

# Rubber cultivation in North and East in Sri Lanka: journey as yet and way forward

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# Sri Lankan rubber industry at glance

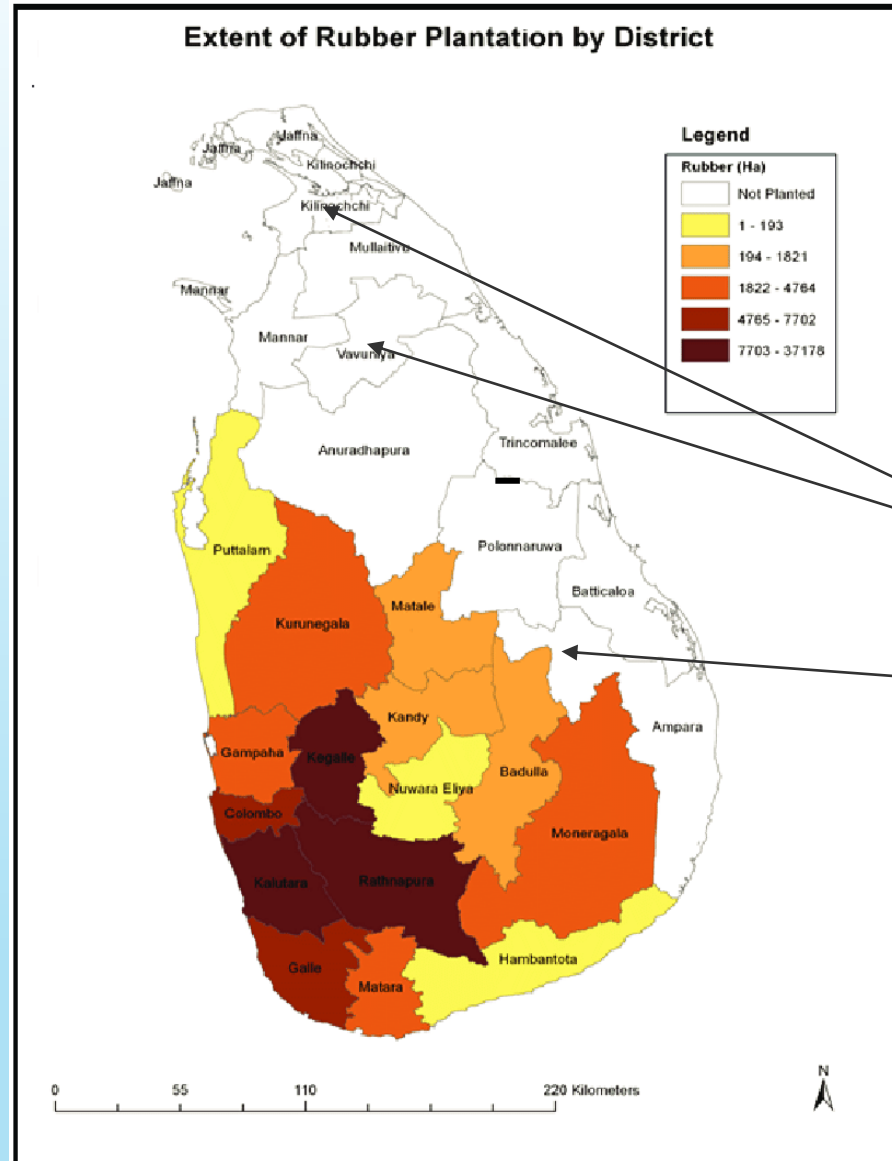
- NR production - 83 Mn kg
- NR exports - 14 Mn kg
- NR consumption - 135 Mn kg
- NR imports - 66 Mn kg
- SR imports - 66 Mn kg
- Foreign exchange earning - About US\$ 900 Mn
- NR consumption target - 157 Mn kg by 2025
- Foreign exchange target - US\$ 4 Bn by 2025
- Productivity target - > 1500/kg/ha
- Targets for rubber extent - 145,000 ha

# Land distribution in rubber growing areas

District	Land Area (km <sup>2</sup> )	Population Density (per km <sup>2</sup> )	Land per Capita (Rank out of 25 districts)
<b>Traditional rubber growing areas</b>			
Kegalle	1683	499	18
Kalutara	1576	775	23
Gampaha	1341	1719	24
Ratnapura	3236	336	15
<b>Non-traditional rubber growing areas</b>			
Moneragala	5508	82	3
<u>Ampara</u>	4222	154	9
<u>Vavuniya</u>	1861	92	4
<u>Kilinochchi</u>	1205	94	5
<u>Mullaithivu</u>	2415	38	1
Anuradhapura	6664	129	6

# Rubber cultivation at present

**Traditional areas ;  
Wet zone –  
130,000 ha**



**Non traditional areas ;  
North – 50 ha  
East – 2000 ha**

# Climatic variability in target areas

	<b>Wet Zone (WL)</b>	<b>Intermediate zone (IL2)</b>	<b>Dry Zone (DL1,2 &amp;3)</b>
<b>Rainfall</b>	<b>&gt; 2500 mm</b>	<b>ca. 1600 mm</b>	<b>ca. 1000 mm</b>
<b>Humidity</b>	<b>High</b>	<b>Low</b>	<b>Low</b>
<b>Temperature</b>	<b>Low</b>	<b>High</b>	<b>High</b>

# Strengths

Strength	Rank		
	Eastern province	Northern province	
		Vavuniya South	Vavuniya North
<u>Land availability</u>	1	1	6
<u>Farmers' interest</u>	2	2	7
Suitable environment	3	-	-
Soil fertility	4	7	3
Experience in farming	5	7	2
Labour availability	6	6	4
Interfamily relationships	7	6	1
Ability afford initial investment	8	4	6
Rubber society	9	-	-
Agrarian services	-	5	5
Provision to supply water	-	3	4

# Weaknesses

Weakness	Rank		
	Eastern province	Northern province	
		Vavuniya South	Vavuniya North
<u>Lack of knowledge</u>	1	1	2
<u>Problem on land ownership</u>	2	-	-
Lack of financial assets	3	-	-
Poor roads	4	-	-
Distinct dry period	5	2	1
Seasonal demand for labour	6	3	3
No local marketing systems for latex	-	4	4
Lack apparatus for raw rubber processing	-	4	-

# Threats

Threat	Rank		
	Eastern province	Northern province	
		Vavuniya South	Vavuniya North
<u>Droughts</u>	1	1	3
Cyclones	3	3	2
Wild animals	5	2	1
Pest & Diseases	2	-	-
Low price	4	-	-



A decorative graphic on the left side of the slide. It features a dark grey arrow pointing to the right at the top. Below the arrow, several thin, curved lines in shades of blue and grey sweep upwards and to the right, creating a sense of movement and design.

# Challenges in drier climates

- ▶ **Droughts**
- ▶ **Knowledge transfer**
- ▶ **Providing initial capital**
- ▶ **Land clearance**
- ▶ **Motivation of farmers (In North)**

# Milestones

- ▶ Eastern province – Padiyathawa (IL2)  
planting – 2003/2004  
harvesting – 2010
  
- ▶ Northern province – Vavuniya (DL1)  
planting – 2010/2011  
harvesting – 2019



# Key elements in agronomic practices

- **Land suitability** - Reddish Brown Earth (RBE)/Red Yellow Latasol (RYL)  
Deep soil (over 1.5 m)  
Ground water
- **Land preparation** - Avenue planting (2.5 m x 7.75 m)  
Larger planting hole (1 m x1 m x1 m)  
Organic manure (5 kg/hole)  
Proper drainage system
- **Planting material** – Poly bagged two leaf whorl plants



- **Planting** – On set of North-East Monsoon  
Fully removal of poly bag



- **Crop upkeep** - Mulching  
Shading  
Irrigation  
Intercropping

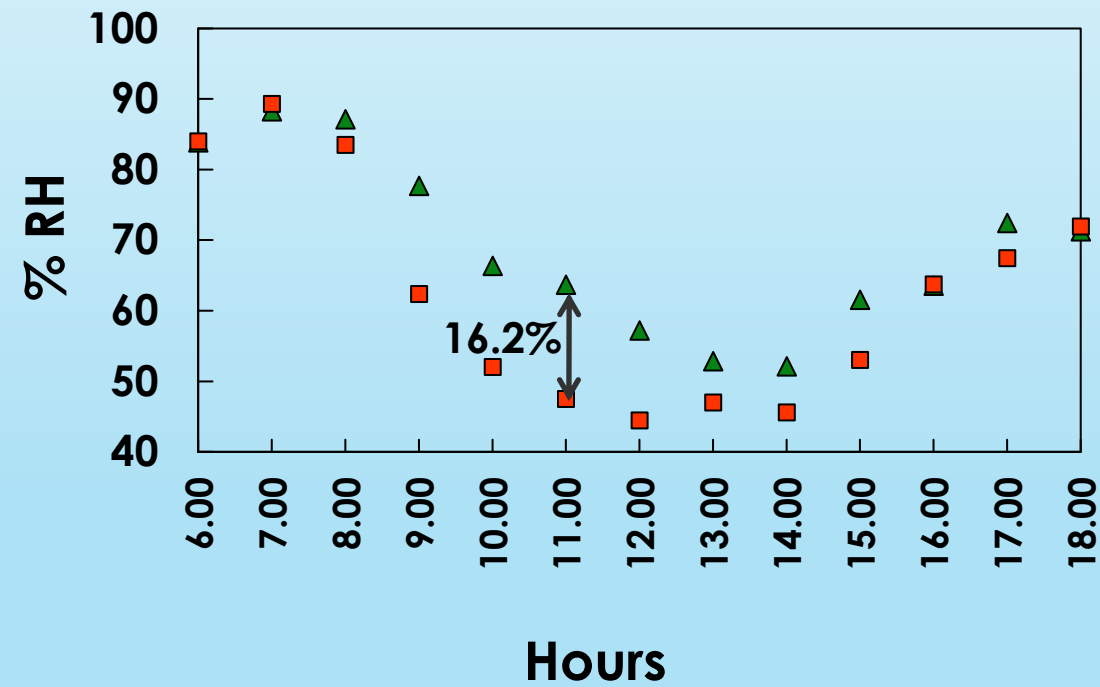
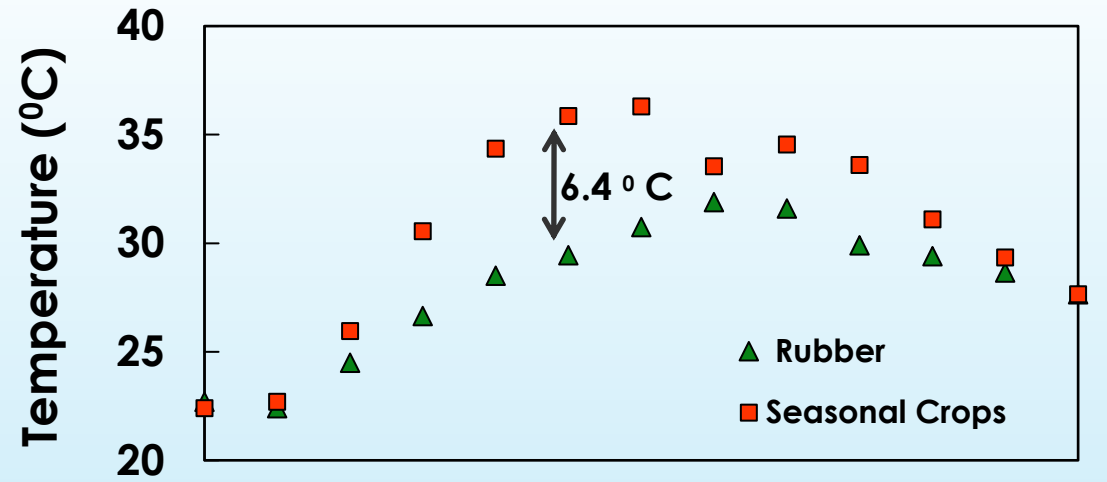


- **Fertilizer** - Ammonia based fertilizer [7:9:9:3 (N:P:K:Mg)]  
Application frequency - 3 times per year

# Agronomic success

	Intermediate Zone	Dry Zone
Growth increment rate	7.4 cm/year	8.6 cm/year
Establishment (% sites successful)	75%	30%
Yield	1,400 kg/year	

# Environmental benefits





# Impact on livelihood development

- Empowering farmers in peasant community to enjoy benefits of infrastructure developments

eg. Obtaining electricity, refurbishing houses with extra appliances, purchasing new vehicles



- Improved education of children

- Changing lifestyles

eg. More time to enjoy the life



# Current research activities

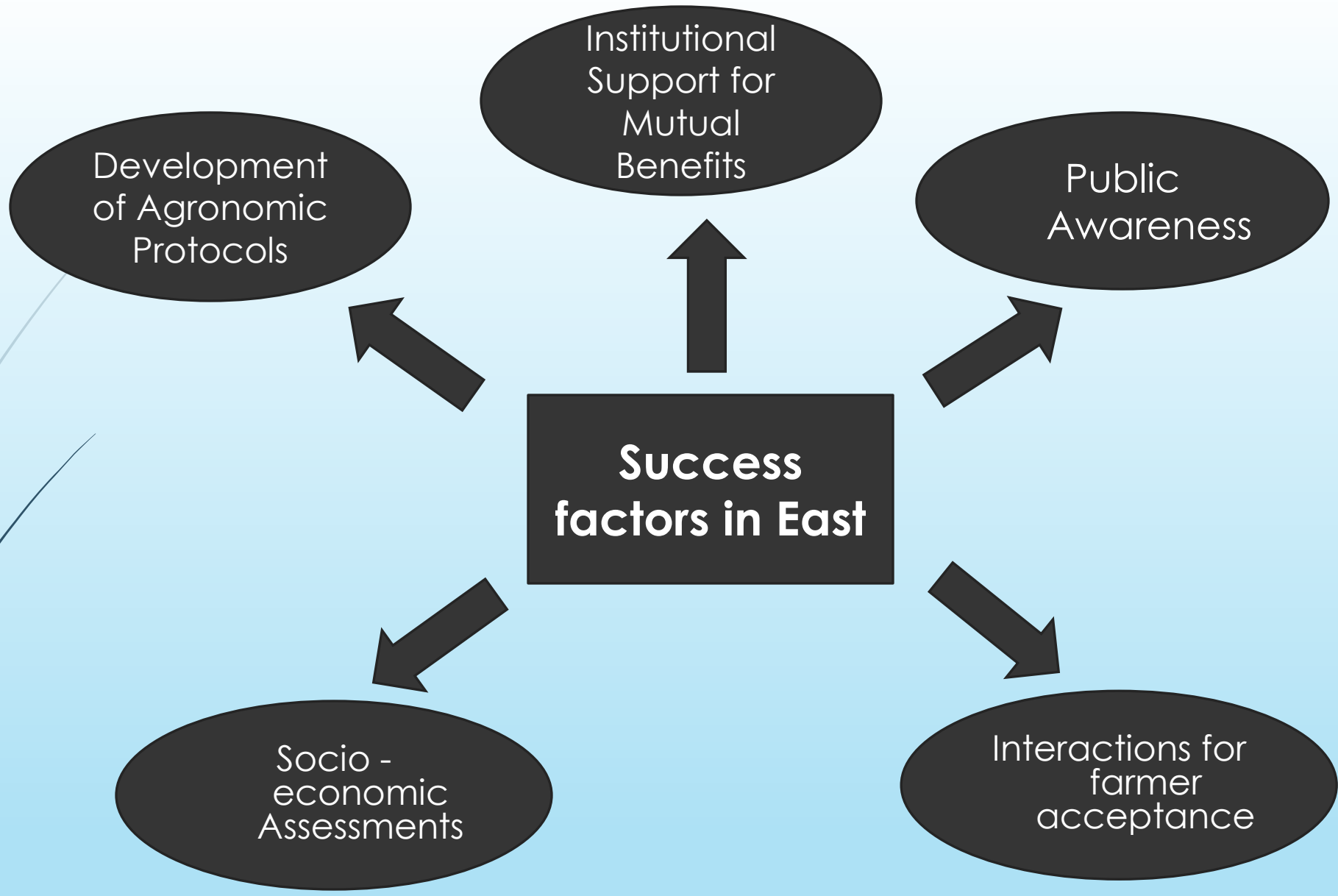
- **Farmer participatory adaptive research trials to refine the existing technologies to cultivate rubber in drier climates**
  - Pits for moisture conservation
  - Water requirement (Quantity & Frequency)
  - Incorporation of indigenous knowledge
- **Screening for more suitable clones and assessments on new approaches for drought resistance**
- **Disease screening and be vigilant on new diseases**
- **Monitoring yield variations and latex quality**
- **Assessment on changes in livelihood capital**
- **Assessment on environmental impacts**
- **Developing solar drying system for sheet rubber manufacturing**





# Development activities

- ▶ Accelerated planting programme targeting 3000 ha in three years
- ▶ Development of Voluntary Carbon project for the benefit of smallholders



Development of Agronomic Protocols

Institutional Support for Mutual Benefits

Public Awareness

**Success factors in East**

Socio-economic Assessments

Interactions for farmer acceptance



**Thank you!**