

TRIPURA STATE: THE ROLE OF GOVERNMENT AND PANCHYATI RAJ INSTITUTIONS IN LARGE- SCALE ADOPTION OF SRI

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A wide-angle photograph of a lush green rice field. In the foreground on the left, a bright yellow flag is planted in the rice, featuring the letters 'R.I.' in black. The rice plants are tall and have golden-brown panicles. In the background, a line of trees and several buildings, including a prominent white building, are visible under a clear sky.

WELCOME

To

TRIPURA

● **Distances (in km)**

Kolkata **1,645**

Guwahati **587**

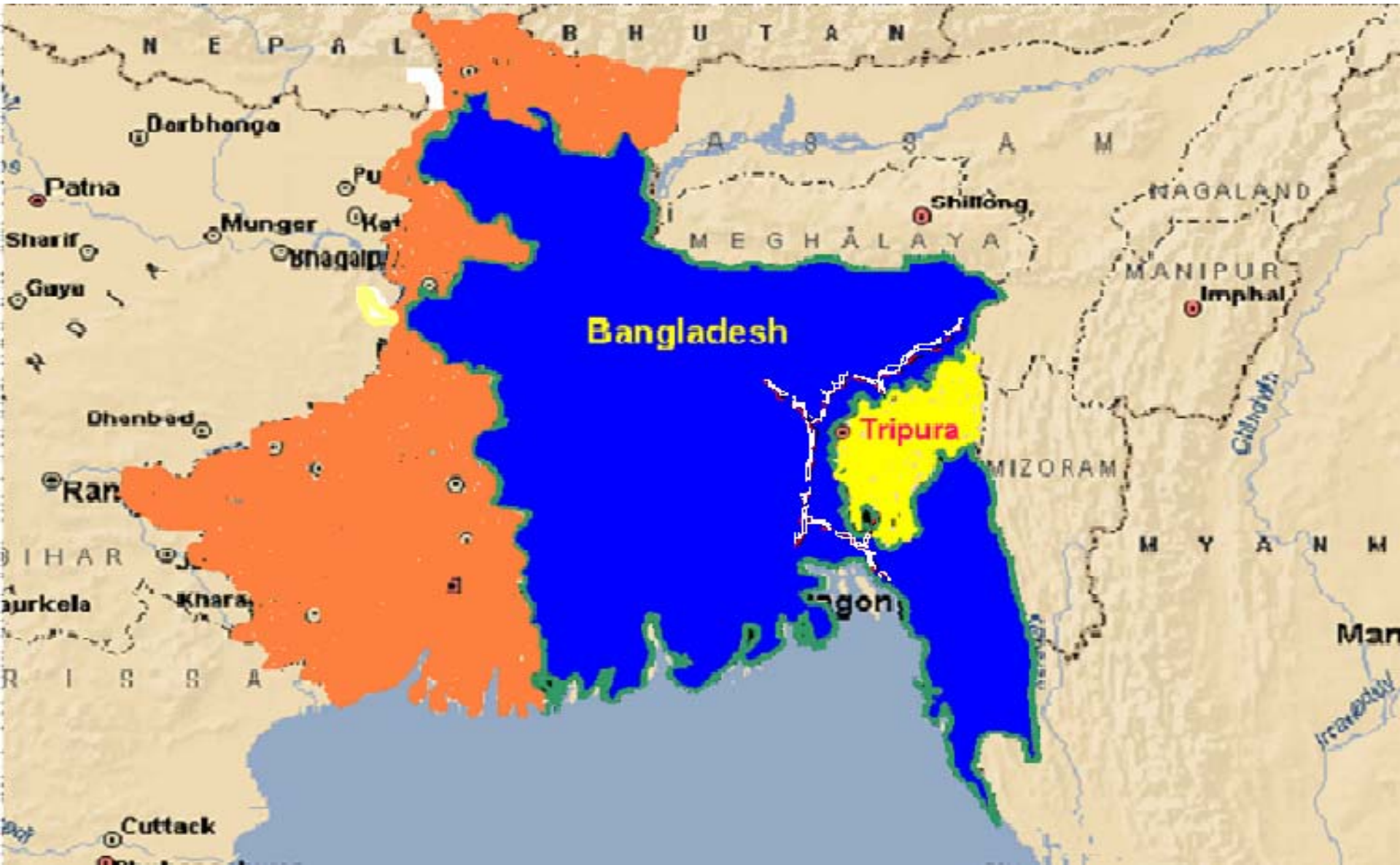
New Delhi **2,637**

Shillong **487**



Distance to sea (from Sabroom) – 60 km

Geographical Location



Agartala-Kolkata distance went from 350 km before Partition, to 1,645 km

Brief Profile

- **Union Territory on 1st July, 1953; State from 21st January, 1972 → 3rd smallest Indian State, after Goa and Sikkim**
- **Long international border (856 km)**
- **Forest land: officially 60% of total area**
- **4 Districts, 17 Sub-Divisions, 40 Blocks, and 1 Autonomous District Council**
- **Princely State merged in October, 1949**
- **4 Zilla Parishads, 513 Gram Panchayats, 527 ADC Villages, 1 Municipal Council, and 12 Nagar Panchayats**

PERSPECTIVE PLAN: OBJECTIVES 2001-10

State Government commitments:

- **Self-sufficiency in food grains**
- **Improvement in farmers' economic condition**

PERSPECTIVE PLAN IMPLEMENTATION

- After 7 years of implementation of the Perspective Plan, food grain production up only from 5.13 lakh tons to 6.35 lakh tons
- **There remained a shortfall in foodgrains of about 1.50 ~ 1.60 lakh tons**
- Growth in food grain production cannot be achieved without adoption of proper system for improvement of crop management
- Advent of SRI in 2005 came at right time

Shrinkage in Cultivable Area

Diversion of agricultural land
for non-agricultural purposes, i.e.,

- Domestic and other developmental uses
- Area for fencing along border
- Road construction
- Brick kilns
- Plantation crops like rubber, etc.

Rice is the growth engine of the State's economy

Two-pronged strategy was adopted to increase the rice production per unit land per unit time

- **Crop management – through SRI**
- **Varietal technology – hybrid rice**

Category of Farmer

Category	No. of farmers
Marginal (< 1 ha)	405,788
Small (1 to 2 ha)	54,598
Semi Medium (2- 4 ha)	17,032
Medium (4 - 10 ha)	1,803
Large (> 10 ha)	207
Total	479,428

Operational Holdings

Farmers	Operational holdings (%)		Area operated (%)		Average size of holding (ha)	
	TRIPURA	ALL-INDIA	TRIPURA	ALL-INDIA	TRIPURA	ALL-INDIA
Marginal (Below 1 Ha)	84.6%	63%	47%	19%	0.3	0.40
Small (1 to 2 Ha)	11.4%	19%	28%	20%	1.4	1.41
Semi Medium (2-4 ha)	3.6%	12%	16%	24%	2.6	2.72
Medium (4 - 10 Ha)	0.4%	5%	3%	24%	5.2	5.80
Large (above 10 ha)	0.04%	1%	6%	13%	78.8	17.18
Total	100%	100%	100%	100%	0.56	1.32

ORGANISATIONAL SET-UP

DEPARTMENT OF AGRICULTURE

MINISTER OF AGRICULTURE

PRINCIPLE SECRETARY OF AGRICULTURE

**DIRECTOR
STATE LAND USE BOARD (SLUB)**

DIRECTOR OF AGRICULTURE

**DIRECTOR OF HORTICULTURE
AND SOIL CONSERVATION**

**JDA
(Plan)
I/C
Plann-
Ing
Section**

**JDA
(PP)
I/C
Plant
Protection
Section**

**DDA
(Seed)
I/C Crop
Section**

**DDA (S &
QC)
I/C Ferti. &
Estt. Section
(Gazetted)**

**DDA
(Estt.)
I/C
Section
(Non-
Gazetted)**

**DDA
(Trainin
g) I/C
Trainin
g &
Develo
pment**

**DDA
(Market
ing)
I/C
Marketi
ng
Section**

**Credit
Plannin
g
Officer
I/C
Statisti
cal
Section**

**Senior
Agrono
mist I/C
Agri.
Researc
h Wing,
A.I. Unit**

**Principal
I/C
Upgraded
Gram
Sevak
Training
Centre**

DISTRICT LEVEL

Dy. Director of Agriculture I/C/ of respective Districts (Total 4 – Districts)

**W. Tripura = 1
S. Tripura=1
N. Tripura=1
Dhalai = 1**

Agri. Sub-Division Level
(Coterminous with Block)

Superintendent of Agriculture, I/C Agri. Sub Division (Total 20 Nos.)

Agriculture Sector Officer, I/C Sector (Agri) (Total = 78 Nos.)

**W Dist = 8
S Dist = 5
N Dist = 4
Dhalai Dist =3**

**Agricultural
Farm
(Total 21
Nos.)
West = 5
South = 8
North= 3
Dhalai =5**

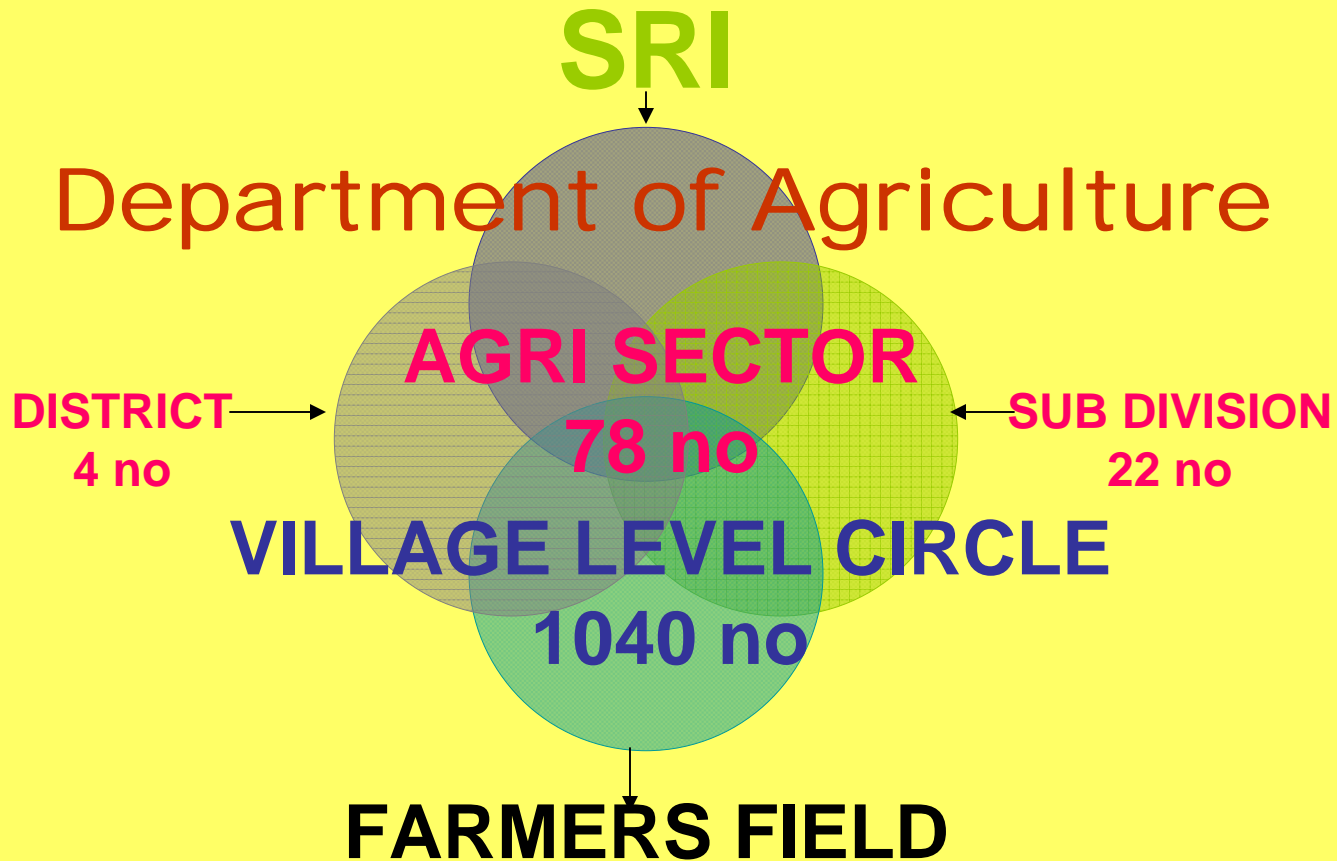
**Circle V.L.Ws I/C
V.L.W.Circle
Total = 704
West = 265
South = 208
North = 138,Dhalai = 93**

V.L.W. Store, I/C Input Stores

**West = 158 Nos.
South = 106 Nos.
North = 72 Nos.
Dhalai = 41 Nos.**

**Power Tiller
Hiring Centre
West = 35
South = 26
North = 12
Dhalai = 7**

Institutional approach for Promotion of SRI – 2002-06



Experimental Demonstration

Experimental Demonstration in the farmers field taken up from the crop year 2002-2003- Kharif Season

- 2002-03 – 44 no -@ 0.2 ha
- 2003-04 – 88 no @ 0.2 ha
- 2004-05 – 440 no @ 0.4 ha
- 2005-06 – 880 no @ 0.4 ha

- **Criticism**
- **Resistance**
- **Opposition**

Visit of Mrs. Radha Singh, IAS, Former Secretary. MOA, GOI



10 01 1
SYSTEM OF RICE INTERCROPPING
• 3.0 TON/HECTARE
• 100% ORGANIC AND NUTRIENT
• 100% ORGANIC FERTILIZER
• 100% NUTRIENT
• 100% NUTRIENT
• 100% NUTRIENT

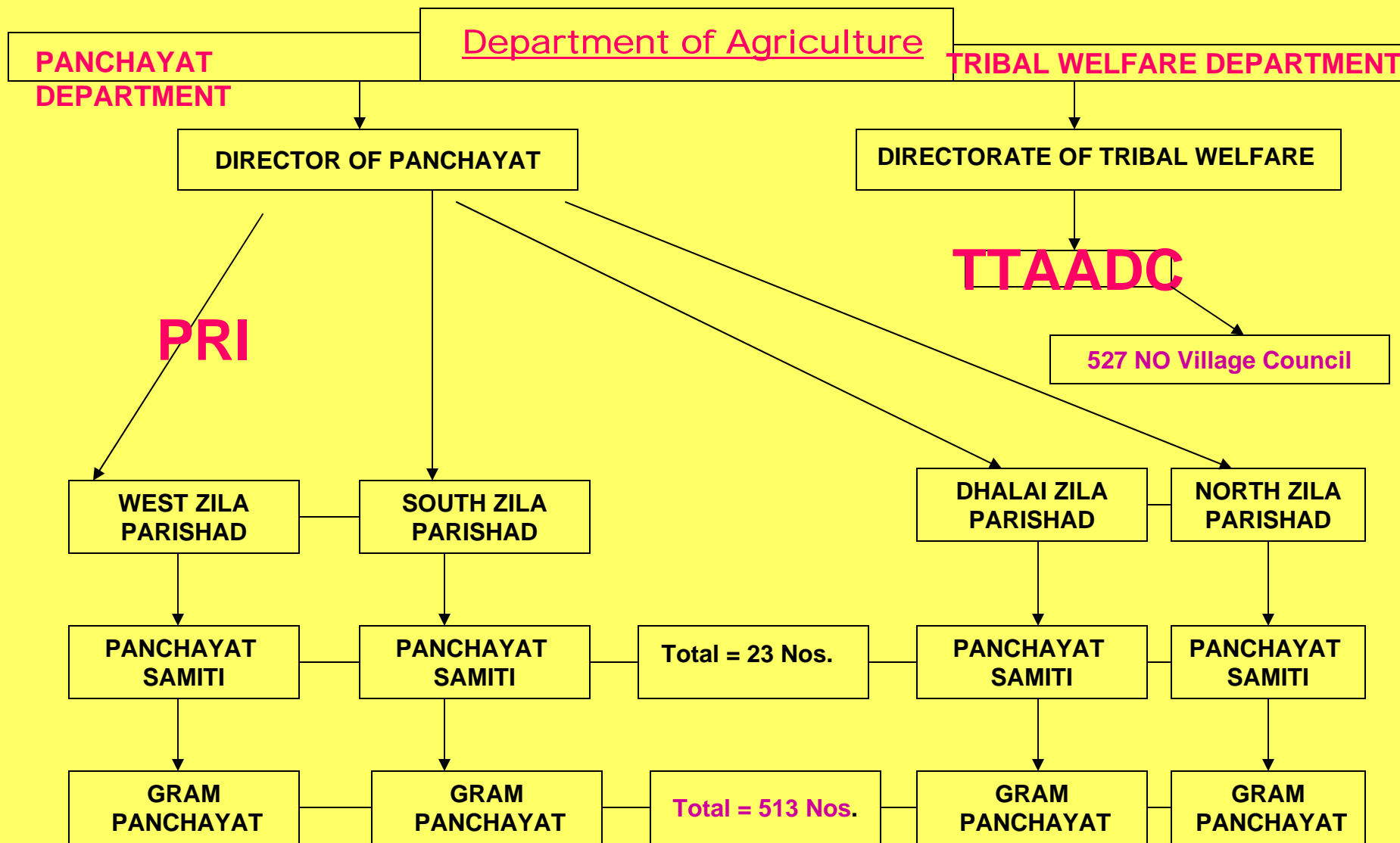
Visit of Dr. M.S. Swaminathan



MASS MOVEMENT

SRI MOVEMENT

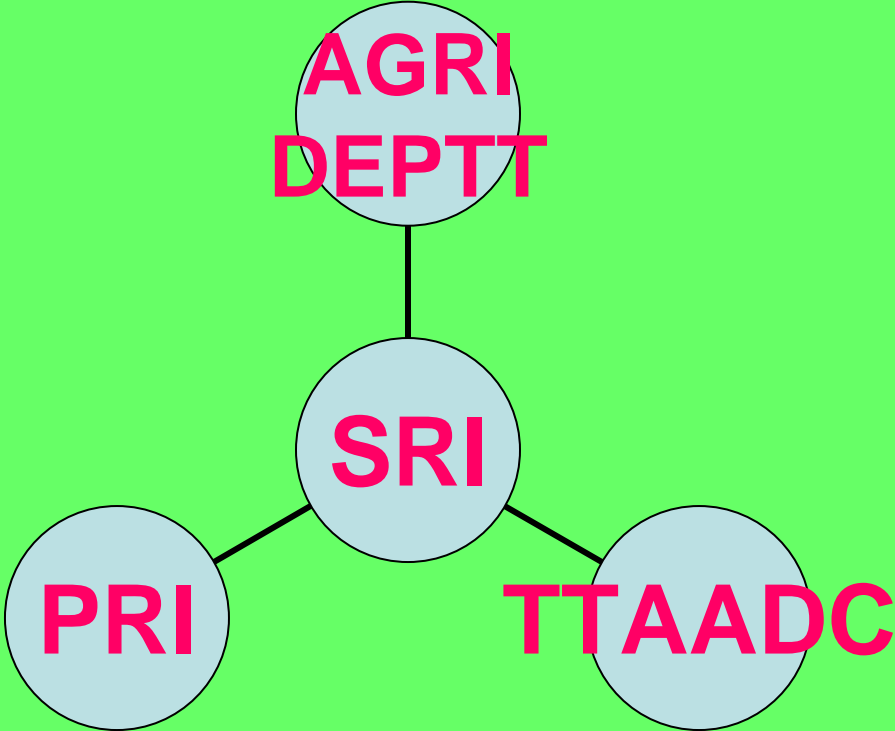
RECASTED INSTITUTIONAL APPROACH



Awareness Cum Training - Public Representatives

- **Future Food Crisis**
- **Future water Crisis**
- **What is SRI**
- **Why it is essential**
- **How to Practice it**
- **How to Adopt it**
- **Incentive of SRI**
- **Problem relates to practice and adoption of SRI**
- **How to minimize problems**
- **Incentive for SRI adoption**

Large Scale Adoption of SRI



PRI's / TTAADC Contribution

- Farmers Mobilization
- Weeder
- Marker
- Labour Cost – 20 – 25 mandays
- Drainage and Irrigation Channel

FINANCIAL BREAK UP OF SRI DEMONSTRATION:

SI No.	Item/Input	Physical		Financial (In Rs)	
		Per ha in Kg/ No	Per 0.2 ha unit area	Per ha in Kg/ No	Per 0.2 ha unit area
1	Seed (Kg)	5	1	70.0	14.0
2	N:P:K @ 20:10:10 kg/ ha				
	a) Urea	44	9	230.0	46.0
	b) SSP	63	13	330.0	66.0
	c) MOP	17	4	89.0	18.0
3	Organic Manure	10	2	2500.0	500.0
4	Bio-Fertilizer @ 4.0 Kg/ha per cultivator per strain-3 strain	12	2.4	360.0	72
5	<u>Plant Protection Chemicals:</u>				
	a) Prophylactic	LS	LS	200.0	40.0
	b) Bio- agent	LS	LS	150.0	30.0
6	Nursery Materials	LS	LS	500.0	100.0
7	Contingency Expenditure	LS	LS	71.0	14.0
	Total			4500.0	900.0

Funding Pattern :

- **Demo. Cost per Hectare : Rs. 4500.00**
- **From State Plan : Rs. 2000.00**
- **From Macro Management: Rs. 2500.00**

Rate of Adoption of SRI in Tripura

YEAR	Area covered through SRI (ha)	Total paddy area (ha)	Covered through SRI (%)	Farmers involved (no.)
2002-03	8.8	239,670	0.003	44
2003-04	17.6	242,110	0.007	88
2004-05	176	238,950	0.07	440
2005-06	352	237,150	0.14	880
2006-07	14,678	235,272	6.23	73,390
2007-08	32,497	235,938	13.77	162,485
2008-09	50,000	235,500	21.23	250,000

Rate of SRI Adoption in Tripura

Year	Area Covered through SRI	Total area under paddy	Percent covered through SRI (%)	No. of farmers involved
2006-07	14,678 ha	235,272	6.23 %	73,390
2007-08	32,497 ha	235,938	13.77%	162,485
2008-09	24,782 ha (Kharif only)	192,000	12.90% (Kharif only)	123,910 (Kharif only)

**Total SRI target for 2008-09 is 50,000 ha
Achievement shown is only for Kharif Season 2008**

Productivity of Rice – Tripura vs. All-India

Year	Yield (tons/ha)			
	All-India	Tripura	SRI in Tripura	Increase over present practice
2003-04	2.077	2.396	5.360	2.964
2004-05	1.984	2.352	5.025	2.673
2005-06	2.102	2.383	4.690	2.307
2006-07	2.084	2.503	4.271	1.768
2007-08	N.A.	2.550	4.321	1.771

Increase in foodgrains production through adoption of SRI **in Lakh tons**

Year	Projected foodgrains requirement	Likely production with present trend	Additional production through adoption of SRI	Projected production
2008-09	8.09	6.74	0.50	7.24
2009-10	8.22	6.88	0.75	7.63
2010-11	8.34	7.03	0.90	7.93
2011-12	8.48	7.17	1.00	8.17

Per ha average yield increase through SRI – 1 Mt