



Increasing temperature , preparedness and development of a heatwave action plan.

Sri Lanka

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இலங்கை ஜனநாயக சோசலிச குடியரசு
Ilankai janānāyaka sōsalisa kuṭiyarasu

Capital	Sri Jayawardenepura Kotte (Administrative) Colombo (Commercial) 6°56'N 79°52'E
Largest city	Colombo
Demonym	Sri Lankan
Area	
• Total	65,610 km ²
• Water (%)	4.4
Population	
• 2017 estimate	21,444,000

Climate is tropical and warm, due to the moderating effects of ocean winds.

Mean temperatures range from 17 °C (62.6 °F) in the central highlands, where frost may occur for several days in the winter, to a maximum of 33 °C (91.4 °F) in other low-altitude areas.

Average yearly temperatures range from 28 °C (82.4 °F) to nearly 31 °C (87.8 °F). Day and night temperatures may vary by 14 °C (25.2 °F) to 18 °C (32.4 °F).





Legal and Institutional Arrangement for DM in Sri Lanka



Sri Lanka Disaster Management Act; No.13 of 2005

- ❖ Act Provides a Legal Framework for Disaster Risk Management (DRM) in Sri Lanka
- ❖ Disaster Management Centre estd. in Aug 2005 under the National Disaster Management Council as Implementing arm of NDMC
- ❖ Ministry of Disaster Management & HR estd. in Dec 2005 and



National Council For Disaster Management



Ministers in charge of

Social Services

Rehabilitation &
Reconstruction

Home Affairs

Health

Science & Technology

Housing

Coast Conservation

Irrigation

Power

Defence

National Disaster Management Council

Chair Person : H.E. The President
Vice Chairman: Hon. Prime Minister
Leader of Opposition
Nine Provincial Chief Ministers
Five MPs from Opposition

Ministry of Disaster Management

DMC

Ministers in charge of

Police

Finance

Land

Fisheries & Aquatic
Resources

Foreign Affairs

Water Supply

Highways

Urban Development

Education

Environment

All of can Stakeholders in Implementing Heatwave Action Plan
Ministry of Disaster Management- Nodal Point



Ministry of Disaster Management

Department of Meteorology
(HOD – DG) - (Technical Agency)

Disaster Management Center
(HOD – DG)

National Building Research
Organization (HOD – DG)
(Technical Agency)

National Disaster Relief
Service Center (HOD – Dir.)

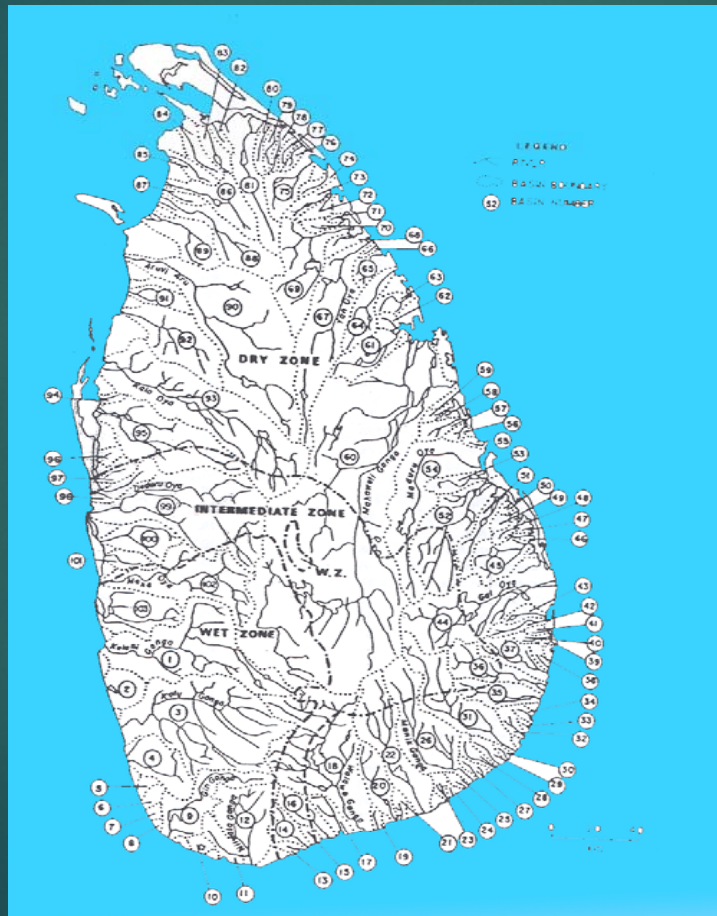


TYPES OF DISASTERS - As per the Act



- ❖ Landslides
- ❖ Cyclones
- ❖ Floods
- ❖ Droughts
- ❖ Industrial Hazards
- ❖ Tsunami (Seismic Wave)
- ❖ Earthquakes
- ❖ Air Hazards
- ❖ Marine Hazards
- ❖ Fire
- ❖ Epidemics
- ❖ Explosions
- ❖ Air Raids
- ❖ Civil or Internal Strife
- ❖ Chemical Accidents
- ❖ Radiological Emergency
- ❖ Oil Spills (Inland & Marine)
- ❖ Nuclear Disaster
- ❖ Urban and Forest Fire
- ❖ Coastal Erosion
- ❖ Tornadoes, Lightning Strikes and Severe Thunder Storms
- ❖ Animal Attacks
- ❖ Dam Breach

Multi Hazards in Sri Lanka

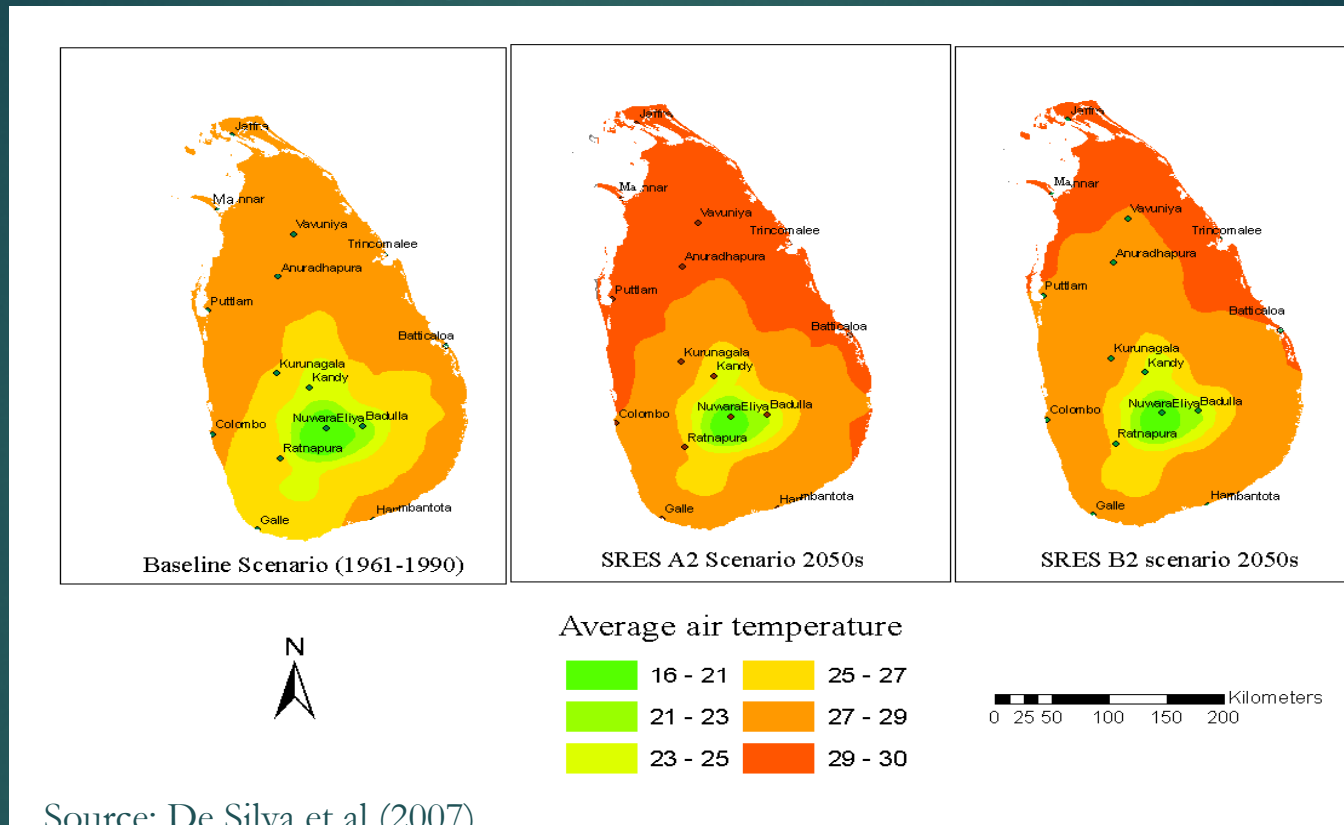


Background- Heatwave

- ▶ Fourth Assessment Report (AR4) of the Intergovernmental Panel on Climate Change (IPCC, 2007) has documented that the global temperature had increased by about 0.74 C during the period 1905 – 2006, with the warming over the past 50 years being nearly 2 times higher compared to the past 100 years (Alley et al. 2007).
- ▶ Sri Lanka average temperature has been increased by 1.0 C for last 60 years from 1961 to 2010 (Premalal, 2010)
- ▶ Number of days with higher temperature values has also been reported during recent years.

Compared to the global trend of increasing temperature (0.74 C), the increasing trend in Sri Lanka is very significant.

Annual Average Temperature



The average annual temperature is predicted to increase by 1.6° C (A2) and 1.2° C (B2) in 2050s, mostly in northern, north eastern and north western regions of the country.

Following four strategic areas were identified as the core elements of the Heatwave Action Plan.

1. Early warning systems and inter-agency coordination
2. Building public awareness & community outreach
3. Capacity building of health systems and health care staff
4. Promotion of adaptive measures and reducing exposure

1. Early warning systems and inter-agency coordination

Activity	Description	Responsible agency/agencies	
		Lead agency	Supporting agencies
Formation of a National Steering committee to coordinate heat wave response	A steering committee comprising of all stake holders including Ministry of Disaster Management including Meteorology Department, Ministry of Health, Ministry of Education, Ministry of Mass media, Ministry of local governments, Ministry of urban planning, Water board, Ministry of sports will facilitate the inter agency coordination required in this regard.	Min. DM	Min. Health and other agencies
Accurate and timely alert system	Determine the thresholds for alert, action and risk communication Development of warning systems Further research may be needed in this area to determine the threshold levels and to identify the impact eg: Pilot project with Ministry of Education on indoor temperature levels and health effects	Meteorology Department	Min. DM Min. Health
Setting up of a communication plan to receive early warnings and activate multi agency response	To receive alerts and warnings in time for prompt response – Identify communication pathways/ whom and what to communicate- use existing systems	Min. DM	Min of Mass Media Min. Health
Identification of most vulnerable groups	Identification of most vulnerable groups and their locations is of particular importance to deliver early warnings and apply adaptive measures	Min. DM Min. Health	University academia, NGOs

2. Building public awareness & Community outreach

Activity	Description	Responsible agency/agencies	
		Lead Agency	Supporting agencies
Setting up of a heat wave information plan	<p>Formation of a technical sub committee to develop specific messages and materials (content, timing, target audience, means of communication to be defined)</p> <ul style="list-style-type: none"> ✓ Develop standard operating protocols and guidelines for expected behavioural change <ul style="list-style-type: none"> -Public and Individual level/ -Health care institutions and health professionals/ - Institution based eg: Schools/ elderly homes ✓ Methods of dissemination to be determined <ul style="list-style-type: none"> -Circulars/ -Mass media campaign/ -Leaflets/ -Social Media ✓ Mechanism of delivery to be defined <ul style="list-style-type: none"> National/District/divisional level 	DMC	Health, Mass Media
	The information communication should be in accordance with the communication plan		
Evaluation and monitoring of Heat wave response	Monitoring and evaluation plan should be established to see whether the response of the target audience is appropriate.	Health	Other stakeholders
Encourage public/institutional reporting	<p>Streamline the reporting of heat wave related events from public and institutions</p> <p>From preventive sector/curative sector and private health facilities including NGOs</p>	Min. DM Min. Health	Ministry of Education

3. Capacity building of health systems and health care staff for heat wave actions

Activity	Description	Responsible agency/agencies	
		Lead agency	Supporting agency
Capacity building of the health care staff to cope with heat wave cases	<p>To provide better clinical care for patients with health impacts of heat and minimize the effects of heat on patients with other illnesses and general public</p> <ol style="list-style-type: none"> 1. Updating knowledge on heat pathologies/medications 2. How to identify vulnerable and at risk populations/situations 3. Knowledge on prevention measures and principals of care <ul style="list-style-type: none"> ✓ Designing tools- <ul style="list-style-type: none"> -training material/video clips ✓ Implementation- Training and supply <ul style="list-style-type: none"> -sensitization work shops -target audience identification and specific training ✓ Monitoring and evaluation 	Health Min	Min of DM

4. Promotion of adaptive measures and reducing exposure

Activity	Description	Responsible agency/agencies	
		Lead Agency	Supporting agency
Mapping of high risk zones/ timing	High risk areas in terms of temperature indicators and vulnerable populations Times of the year and day with high temperature This should be coupled with early warning alert systems	DMC	DMC
Advocacy for mobilization of stakeholders to employ adaptive measures	Should be in line with the information plan and based on recommendations of the technical sub committee <ul style="list-style-type: none"> • General guidelines for the public <ul style="list-style-type: none"> ✓ Adaptation of healthy habits and behaviour Eg: Use of sufficient amount of liquid and beverages ✓ Minimize out door activities • Formulation of specific guidelines/regulations for identified groups: <ul style="list-style-type: none"> ✓ Schools ✓ Sports/physical training ✓ Farming ✓ Designing of work shifts 	Min Health	Min of DM

Cont.

Activity	Description	Responsible agency/agencies	
		Lead Agency	Supporting agency
Ensure continuous access to potable water	Maintain uninterrupted supply of water -Water storage tank -Tanks (desilting) -Rain water harvesting etc	NWSB Community Water supply board	Water board/ Dept. Of agriculture/N GO/ Ministry of rural development
Anticipate, take preventive measures and continuous surveillance on related disease entities	Eg: Vector borne diseases, waterborne diseases, diarrhoea Should anticipate and take timely preventive actions. Capacity building for management of extra case load and continue surveillance	Min of Health.	Ministry of local government



Thank You

