

RESET SRI LANKA- ENERGIZING AGRICULTURE



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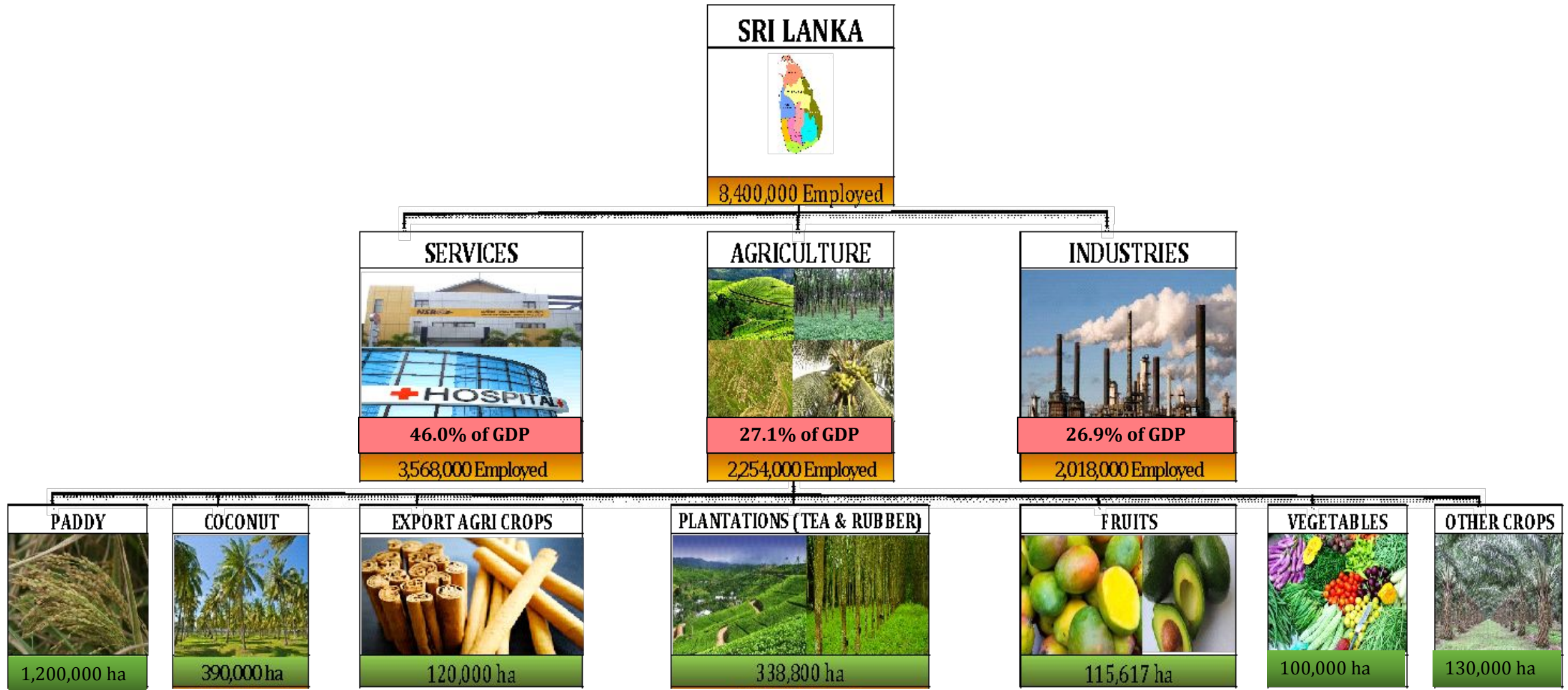
B Sc. (Hons), PG BA, MBA(PGIA), M Sc. (Agri & Plt Crops-PGIA), M Sc. (OB).

MANAGING DIRECTOR

HAYLEYS PLANTATIONS SECTOR

KELANI VALLEY, TALAWAKELLE & HORANA PLANTATIONS

GDP COMPONENTS OF SRI LANKA

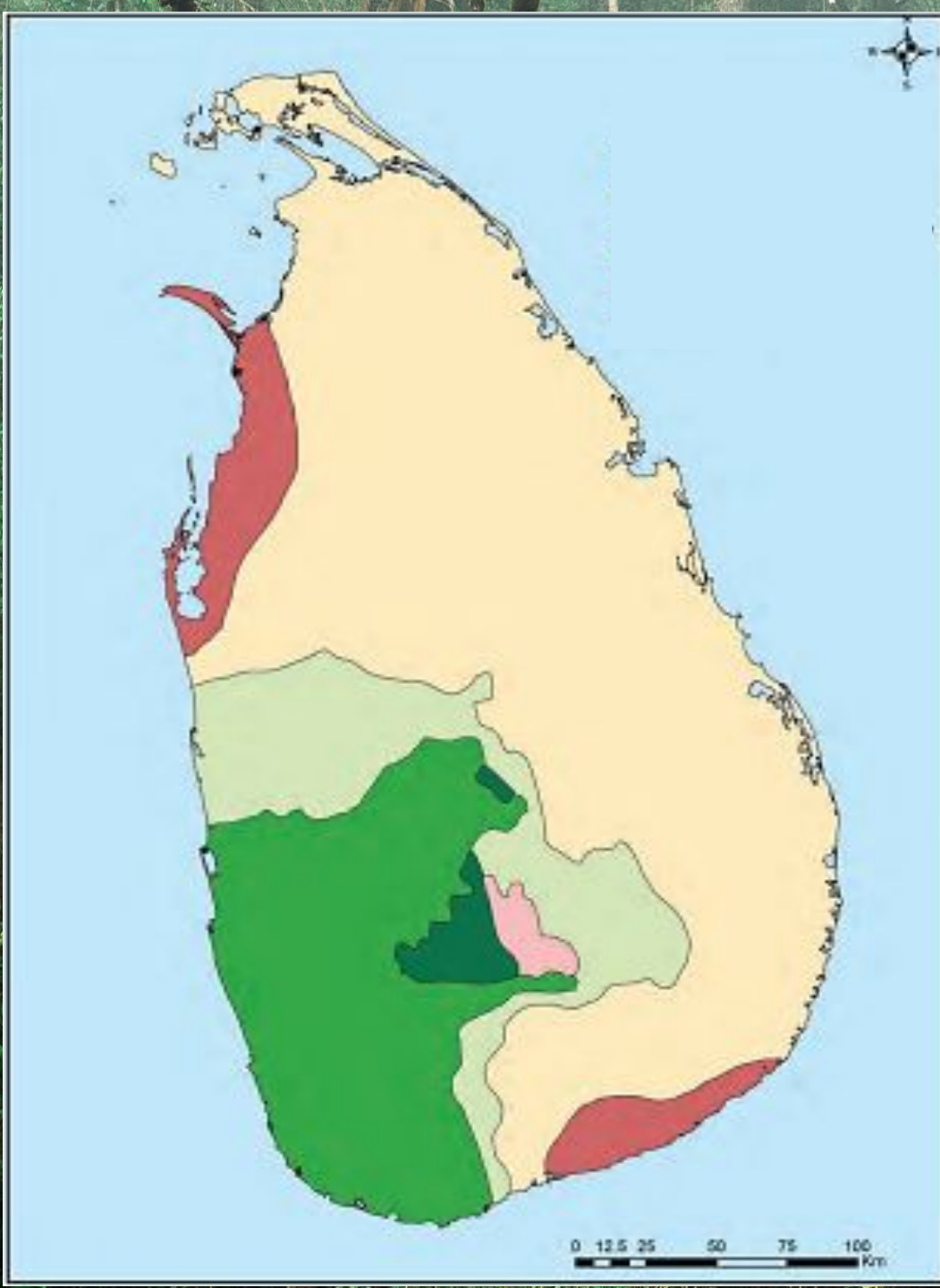


AGRICULTURE & IT'S RELEVANCE







- Agricultural Land is the most important & fundamental natural resource for the sustenance of mankind. All natural resources are founded on it.
- The Objective of agricultural land use is to derive/extract optimal utility/value from a unit of land on a sustainable basis to accrue benefits to the people/country in social, economic, environmental & ecological areas.
- Sri Lanka is a small tropical maritime & humid island located close to the equator in the Indian ocean, in the Indian sub continent strategically located in the Bay of Bengal with much geographical and agro-ecological diversity in topography & climate, consisting of flat to rolling coastal lowland plains & mountains rising only in the South Central highland part. It has a bimodal rainfall pattern with 2 distinct monsoons and with inter monsoon rain, receives year round rainfall. Temperature is diurnal & the mean annual temperature is largely homogenous in low lands & rapidly decreasing towards highlands. The country is endowed with a very rich bio diversity and is a recognized global hot spot acknowledging the rich diversity in flora & fauna.
- Sri Lanka has 103 Rivers 15 in the Wet Zone, 20 in Intermediate Zone, 8 Rivers crossing all 3 Zones and the largest river covering 10% of total land area. The extensive Riverine system is supplemented by further 7600 Tanks.
- In 2020, total employment is 8 Mn, of which 2.2 Mn (27.1%) in Agriculture, 2.1 Mn (26.9%) in Industries, 3.7Mn (46%) is in Services.



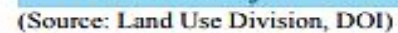
Land Zones in Sri Lanka



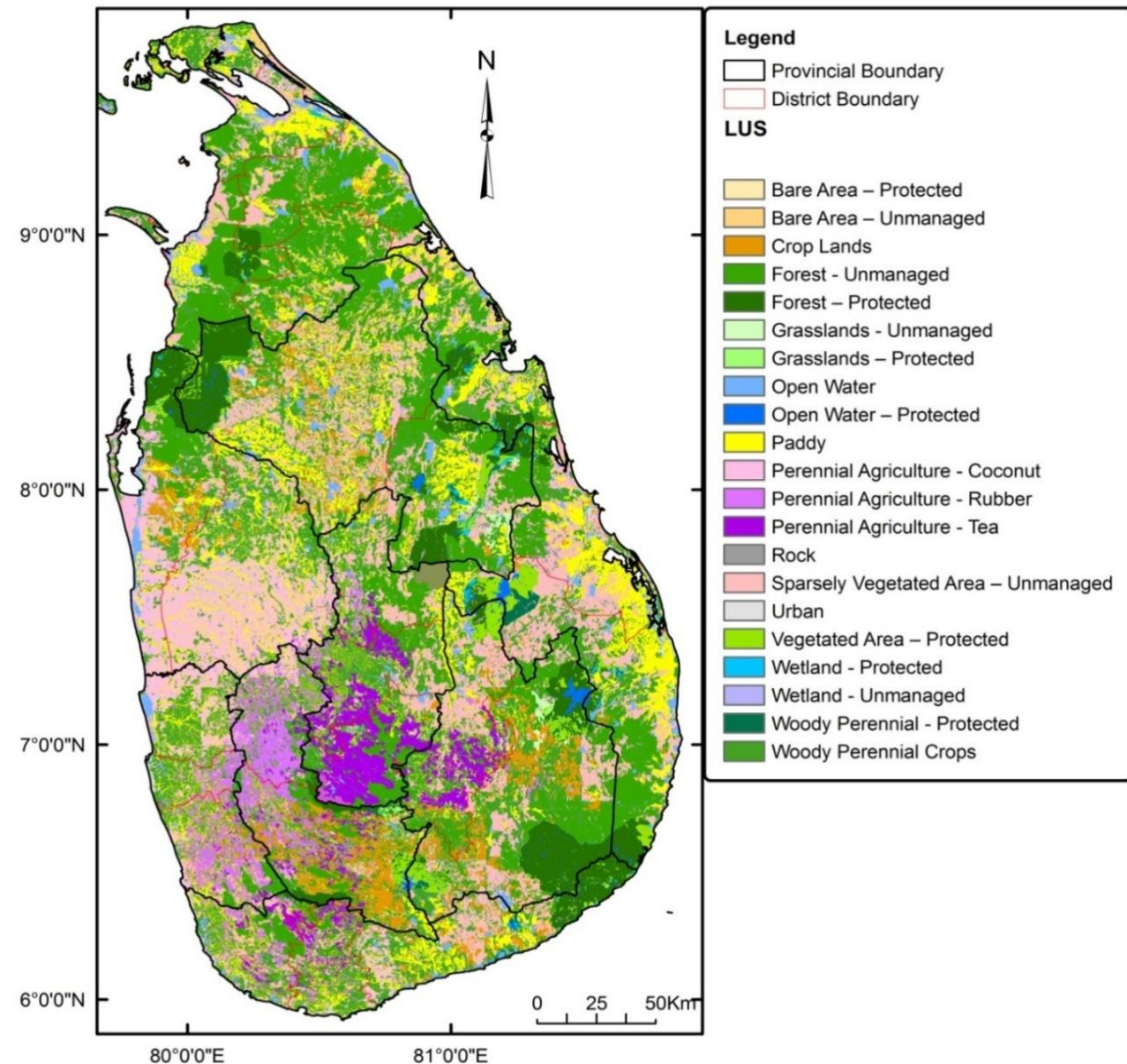
Legend

-  Arid Zone
-  Dry Zone
-  Dry & Mid Country Intermediate Zone
-  Dry & Mid Country Wet Zone
-  Wet Zone Intermediate Zone
-  Wet Zone Wet Zone

Soil Map of Sri Lanka



Land Use Systems in Sri Lanka

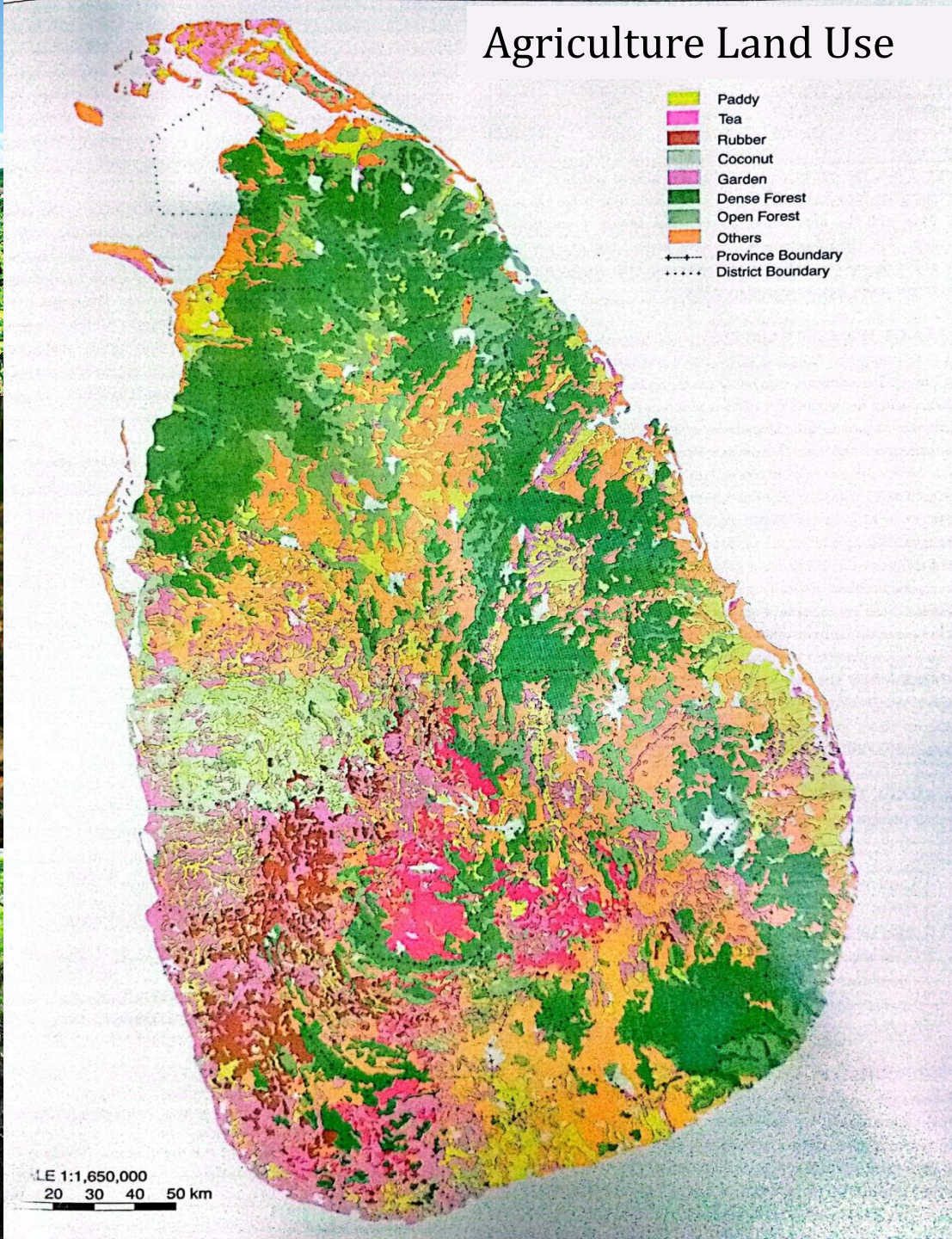


Source: NRMCM, Department of Agriculture

Land Use Types in Sri Lanka 2015

Land Use			Extent ha.	Percentage
Non Agricultural Lands				
	Built up areas		60,062	0.92
Agricultural Lands	Home Gardens		1,450,849	22.11
	Plantation Crops			
		Tea	229,262	3.49
		Rubber	207,628	3.16
		Coconut	295,552	4.50
	Paddy		922,151	14.06
	Other Field Crops		146,181	2.23
	Chena Lands		284,025	4.33
Forest Lands				
	Forest		1,187,729	18.10
	Forest Plantations		63,525	0.97
	Scrub		779,604	11.88
Water Bodies			488,028	7.44
Other			446,406	6.80
Total			6,561,000	100.00

Source: Land Use Policy Planning Department



CROP CULTIVATION & EXTENT

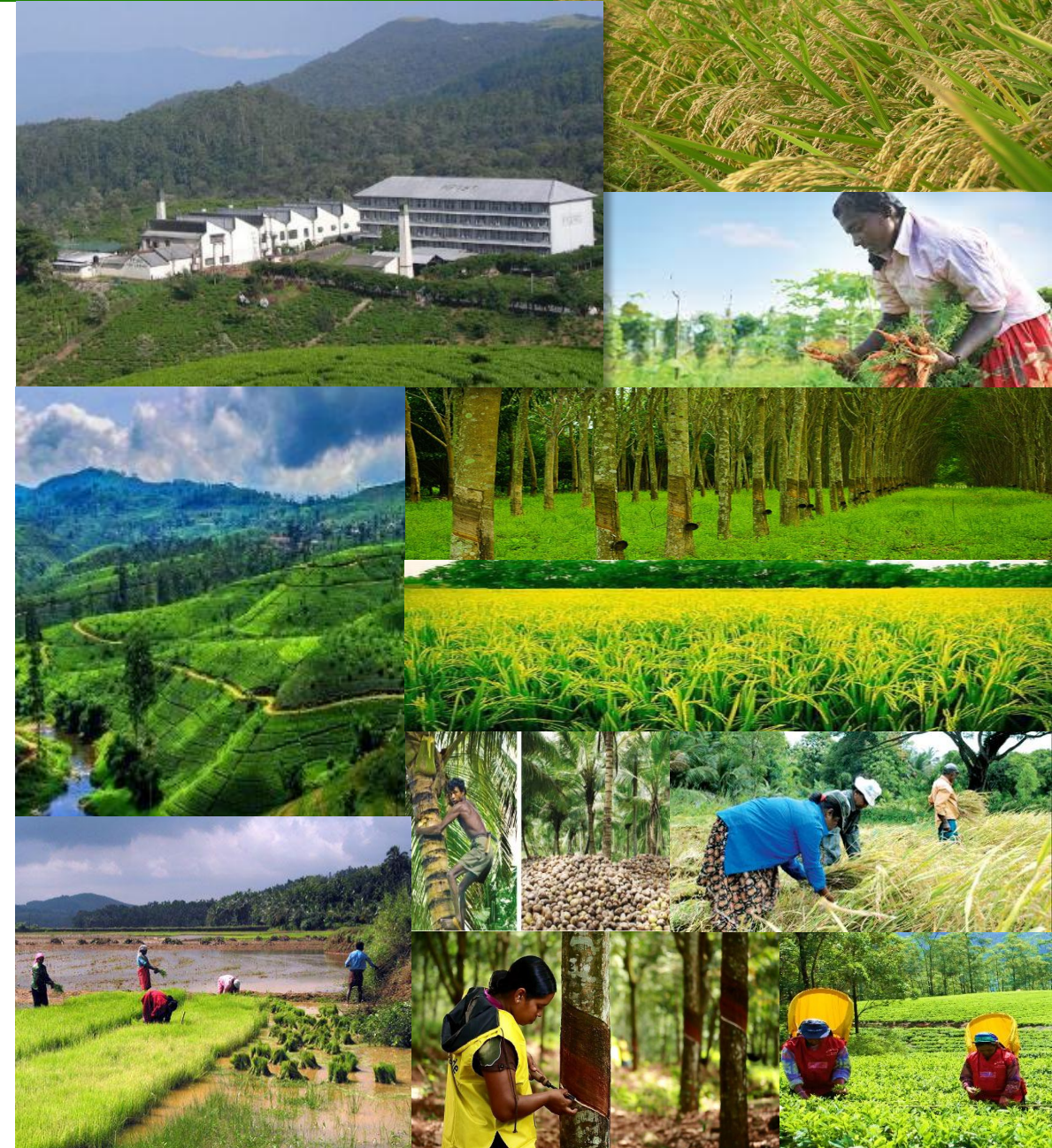
Crop	Extent (Ha)
Total Land Area	6,560,000
Rice	850,000
Other Food Crops	175,000
Fruits	115,617
Vegetables	100,000
Coconut	390,000
Tea	202,800
Rubber	136,000
Spices	77,400
Cashew	57,736
Palmyra	28,000
Cultivated Food Crops	2,132,553
Forestry	1,900,000
Inland water bodies, Mangroves, Mud flats & Salt marshes	489,000
Uncultivated	2,038,447
Total Cultivated	4,521,553

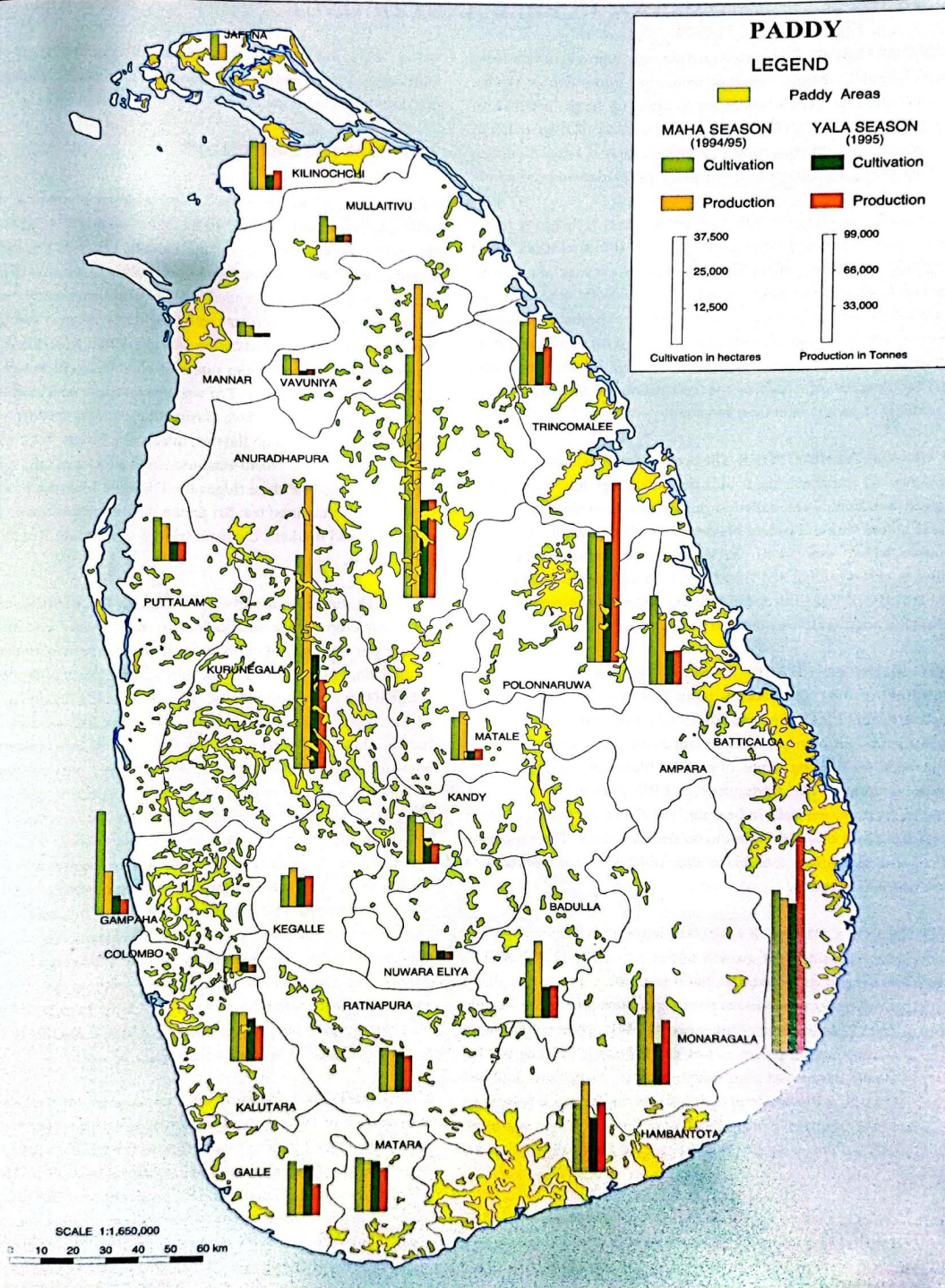
****Sri Lanka Council for Agricultural Research Policy**

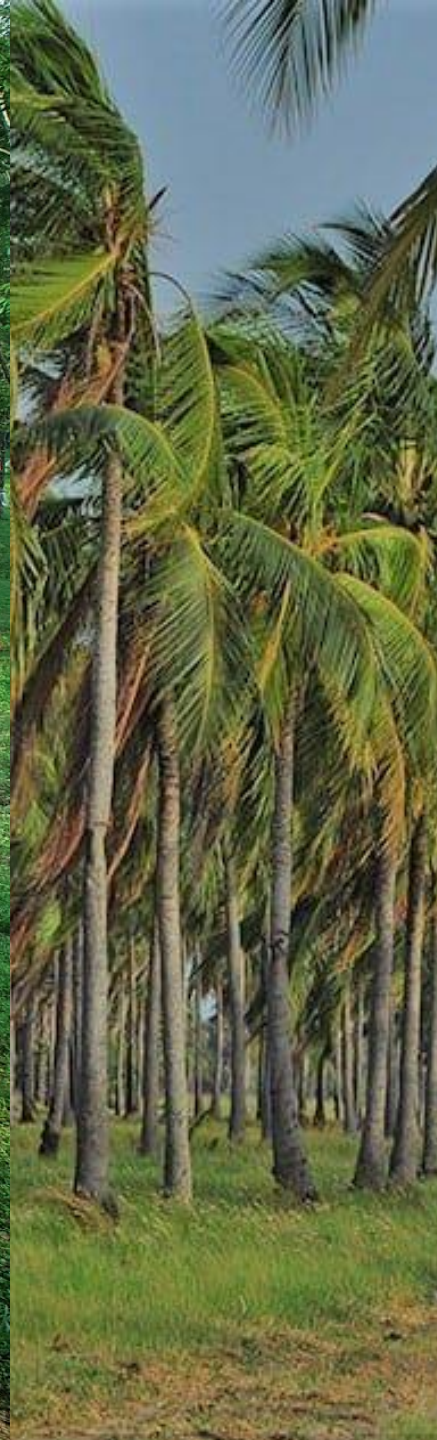
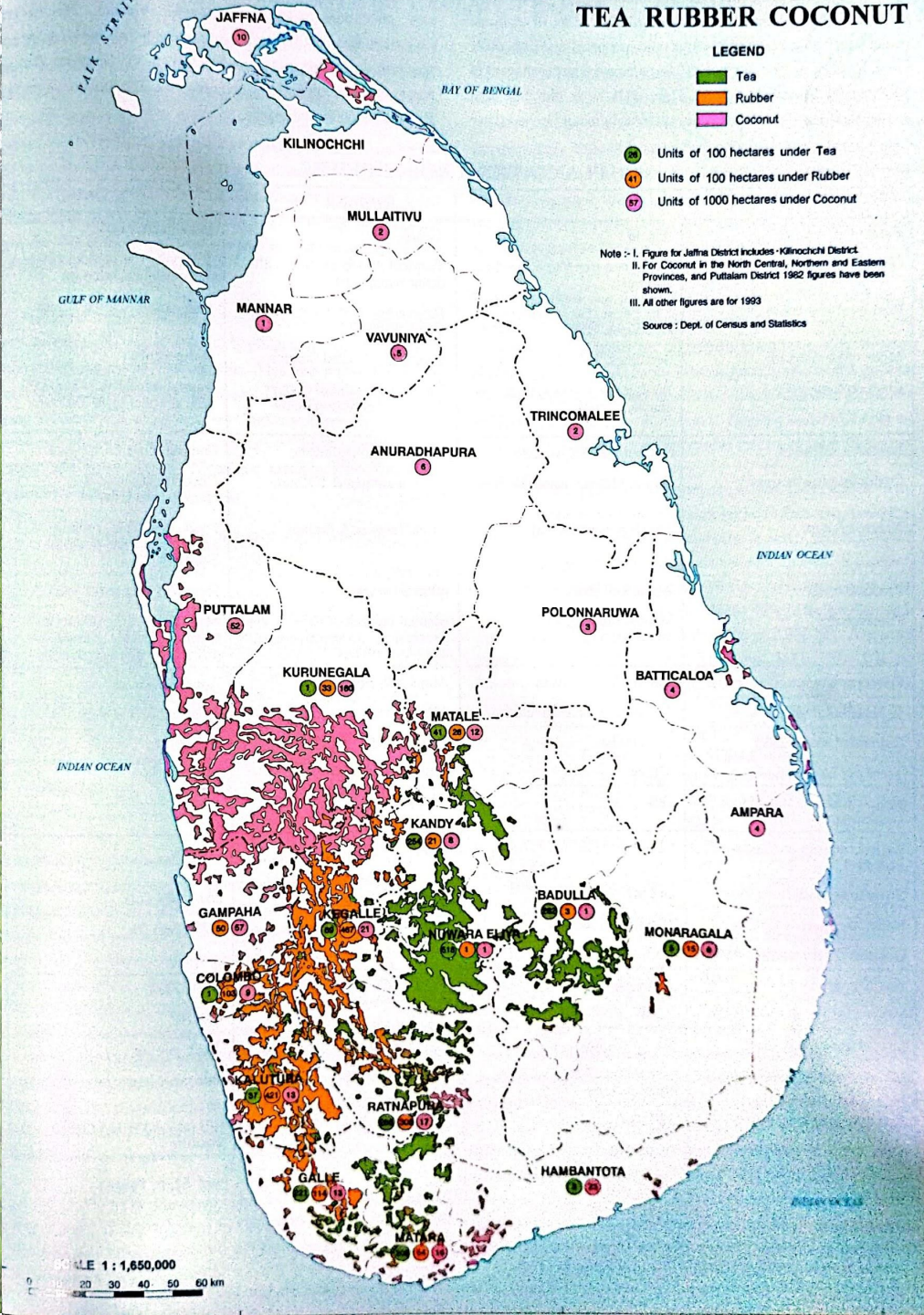


AGRICULTURE SECTOR OF SRI LANKA – 2.2 Mn Employed

- **1.2 Million Ha of Paddy** cultivation
- **390,000 Ha of Coconut** cultivation
- **120,000 Ha of Export Agriculture Crops** Cultivation
- **100,000 Ha of Vegetable** Cultivation
- **115,617 Ha of Fruit** Cultivation
- **130, 000 Ha of Other Crops** Cultivation
- **220,000 Ha** of **Tea** cultivation
- **138,000 Ha of Rubber** cultivation
- 120,000 Ha Tea Small Holdings
- 70,000 Ha of RPC Tea land
- 86,000 Ha of Rubber Small Holdings
- 47,000 Ha of RPC Rubber land
- **1.8 Million House Holds** in **Paddy** farming
- **700,000 people** in **Coconut** cultivation
- **100,000 people** in **Coconut** production
- **450,000 people** as **Tea Small Holder Operators**
- **200,000 people** as **Rubber Small Holders**
- 135,000 people in the Regional Plantation Companies
- **1 Million people** cared by **Regional Plantation Companies**

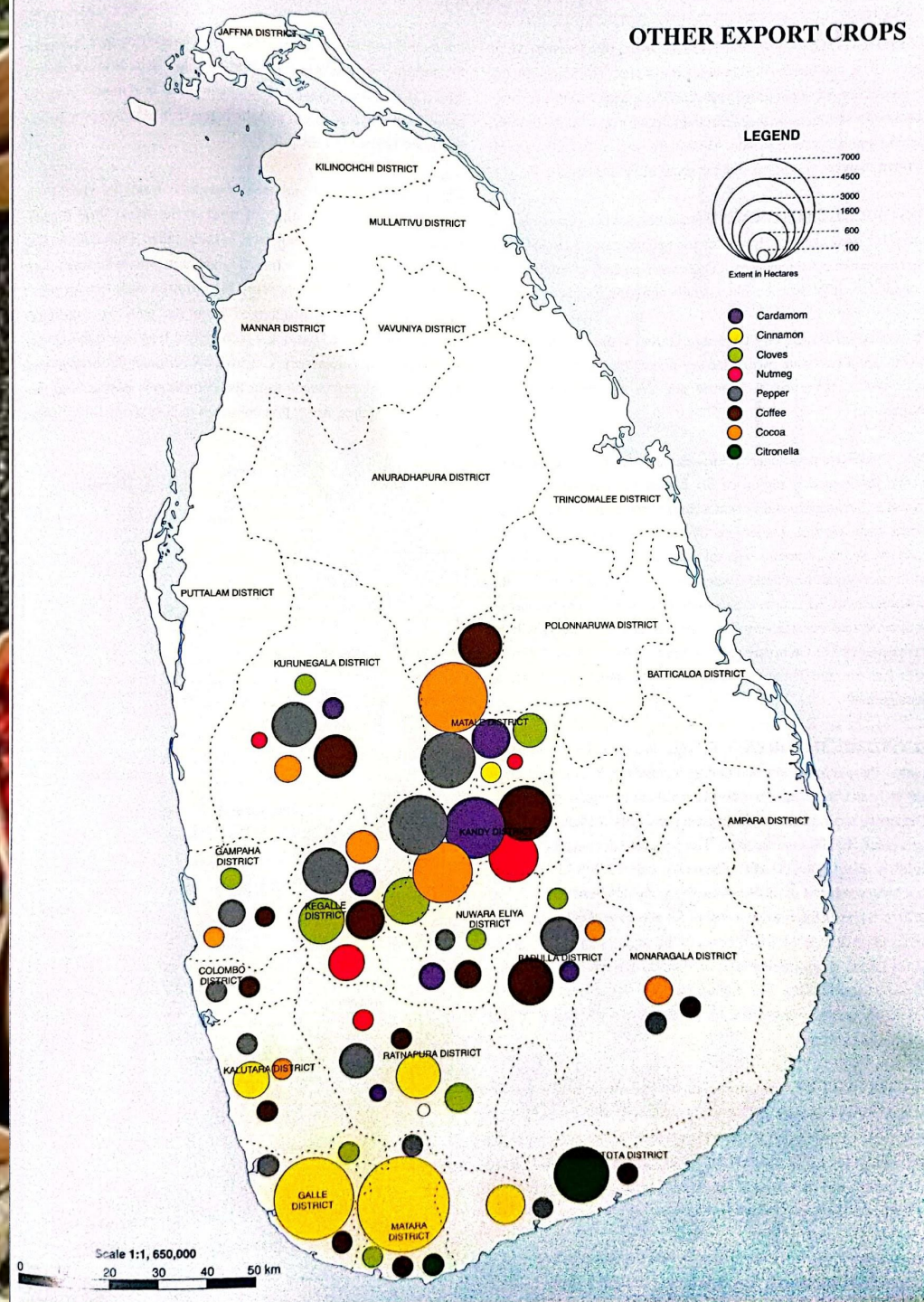








OTHER EXPORT CROPS



IMPORTANCE OF AGRICULTURE

- **FOOD SECURITY** – 90% SECURE, PRE PANDEMIC ERA
- **NUTRITION & HEALTH** – 2030 Kcal: National Average
- **NATIONAL SOVEREIGNTY**
- **SOCIAL SECURITY & COHESION**
- **POVERTY ALLEVIATION**
- **HUMAN WELL BEING**
- **EMPLOYMENT**
- **FOREIGN INCOME**
- **EFFECTIVE LAND USE**



COUNTRY SCENARIO

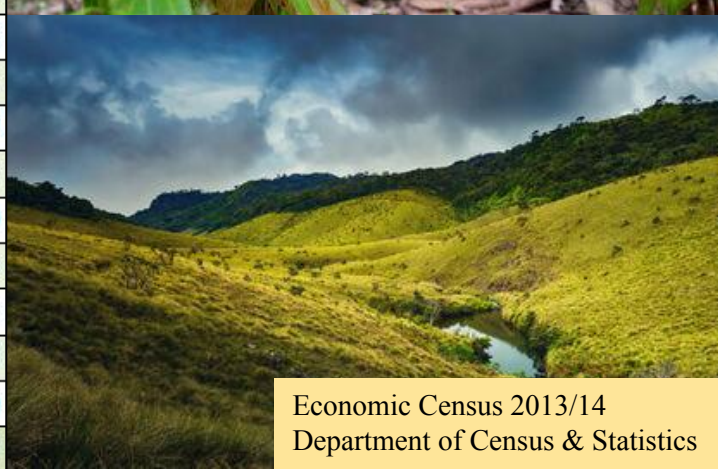
- National Land Area - 6,561,000 Ha – 6.6 Mn Ha, Excluding Inland Waters - 6,271Mn ha - 6.3 Mn.
- Agricultural Land – (42%) – 2.8 Mn Ha. Central Highlands; 92,600 Ha- 14% of total land.
- 83% of country's land & 1/3rd of agriculture land State owned.
- 1,382,000 Ha. State owned agriculture land & 880,332 Ha. Privately owned.
- Of the 42% Agriculture land; 40% in Plantations & 28% in Paddy .
- Per Capita Arable land area - 0.12 Ha per person, Land /Man Ratio 0.3 Ha/Man.
- Temperature- Low Country - Min 24.6 C & Max 32.3 C & Hill Country - Min 18.4 C & Max 27.6 C
- 64% of total land area in Dry Zone, 23% in Wet Zone & 13% in Intermediate Zone.
- Over 2000 mm Annual Rain Fall, Rural Population- 77.4%, Estate- 4.4%, Urban Land Use-6.8%.
- 5- 59 years age group – (of 21. 8 Mn population) - 63%.
- 71% of Land holdings below 1 Ha, 27% farmers landless, 82% less than 2 acres.



Agriculture Land Extent & % Distribution by Use of Land -2014



District	Agricultural Land extent (Acres)	Percentage distribution of Agricultural area by use		
		Arable Land	Land Under Permanent crops	Other land
Colombo	65,324	19.6	62.5	18.0
Gampaha	170,453	21.7	65.9	12.4
Kalutara	222,583	19.0	62.9	18.1
Kandy	254,263	16.7	59.3	24.0
Matale	183,541	34.8	49.2	16.0
Nuwara Eliya	228,145	13.0	72.8	14.2
Galle	210,609	19.4	62.2	18.4
Matara	207,799	21.0	63.5	15.5
Hambantota	235,020	45.1	42.9	11.9
Jaffna	53,741	62.1	23.0	14.9
Mannar	41,808	67.0	28.1	4.9
Vavunia	64,687	62.7	26.0	11.3
Mullaitivu	63,838	60.6	23.5	15.8
killinochchi	75,043	64.7	25.8	9.5
Batticaloa	107,335	86.3	7.3	6.4
Ampara	215,344	82.2	7.4	10.4
Trincomalee	88,359	82.5	7.3	10.2
Kurunagala	672,774	35.6	53.7	10.7
Puttalam	255,648	25.0	59.3	15.7
Anuradhapura	536,477	72.0	16.7	11.3
Polonnaruwa	209,194	74.0	13.0	13.0
Badulla	295,228	37.7	43.6	18.8
Monaragala	320,441	51.6	39.2	9.3
Ratnapura	372,142	14.0	67.3	18.7
Kegalle	253,805	10.9	70.1	19.0
Sri Lanka	5,403,600	39.8	45.9	14.3



AGRICULTURE EMPLOYMENT

- **8.4 Mn** employed in SL - **Agriculture 2.2 Mn (26%)**; GDP contribution only 7%.
- 700,000 in Coconut, 450,000 Tea Smallholders, 200,000 Rubber Smallholders, **1.8 Mn Households** engaged in Paddy Farming–**Subsistence** scale and not Large **commercial** scale agriculture in general.
- Own Account **1.2 Mn (49%)** & Family Workers **521,000 (21%)**.
- Total **Family & Own Account Workers 1.7 Mn = 70% of Agricultural Employees**.
- **91.4% of all Agricultural Workers – Informal Sector** (Less than 10 employees).
- **No guarantee of regular work, Wages, Statutory Dues** and other Benefits & Facilities of Corporate Sector Agriculture Workers.



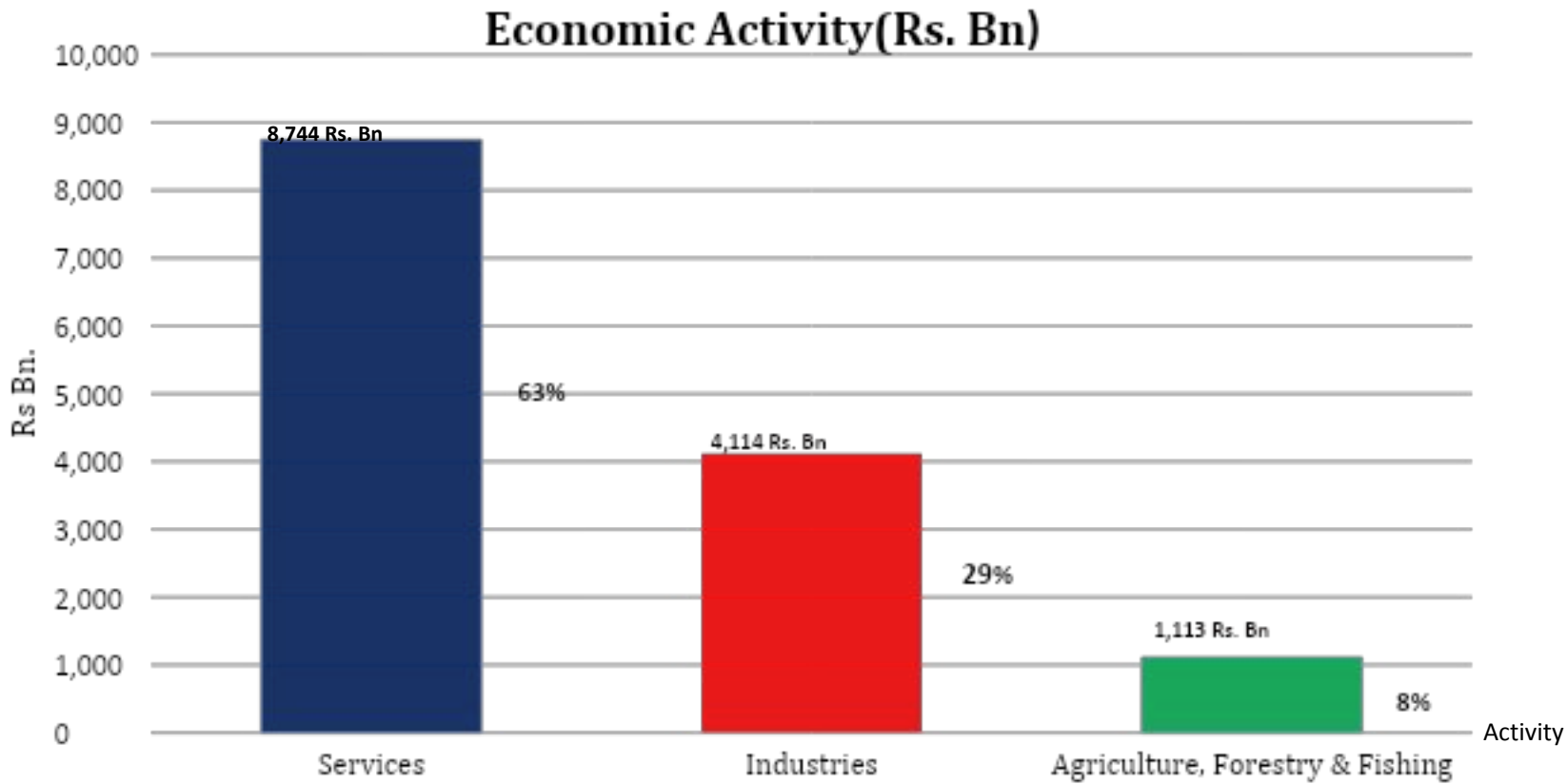
Distribution of Agricultural Holdings by Sector in 2014 and 2002

Group	2014				2002			
	Holdings		Extent		Holdings		Extent	
	Number	%	Acres	%	Number	%	Acres	%
Small Holding sector	4,345,674	99.8	4,644,276	82.3	3,246,377	99.8	3,846,057	80.2
(a) Less than or equal to 1/4 of an acre	2,034,331	46.7	239,677	4.2	1,462,904	45.0	202,182	4.2
(b) Above 1/4 of an acre	2,311,343	53.1	4,404,599	78.1	1,783,473	54.8	3,643,875	76.0
Estate Sector	7,447	0.2	999,001	17.7	6,577	0.2	950,947	19.8
All Sectors	4,353,121	100.0	5,643,277	100.0	3,252,954	100.0	4,797,004	100.0

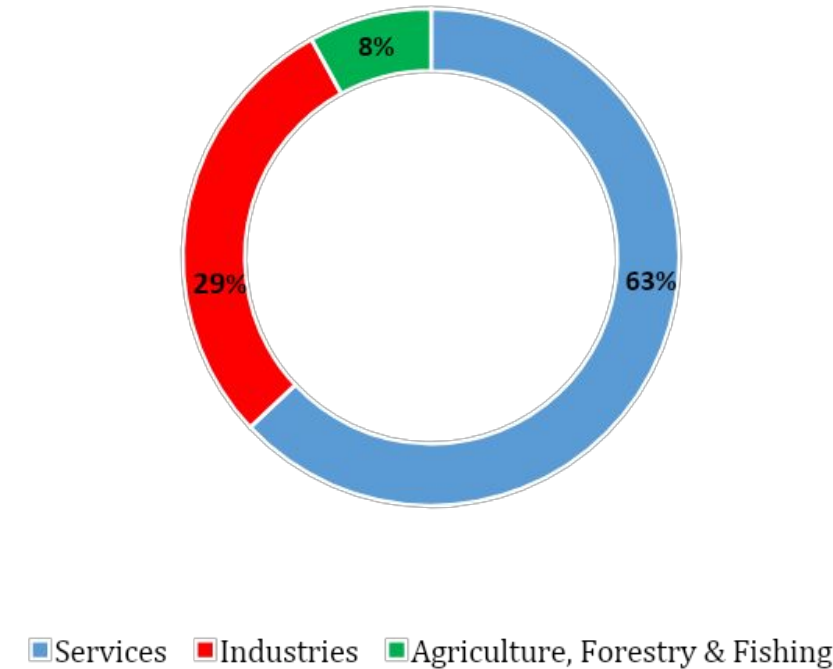
Agricultural Holdings & Extent – 1982,2022,2014



Gross National Income - 2019



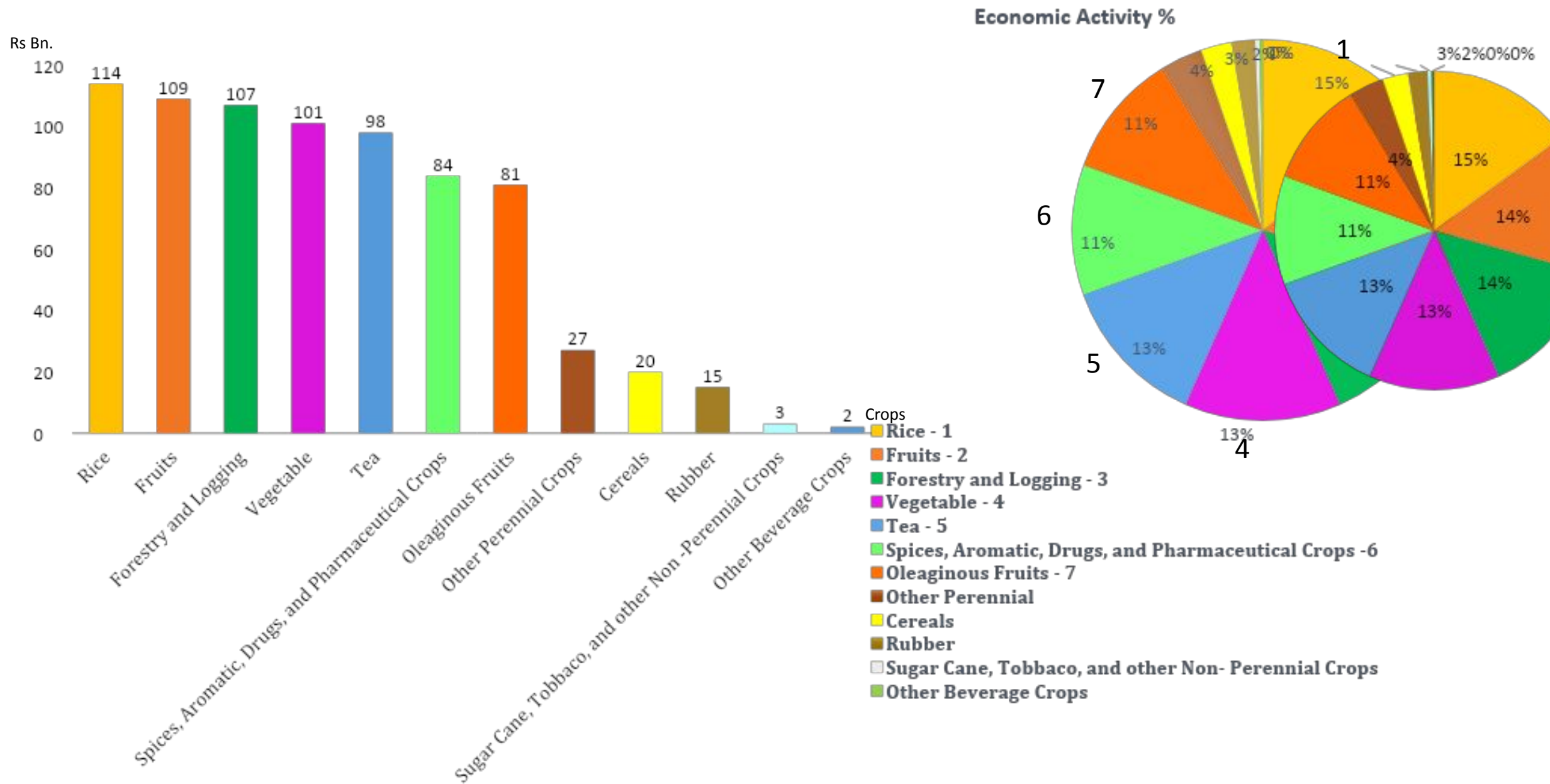
Economic Activity (%)



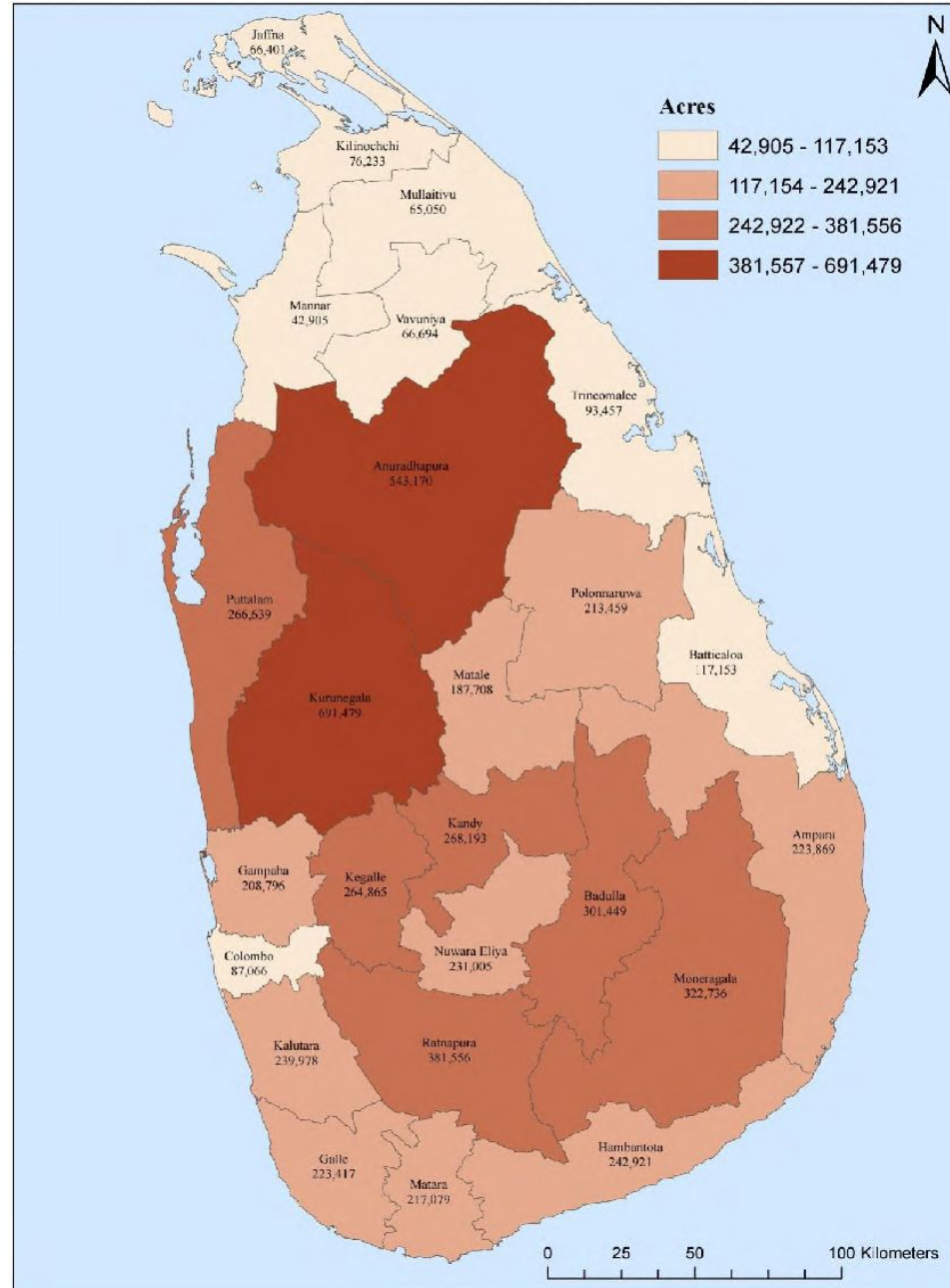
	Net Income (Rs Bn.)	Percentage
Services	8,744	63%
Industries	4,114	29%
Agriculture, Forestry & Fishing	1,113	8%



Gross National Income - Industrial Origin 2014 - 2019



Distribution of Agricultural Land Extent by District - 2014



*Note: Including the extent of land in the holdings
¼ acres and below*

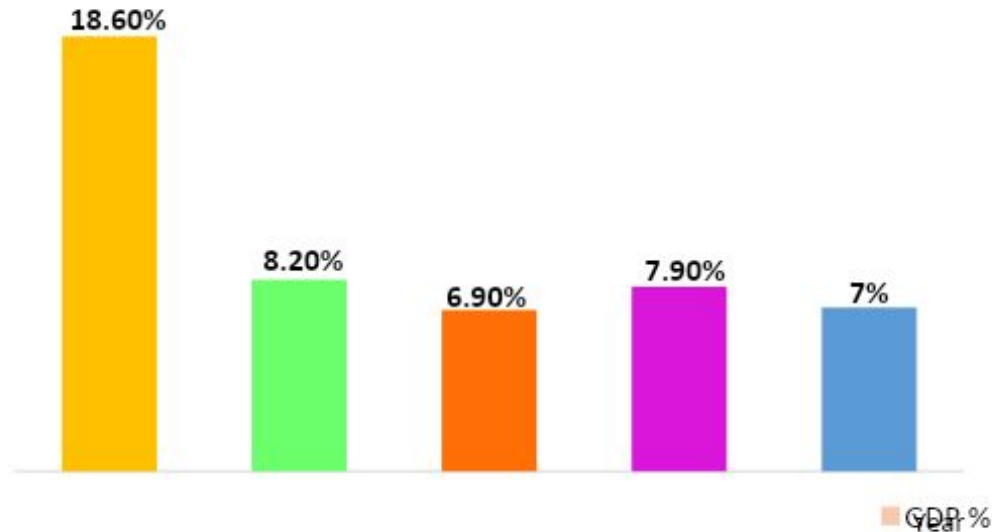
Provincial Gross Domestic Product – Current Market Prices (Rs Bn.) - 2018

Crops	Total Rs. Bn.	Highest		2 nd Highest		3 rd Highest	
		Province	Percentage	Province	Percentage	Province	Percentage
Rice	132	Eastern	25.56%	North Central	25.54%	Southern	12.89%
Oleaginous Fruits	110	North Western	33.45%	Western	14.60%	Southern	14.00%
Tea	108	Central	33.51%	Southern	26.87%	Uva	7.98%
Fruits	98	North Western	18.53%	Eastern	15.95%	Western	15.58%
Spices, Aromatic, Drugs, & Pharmaceutical	87	Southern	33.24%	Sabaragamuwa	20.51%	Central	17.54%
Other Perennial	24	Sabaragamuwa	21.95%	North Western	17.38%	Southern	17.66%
Rubber	21	Western	44.18%	Sabaragamuwa	31.85%	Southern	10.16%
Cereals	20	North Central	32.09%	Uva	29.46%	Eastern	12.42%
Sugar Cane, Tobacco & Non perennials	3	Uva	54.20%	Central	19.30%	Northern	13.59%
Growing of other Beverage	3	Central	58.69%	Uva	13.91%	Sabaragamuwa	12.15%

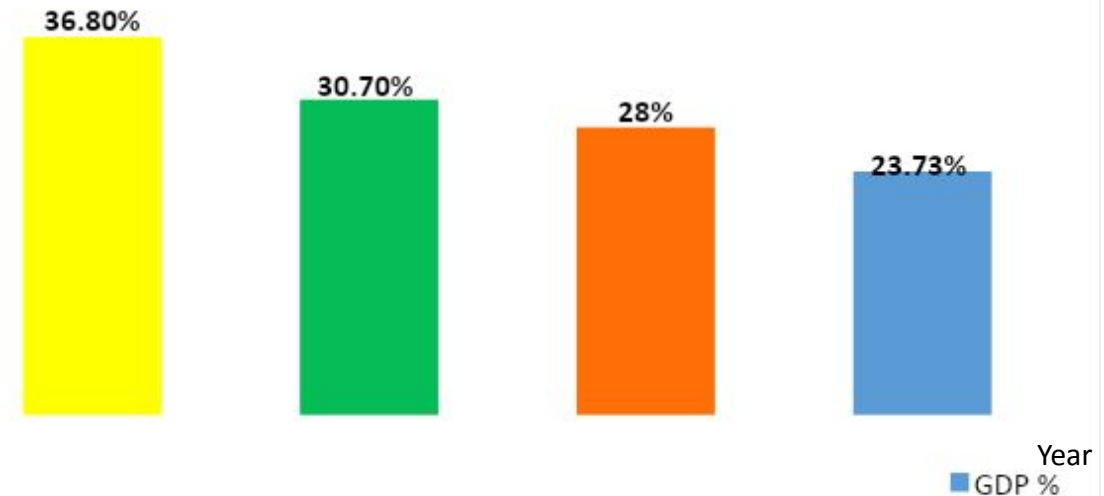
CURRENT STATUS & TRENDS - AGRICULTURE SECTOR

Continued decline in the contribution of Agriculture Sector in GDP

GDP

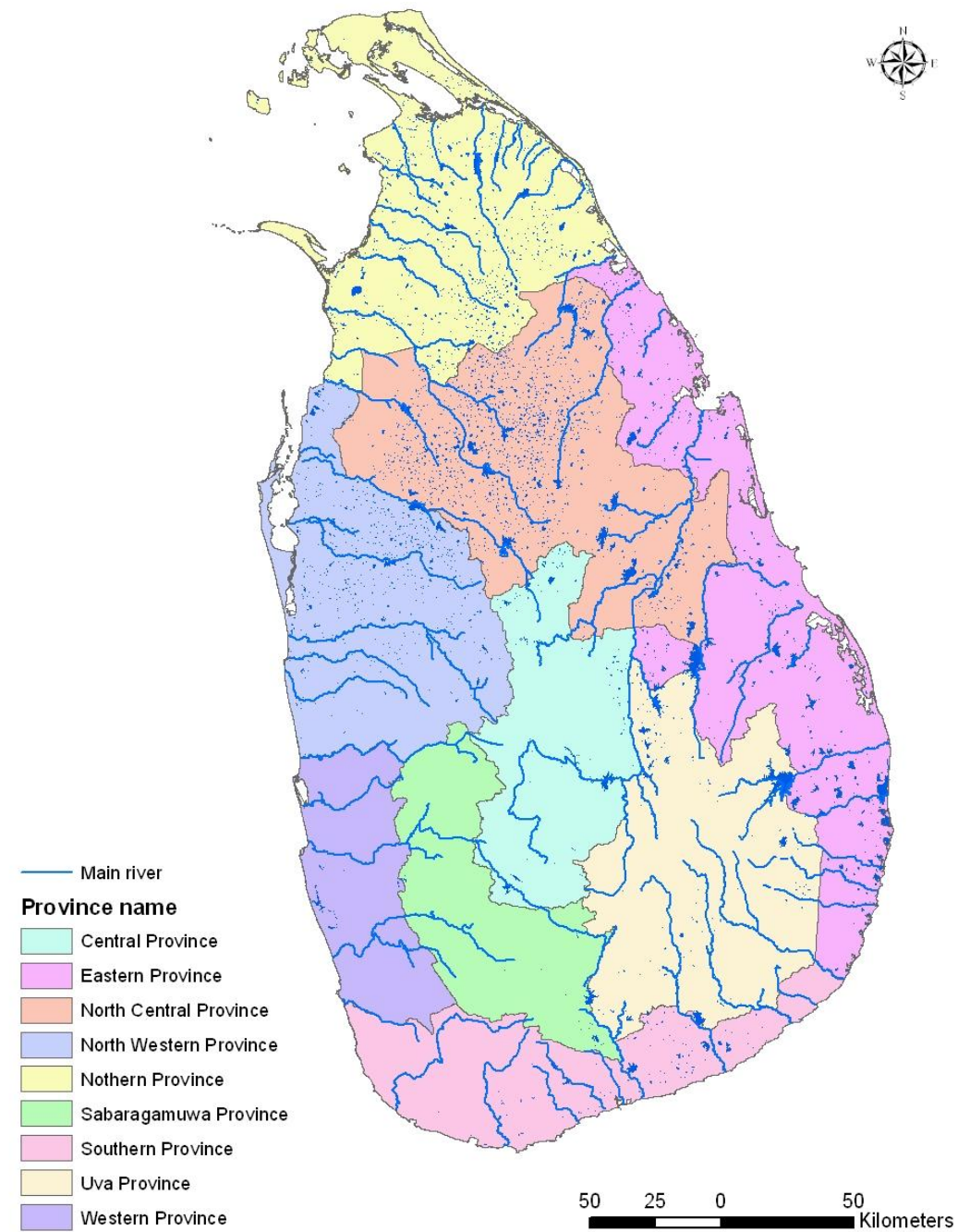


EMPLOYMENT

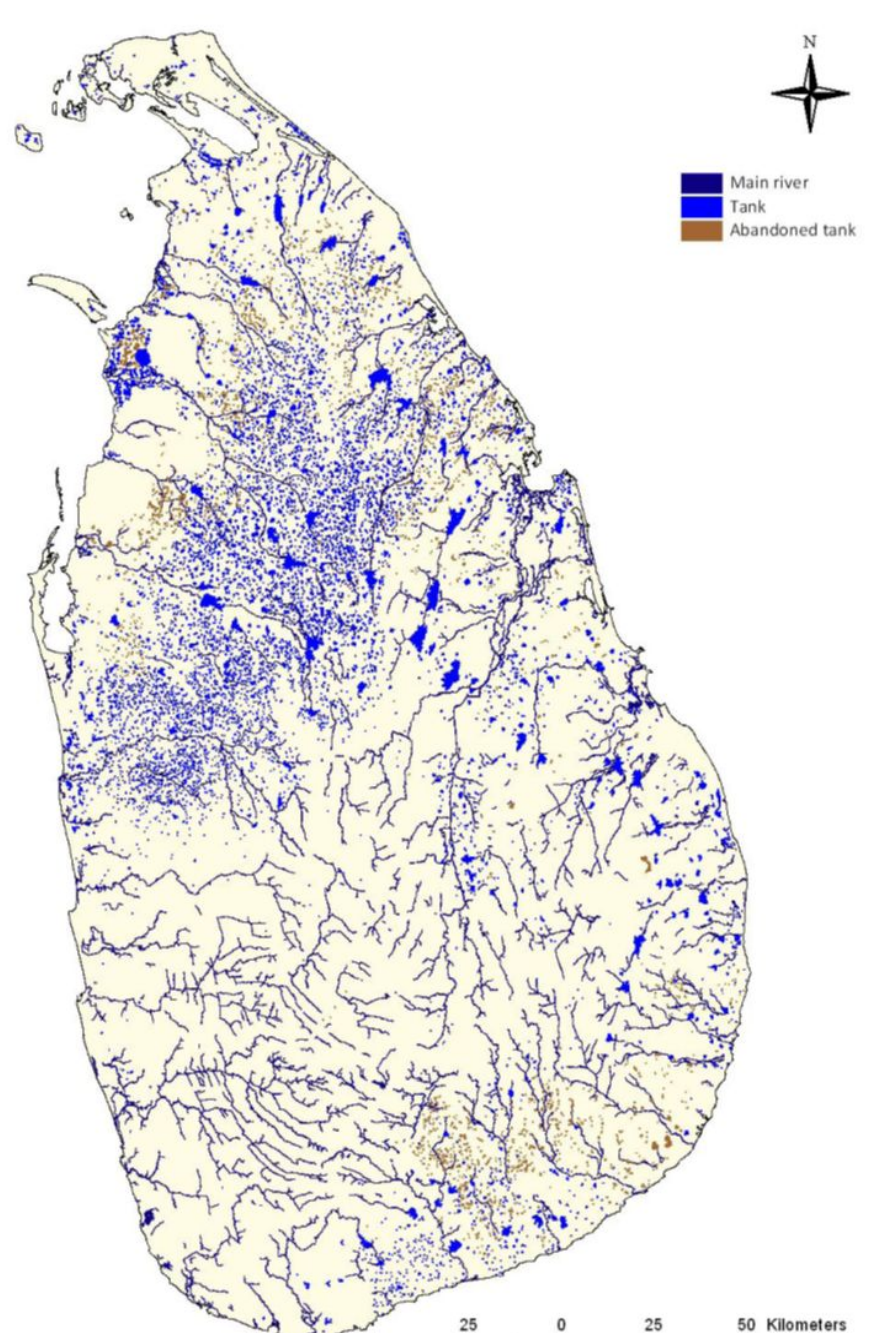


- Although contribution to GDP declined (50% last two decades), 2nd highest contribution to employment.
- Main Source of livelihood of rural population accounting for 77% of total national population.
- Lowest Gross Wage/Salary by Sectors – Median of Rs.20,100 Vs. Service Rs.38,000, Industry Rs.30,000.
- A phenomenon seen in South Asia (2010 to 2019) –Agri employment change -8.5% (Manufacturing +1.3%)

Major Rivers of Sri Lanka



Rivers and Tanks in Sri Lanka



Rivers in Sri Lanka



Legend

Rivers



0 12.5 25 50 75 100 Km

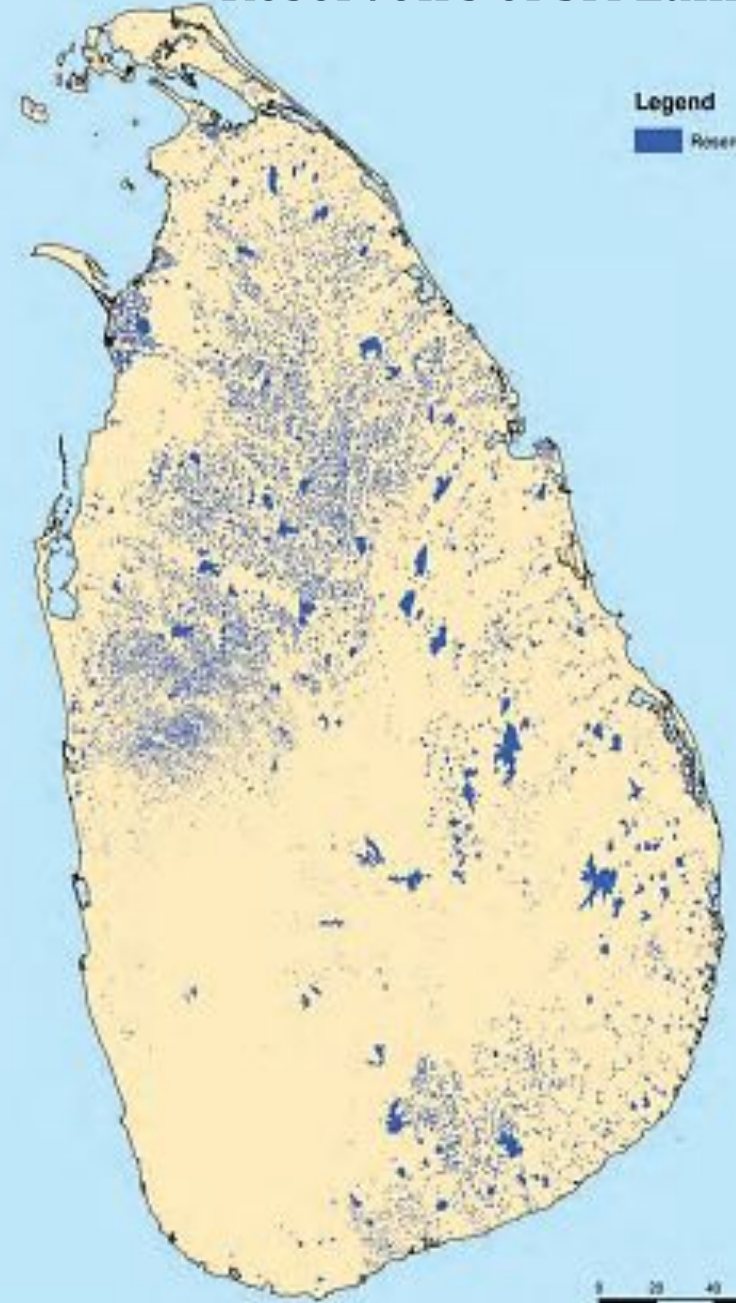


Reservoirs of Sri Lanka



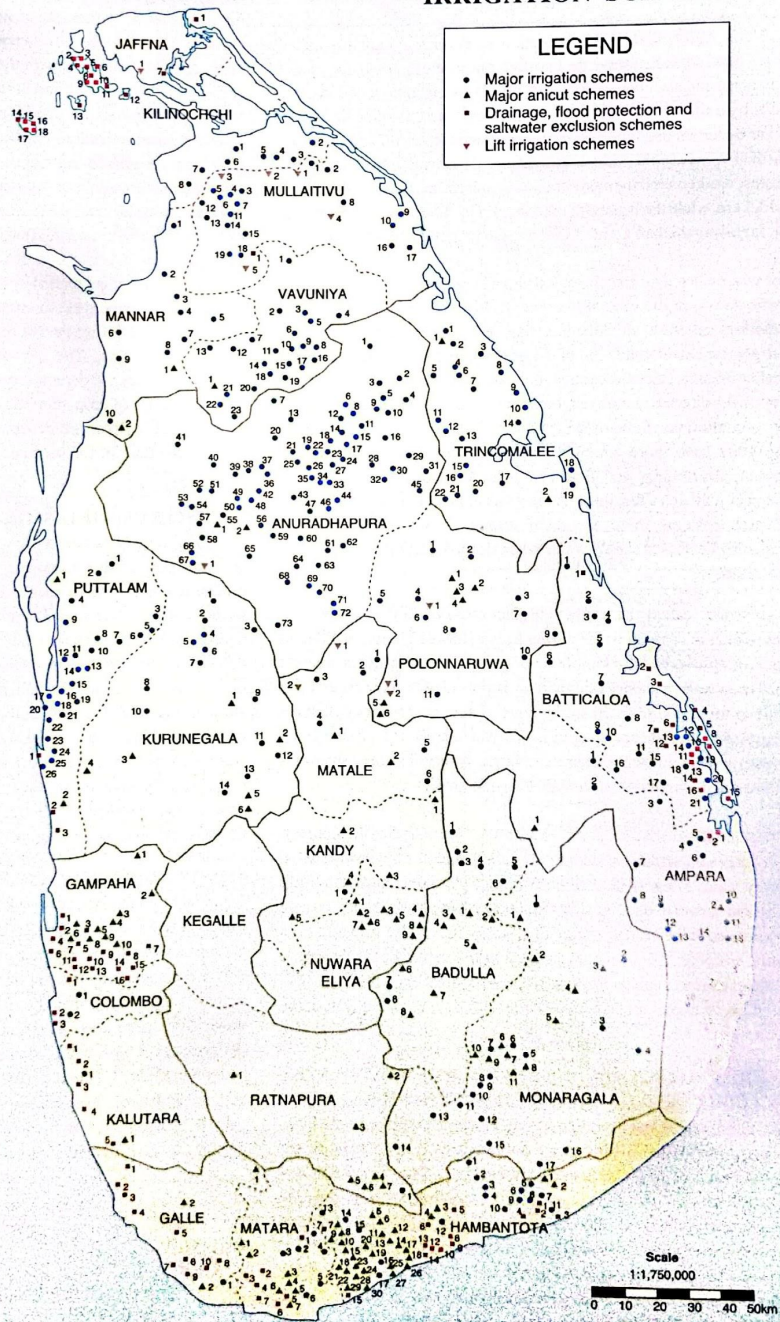
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Reservoirs and Tanks

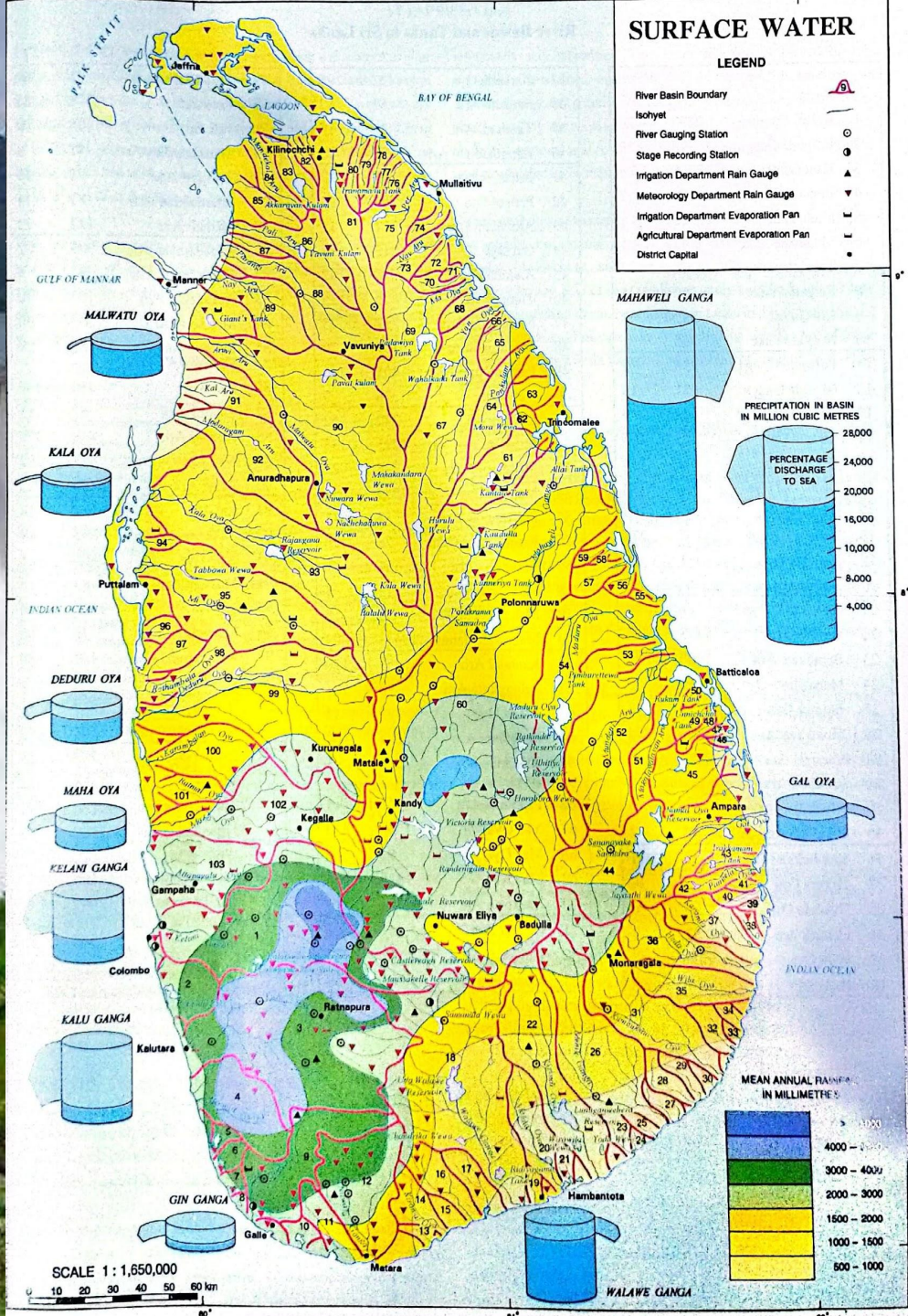


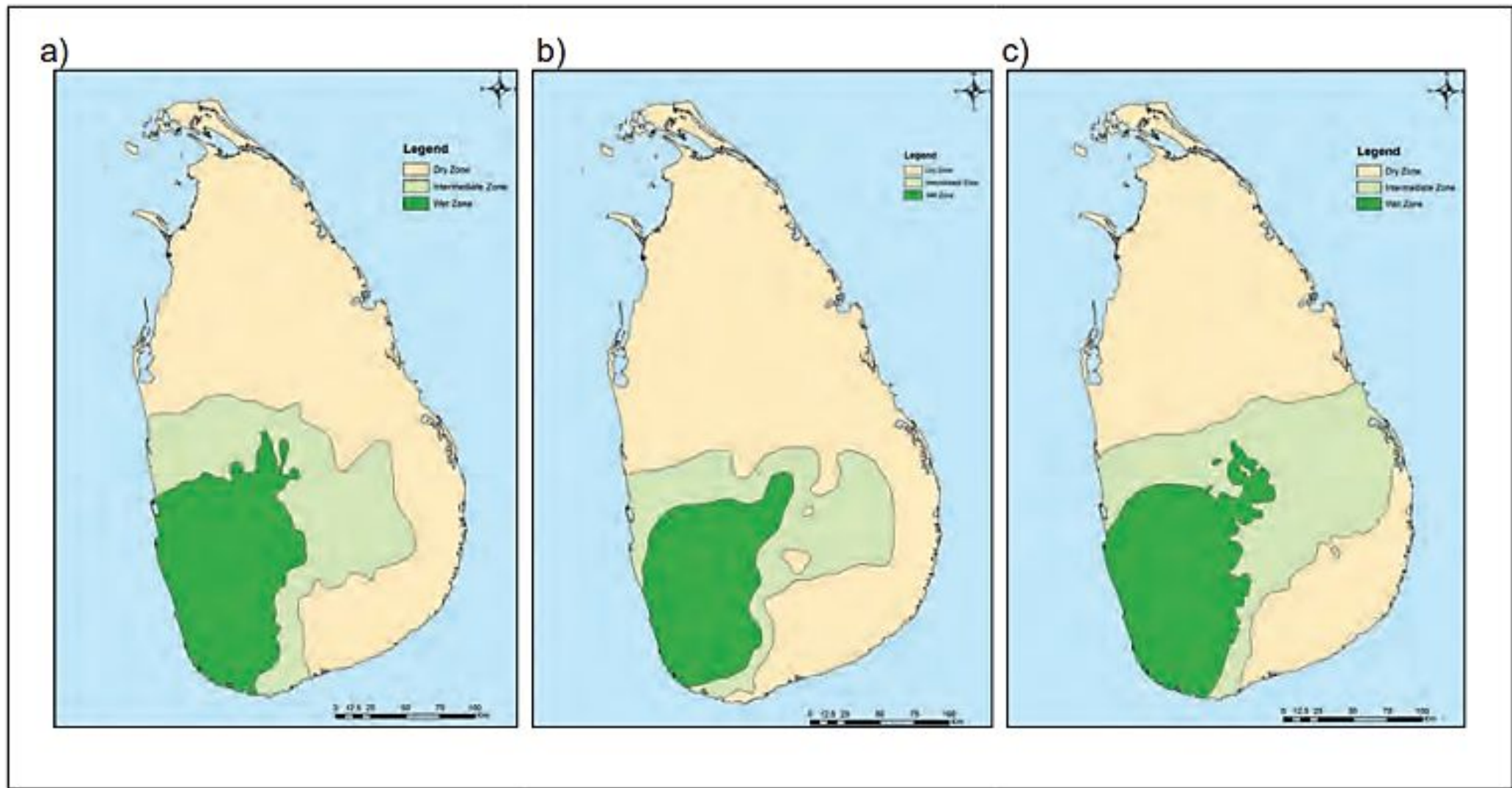
0 20 40 60 Km

IRRIGATION SCHEMES



SURFACE WATER



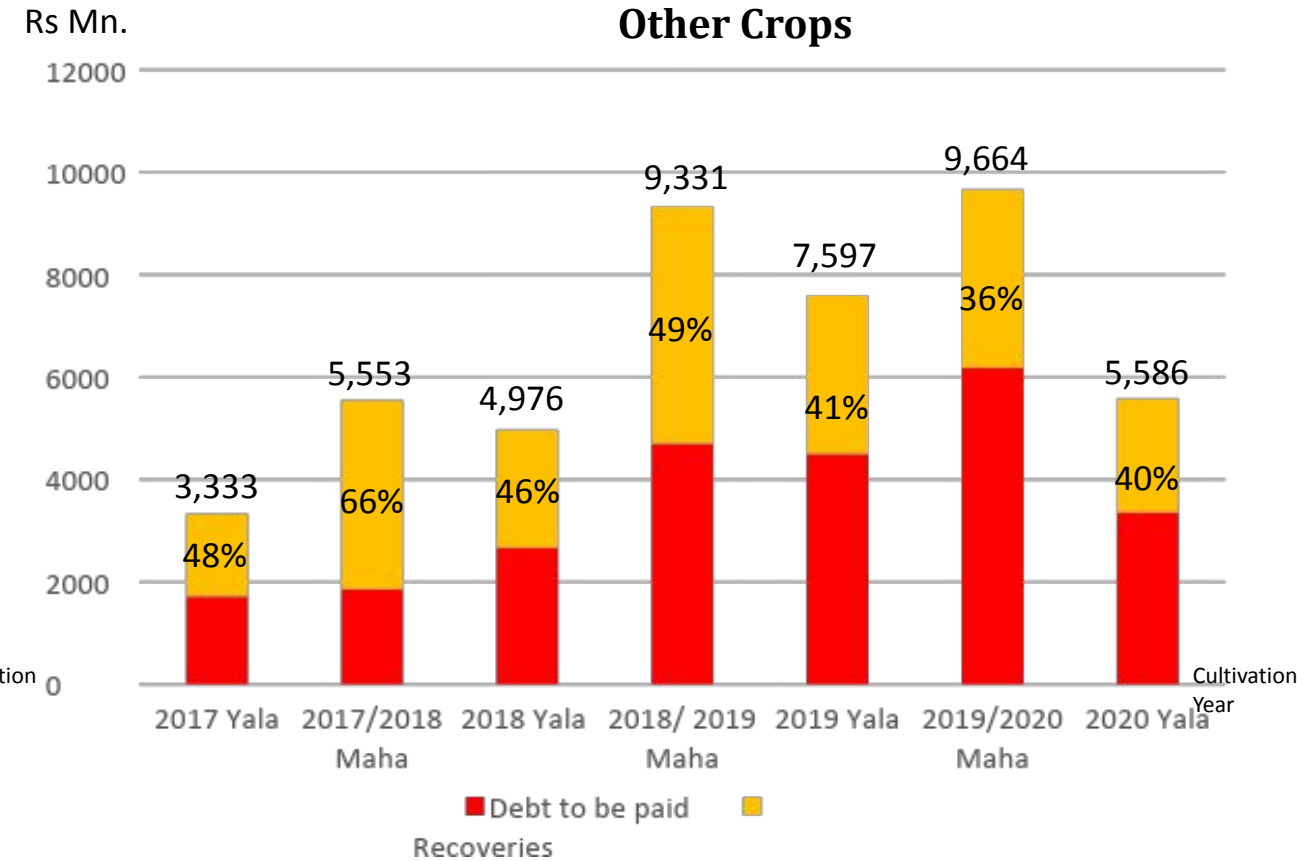
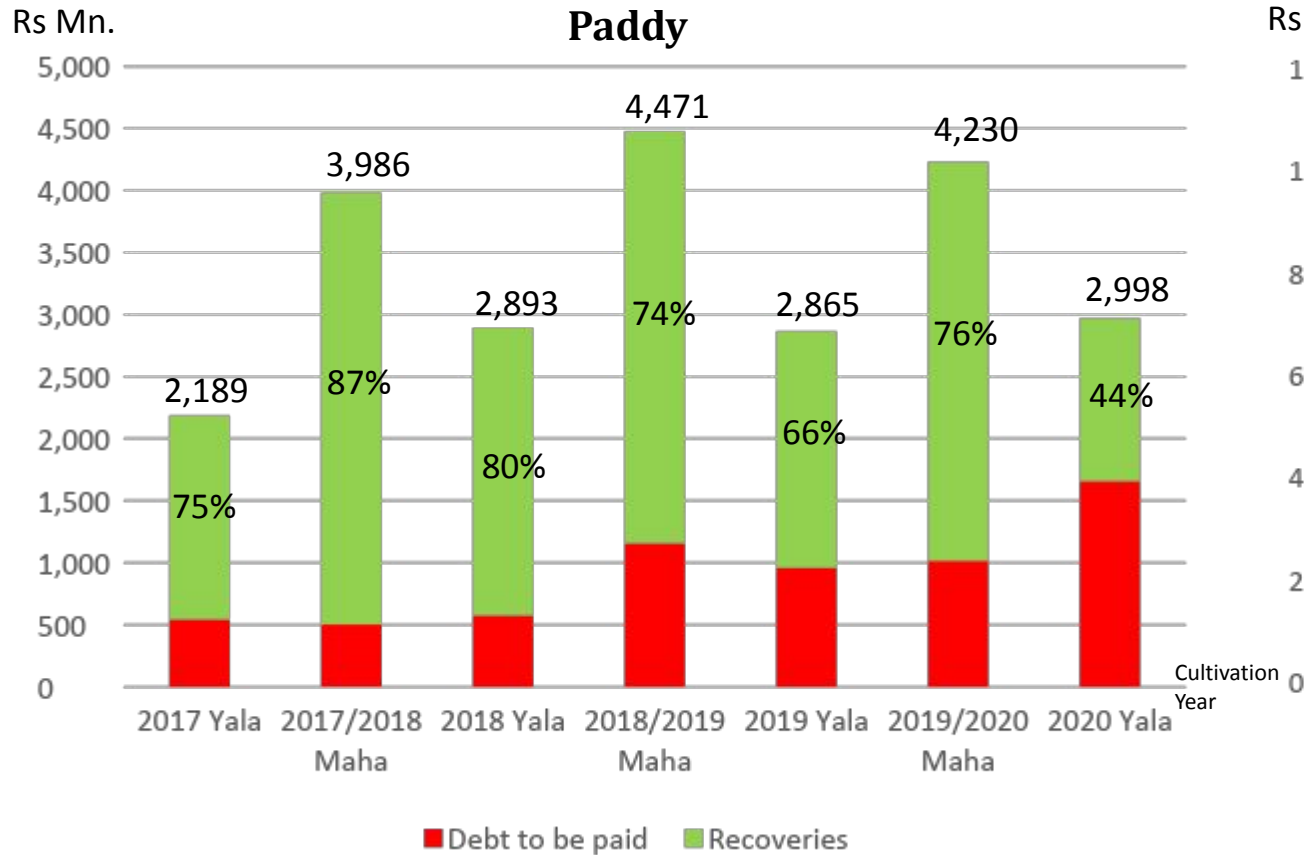


Changes in Climate Boundaries in 2050

a) Baseline map b) current map (based on observe data from 1971-2000 from Met Dept. c) projected change in 2050 (using the UK Hadley Centre for Climate Prediction and Research Model, HadCm3, applied on the IPCC Scenario A1B)

(Source Muthuwatta and Liyanage, 2013)

DEBT CYCLE -Paddy & Other Crops - Loans



	2018	2019
Area Insured (Ha `000)	1,034.1	1,138
Collected (Rs. Mn.)	49.1	54.1
Total Indemnities Paid (Rs. Mn.)	9.4	6.0

A GIANT – TIED DOWN BY THOUSANDS OF SMALL STRINGS



SECTOR FEATURES

- **Very Low land & labour productivity.**
- **Improper Land use**, agronomy and agricultural practices.
- **Small size of Holdings**; Low farm family income due to small land ownership (TSH 60 Perches, Paddy 2 Acres).
- **Declining land** under cultivation; Shrinking of cultivable land due to urbanization, population growth and land degradation.
- **Poor Knowledge & Awareness** by Operators; under-utilization and misuse of land.
- High **labour component** cost in the **COP &** High cost of cultivation inputs.
- **Insecurity of Tenure & ownership** terms.
- **Diseconomies of scale** – (Average size of TSH land @ 69 perches, Large estates 200-250 Ha., Paddy 2 Acres).
- **Low use of Technology, Innovation, Mechanization & Automation.**
- **Climate Impact** – Minor change cause significant effect; small country size, scale of plots & variation in topography.
- **Subsistence & Homestead** Crop Farming System, **Shifting Agriculture** (Chena) system.
- No guaranteed **price, seasonality** of employment ,No National **Crop Insurance** Policy & Social Safety Net.
- **Government policies-** Inconsistent, illogical, unscientific, irrational, & not practical or economical.



SECTOR FEATURES

- **Multiplicity of State Agencies & Ministries**, Multiple land ownership within the State itself.
- Complex **Administration & Land Governance** System-(39 operational laws).
- **Information asymmetry** related to **markets** & access to markets.
- **Infrastructure**, facilities, transport & storage.
- **Plethora of Laws**, Excessive rules , regulations & controls & long-drawn out approval protocols.
- **Archaic** Labour laws.
- **Political will** to make unpopular decisions.
- Accelerated **out migration** of skilled & talented people from the industry.
- Low **status , societal acceptance & dignity** for agriculture work.
- **Low incentive** for **producer** for quality, cost & effort.; no equitable and fair value distribution .
- **Commoditization** of the product – (Less than 10% value added after 150 Years of trading in Tea).
- **Commoditization** & very low **Value Addition**.
- Unexplained **price fluctuations**.
- **Product range & quality** - Changing consumer preference for variety, usage, application.
- **Stranglehold of the retail trade** – (53% of profits with Retailer & 33% with Blender).
- Low support for institutional **research & development**.
- Weak **extension** and **research** leading to low awareness and knowledge.
- Increasing **biotic and abiotic stresses** due to climate change.
- Inadequacy of improved **varieties/** other appropriate **technologies**.
- Inadequacy of **quality seed** and planting material of improved varieties.



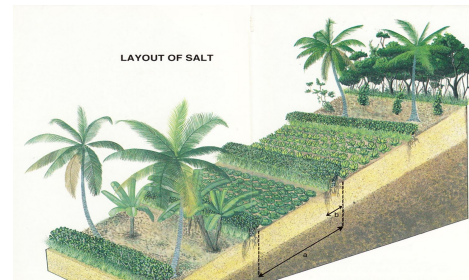
WAY FORWARD

- Non-partisan **Expert Panel** to advice, set policy.
- **Stop Government meddling** in agriculture.
- **National** Land Policy, GIS Mapping of Agricultural Land.
- **Centralize** Agriculture related Ministries– Land, Irrigation, Forestry, Plantations, Mahaweli.
- **Consistent** & continuous **logical, science-based, research** supported **agriculture policy**.
- **Liberalize Land Tenure** & Guarantee of continuity free from any ambiguity.
- **Free up land** held by State for large scale commercial agriculture.
- **Consolidate** small holdings into viable commercial scale holdings.
- **Support** Research, Extension & Awareness amongst the stakeholders.
- Use **State resources** as green field enterprise initiatives.
- **Encourage** wider technology usage, automation & mechanization.
- Create a **level playing field** for producer by giving fair value.
- Address **information asymmetry** issues.
- Create **supportive infrastructure**- storage, value addition & transport network.
- Encourage, facilitate & promote **External Investments** in Commercial agriculture and change historical populist mindset.

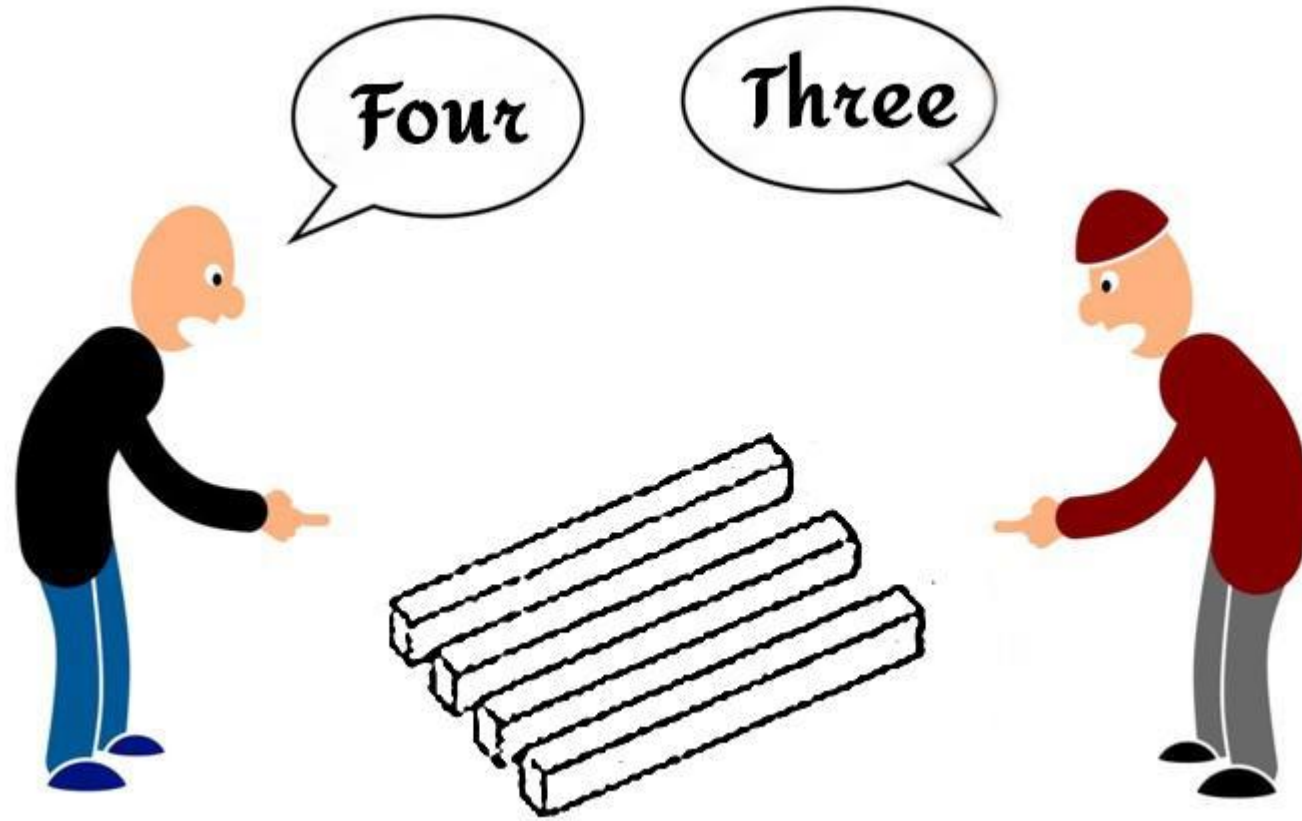


WAY FORWARD

- **Central Digital Inventory** of land; classified & assigned based on land use/crops.
- National **Land Use & Land Suitability** Evaluation , **Land Utilization**.
- Effective **land tenurial** reforms for long term engagement & investment.
- **Equitable** land use policy applicable to all sectors (5000ft. limit for harvesting specifically grown fuelwood Vs. clear felling by state agencies).
- Provide a significant **stimuli** (Conversion of Coffee to Tea).
- **Prioritize agriculture** oriented land use.
- **Weather forecasting** & an early warning system.
- Strengthen drought & flood **relief systems** & stronger , reliable, effective **safety net**.
- Stop **illogical expropriation** of crop bearing & productive agriculture land.
- Multidisciplinary, Interdisciplinary & Integrative **research & development** focus.
- Public, Private & Producer **synergy**.
- **Inter institutional** coordination & implementation.
- Address land **degradation, encroachment, erosive land use** issues.
- **Monitor** agricultural land , fragmentation, scarcity, conversion to other uses.



Change The Perspective





**STILL THE
WORLD'S FINEST
TEA**

