Regional Workshop on Measuring Disaster Risks and Impacts

Country Presentation - Sri Lanka

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Daejeon
Republic of Korea

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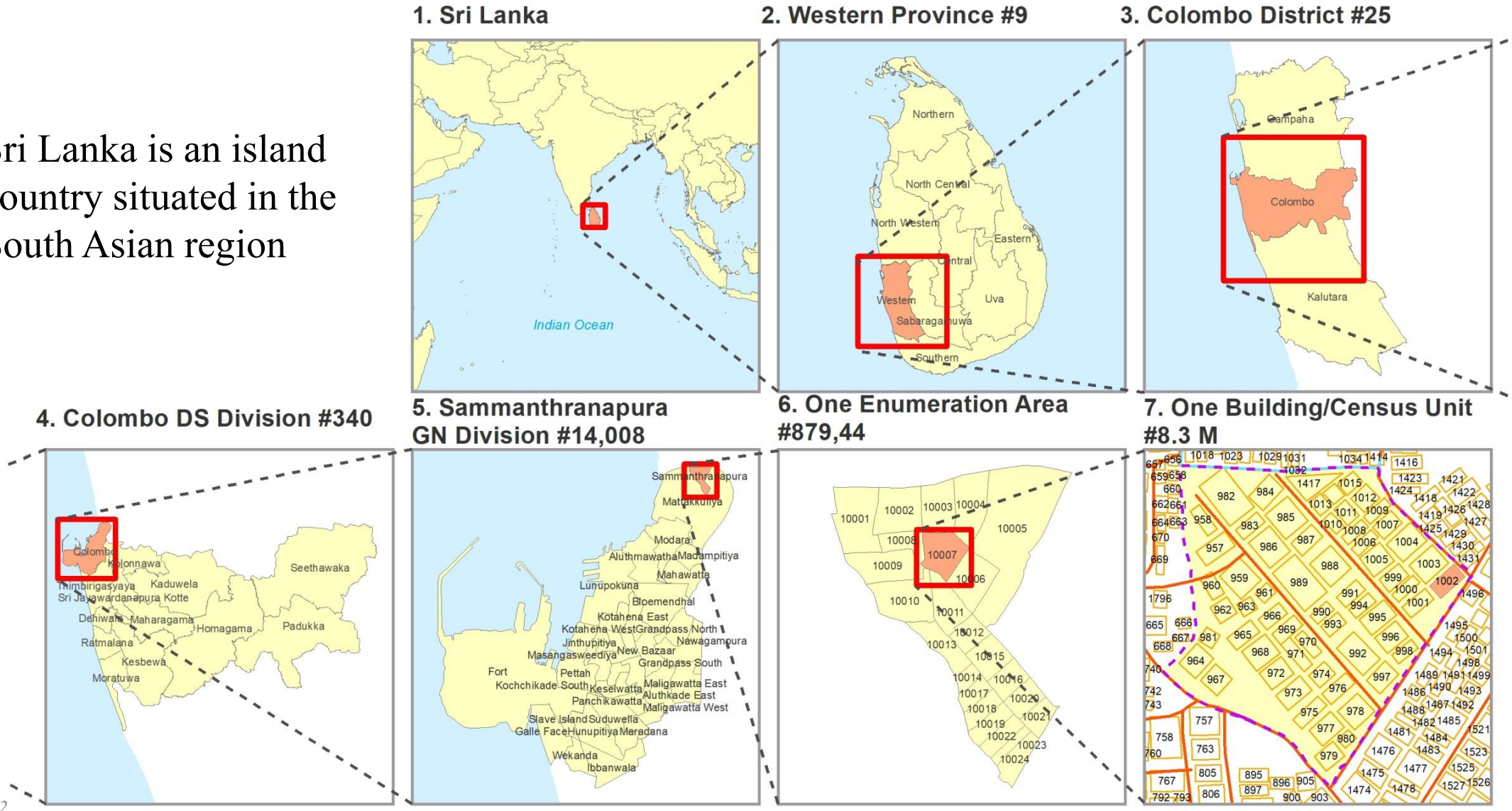
Outline

1. Introduction
2. Key Hazards in Sri Lanka
3. Impact of the Disasters
4. GIS for Risk Deduction
5. Disaster Risk Management
6. Our Current Priorities

1. Introduction

Main Administrative Hierarchy and Census Mapping

Sri Lanka is an island country situated in the South Asian region



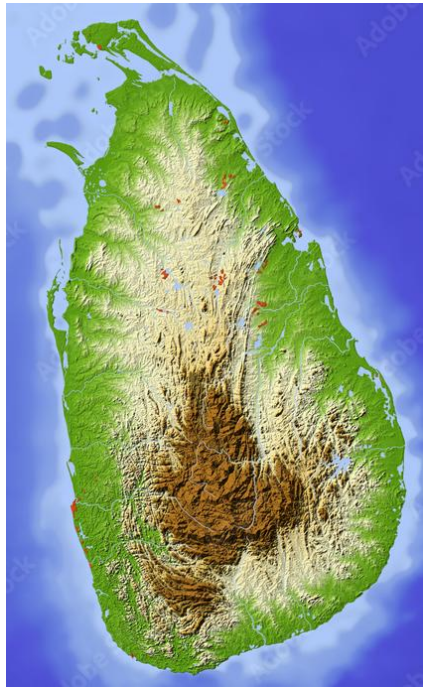
1. Introduction

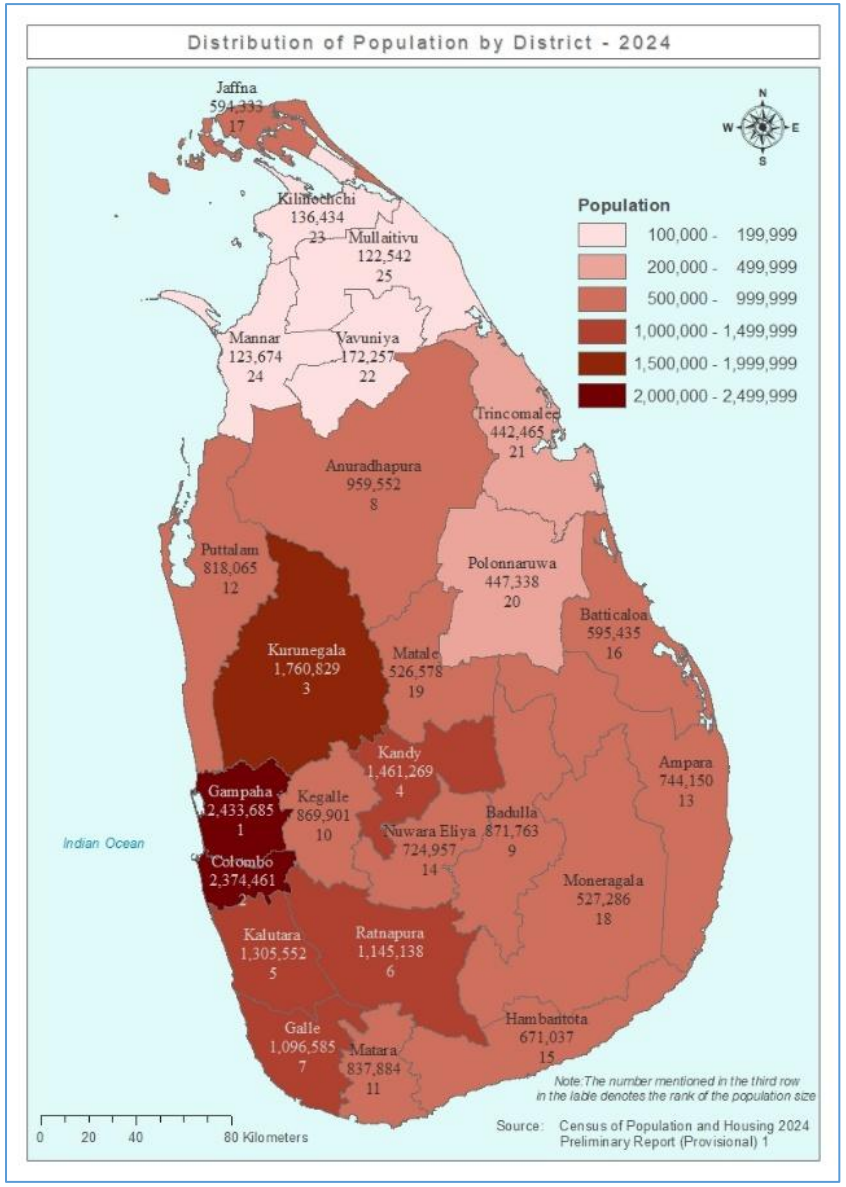
Area: 65,610 km^2

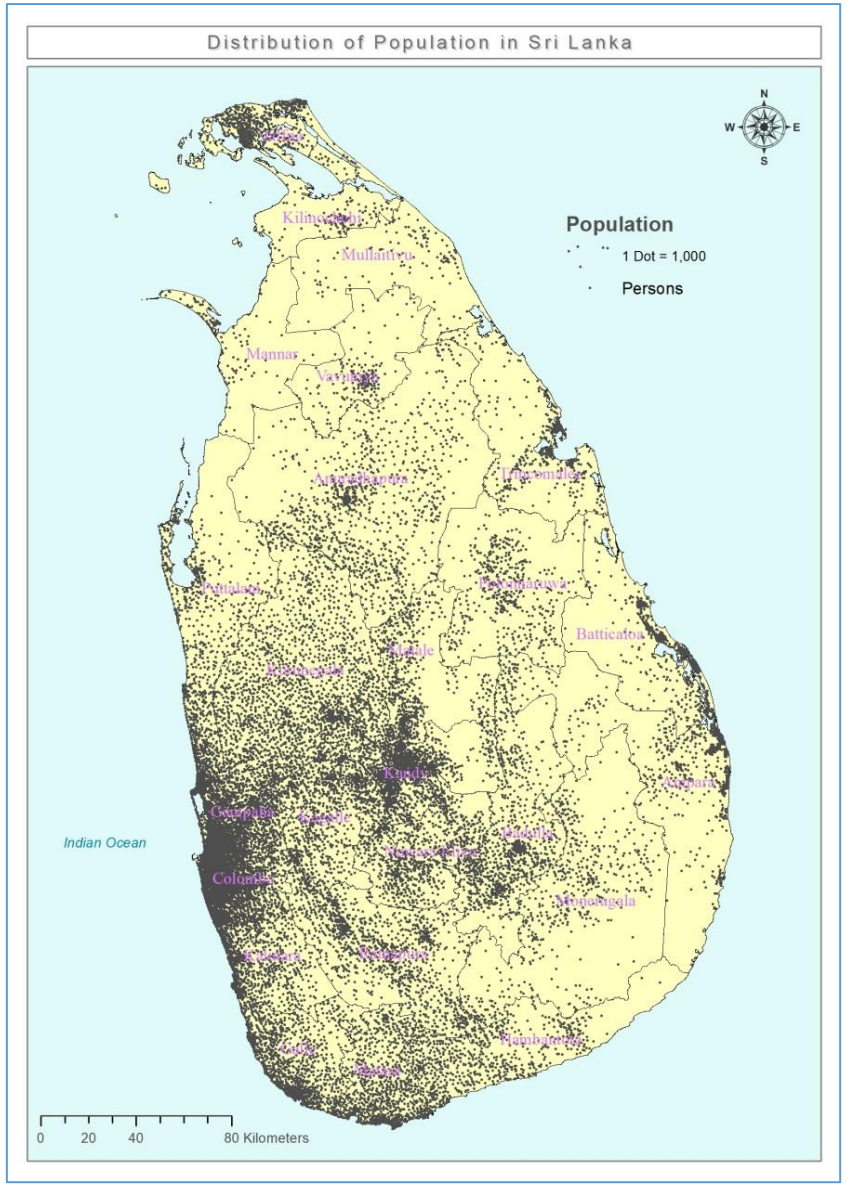
Population: 21,763,170

Population Density: 349 (persons per km^2)

Highest Elevation: 2,524m







2. Key Hazards in Sri Lanka

- Floods – Seasonal monsoon floods affecting low-lying areas
- Droughts – Frequent in dry zones due to irregular rainfall
- Landslides – Common in central highlands during heavy rains
- Fire – Unsafe, rapid spread fire specially in slum area
- Cyclones/High wind – Occur in coastal regions, especially in the northeast
- Lightening - Especially during the May–September monsoon season
- Coastal Erosion - Threatens beaches, livelihoods, and marine ecosystems
- Tsunamis – Rare but catastrophic, as seen in 2004

2. Key Hazards in Sri Lanka…

Climate Change

2. Key Hazards in Sri Lanka…

Manmade Factors

Human elephant conflict

2. Key Hazards in Sri Lanka…

Unplanned Development and urbanization

Flash Flood

Garbage dump collapse in Meethotumulla

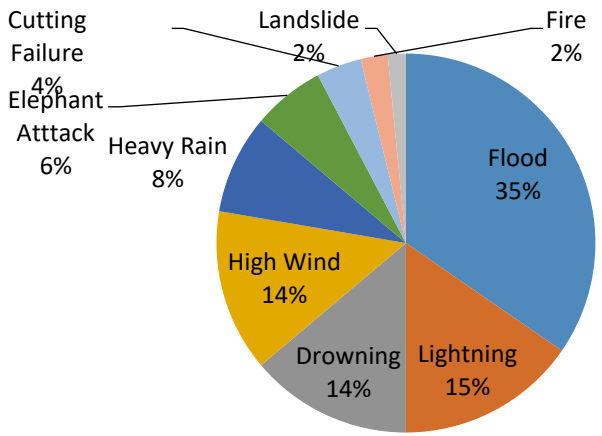
3. Impact of the Disasters

Disaster impact in 2024

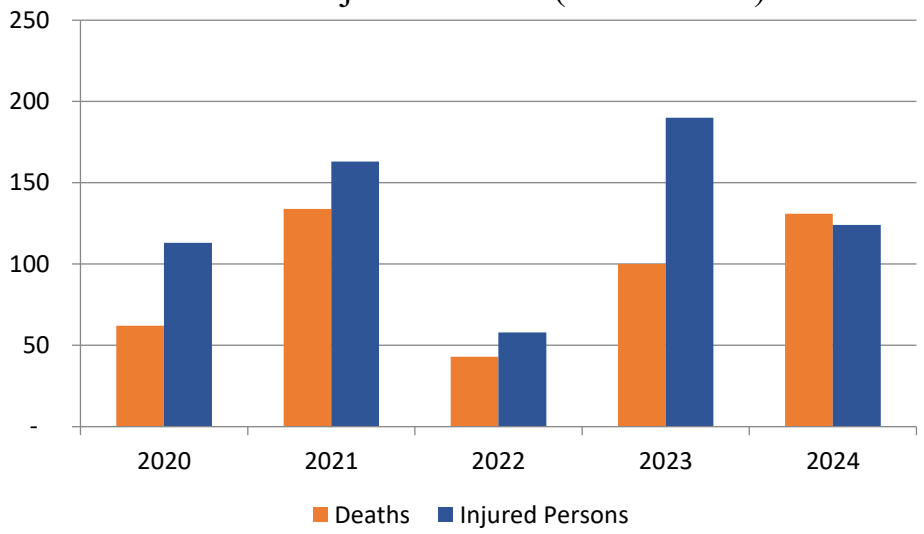
Disaster	Affected Families	Affected Persons	Deaths	Injured Persons	Missing Persons	House Damages Fully	House Damages Partially
Coastal Erosion	1	4	-	-	-	-	1
Cutting Failure	2,520	9,577	5	13	-	11	1,962
Drowning	9	25	18	-	1	-	-
Elephant Atttack	13	52	8	1	-	-	6
Fire	430	1,324	3	2	-	46	75
Flood	371,107	1,309,435	45	17	10	314	12,704
Heavy Rain	18,189	61,848	11	15	5	102	4,112
High Wind	21,165	79,027	18	59	5	74	14,102
High Wind Tree Fallen	403	1,520	1	9	-	2	394
Landslide	323	1,251	2	4	-	13	141
Landslide Risk	2,283	8,882	-	-	-	2	141
Lightning	1,024	3,794	20	4	-	3	968
Wall collapsed	11	48	-	-	-	-	11
Total	**417,478**	**1,476,787**	**131**	**124**	**21**	**567**	**34,617**

3. Impact of the Disasters…

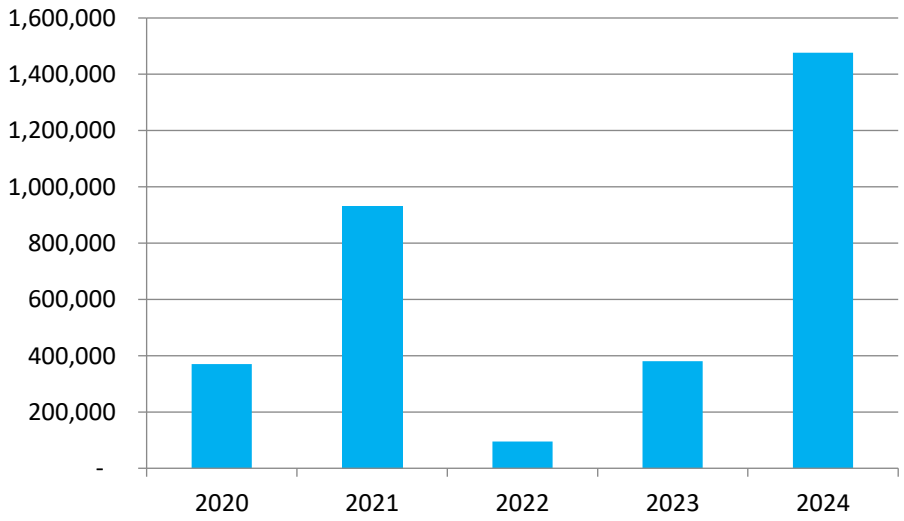
Deaths from each disaster in 2024



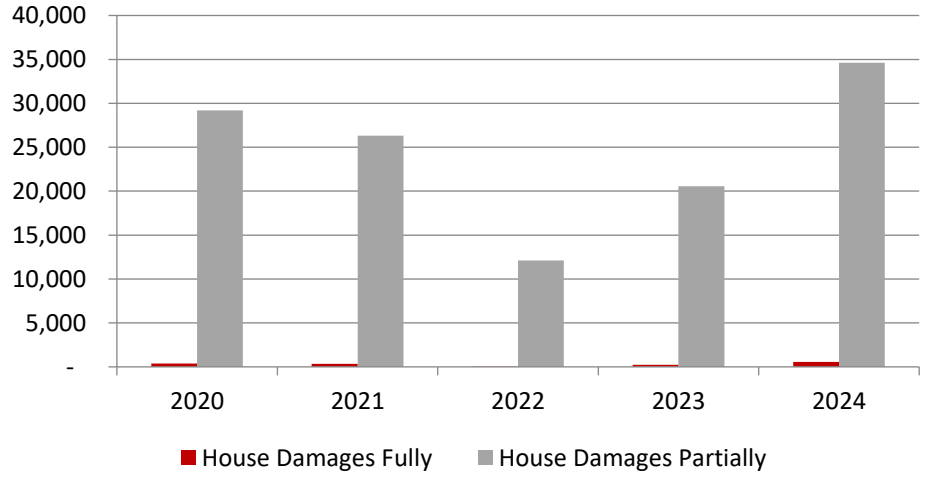
Deaths and Injured Persons (2020 – 2024)



Affected Persons (2020 – 2024)

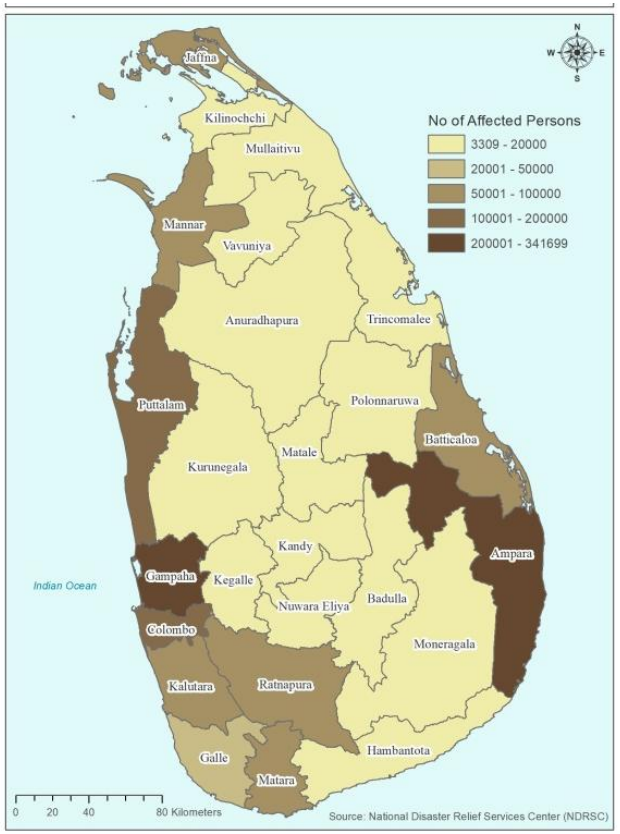


House Damages Fully and Partially (2020 – 2024)

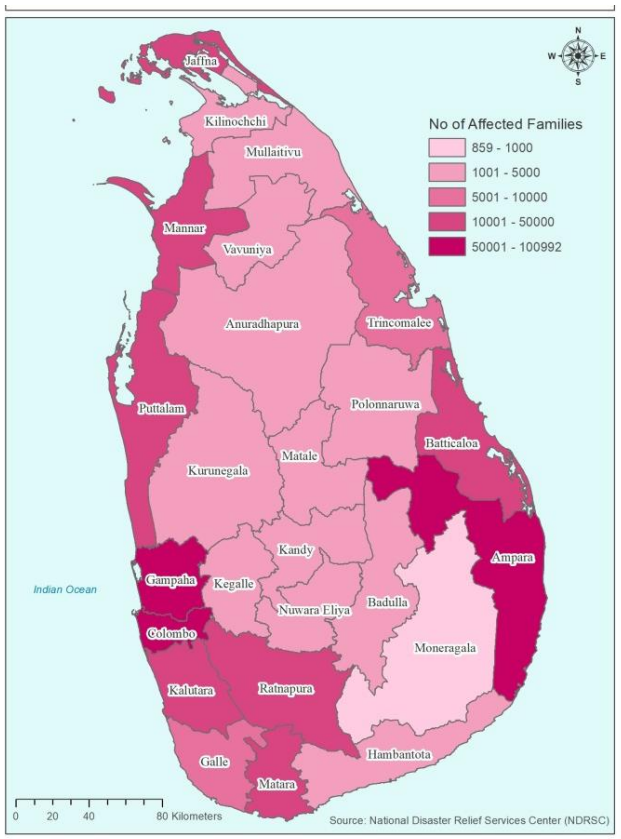


3. Impact of the Disasters…

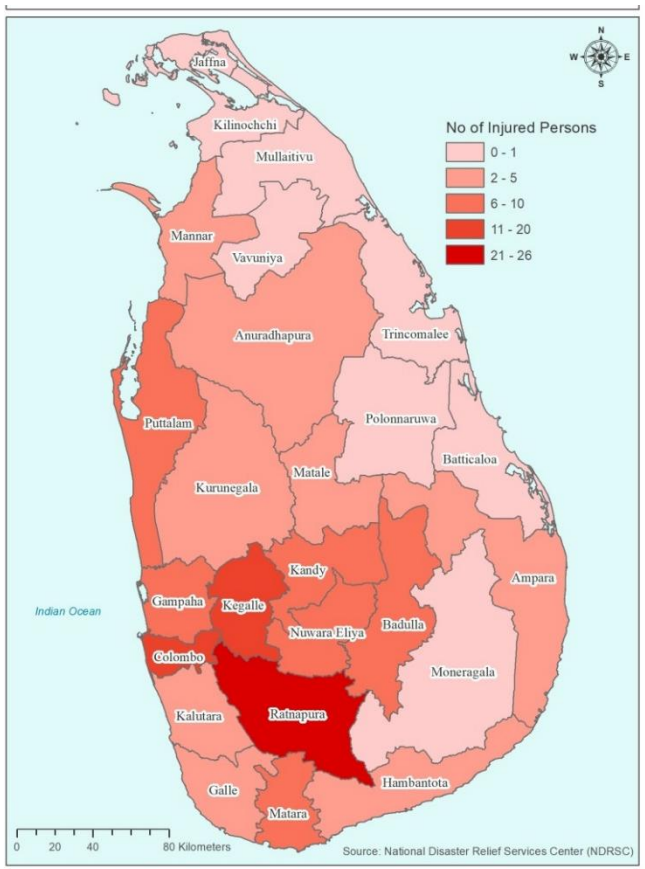
Affected Persons
by District in 2024



Affected families
by District in 2024

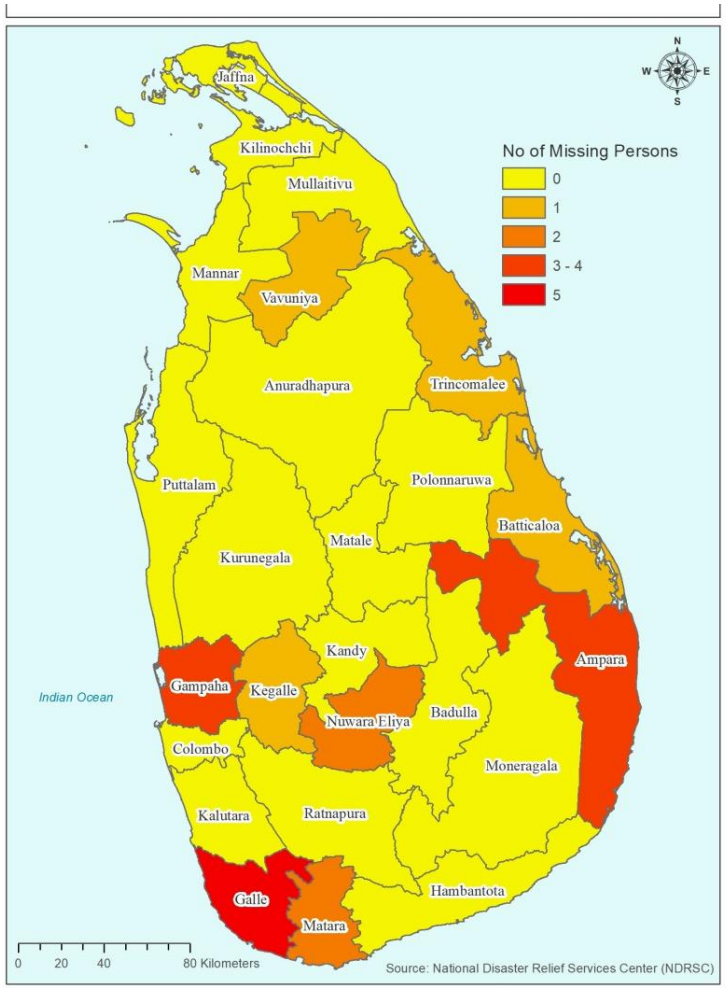


Injured Persons by
District in 2024

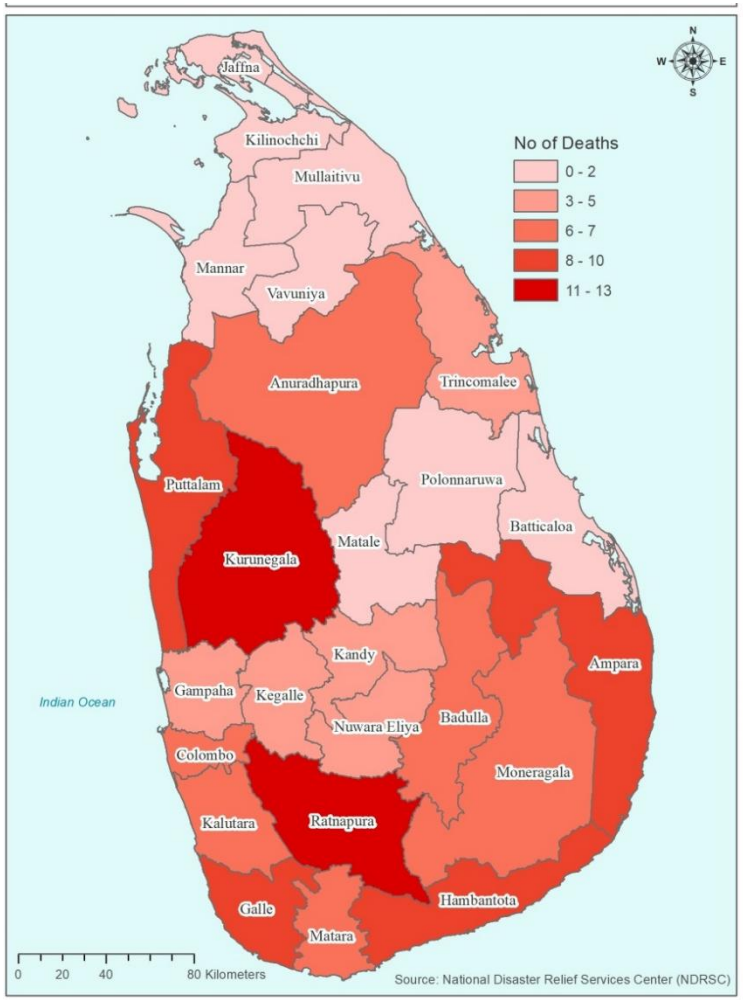


3. Impact of the Disasters…

Missing Persons
by District in 2024



Deaths by District
in 2024



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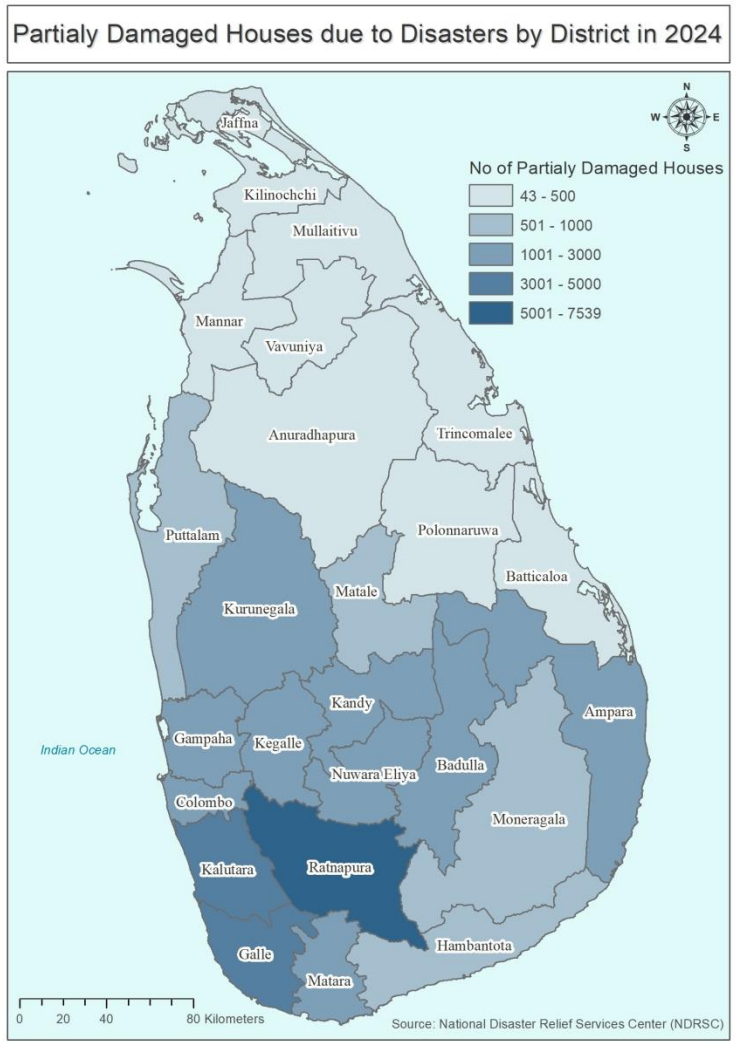
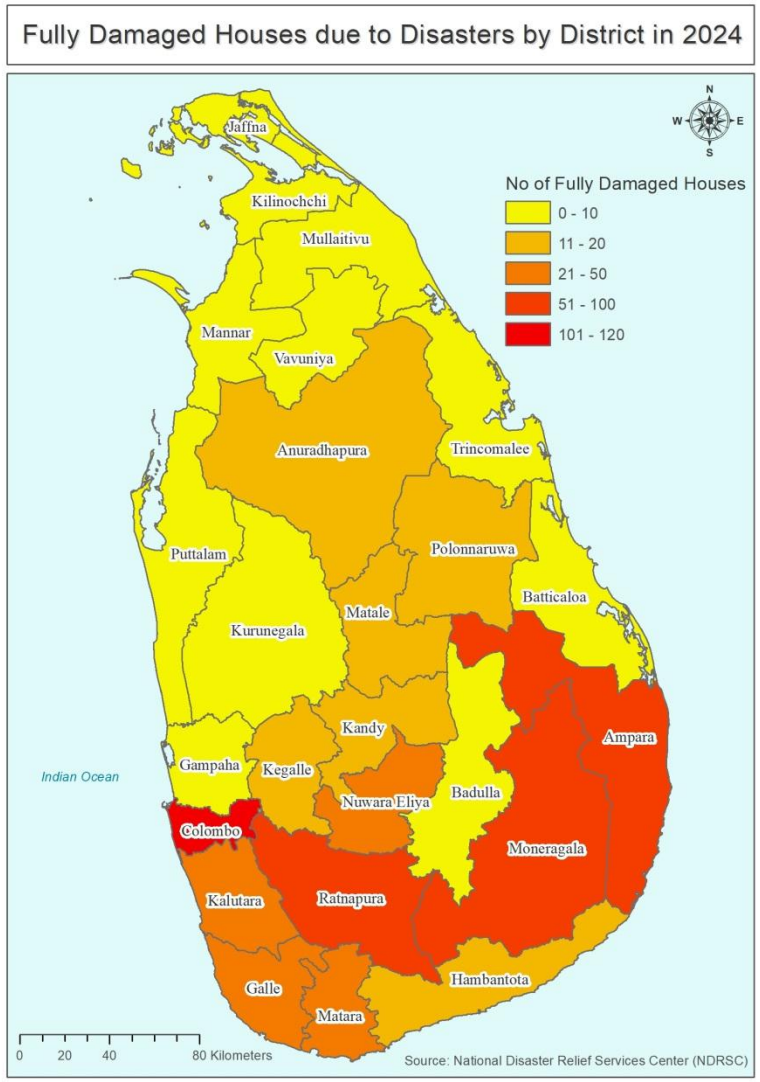
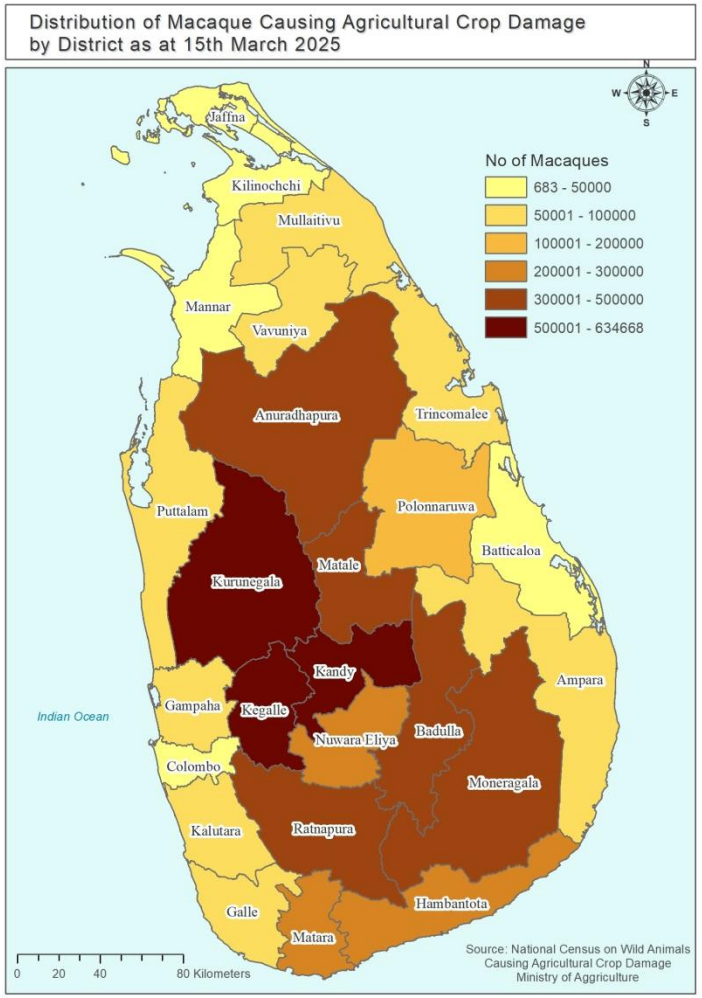
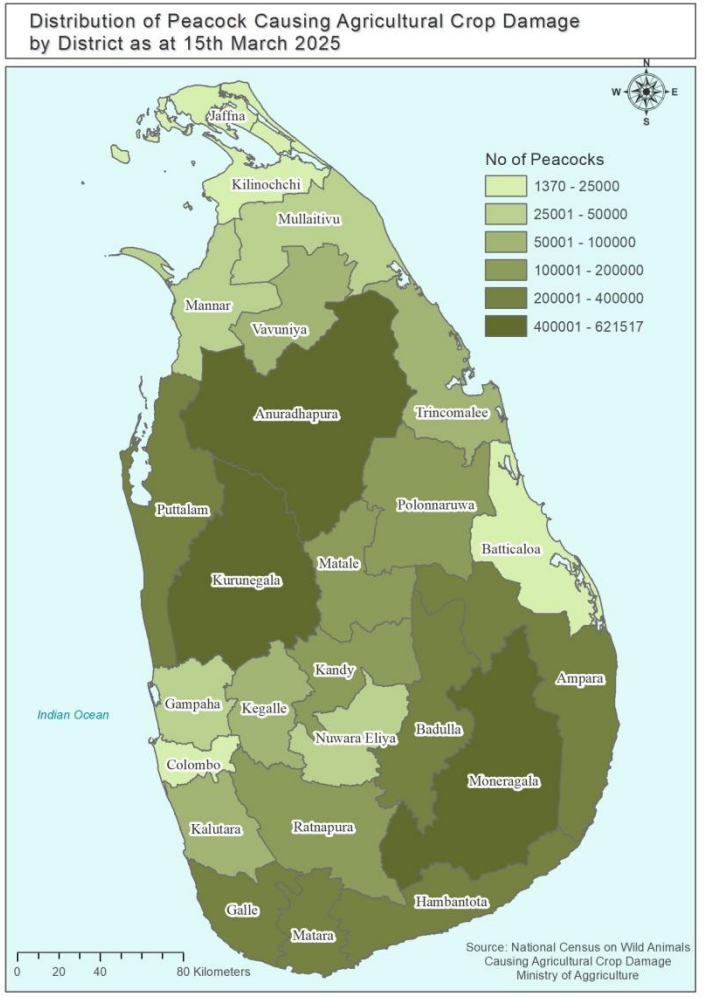




3. Impact of the Disasters…

Distribution of Wild Animal Causing Agricultural Crop Damage by District as at 15th March 2025





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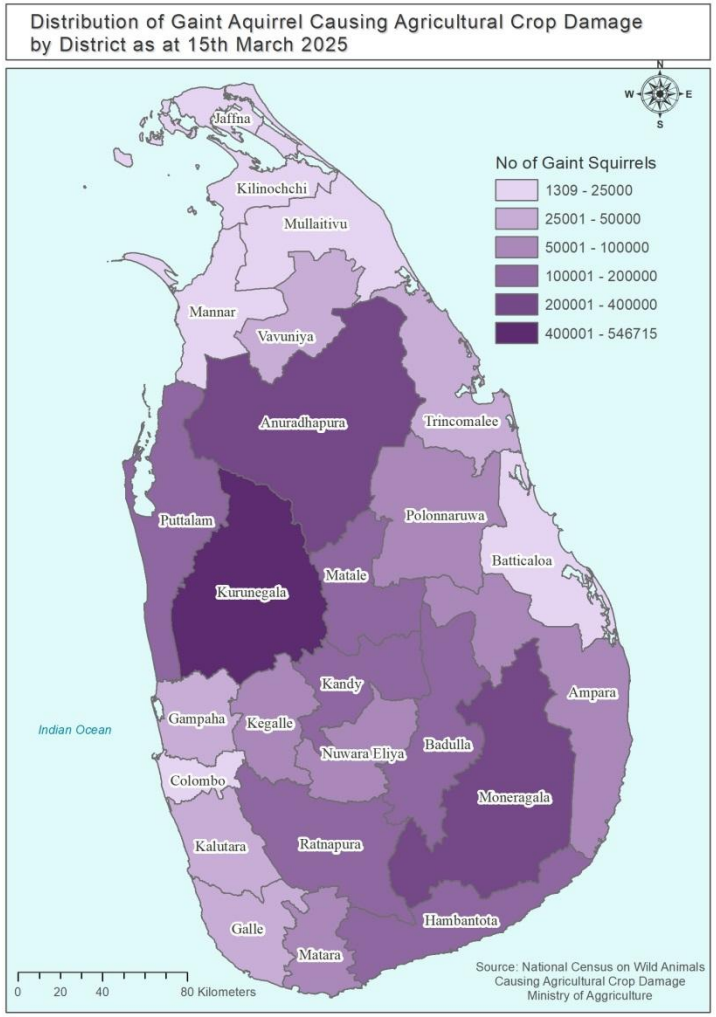
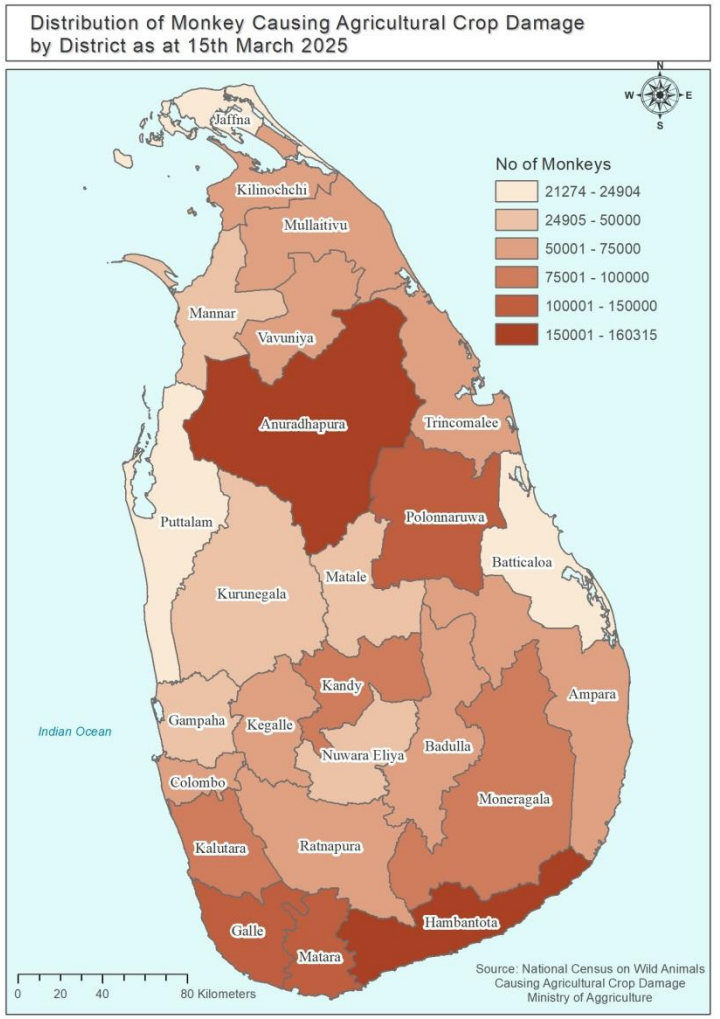




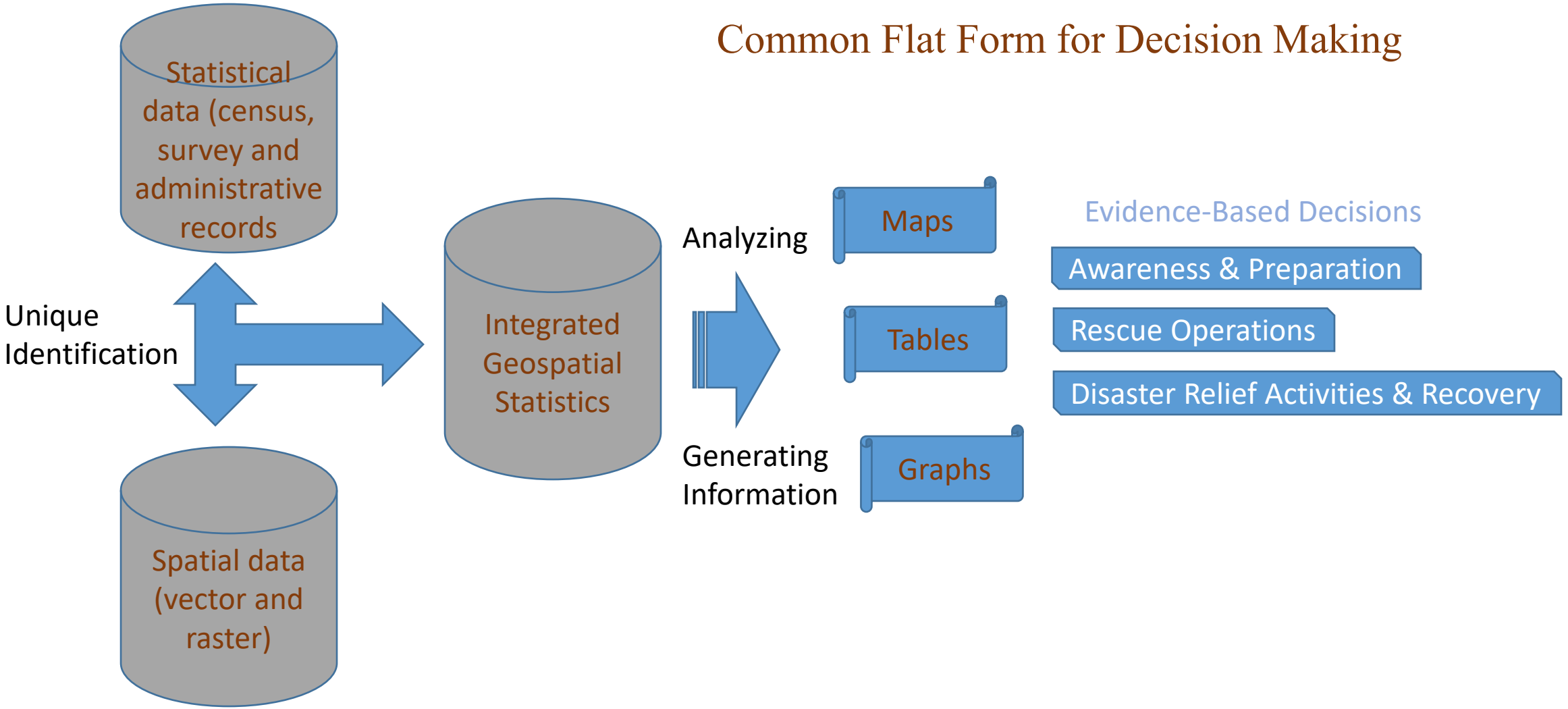
3. Impact of the Disasters…

Key Factors Contributing to Excessive Crop Damage by Wild Animals

- Deforestation and Losing their habitat
- Feeding cattle in the forest and destruction of remaining food sources
- Hunting has been prohibited, and people are losing interest in hunting wild animals. As a result, their populations are increasing rapidly.
- Wild animals have migrated from forests to human settlement area in search of food.
- Then they adapted to live in human settlement area

Threatened food security, farmer incomes, rural stability, and overall national economy

4. GIS for Disaster Risk Deduction…



4. GIS for Disaster Risk Deduction

Population Density Map for Disaster Management

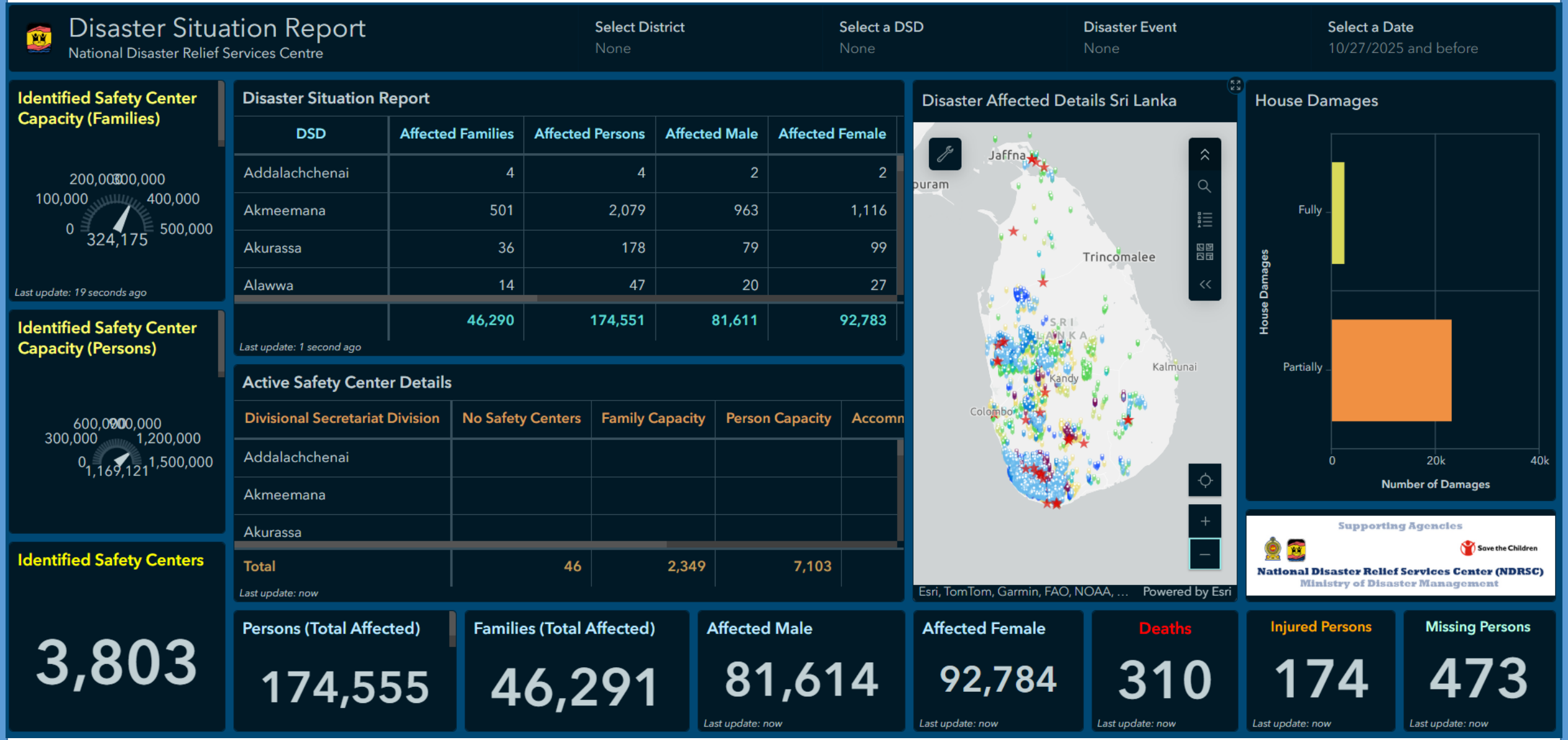
Gridded Population Map (100m × 100m) for Identifying Vulnerable Populations in Hazard-Prone and Disaster-Affected Areas

4. GIS for Disaster Risk Deduction…

Realtime Major River Water Level

Hydrology and Disaster Management Branch

4. GIS for Disaster Risk Deduction…



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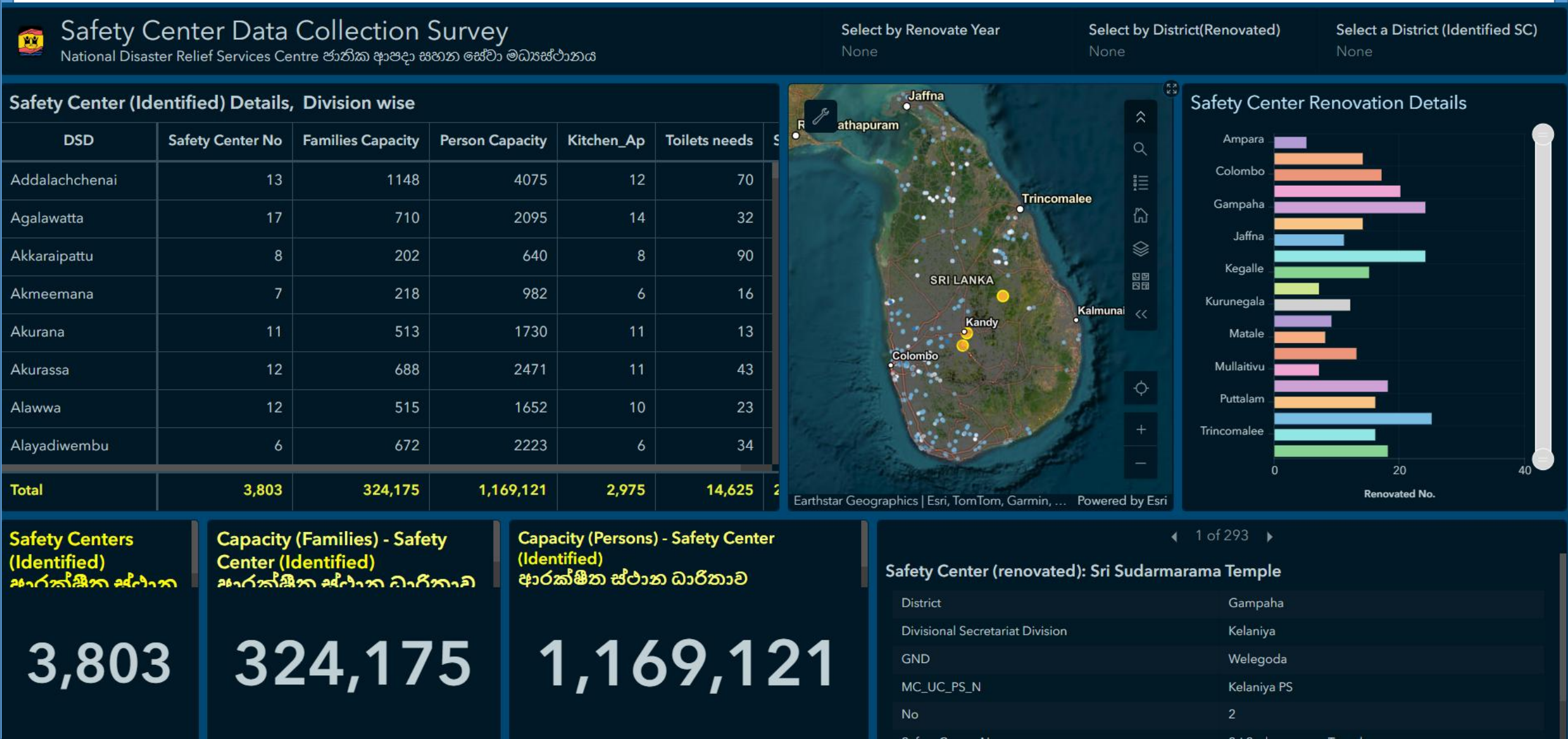


5. Disaster Risk Management

Essential Data Classifications for Comprehensive Disaster Risk Management

Disaster Event Tracking

Number of disasters by type and region helps understand spatial and temporal trends.

Human Impact Data

Data on injuries, missing, deaths, and displacement assess the disaster's human toll.

Economic and Infrastructure Losses

Indicators on financial loss and infrastructure damage guide recovery planning.

Climate and Vulnerability Metrics

Climate data and socio-economic metrics identify risks and support hazard anticipation

5. Disaster Risk Management…

Challenges with Disaster Data Sources

Fragmented Data Across Agencies : Data fragmentation among multiple agencies causes inconsistencies and duplication, hindering effective disaster risk management.

Lack of Historical and Real-Time Data : Limited historical records and absence of real-time updates restrict trend analysis and timely response to disasters.

Poor Integration of Data Types : Insufficient integration of geospatial and statistical data impedes hazard mapping and disaster planning.

Data Gaps in Remote Regions : Remote and vulnerable areas face data collection challenges due to limited infrastructure and resources.

5. Disaster Risk Management…

Initiatives to Enhance Disaster Data Production

Centralized Data Platforms : Sri Lanka established centralized platforms consolidating disaster data from multiple sources for better accessibility.

Risk Assessments and Hazard Mapping : National risk assessments and hazard mapping identify high-risk areas to guide disaster planning.

Survey Integration and Collaboration : Disaster modules integrated into surveys and collaboration with relevant agencies to enhance data accuracy.

Standardized Data Collection : Standard operating procedures ensure consistent and reliable disaster data collection processes.

6. Our Current Priorities

Data Integration and Digital Solutions

- Digitization of all building footprints in disaster-prone areas
- Linking building footprints with population census data
- Developing a data-sharing portal to support decision-making at the grassroots level.
- Strengthening coordination, collaboration, and data sharing to enhance disaster preparedness, risk reduction, and mitigation
- Developing a system to obtain real-time or periodic population data and housing data during the intercensal period

6. Our Current Priorities…

Data Integration and Digital Solutions

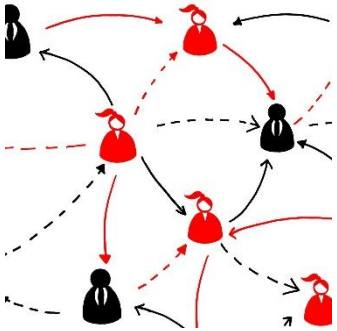
- Focusing on identifying settlement areas and approving building plans in a systematic way.
- Strengthening Access to early warning systems all people in disaster prone areas
- Aliening all the spatial data produced by various government agencies
- Integrating disaster risk reduction into the mainstream of development for preparation of national plans, urban development, national and provincial highway construction and development, local government, tourism, private sector, health, water and sanitation, environmental impact studies, local disaster management strategy

6. Our Current Priorities…

Challenges with Disaster Data Sources

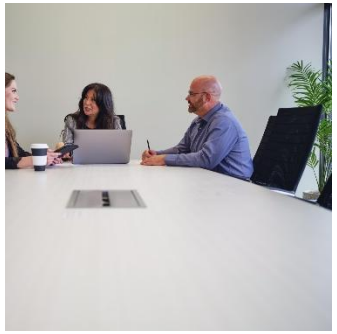
Capacity Building

Training programs and international support enhanced Sri Lanka's technical capacity for disaster data management.



Data Sharing Collaboration

Inter-agency agreements and governance policies fostered cooperation and data sharing among agencies.



Funding and Resource Mobilization

Integrating disaster data efforts with development programs secured donor support and funding.

6. Our Current Priorities…

Insights and Recommendations

Institutionalize Disaster Data : Integrate disaster data within national statistical frameworks to ensure sustainability and seamless data management.

Cross-sector Collaboration : Promote cooperation across government levels and sectors for comprehensive disaster data collection and utilization.

Technology and Capacity Building : Invest in technology and human resources to enhance data quality and improve timeliness of disaster information.

Global Alignment : Align disaster data initiatives with international frameworks to support global cooperation and relevance.

Thank You.