LEGAL FRAMEWORK AND ORGANIZATION STRUCTURE OF DISASTER MANAGEMENT IN SRI LANKA
**University of Sri Jayewardenepura** (2012-2017) PhD Geography (Reading)

**University of Peradeniya** (2007 to 2009) M.Phil in Earth Sciences

**University of Peradeniya** (2004 to 2007) Postgraduate Diploma in GIS & RS

**Sabaragamuwa University of Sri Lanka** (B.A.(Special) Geography

<table>
<thead>
<tr>
<th>Institution</th>
<th>Programme</th>
<th>country</th>
<th>period</th>
</tr>
</thead>
<tbody>
<tr>
<td>University of Kashmir</td>
<td>SAARC Training Programme on Children Safety Including Children with Special Needs</td>
<td>Kashmiri/India</td>
<td>06th - 12th November 2013</td>
</tr>
<tr>
<td>Asia Pacific Centre for Security Studies</td>
<td>Compréhensive Crisis Management Programme.</td>
<td>Hawaii-USA</td>
<td>8th May-01st July 2014</td>
</tr>
<tr>
<td>Asian Disaster Preparedness Center</td>
<td>Workshop 2 of Regional Training on Disaster Resilience Leadership</td>
<td>Bangkok, Thailand</td>
<td>7th- 11th July 2014</td>
</tr>
<tr>
<td>SARRC Disaster Management Centre</td>
<td>South Asia Policy Dialogue on Children</td>
<td>Kathmandu- Nepal</td>
<td>17th -18th September 2015</td>
</tr>
<tr>
<td>JICA</td>
<td>Young Leaders Training Programme</td>
<td>Hiroshima, Japan</td>
<td>29th January -17th February 2017</td>
</tr>
<tr>
<td>BIMSTEC</td>
<td>1st Annual Exercise</td>
<td>Deldhi, India</td>
<td>10th 13th, October 2017</td>
</tr>
</tbody>
</table>
Potential disaster risk areas

Flood Prone areas during South west Monsoon (May – Sep)

Flood Prone areas during North East Monsoon (Dec – Feb)

Landslide Prone areas

Land subsidence areas

Drought Prone areas

Problematic Soils -

Tropical Cyclones

Tsunami Affected Coastal Areas

Wet Zone

Intermediate Zone

Dry Zone

Arid Zone

Mannar

Puttalam

Dambulla

Uda Walawa

Hambantota

Mahiyangan

Intermediate Zone

Buttala

Mihintale

Anuradhapura

Mannar

Puttalam

Mahiyangan

Buttala

Uda Walawa

Hambantota

Mihintale

Anuradhapura
Southern, Western, Eastern and Northern coastal belt is prone to Tsunami

The unprecedented havoc caused by Tsunami had devastated two thirds of the coastal belt of Sri Lanka.

More than 33,000 lives were lost and 100,000 houses were completely damaged in thirteen districts along the coastal belt. Approximately 5,000 people were missing.
TSUNAMI IMPACTS

- Humanitarian
- Economic
- Environmental
- Spiritual/Psychological
TSUNAMI IMPACTS contd..

Humanitarian

- Since many people hurt or die in there. also, the sea water made the infrastructure fell down, and shortages of food and drink water.
Economic

The impact on coastal fishing communities and fisher folk, has been devastating with high losses.
Environmental

The environment also gets severely affected and that will last for years.
Spiritual/Psychological

Many health professionals and aid workers are reporting widespread psychological trauma associated with the tsunami.
# TSUNAMI IMPACTS contd..

<table>
<thead>
<tr>
<th>Category</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deaths</td>
<td>30,959</td>
</tr>
<tr>
<td>Injured</td>
<td>19,611</td>
</tr>
<tr>
<td>Missing</td>
<td>1,908</td>
</tr>
<tr>
<td>Houses Destroyed</td>
<td>57,085</td>
</tr>
<tr>
<td>Houses Damaged</td>
<td>48,208</td>
</tr>
<tr>
<td>Affected</td>
<td>1,076,240</td>
</tr>
<tr>
<td>No. Families Affected</td>
<td>249,717</td>
</tr>
<tr>
<td>No. Of camps</td>
<td>309</td>
</tr>
</tbody>
</table>

Extracted from DMC records
WHY SO MANY PEOPLE DIED IN TSUNAMI

- Lack of knowledge of the public about the serious effects of tsunami
- Very low people awareness
- Poor Early Warning system
- No proper system for receive Early Warning in night and holidays
- No proper Mechanism for dissemination
- Lack of preparedness
- No proper mechanism for Disaster Management
- Poor economic development
- The buildings structure is not unfluctuating
BACKGROUND OF DISASTER MANAGEMENT IN SRI LANKA

- Ecosystem Management Approaches in early Agrarian Civilization in kings period 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

Indian Ocean tsunami of December 2004 and “Parliamentary Select Committee on Natural Disasters”

Disaster Management Act 13 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)
<table>
<thead>
<tr>
<th>Date Range</th>
<th>Department/Ministry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before 1977</td>
<td>Department of Social Service</td>
</tr>
<tr>
<td>1977-1988</td>
<td>Department of Social Service under Ministry of Social Services</td>
</tr>
<tr>
<td>1989-1994</td>
<td>Ministry of Rehabilitation, Reconstruction and Social Welfare</td>
</tr>
<tr>
<td>1994-1995</td>
<td>Ministry of Health and Social Service</td>
</tr>
<tr>
<td>1995</td>
<td>Department of Social Service</td>
</tr>
<tr>
<td>1996</td>
<td>National Disaster Management Centre - Activities of Preparedness, Mitigation, Response and Recovery</td>
</tr>
<tr>
<td></td>
<td>Department of Social Service - Relief</td>
</tr>
<tr>
<td>Year</td>
<td>Ministry/Act Description</td>
</tr>
<tr>
<td>------</td>
<td>--------------------------</td>
</tr>
<tr>
<td>2005</td>
<td>Disaster Management Act / Disaster Management Centre</td>
</tr>
<tr>
<td>2005</td>
<td>Ministry of Disaster Management</td>
</tr>
<tr>
<td>2006</td>
<td>Ministry of Disaster Management and Human Rights</td>
</tr>
<tr>
<td>2010</td>
<td>Ministry of Disaster Management</td>
</tr>
<tr>
<td>2015</td>
<td>Ministry of Disaster Management, peace and Order and Christian Affairs</td>
</tr>
<tr>
<td>2015</td>
<td>Ministry of Disaster Management</td>
</tr>
<tr>
<td>2018</td>
<td>Ministry of Irrigation, Water Resource Management and Disaster Management</td>
</tr>
</tbody>
</table>
A Parliamentary Select Committee was appointed to review the disaster risk management in 2005

An Interim Committee on Early Warning System was set up


The National Council for Disaster Management (NCDM) was established, as per the act in 2005

The Disaster Management Centre (DMC) was established in 2005

In December 2005, the Ministry for Disaster Management was established. In January 2006,
Parliament of the Democratic Socialist Republic of Sri Lanka

Sri Lanka Disaster Management Act, No. 13 of 2005

Certified on 16th May, 2005

Printed on the Order of Government

Published as a Supplement to Part II of the Gazette of the Democratic Socialist Republic of Sri Lanka on May 13, 2005.
An Act To Provide For The Establishment Of The
NATIONAL COUNCIL FOR DISASTER MANAGEMENT;
THE DISASTER MANAGEMENT CENTRE;
THE APPOINTMENT OF TECHNICAL ADVISORY COMMITTEES;
THE PREPARATION OF DISASTER MANAGEMENT PLANS;
THE DECLARATION OF A STATE OF DISASTER;
THE AWARD OF COMPENSATION
AND FOR MATTERS CONNECTED THERE WITH OR INCIDENTAL THERETO.
PREPARATION OF DISASTER MANAGEMENT PLANS
<table>
<thead>
<tr>
<th>Natural Hazards</th>
<th>Man-Made Hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td>Floods</td>
<td>Air Raids</td>
</tr>
<tr>
<td>Droughts</td>
<td>Civil or Internal Strife</td>
</tr>
<tr>
<td>Landslides</td>
<td>Chemical Accidents</td>
</tr>
<tr>
<td>Industrial Hazards</td>
<td>Radiological Emergency</td>
</tr>
<tr>
<td>Tsunami (Seismic Wave)</td>
<td>Oil Spills</td>
</tr>
<tr>
<td>Earthquakes</td>
<td>Nuclear Disaster</td>
</tr>
<tr>
<td>Air Hazards</td>
<td>Urban and Forest Fire</td>
</tr>
<tr>
<td>Fire</td>
<td>Coastal Erosion</td>
</tr>
<tr>
<td>Epidemics</td>
<td>Tornadoes, Lightening strikes and Severe Thunder Storms</td>
</tr>
<tr>
<td>Explosions</td>
<td></td>
</tr>
</tbody>
</table>
LEGAL FRAMEWORK AND COORDINATION MECHANISUM OF DISASTER MANAGEMENT IN SRI LANKA

National Council for Disaster Management
Chair Person: H.E. President
Vice Chairman: Hon. Prime Minister

Chief Ministers (09)
Opposition Leader & MPs (5)

Minister DM

Ministry of Disaster Management

DMC
DOM
NBRO
NDRC

DDMCU (25)
OCDS
Media

NGO’s
• Civil Societies
• Business Community
• Privates Sector

District Secretariats
Provincial Council
Local Authority

Divisional Secretariats
GN Officials

Social Services
Rehabilitation & Reconstruction
Home Affairs
Health
Science & Technology
Housing
Coast Conservation
Irrigation
Power
Defense
Police
Finance
Land
Fisheries & Aquatic Resources
Foreign Affairs
Water Supply
Highways
Urban Development
Education
Environment
ORGANIZATION STRUCTURE

MINISTRY OF DISASTER MANAGEMENT

DMC

DIRECTOR GENERAL

ADDITIONAL DIRECTOR GENERAL

MITIGATION RESEARCH AND DEVELOPMENT

- Hazard Mitigation Development Projects
- Mainstreaming DRR
- Risk Profile and Risk Analyses

PREPAREDNESS AND PLANNING

- National/District/Divisional/ GN DM Plan Preparation
- Drill/TTEX
- Institutional DM Plans

AWARENESS AND TRAINING

- National/District/Divisional DM committee Meeting
- Public Awareness Through Media/Exhibition
- DM Training for Military/Youth and Professional bodies

EARLY WARNING AND 24 x7EMERGENCY OPERATION

117 Call Center

- Receiving Early Warnings
- Dissemination of Warning
- Maintaining Radio Communication
- Tsunami Towers
- Coordinating Emergency Response

DDMCU

Internal Audit

HR/Finance

Media Unit

General Public
Disaster Risk Management Mechanism at Sub-national Level

- District Secretary
  - District Disaster Management Committee
- Emergency Op. Rooms
- Govt. Departments
- Div. Level Committees
- GN Committees

Disaster Management Centre

- Prov. Level Disaster Management Committee
- Local Authority Committees
- Military & Police
- Private Sector
- NGOs/ Civil Societies
- Business Communities

- District Disaster Management Coordination unit
- Village volunteer Groups
- Early Warning Subgroup, Medical / Health Subgroup, Search & Rescue Subgroup, Coordinating Subgroup, Village Task Force
Objectives of the Policy

The main objective of the National Disaster Management Policy is to establish, strengthen and maintain the following in collaboration with all relevant stakeholders:

Introduce sustainable mechanisms, structures, programmes to enhance capabilities for disaster risk management

Ensure the establishment of national, regional and local level coordinating mechanisms for disaster risk management

Guarantee the availability of resources for DRM activities through a special fund

Contd...
• Minimize disruption of economic activity and damage to environment

• Mainstream and integrate disaster risk reduction into sectoral development programmes including resource allocation in order to achieve sustainable development

• Ensure use of appropriate procedures and guidelines for and responding to disasters and threats of disasters in Sri Lanka in order to save lives and property

• Adhere to higher standards than before in medium and long-term reconstruction and rehabilitation initiatives

• Ensure introduction of planning guidelines and building codes for construction in disaster prone areas

• Promote community based disaster management and micro insurance to improve the resilience of the vulnerable communities
INTERNATIONAL DECADE FOR NATURAL DISASTER REDUCTION (IDNDR)

In 1987 UN General Assembly declared 1990 as the “International Decade for Natural Disaster Reduction” (IDNDR)

Establish special UN office in Geneva to coordinate IDNDR

To promote internationally coordinated to reduce disaster impacts in developing countries.


2005-2015- HYGO FRAMEWORK IN ACTION- HFA

2015-2030 – SENDAI FRAMEWORK FOR DRR
Devolved Disaster Management Framework

- National
  - National Disaster Management Coordinating Committee
  - Emergency Response Committee

- District
  - District Disaster Management Committees

- Divisional
  - Divisional Disaster Management Committees

- GN
  - Community Disaster Management Committee
  - Sub Committees at GN Level
PRE DISASTER RISK ASSESSMENT

URBAN FLOOD COLOMBO

Flood Vulnerable Ranking

<table>
<thead>
<tr>
<th></th>
<th>Colombo</th>
<th>Kaduwela</th>
<th>Thimbiri gasyaya</th>
<th>Kolonna wa</th>
<th>Sri Jayawardanapura Kotte</th>
<th>Dehiwala</th>
</tr>
</thead>
<tbody>
<tr>
<td>Score</td>
<td>1.00</td>
<td>0.74</td>
<td>0.70</td>
<td>0.59</td>
<td>0.30</td>
<td>0.26</td>
</tr>
<tr>
<td>Rank</td>
<td>4</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

Flood Risk for 2010 and 1989

<table>
<thead>
<tr>
<th></th>
<th>Colombo</th>
<th>Kolonna wa</th>
<th>Thimbiri gasyaya</th>
<th>Kaduwela</th>
<th>Sri Jayawara renapura Kotte</th>
<th>Dehiwala</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rank 2010</td>
<td>16</td>
<td>6</td>
<td>6</td>
<td>3</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Rank 1989</td>
<td>0</td>
<td>1.5</td>
<td>0</td>
<td>4</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
PREPAREDNESS PLANNING

- Preparation of National Disaster Management Plan.
- Preparation of guidelines, tools, and other guidance for preparedness planning works
- District, Divisional and GN level DM plan
Community hazard mapping

Identifying vulnerable areas, local level early waning capabilities, evacuation paths, and safe places
RISK MITIGATION, RESEARCH AND DEVELOPMENT

- Development of maps on vulnerability, exposure and risk for all kind of disasters
- Long-term disaster risk minimizing project
- Data and information system
- Post disaster assessment
Promote and increase public awareness on Disaster Management (DM) and Disaster Risk Reduction (DRR) among school children, academic institutes, government officials, general public, NGOs & INGOs.

Coordinating and conducting community level training programmes on First Aid, Life Saving, Search and Rescue, Swimming, Leadership training, Outward Bound Training, Camp Management etc.
TRAINING AND AWARENESS

- Disaster Management Training program
- Curriculum development for school, universities and high education
- Awareness program for vulnerable community and other groups.
SCHOOL AWARENESS
Global community (Scientists, Warning Centre Operators, Disaster Managers, Policy Makers, Locals) linked by common goal, web technology to create tsunami-resistant communities with access to timely warnings.

PTWS and JMA provided Interim Advisory Service from 2005-2013, until IOTWS in full operational service from March 31, 2013.
Multi-Hazard Early Warning Dissemination System

Government Agencies, Critical Agencies & Stakeholders
Police
Media & General Public
Military
Regional & International Organizations
UN System, INGOs, NGOs

Provincial Councils
District Secretariats
Divisional Secretariats
Local Authorities
Police Stations
Hospitals
Government Dpt.
NGOs, CBOs

Radio Comm
SLT/Dialog, SMS
Fax
Internet
Satellite com
Cell Broad.
Police Com
Military Com
Warning Towers
DEWN
Media
Speaker Sys.
Bells / Sirens
Messengers
Riders / Cyclers
The Military and Disaster Management: SRI LANKA

**NATIONAL LEVEL**

- NATIONAL COUNCIL OF DISASTER MANAGEMENT
- MINISTRY OF DEFENCE
- Disaster Management Centre

**DISTRICT Level**

- MILITARY COORDINATOR
- NATIONAL DISASTER MANAGEMENT COORDINATING MEETING
- NAVY BASES
- DISTRICT DISASTER MANAGEMENT COORDINATING UNITS
117
Call Center
Use of Police & military Communication during disaster  Warning and Evacuation

EW dissemination systems

DMC

OCD

ARMY HQ
NAVY HQ
AIR FORCE HQ
COAST GUARD HQ

119 Mirihana

All Police Stations

Vulnerable Community

77 Early Warning towers

Repeater Stations

EW Towers
“Last mile” Dissemination

Government

DMC

District

Divisional

GN

Police

Military

Media

Communication Tools

Multi hazard EW tower

Temple Bell

Loudspeaker car

SMS

Mega phone

Rider/Messenger

Tsunami Warning

Flood Warning

Evacuation Instruction

in collaboration with CBDM

Community
EW through media

TV channels
• ITN
• RUPAVAHINI
• SIRASA TV
• DERANA TV
• SHAKTHI TV
• SWARNAVAHINI
• SIYATHA TV

NEWS WEB SITES
SATTELITE TV

PEO TV NEWS BAR

RADIO channels
• SLBC
• LAKHADA FM
• SIRASA FM
• DERANA FM
• SRI FM
• SIYATHA FM
• KIRULA FM
• LAK FM
• RANGIRI DAMBULU FM

NEWS ALERTS
• JNW NEWS ALERTS
• DERANA ALERTS
• LIVE @ 8 ALERTS
Emergency Response

MILITARY CONTRIBUTION

Supported since beginning for all search/rescue operations, camp management and relief operations

- Army
- Navy
- Air force
- Police

Around 1000 troops were deployed
24 x 7 National Emergency Operations Centre
OVERALL EMERGENCY RESPONSE COORDINATION FLOWCHART
Emergency Response
SAR Teams Develop by Army

Equipment allocated to the SAR teams by the DMC
More than 150 fire incidents - 2014

Air Rescue missions by Sri Lanka Air force
June-2014 (people rescued in Kalutara and Rathnapura Districts)
May-2016 (people rescued in Colombo district)
Feb-2017 (people rescued in Kalutara boat wreckage)
Humanitarian response by volunteers & NGO's
Padaviya
Stockpiling of Machinery and equipment for emergency response

Armed forces/Police:
- Public Addressing Systems, HF/VHF Sets,
- Ropes,
- S&R Boats, Safety Jackets, Search Lights,
- sirens,
- Megaphones

District & Divisional Secretariats:
- Water bowsers, Rescue boats, Mega Phones,
- Chainsaws, VHF/HF sets, Canopies, Sirens

Local Authorities:
- Backhoe loaders, Water bowsers, Gully Emptier,
- Water pumps, Generators, Sirens

Communities:
- Megaphones, Fire extinguishers, Safety Jackets, PA Systems, Kitchen Utensils, First aids kits, Rain Gauges

Schools:
- First aids kits, Rain Gauges
Purpose of conducting Exercises
• Check the preparedness level at each level
• Check the efficiency of early warning dissemination mechanisms
• To assess the responding capacities of community
• To get familiarize with SOPs on Early Warning Dissemination

Exercises
• Information Transferring Exercises
  National level up to community level through district, division, GN
• Information transferring and Evacuation Exercise
• Community evacuation exercise
  One village, several villages, all vulnerable GN divisions, ....
• Table Top Exercises
  With other Institutions, .......
• Role Play Exercises
  For institutions
Objective: National DRM Plan

Establishment of mechanisms/systems for Disaster Risk Management (DRM) in Sri Lanka as a multi-sectoral, inter-ministerial, and inter-agency activity, by identifying and assessing the capacities of existing agencies for improving their capacities and mandates as necessary to implement the identified tasks, using methodologies and concepts already developed and field tested.
Sri Lanka has ratified the UN Agreement on “Sendai Framework for Disaster Risk Reduction: 2015-2030”, in 2015
2.1. Consideration of priority Action for DRR given under Sendai Framework

There are Sendai Framework Guiding Principles (13)

<table>
<thead>
<tr>
<th>Priority 1:</th>
<th>Understanding disaster risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Priority 2:</td>
<td>Strengthening disaster risk governance to manage disaster risk</td>
</tr>
<tr>
<td>Priority 3:</td>
<td>Investing in disaster risk reduction for resilience</td>
</tr>
<tr>
<td>Priority 4:</td>
<td>Enhancing disaster preparedness for effective response and to “Build Back Better” in Recovery, Rehabilitation and Reconstruction</td>
</tr>
<tr>
<td>INCIDENT</td>
<td>LESSON</td>
</tr>
<tr>
<td>---------------------</td>
<td>----------------------------------------------------------</td>
</tr>
<tr>
<td>2004 TSUNAMI</td>
<td>2005 No 13 Disaster Management Act/ Establish - Disaster Management Centre/ Ministry of Disaster Management / 24*7 Emergency Operation Unit</td>
</tr>
<tr>
<td>2010 FLASH FLOOD</td>
<td>Implement Land Reclamation Act/ Flood Control and City Development Plan</td>
</tr>
<tr>
<td>2013 High Wind</td>
<td>Strengthen Early Warning / Improve Fisheries Awareness/ Distribute Life Jackets</td>
</tr>
<tr>
<td>2013/2014 Drought</td>
<td>Improvement of Drought Control Method</td>
</tr>
<tr>
<td>2014 Landslide</td>
<td>Awareness of State sector/ Landslide Safety Location Identification/ Safety Reconstruction Method / Building Codes</td>
</tr>
<tr>
<td>2016 Flood/ Landslide</td>
<td>Insurance System</td>
</tr>
</tbody>
</table>
By people awareness and vigilance...

...lets mitigate disaster risk and let’s save our village and the country.

THANK YOU