



Demands and Current Challenges for the Use of Official Statistics for Informing Disaster Risk Reduction policies; and Institutional arrangements in Government to Improve Quality of Disaster-Related Statistics in Sri Lanka

**6th meeting of the Expert Group on Disaster-related Statistics in Asia and the Pacific
April 23rd-25th Bangkok, Thailand**

**Dr S.Amalanathan
Ministry of Public Management and Disaster Management
Sri Lanka**

CLIMATE RISK INDEX 2016 & 2017

Ranking 2016 (2015)	Country	CRI score	Death toll	Deaths per 100 000 inhabitants	Absolute losses in million US\$ (PPP)	Losses per unit GDP in %	Human Development Index 2015 ¹²
1 (40)	Haiti	2.33	613	5.65	3 332.72	17.224	163
2 (14)	Zimbabwe	7.33	246	1.70	1 205.15	3.721	154
3 (41)	Fiji	10.17	47	5.38	1 076.31	13.144	91
4 (98)	Sri Lanka	11.50	99	0.47	1 623.16	0.621	73
5 (29)	Vietnam	15.33	161	1.17	4 037.70	0.678	115
6 (4)	India	18.33	2 119	0.16	21 482.79	0.247	131
7 (51)	Chinese Taipei	18.50	103	0.44	1 978.55	0.175	Not included
8 (18)	Former Yugoslav Republic of Macedonia	19.00	22	1.06	207.93	0.678	82
9 (37)	Bolivia	19.33	26	0.24	1 051.22	1.334	118
10 (21)	United States	23.17	267	0.08	47 395.51	0.255	10



Ranking 2017 (2016)	Country	CRI score	Death toll	Deaths per 100 000 inhabitants	Absolute losses (in million US\$ PPP)	Losses per unit GDP in %	Human Development Index 2017 ¹⁰
1 (105)	Puerto Rico ¹¹	1.50	2 978	90.242	82 315.240	63.328	-
2 (4)	Sri Lanka	9.00	246	1.147	3 129.351	1.135	76
3 (120)	Dominica	9.33	31	43.662	1 686.894	215.440	103
4 (14)	Nepal	10.50	164	0.559	1 909.982	2.412	149
5 (39)	Peru	10.67	147	0.462	6 240.625	1.450	89
6 (5)	Vietnam	13.50	298	0.318	4 052.312	0.625	116
7 (58)	Madagascar	15.00	89	0.347	693.043	1.739	161
8 (120)	Sierra Leone	15.67	500	6.749	99.102	0.858	184
9 (13)	Bangladesh	16.00	407	0.249	2 826.678	0.410	136
10 (20)	Thailand	16.33	176	0.255	4 371.160	0.354	83



DISASTERS

- ❖ Landslides
- ❖ Cyclones
- ❖ Floods
- ❖ Droughts
- ❖ Industrial Hazards
- ❖ Tsunami
- ❖ Earthquakes
- ❖ Air Hazards
- ❖ Marine Hazards
- ❖ Fire
- ❖ Epidemics
- ❖ Explosions
- ❖ Air Raids
- ❖ Civil or Internal Strife
- ❖ Chemical Accidents
- ❖ Radiological
- ❖ Emergency
- ❖ Oil Spills
- ❖ Nuclear Disaster
- ❖ Urban and Forest Fire
- ❖ Coastal Erosion
- ❖ Tornadoes/Lightening
- ❖ Animal Attacks
- ❖ Dam Breach

DISASTER RISK INDEX

Some Pictures of Devastation



EARTHQUAKE

FLOOD

TSUNAMI

TROPICAL CYCLONE

DROUGHT

HUMAN



0.1

6.2

8.2

3.5

3.4

2.3



Low Risk **1** **10** High Risk

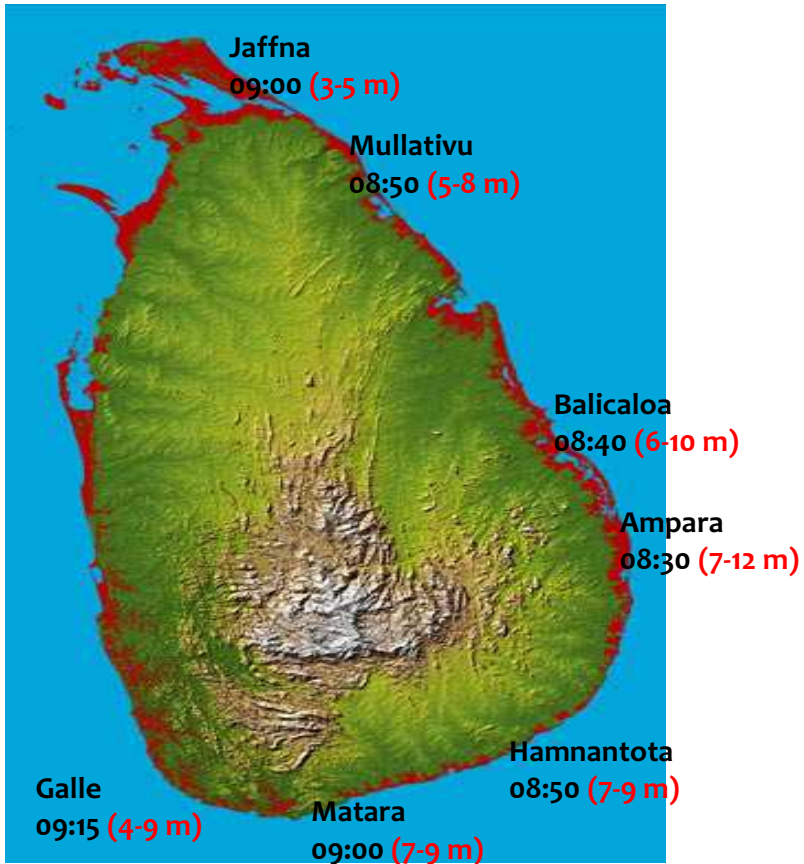
Source: OCHA

Indian Ocean Tsunami of 26-12-2004

Note: (9 Mw) Earthquake occurred at 06:58 am

- Number dead – 30, 959
- Number missing – 5, 644
- Number displaced – 500, 669

Impact due to: no proper DM mechanism established in Sri Lanka.

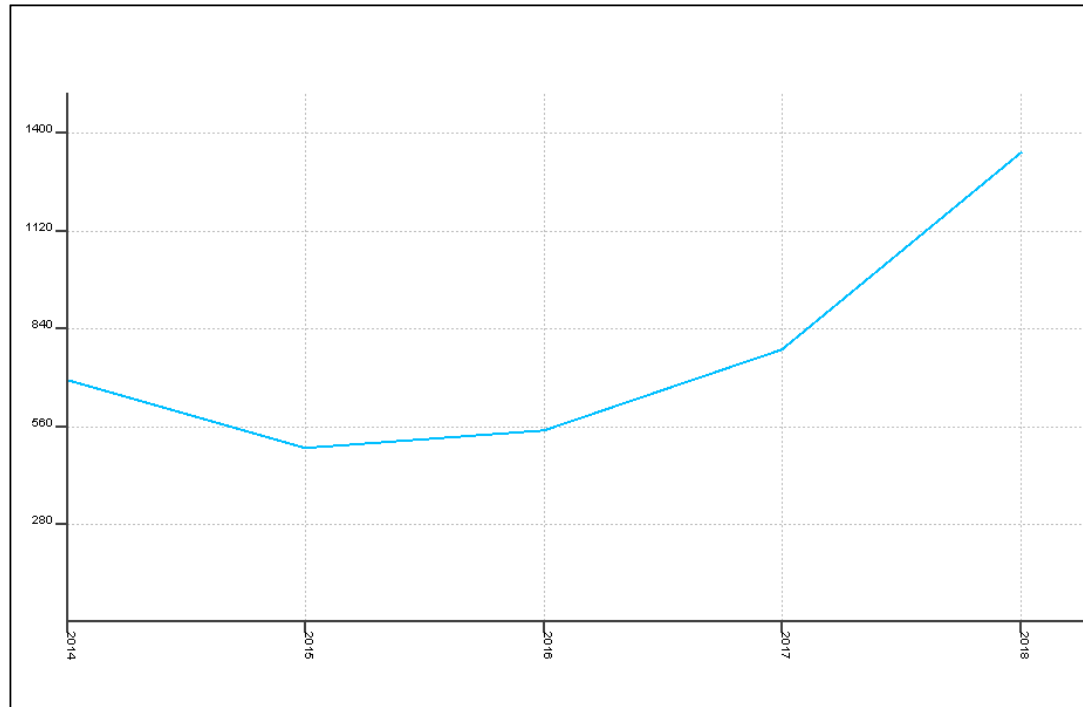


Time of arrival of first wave and estimated max. wave height

Number of Disaster Events from 2014 - 2018



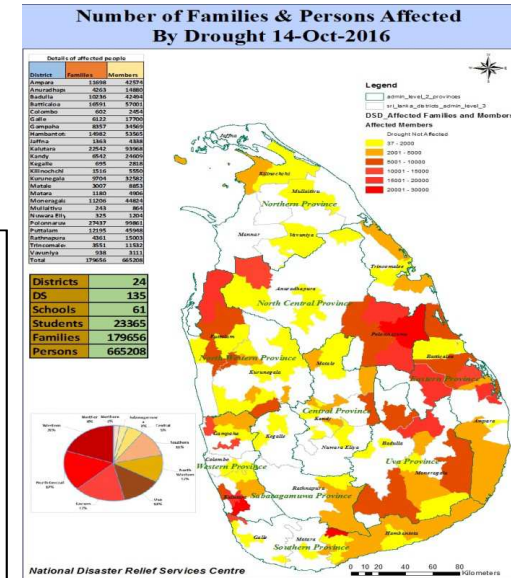
Number of Events



Year

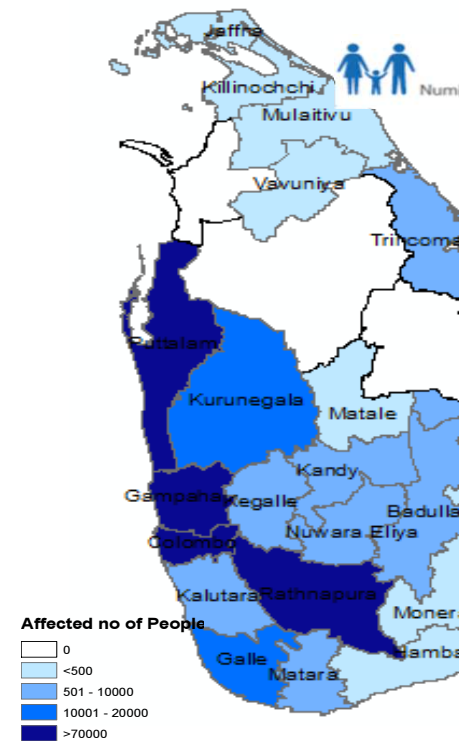
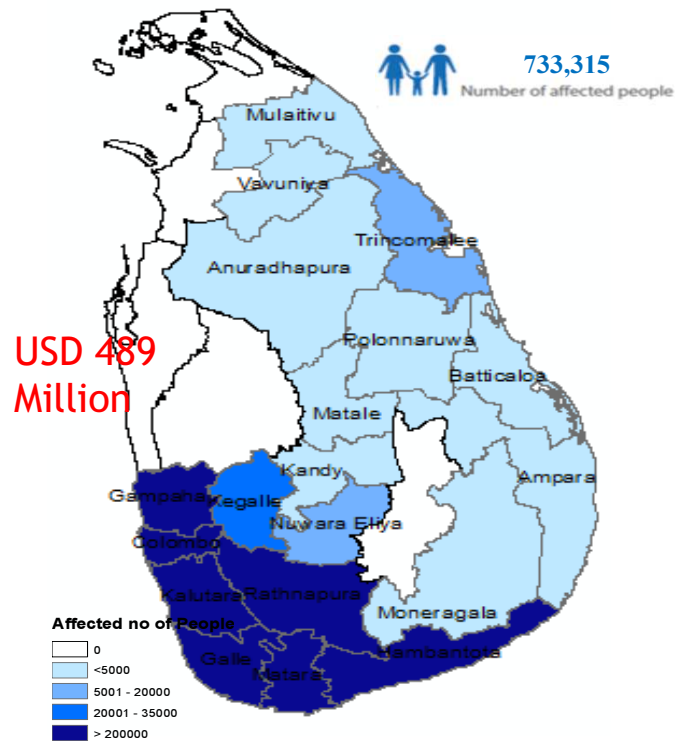
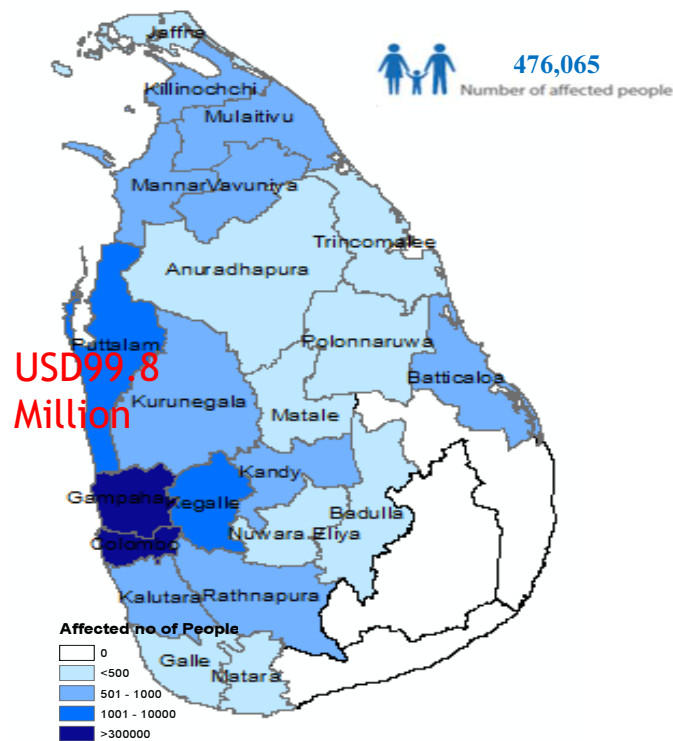
Number of Events representing Hazards or Disasters occurred due to Drought, Land Slide, Floods, High Winds

Source: www.disinventer.lk



Comparison of last Three Years of disaster events & Impacts

Sri Lanka : Flood and Landslide Impact Comparison 2016 , 2017 , 2018



Demands for the Use of Official Statistics

High Frequency and Massive Damage

- ▶ Risk Assessment
- ▶ Planning and implementation of Mitigation project
- ▶ Identification of more vulnerable group for Training, awareness and Mock real.
- ▶ Dissemination of Early Warning Early warning
- ▶ Emergency operation and Evacuation affected people
- ▶ Recourse allocation
- ▶ 72 hours need assessment
- ▶ Providing immediate assistance
- ▶ Conducting Post Disaster Need Assessment
- ▶ Pre planning for insurance
- ▶ Re building and recovery planing
- ▶ Approval for future development



THE DISASTER RISK MANAGEMENT CYCLE



DISASTER RISK MANAGEMENT CYCLE (DRMC) DIAGRAM

Definitions:

Mitigation/Prevention:

Activities which eliminate or reduce the chance of occurrence or the effects of a disaster.

Preparedness:

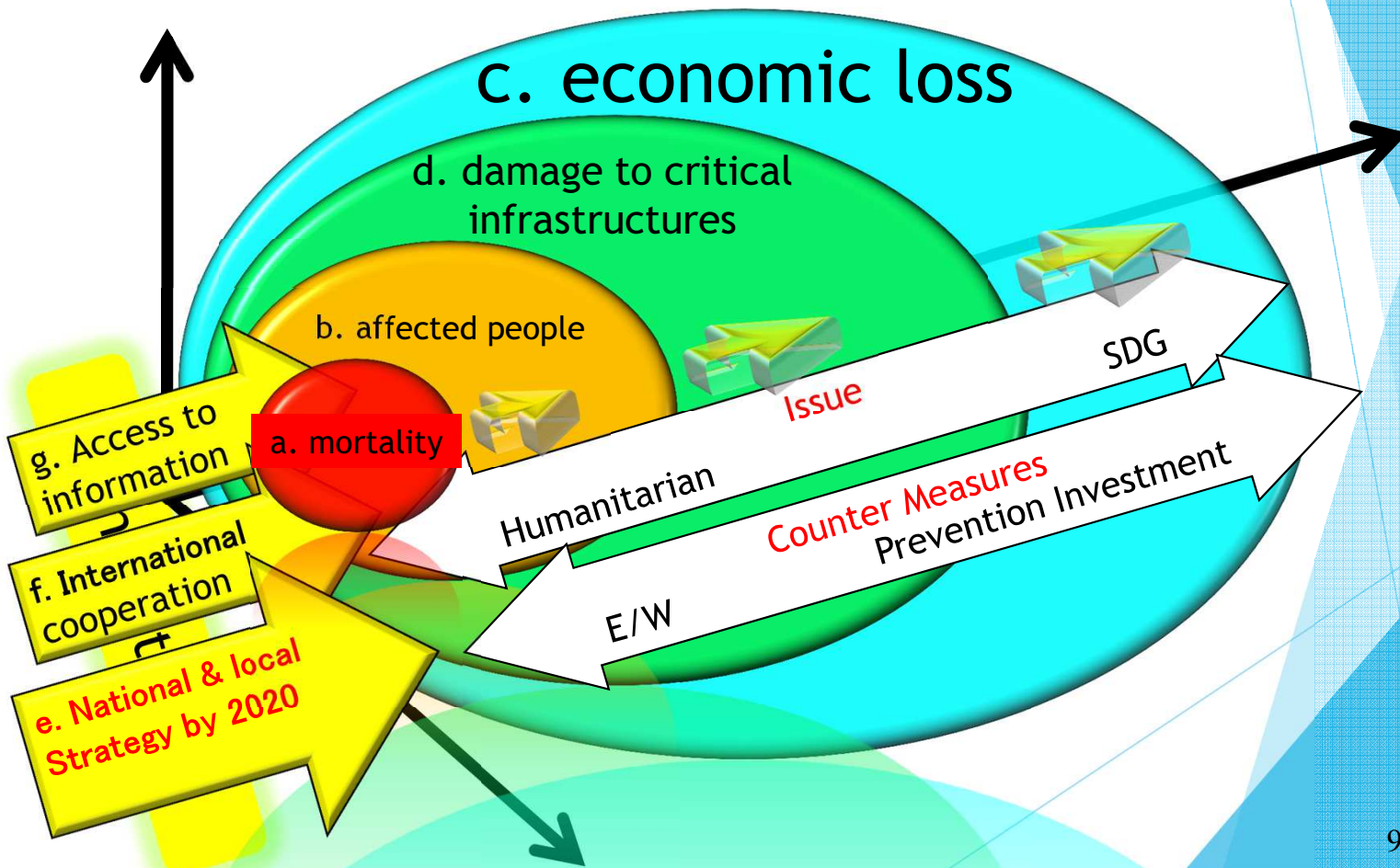
Planning on how to respond to disasters should they occur. This includes the provision of legislation, trained personnel and resources.

3 stages of DRMC

- PRE-DISASTER**
 - Risk Assessment
 - Mitigation/Prevention
 - Preparedness
- DISASTER RESPONSE**
 - Warning/Evacuation
 - Saving People
 - Providing Immediate Assistance
 - Assessing Damage
- POST-DISASTER**
 - Ongoing Assistance
 - Restoration of Infrastructural Services
 - Reconstruction (Resettlement /Relocation)
 - Economic & Social Recovery
 - Ongoing Development Activities
 - Risk Assessment Mitigation/Prevention



Sendai Framework Logical Relation between 7 Targets



Sendai Online Monitoring

The screenshot displays the Sendai Online Monitoring web application. At the top, the header includes 'UNISDR' and 'PreventionWeb' on the left, and a language dropdown set to 'English', a user profile for 'Sisira Kumara', and notification icons on the right. Below the header is a navigation menu with buttons for 'HOME', 'GLOBAL TARGETS', 'CUSTOM TARGETS', 'ANALYTICS', and 'ADMIN'. The main content area features a large banner image of a woman in a blue patterned shirt and white headscarf working with a haystack. Overlaid on this image is the text: 'MEASURING IMPLEMENTATION OF THE SENDAI FRAMEWORK' and an announcement: 'Analytics module is available in the SFM'. The announcement text reads: 'UNISDR is pleased to announce the Analytics module: A meeting point where the data from across the globe meets the public. Gets your hands on all validated data from countries as charts, maps and tables.'

PROGRESS OF GLOBAL TARGETS

COUNTRY REPORTING OVERVIEW

195
countries total

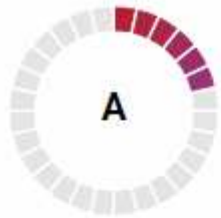
142
Not started

41
in progress

4
ready for validation

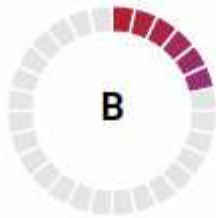
8
validated

TARGET REPORTING OVERVIEW



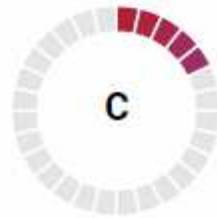
Mortality

151 Not started
8 in progress
15 ready for validation
21 validated



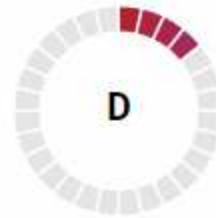
People affected

150 Not started
11 in progress
20 ready for validation
14 validated



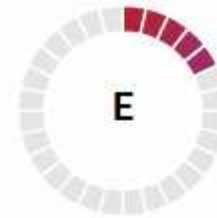
Economic loss

157 Not started
14 in progress
13 ready for validation
11 validated



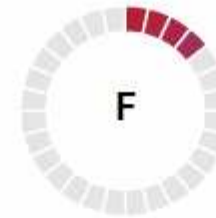
Critical infrastructure
& services

172 Not started
4 in progress
6 ready for validation
13 validated



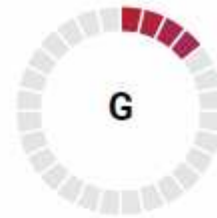
Disaster risk
reduction strategies

160 Not started
11 in progress
8 ready for validation
16 validated



International
cooperation

167 Not started
10 in progress
8 ready for validation
10 validated

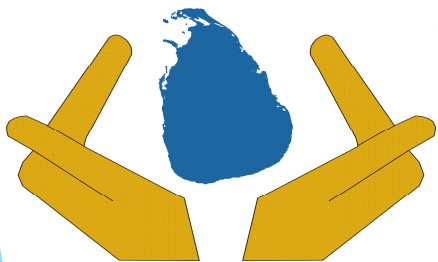


Early warning and
risk information

164 Not started
11 in progress
6 ready for validation
14 validated

Challenges and Issues

- ▶ Multi Hazard and frequency of losses and damages
- ▶ Census data will be up dated in 2022
- ▶ Preparation of **base line** -2015,2016,2017
- ▶ Multi stakeholder contribution/Institutional arrangement
- ▶ Application of modern Teac knowledge
- ▶ Institutional Capacity and capability
- ▶ Application of modern technology



Thank you.