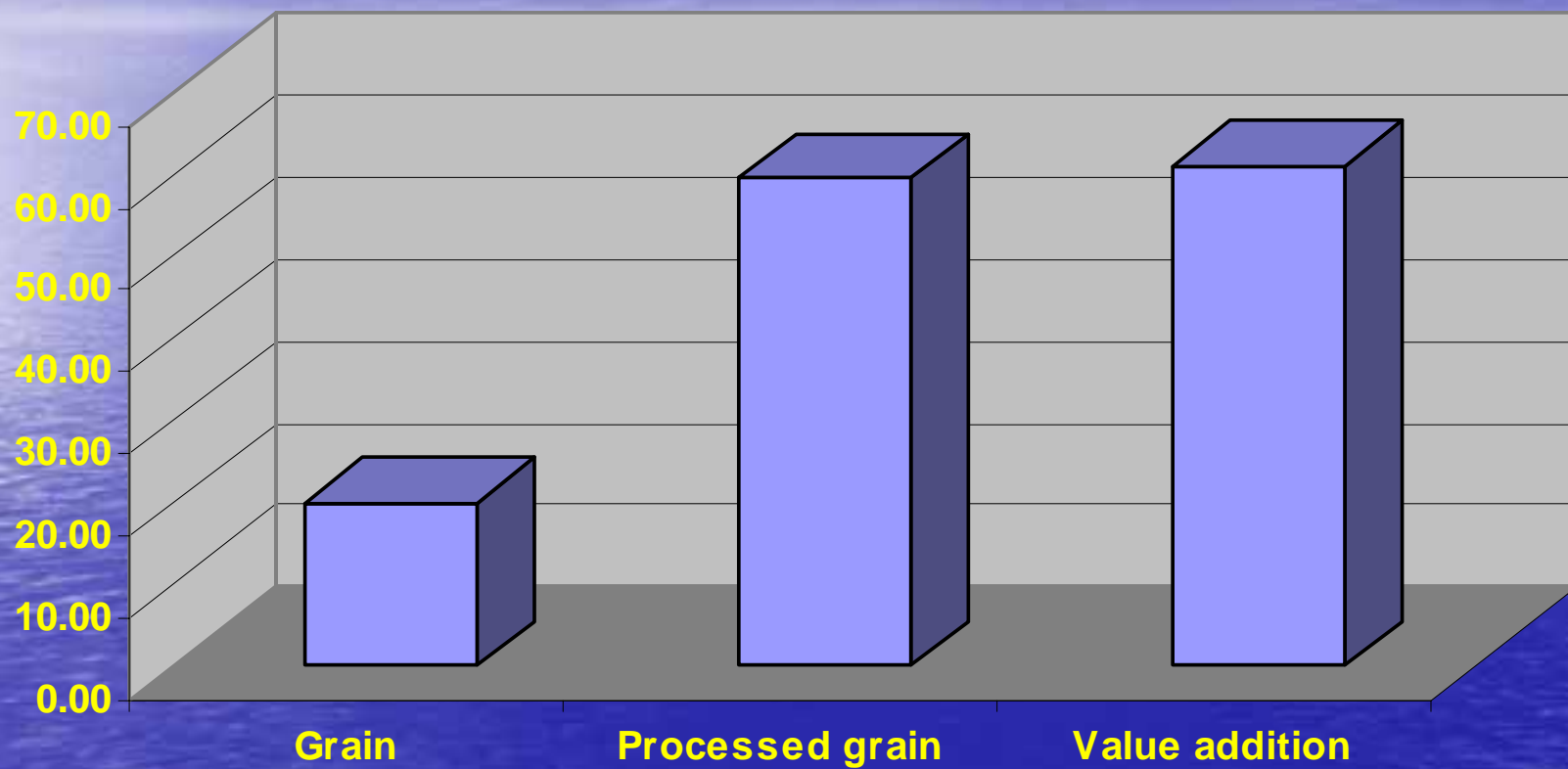
Quantity of Millets marketed in different forms their increase in wage days and income

Products	Quantity(Kg)	Wage (days)	Income through wage	Income to cultivator (Rs)	Income through processing (Rs)	Income through value addition (Rs)
Grain	12755.5	255	12750	25511	0	0
Processed grain	2317.75	138	6900	4636	8112	0
Value addition	736.5	45	2250	1473	2577.75	2209.5

Income through marketing one kilogram of millets as different product



Wage days per ton Millet marketing as different products





Development projects

Improving the economic conditions of the traditional community quite often lack in:

- Synchronizing local bioresources leading to weakening food security
- Traditional Natural Resource Management Practice
- Resilience in the economic structure of the village ecosystem.
- Creating an economic stake for under utilized crops is essential for conservation.

Sustainable Development

- **Needs Participatory Approach**
- **In synchrony with the local bio resource**
- **Accommodating the local cultural and traditional practices**
- **Blending frontier science with traditional wisdom**

A blue-tinted photograph of a vast ocean under a cloudy sky. The text "Thank you" is centered in the lower half of the image.

Thank you