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Sri Lanka

Country Presentation

For Visiting Researcher Programme 2019B, ADRC, Kobe, Japan



A.M.R.N.K. Alahakoon
Assistant Director (District)
Disaster Management Centre
Ministry of Defence
Sri Lanka
Visiting Researcher (2019 B)
ADRC, Kobe, Japan



Content of the Presentation

1. General Information of the country
2. Natural hazards in the country
3. Disaster Management System
4. Disaster Management Strategy, Policy and Plan
5. International Cooperation
6. ADRC counterpart (organization name & Contact Information)
07. Research Topic





World Heritage Sites of Sri Lanka

- Eight sites of Sri Lanka have been inscribed in the [UNESCO World Heritage](#)

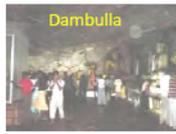
1. The ancient city of [Polonnaruwa](#) (1982)
2. The ancient city of [Sigiriya](#) (1982)
3. The [Golden Temple of Dambulla](#) (1991)
4. The old town of [Galle](#) and its fortifications (1988)
5. The sacred city of [Anuradhapura](#) (1982)
6. The sacred city of [Kandy](#) (1988)
7. The [Sinharaja Forest Reserve](#) (1988)
8. The [Central Highlands of Sri Lanka](#) (2010).



Kandy Dalada Maligawa



Anuradhapura



Dambulla



Polonnaruwa



Sinharaja Forest



Sigiriya



Galle



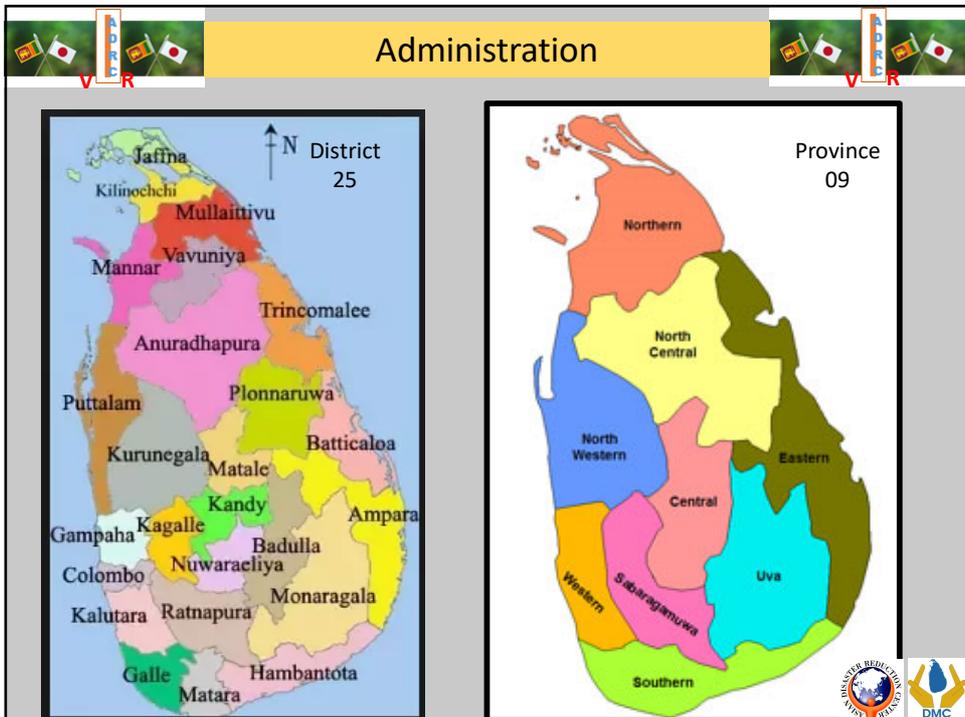
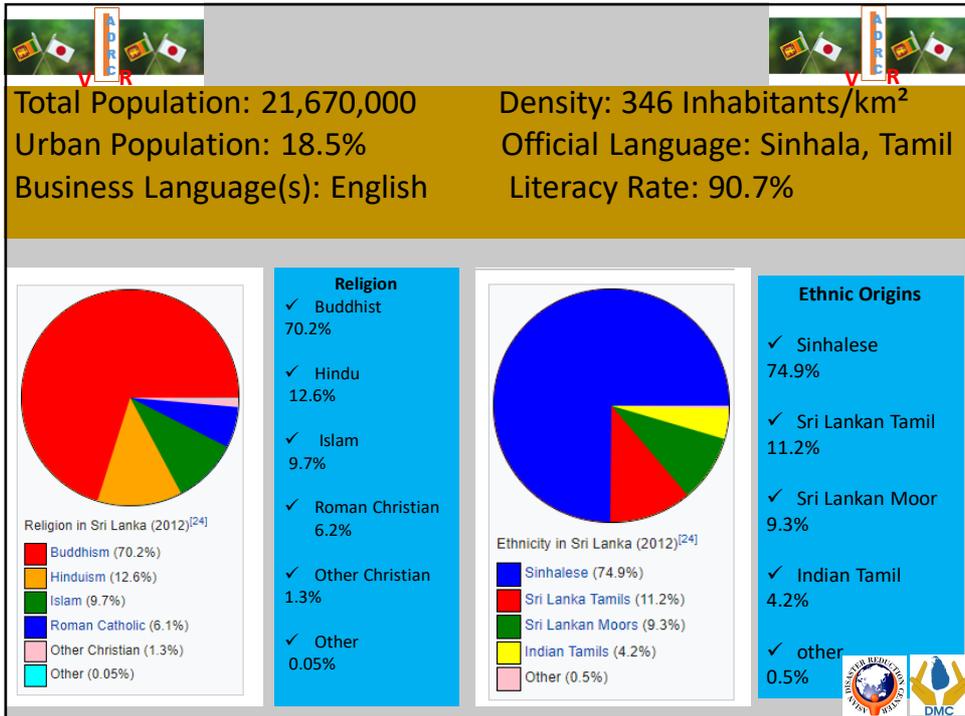

Country Profile of Sri Lanka

- Sri Lanka is an Island
- Location
Indian ocean, Indian sub continent
- Latitudes 50.55'-90.55 N
- Longitudes 790.42'-810.52' E
- Land area : 65,610 km²
- Maximum Length :
445 km
- Maximum Breadth :
225 km









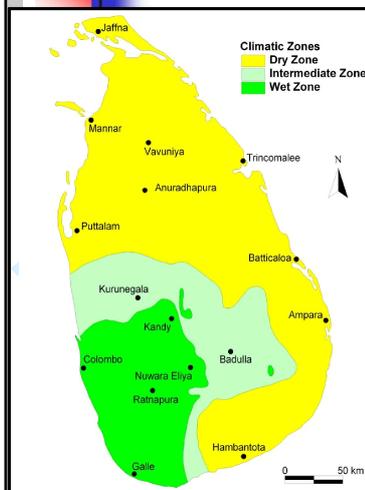


Climate

- Due to the location of Sri Lanka the climate could be characterized as tropical
- Sri Lanka located Inter Tropical Convergent Zone (ITCZ)
- The topographical features strongly affect the spatial patterns of winds, seasonal rainfall, temperature, relative humidity and other climatic elements, particularly during the monsoon season.
- Rainfall in Sri Lanka has multiple origins Monsoonal, Convictional and expressional
- The mean annual rainfall varies from 950mm to 5500mm.



Climatic zones of Sri Lanka



Rainfall

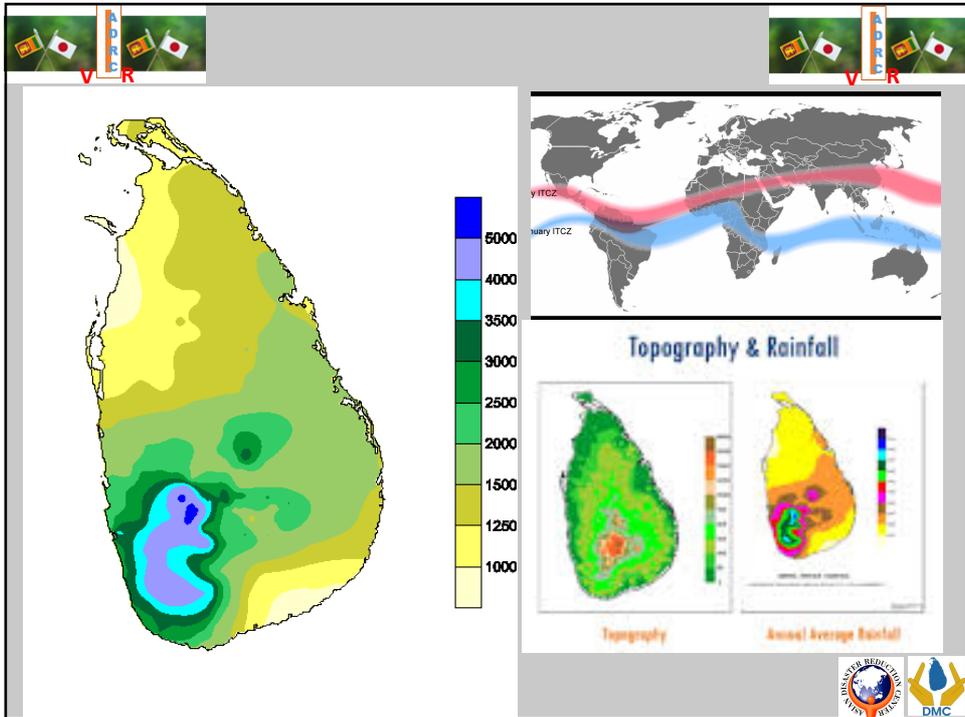
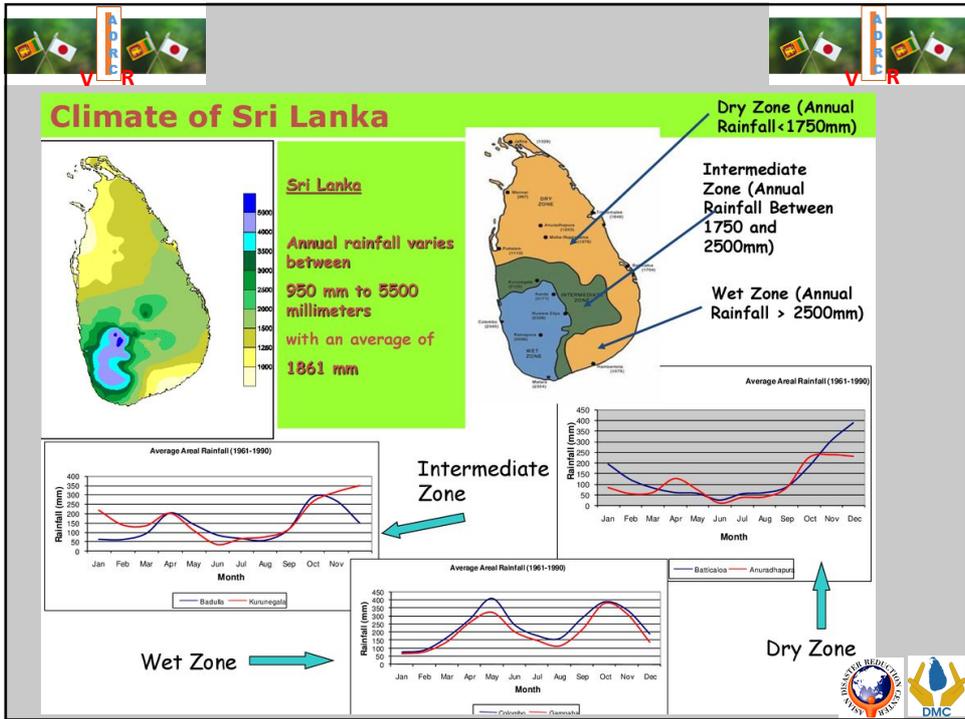
below 1,750 mm - Dry zone

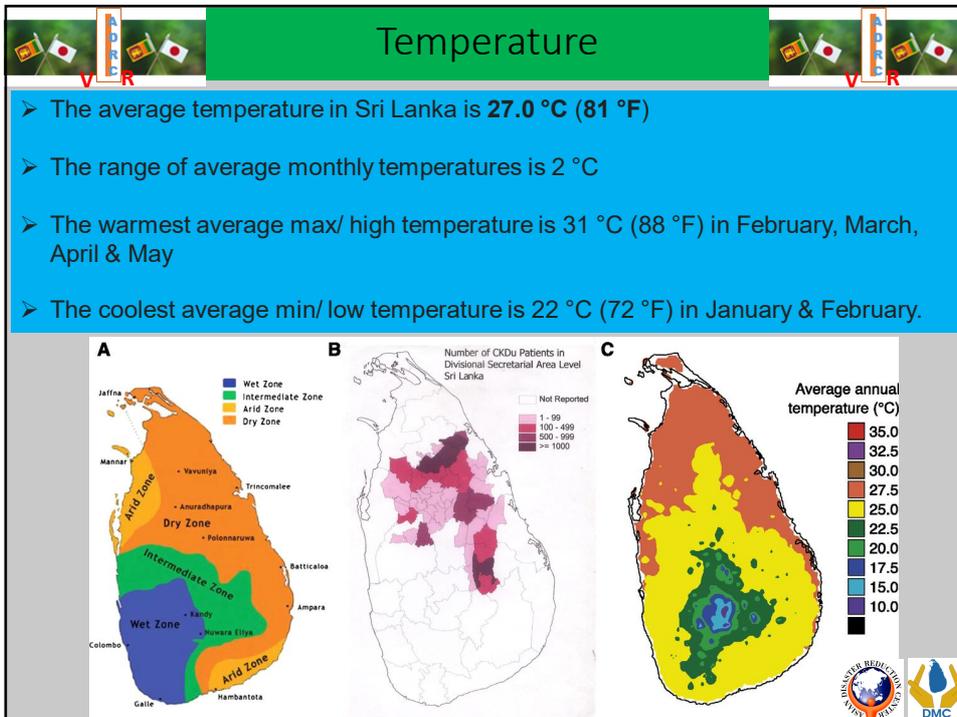
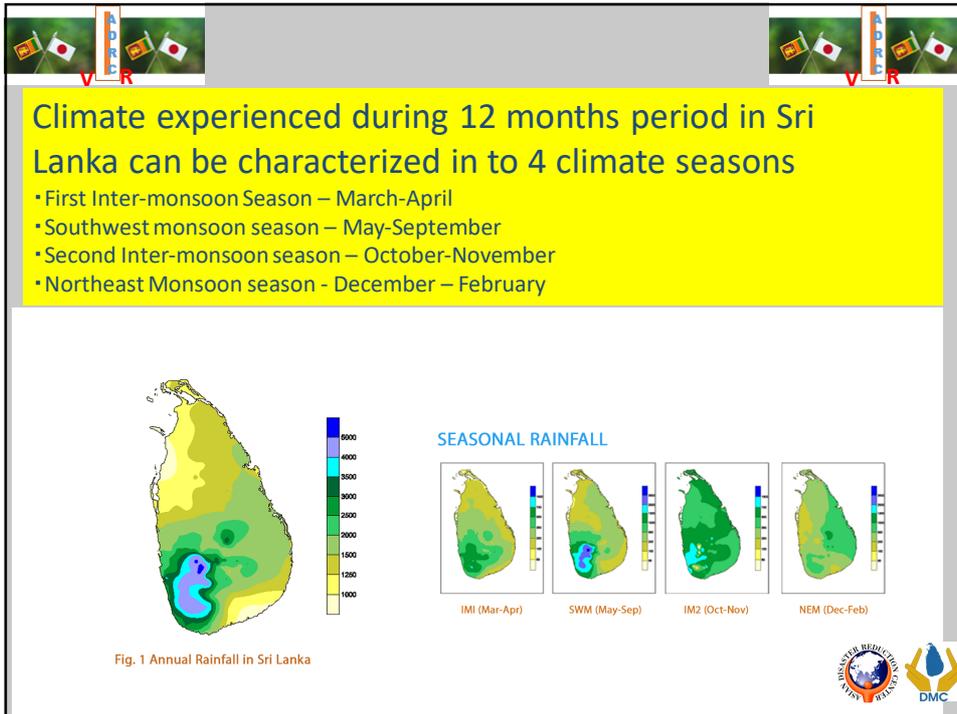
1,750 - 2,500 mm - Inter mediate zone

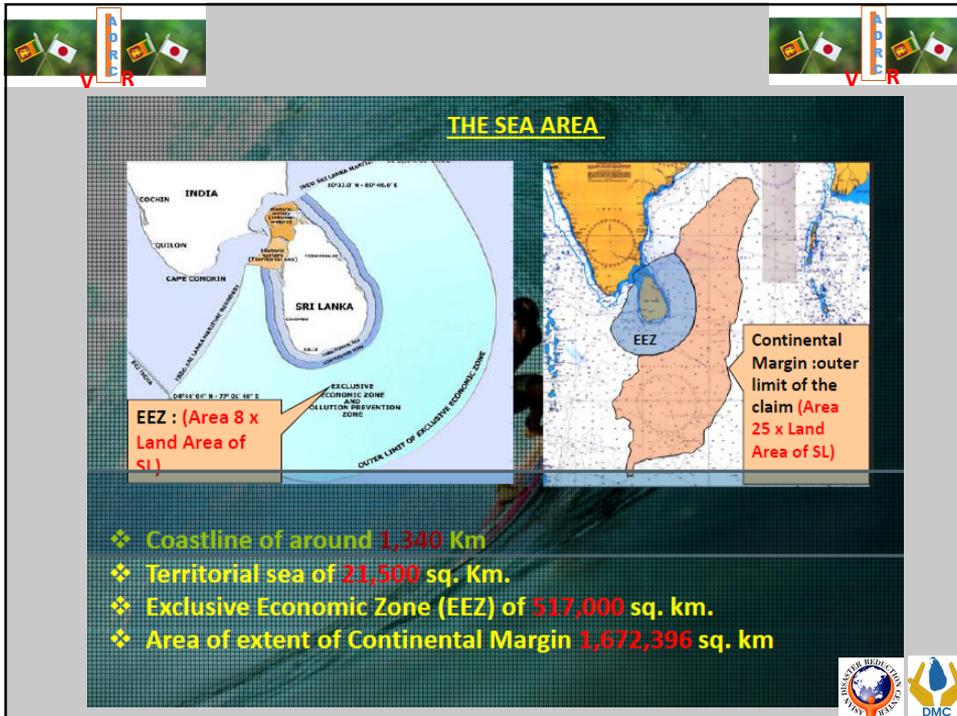
above 2,500 mm - Wet zone

Due to the prevailing tropical climate in Sri Lanka, wet, dry and intermediate regions are formed by the monsoon rainfall pattern.







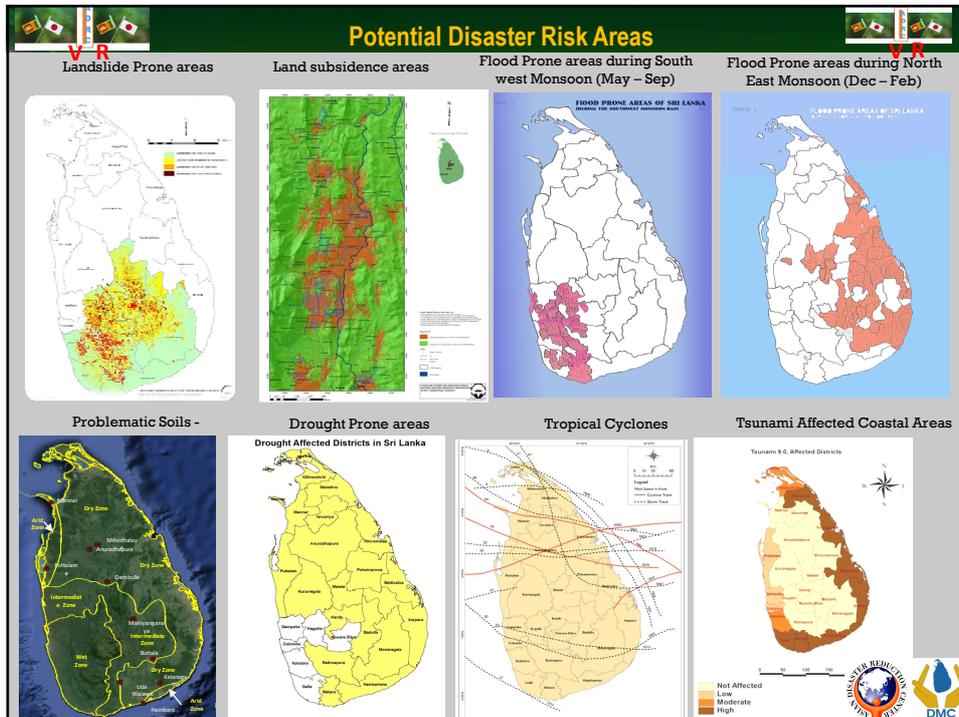


Hazards Profile and Impacts in Sri Lanka

- Tsunami
- Droughts
- Landslides
- Floods
- Lightning
- Coastal Erosions
- Wild Elephant Attacks
- Epidemics
- Cyclones
- Fire
- Tornadoes
- High Winds
- Dam Failures

Disaster and Impacts								
Disaster	Deaths	Injured	Missing	Houses Destroyed	Houses Damaged	Affected	Relocated	Evacuated
ACCIDENT	348	340	1	0	5	752	0	0
ANIMAL ATTACK	977	617	2	191	7700	80065	0	59
BOAT CAPSIZE	58	43	23	0	0	73	0	0
CUTTING FAILURE	31	56	1	161	2028	30583	0	0
CYCLONE	12	140	5	11510	88301	898283	0	571
CYCLONE & FLOOD	9	12	0	13178	37371	319128	0	0
DROUGHT	0	0	0	0	0	21415559	0	600
DROWNING	246	21	33	0	0	310	0	0
EARTH SLIP	10	10	7	56	168	3043	0	0
FIRE	102	149	0	2058	1008	15935	0	1040
FLASH FLOOD	6	10	2	82	826	18704	0	0
FLOOD	706	486	113	53807	173833	15242913	4	39421
FOREST FIRE	1	0	0	6	19	98	0	10
GALE	8	21	1	137	1858	11820	0	36
LAND SUBSIDENCE	17	8	0	69	1742	10403	0	401
LANDSLIDE	1001	316	243	2877	12077	292227	348	2357
LIGHTNING	516	461	3	39	753	4745	0	3
ROCK FALL	3	9	0	13	111	1448	0	28
STRONG WIND	217	710	68	7749	105353	735739	16	1339
TSUNAMI	30959	19611	1908	57085	48069	970705	0	0
URBAN FLOOD	0	0	0	0	0	155	0	0
TOTAL	35496	23429	2416	150194	490657	41397027	369	47221

From 1980 - 2020



BACKGROUND OF DISASTER MANAGEMENT IN SRI LANKA




Ancient documents testify that flood and drought have been managed through the use of excellent irrigation management techniques to better identify wet and dry seasons through advanced irrigation technology.



With the colonization of the plantation economy spreading to the central hills, sensitive ecosystems began to fall into disrepair.



Some of the post-independence informal development programs have intensified the effects of disasters and caused damage to the lives and property of the country.






BACKGROUND OF DISASTER MANAGEMENT IN SRI LANKA




Establishment of Law and Institution in relation to Disaster Management from the beginning

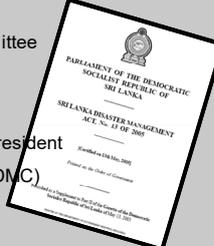
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- ❑ Ecosystem Management Approaches in early Agrarian Civilization for Flood and Drought Management
- ❑ Land use Management in Colonial cultivation era
- ❑ Flood Ordinance 1955
- ❑ 1977-1995 Department of Social Service
- ❑ 1996 National Disaster Management Centre

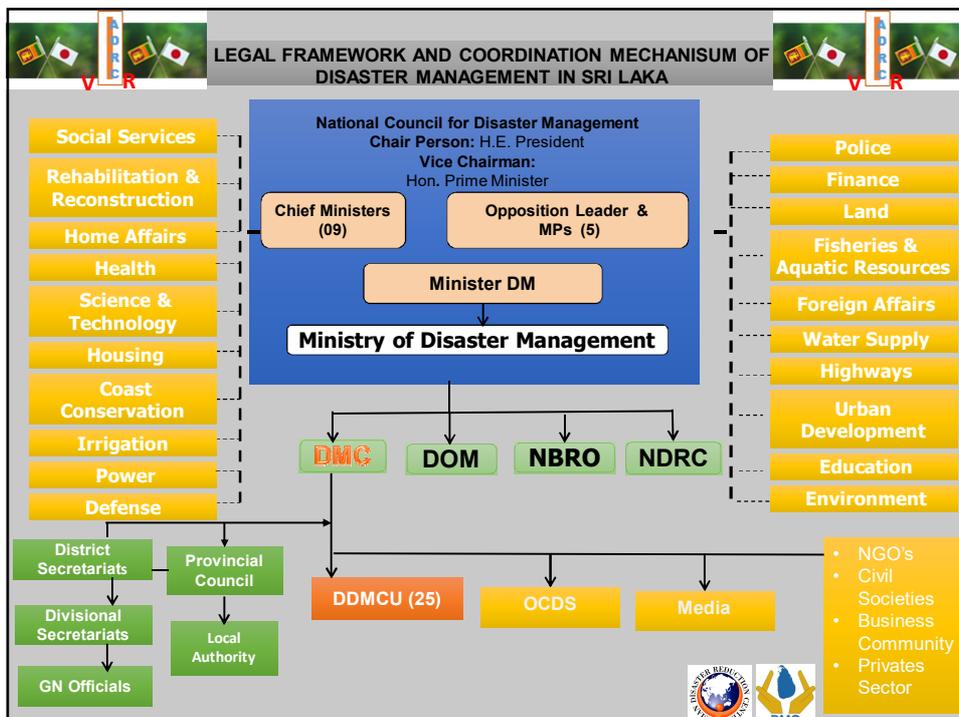
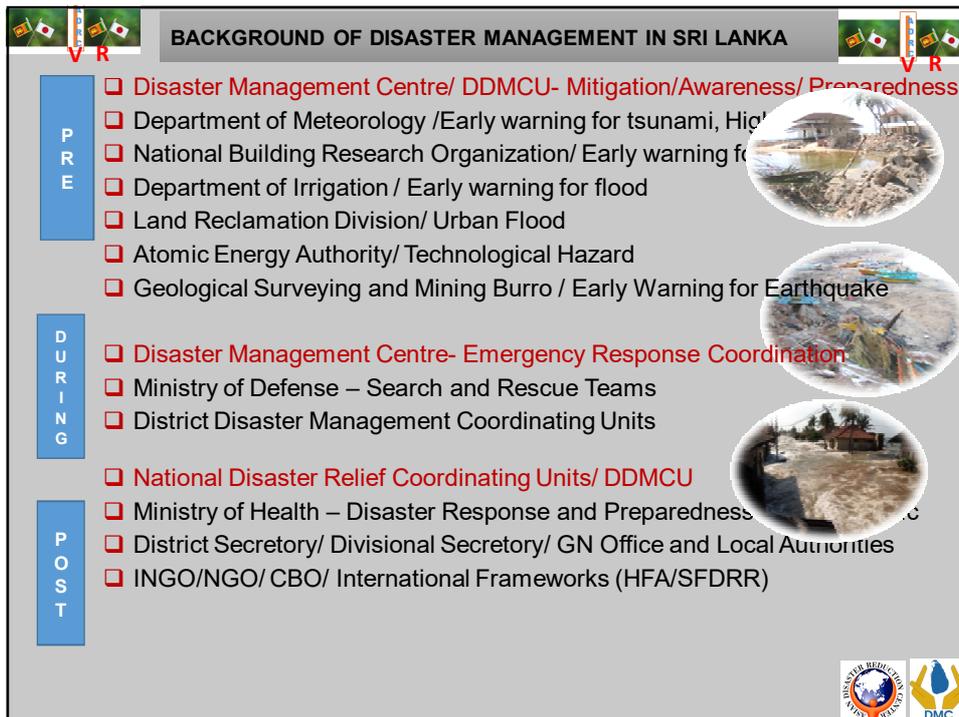


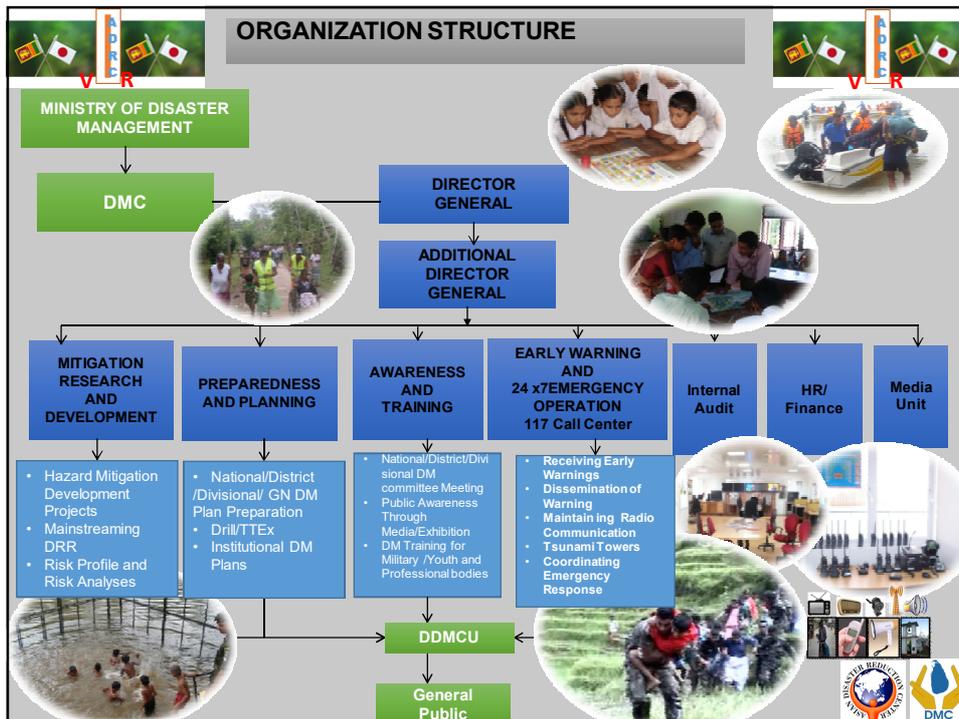

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- ❑ Indian Ocean tsunami of December 2004 and "Parliamentary Select Committee on Natural Disasters"
- ❑ Disaster Management Act 3 of May 2005
- ❑ National Council for Disaster Management (NCDM) Chaired by H.E. the President
- ❑ Ministry of Disaster Management and the Disaster Management Centre (DMC)





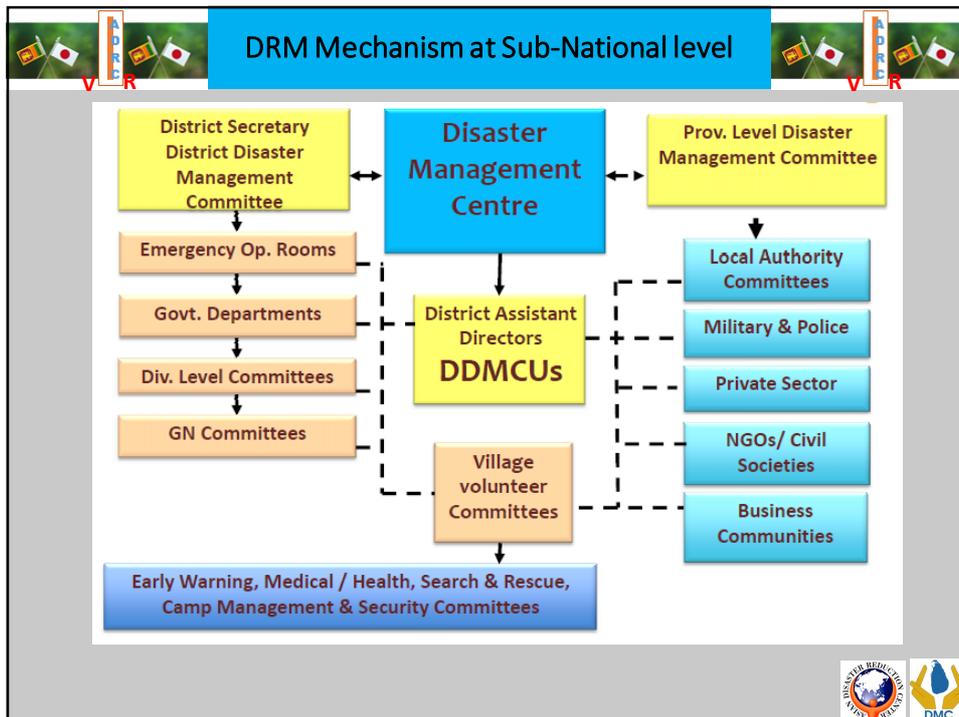





TYPES OF DISASTERS (As per the Act)

1. Landslides	2. Cyclones	3. Flood
4. Droughts (Wave)	5. Industrial Hazards	6. Tsunami (Seismic)
7. Earthquakes	8. Air Hazards	9. Marine Hazards
10. Fire	11. Epidemics	12. Explosions
13. Air Raids	14. Civil or Internal Strife	15. Chemical Accidents
16. Radiological Emergency	17. Oil Spills (Inland & Marine)	18. Nuclear Disaster
19. Urban and Forest Fire	20. Coastal Erosion	
21. Tornadoes, Lightning Strikes and Severe Thunder Storms		

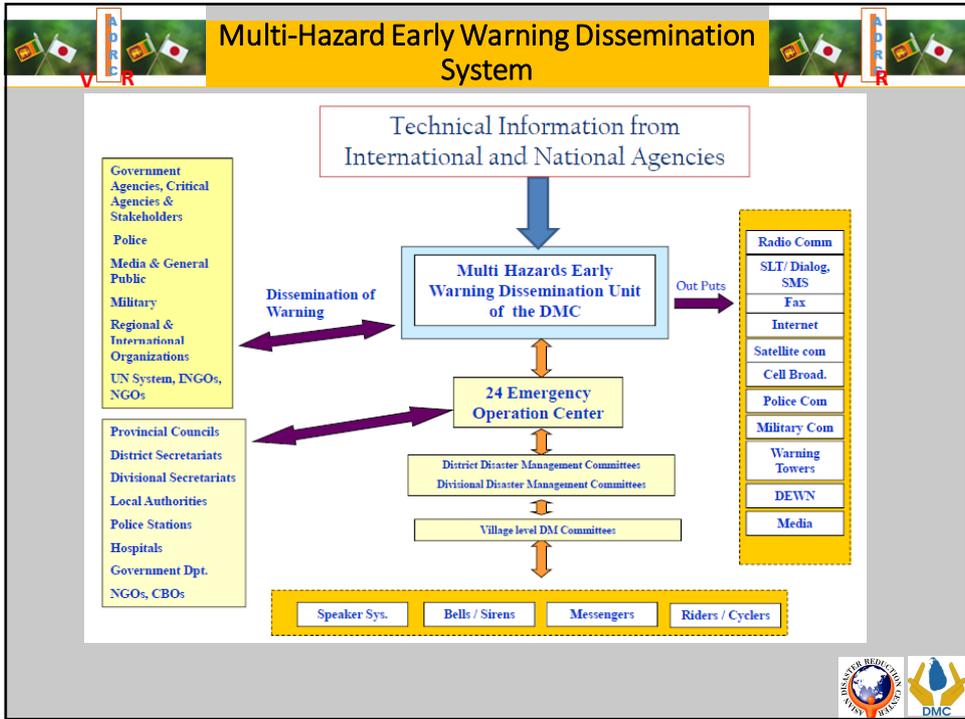
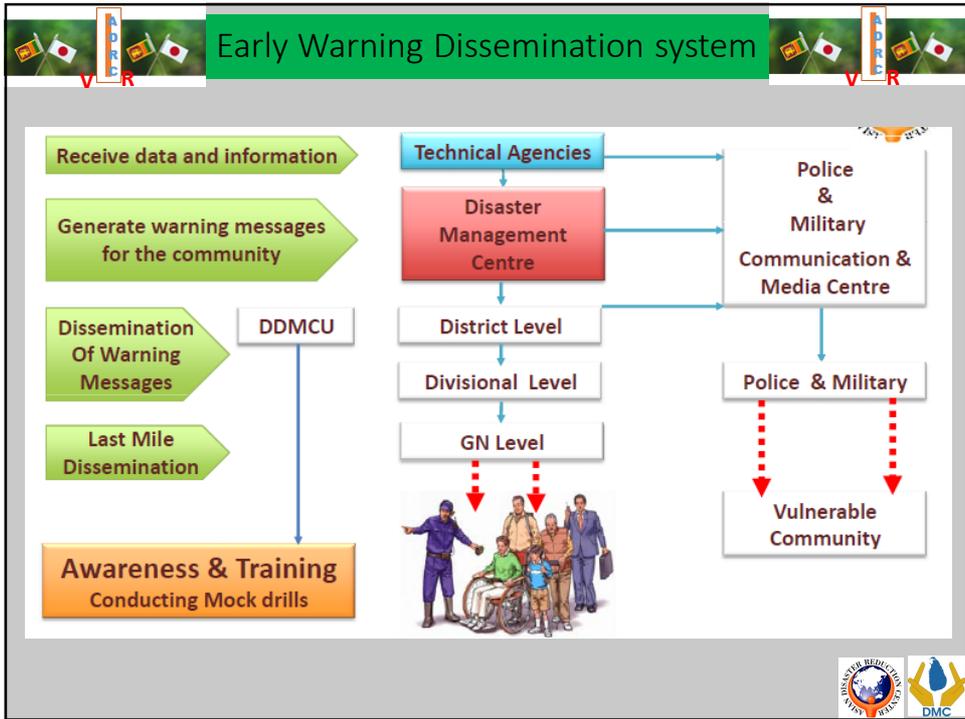




- ### Key DRR Activities
- Forecasting and Analysis of Disaster Risks
 - Disaster Mitigation
 - Strengthen of Response Capacity
 - Training and Awareness
 - Preparedness
 - Simulation Exercises
 - Early Warning & Emergency Response







Emergency Call Centre

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Self evacuation system as a local system for the Landslides

Standard threshold limits of the Rainfall

Alert	75 mm/day
Warning	100mm/day level
Evacuation, Off limit	75 mm/hour or 150mm/day






International Cooperation

All activities of DRR a line with

- Sendai Framework for DRR
- Sustainable Development Goals
- Legally binding universal agreement on climate change

SENDAI FRAMEWORK	Scope and Purpose	1 Global Outcome	1 Goal
7 Global Targets	13 Guiding Principles		
4 Priorities for Action	at 4 Levels Local, National, Regional and Global		
Role of Stakeholders	International Cooperation and Global Partnerships		



SUSTAINABLE DEVELOPMENT GOALS
17 GOALS TO TRANSFORM OUR WORLD



Paris Agreement




International Assistant

Good and Services

- Nepal –Earthquake in 2015
- Philippine – Cyclone Haiyan in 2013
- Haiti –Earthquake in 2010









Disaster Insurance



Coverage

Covers lives and properties, specifically all households and small business establishments (any business of which annual turnover does not exceed LKR 10 M) covered up to 2.5 million rupees each in respect of damages(per event) caused to their property and contents due to Cyclones, Storm, Tempest, Flood, Land slide, Hurricane, Earthquake, Tsunami and any other similar natural perils, excluding Drought.

All Fishermen registered under Department of Fisheries will be covered to the value of Rs.1 Million each.

Limitations

- Death compensation other than fisherman death - Rs.100,000.00
- Property damage (House and SME) - Max Rs.2.5 Mn
- Fisherman death - Rs.1,000,000.00 (1 Mn)



Supporting Agencies

- UNDP
- ADRC
- JICA
- ADPC
- UNHCR
- OCHA
- WHO
- WFP
- NGOs
- INGOs



Challenges/Gaps

- Insufficient Vulnerability and Risk Analysis in the country.
- Different mandates, priorities and attitudes of Stakeholder agencies.
- Political intervention for disaster management at every time.
- Insufficient financial allocation for DM. Specially the supply of equipment.
- Less active volunteer participation.
- Night time evacuation.
- No dedicated traffic plan.
- limited human resources in the DMC.
- EW equipment maintenance. (Cost / Monopoly Market)
- Poor recording of disasters.
- Lack of knowledge transferring system.
- Less adaptation of DM practices and Rules and regulation also DM frameworks.
- No master Plan to the country
- Research



ADRC Counterpart

Director General
Disaster Management Centre
Vidya Mawatha,
Colombo 07

Telephone (General) : +94-112-136136
Fax (EOC) : + 94-112-670079
Fax (General) : + 94-112-670025
E-mail : info@dmc.gov.lk , dgdmc@sltnet.lk
Website : www.dmc.gov.lk





Research



“Study on Preparation of Emergency Response and Recovery Plan in Japan for flood hazard”

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After the lecture
about Urban Flood Damages Area and Measures in Infrastructure
By Associated professor Kenji Kawaike

“Study on Preparation of Emergency Response, Recovery Plan and **Structural Counter measures** in Japan for flood hazard”





Specific Aims



- Identify a methodology / process to identify the hazard using GIS technology
- Study on a timely early warning system (for formulation, and dissemination) to all concerned parties according to the mandate or as a practice of the institution.
- Study on Immediate and effective emergency response, especially considering the gender sensitivity (children, women, elderly, disabled etc.)
- Study on proper and timely evacuation in accordance with requirement of flood hazard to pre identified safe locations / evacuation centers using new technology such as GIS and Remote Sensing
- Study on how to develop an emergency response and recovery plan for flood hazard and it practices.
- Study on Implement mitigation & preparedness programmes
- Study on rehabilitation & reconstruction programmes incorporating Disaster Risk Reduction components (Build Back Better).



