

Disaster Management Efforts in Sri Lanka

By
Sudharma Elakanda, BSc Eng (Hon.), MBA
Mahaweli Authority of Sri Lanka

Where we are



Sri Lanka

Indonesia

Yogyakarta

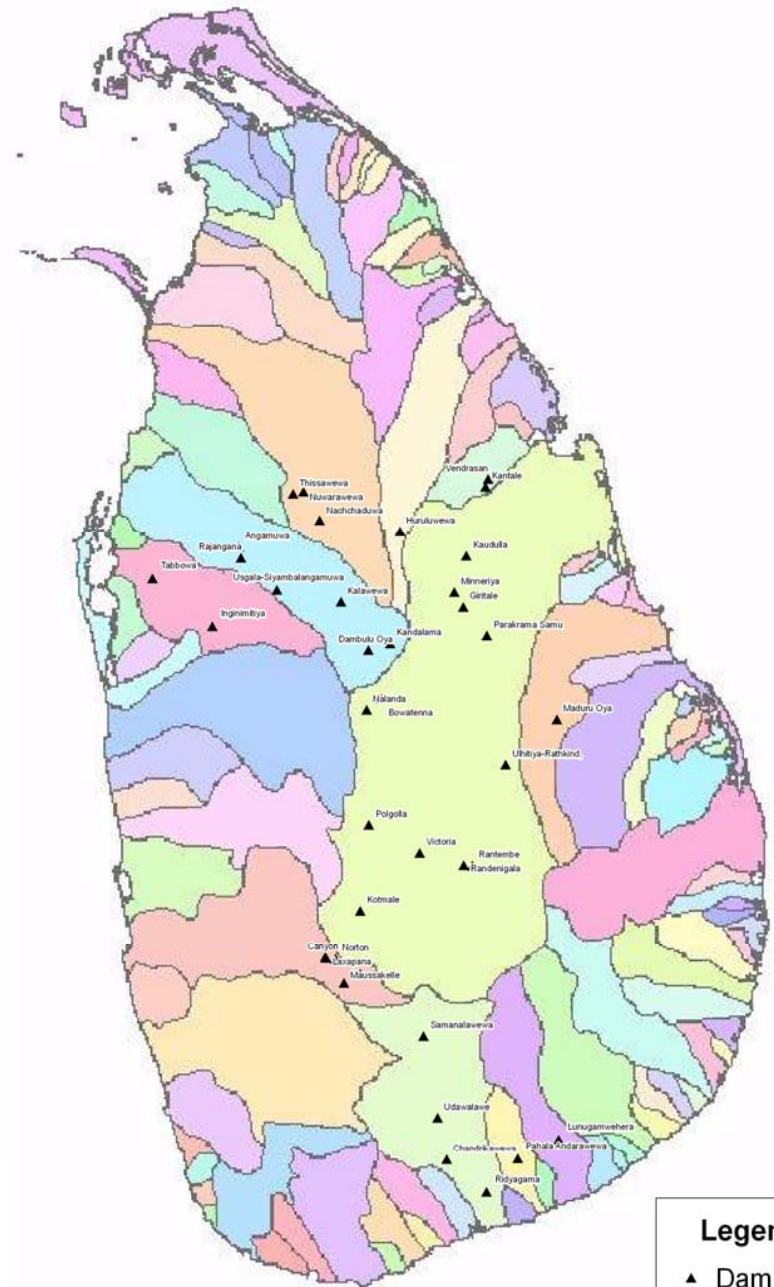
© 2007 Europa Technologies
Image NASA
© 2007 Tele Atlas
© 2007 ZENRIN

© 2005 Google™

Background

- 103 River Basins in Sri Lanka
- 17 River Basins > 1000 sq km
- Mean Annual Rainfall varies from 900mm – 5500mm
- Climatically, there are 3 zones (Dry Zone, Intermediate zone and wet zone)
- Population of Sri Lanka - 19 millions
- At sea level temperature ranges from 25° to 28° C while it varies from 12° to 16° C in hill country

River Basins and Dam Sites



Sri Lanka is not a Disaster Prone Country until Recently

- Sri Lanka was Badly affected by the Tsunami in December 26, 2004.
- It was an Eye Opener for the people of the Entire Country.
- To face this challenge GOSL has taken action to pass a Parliamentary Act and Establish a separate Ministry to handle this important aspect in 2005.

Legal Framework

GOSL has Passed a New Act of Parliament in 2005 to address this issue in nation wide.

- Sri Lanka Disaster Management Act No 13 of 2005. This act has provision for establishment of the
 - o National Council for Disaster Management
 - o The Disaster Management Center
 - o Appointment of the Technical Advisory Committee
 - o Preparation of Disaster Management Plan
 - o Declaration of a State of Disaster
 - o The award of compensation and matters connected therewith or incidental there to.

According to this Act the Ministry of Disaster Relief Services that was formed under the Gazette No. 1422/22, dated on 08th December 2005

Functions of the Ministry for disaster reduction

- Planning and Implementation Programmes to meet impact of Disasters
- Providing response assistance to victims of Disasters
- Monitoring, Coordination and Evaluation the activities of disaster response and recovery with relevant authorities and parties concerned
- Implementation of Search and Rescue operations at Natural and Human made Disasters
- Implementation of Recovery Programmes to regain and re-establish live hood and economic activities disrupted by disasters
- Contribution to Sustainable Development Programmes of the affected areas through disaster response and recovery
- Conducting awareness programmes to making awareness Officials, General public and school children in relation to Hazards, Risk and Vulnerability of Disaster Management

An aerial photograph showing a flooded area with several boats and debris. The water is murky brown, and there are some structures and boats visible in the background. The title 'The Water' is overlaid on a black box at the top center.

The Water

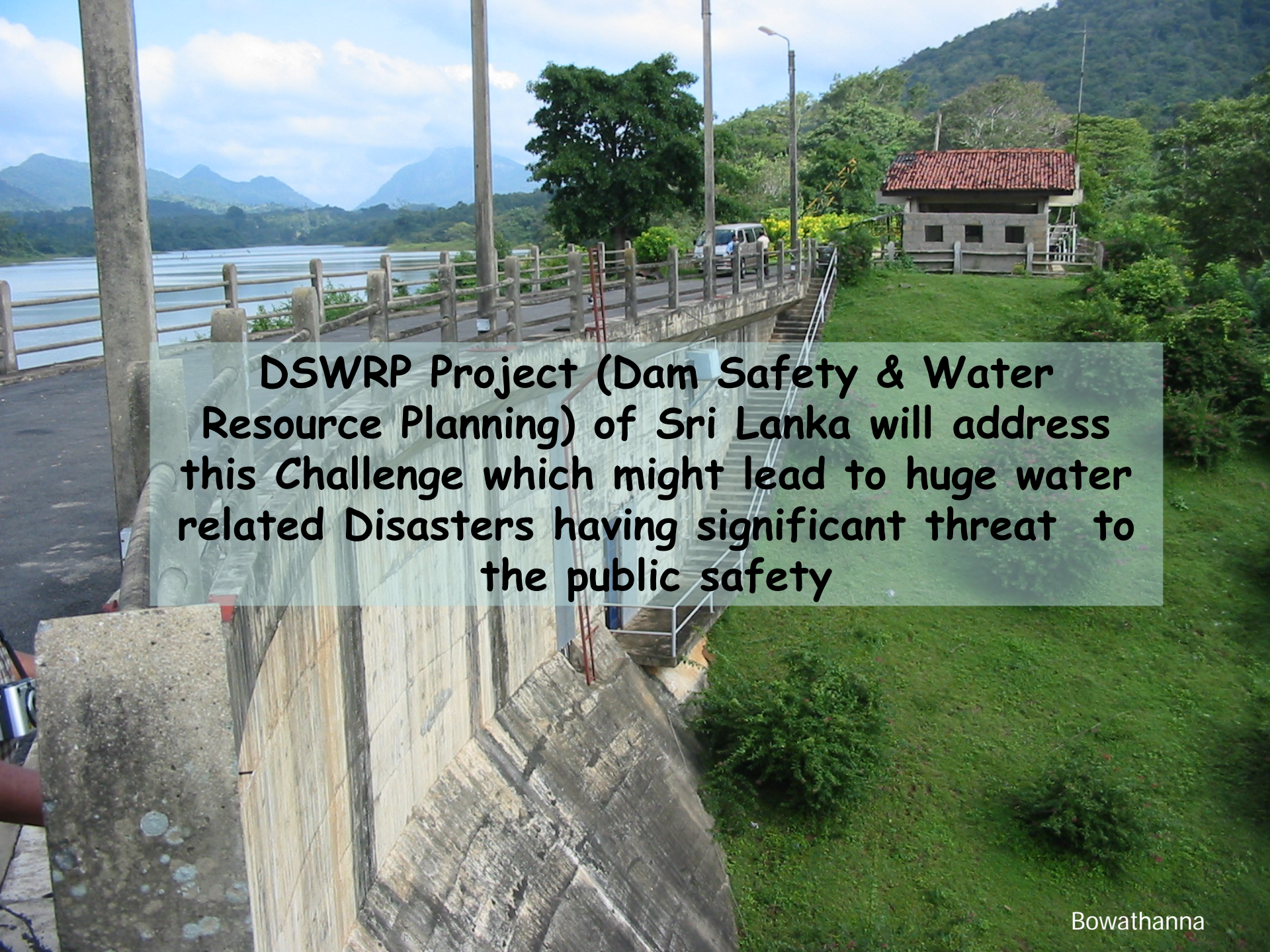
- **Constructive Part of the Water**
 - Irrigation , Food Production
 - Domestic Use
 - Hydro Power Production
 - Industrial use
- **Destructive Part of Water**
 - Flood
 - Land Slides
 - Tsunami
 - Droughts

Level of Attention

- Public attention was totally on constructive part of the Water, because of the various benefits.
- Very less attention was on destructive part of the Water until recent time.

One of the Major Challenge to the Water Sector in Sri Lanka

Over 350 Large/Medium Dams, Headworks and Trans-Basin Canals of the country are aging and suffering from various structural deficiencies and shortcomings in operation and monitoring of such facilities which affect largely on Public Safety.



DSWRP Project (Dam Safety & Water Resource Planning) of Sri Lanka will address this Challenge which might lead to huge water related Disasters having significant threat to the public safety

Under the project following activities will be carried-out

- 32 Large Dams of the country which have been identified as high risk to the public safety , will be rehabilitated.
- 80 Large, (including above 32 Dams) of the country will be provided Basic Safety Facilities.
- Critical issues of Senanayake Samudraya, Samanalawewa, Polgolla Tunnel, Minipe Trans basin Canal and Victoria Dam will be studied and make recommendation for remedial actions.
- Upgrade/Develop a modernized and efficient Hydro-Meteorological Information System (HMIS) for the country to forecast water resources development work more accurately.

Locations of Proposed 32 Dams

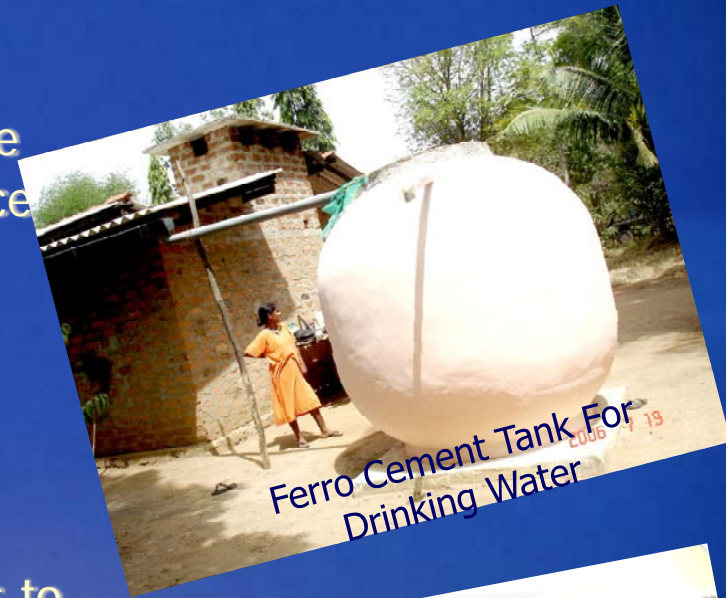
- Bowatenna
- Canyon
- Castlereigh
- Chandrikawewa
- Dambulu Oya
- Girithale
- Huruluwewa
- Kalawewa
- Kandalama
- Kantale
- Kaudulla
- Kotmale
- Laxapana
- Minneriya
- Nachchaduwa
- Nalanda



- Norton
- Nuwarawewa
- Parakrama Samudra
- Polgolla Dam
- Rajangana
- Randenigala
- Rantembe
- Tissawewa
- Ulhitiya-Rathkinda
- Vendrasan
- Victoriya
- Kalatuwawa
- Inginimitiya
- Ridiyagama
- Tabbowa
- Usgala Siyambalangamuwa

Country's efforts towards Reduction of Impacts of Disasters.

- Examine and reorganizing existing Relief Assistance Programme to ensure for providing excellent service to disaster victims
- Setting up an Emergency Operation Unit at the Ministry
- Setting up Disaster Resource Centers to each Districts
- Implementation of Disaster Mitigation Programmes to reduce Risk and Vulnerability in disaster prone areas
 - eg: Construction of tanks for rain water harvesting in dry zone for preventing Drought.
 - Development of conservation measures in hill country for preventing landslide & soil erosion



Country's efforts towards Reduction of Impacts of Disasters.

- Mapping flood prone areas
- Establishment of Disaster Response Teams at the school level
- Setting up Disaster Management Coordinating Committees to each Divisional Secretariats
- Preparation of Divisional Level Disaster Response and Action Plan to each Divisional Secretariats
- Implementing an Income Generating Programme among Tsunami and War victims in the Batticola District



Recent Disasters in Sri Lanka

- Tsunami on 26th December 2004
- Drought 2004
- Flood and Landslide 17th May 2003
- Drought, 2001
- Cyclone, 26th December 2000
- Kantalai Dam Failure-1986

Example: Water-Related Disaster

Kantale Dam Failure in 1986.

The Kantale Tank Bund breached in 1986 resulting in a massive dam disaster.

- killing 127 people,
- affecting 10864 residents,
- destroying 1200 houses
- damaging agriculture,
- Commercial and public infrastructure sector.

The cost to the Government of rebuilding the breached section was Rs186m.

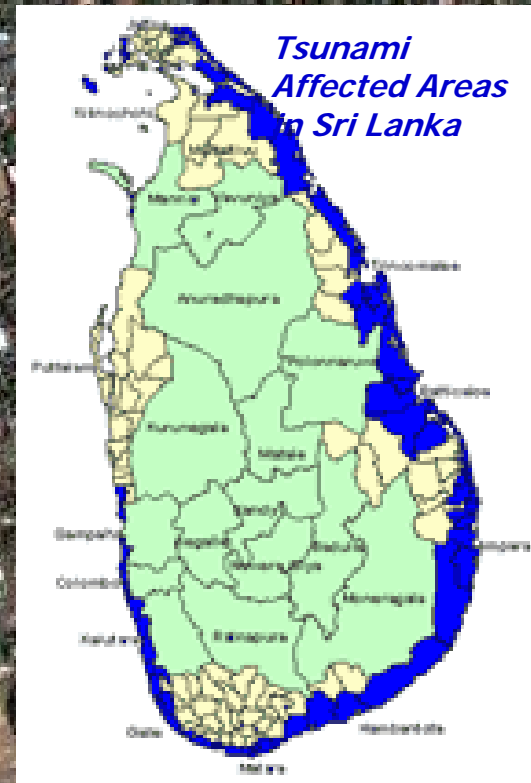
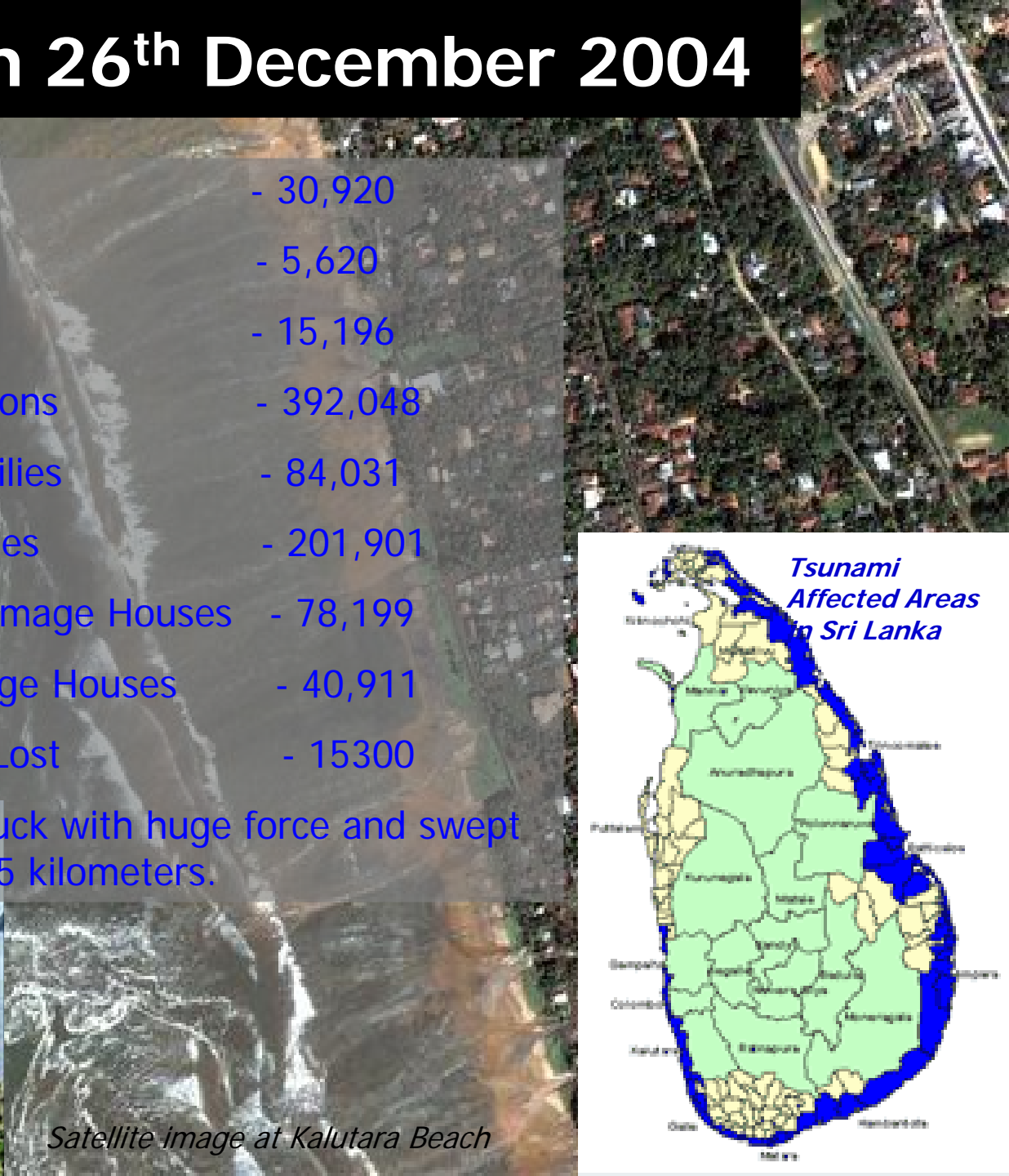
Total expenditure spent including the cost of rebuilding public properties and infrastructure like schools, roads, hospitals, etc. is equivalent to Rs 3.5 billion



Tsunami on 26th December 2004

- Deaths - 30,920
- Missing - 5,620
- Injured - 15,196
- Displaced Persons - 392,048
- Displaced Families - 84,031
- Affected Families - 201,901
- Completely Damage Houses - 78,199
- Partially Damage Houses - 40,911
- Fishing Boats Lost - 15300

• The waves struck with huge force and swept inland as far as 5 kilometers.



Satellite image at Kalutara Beach

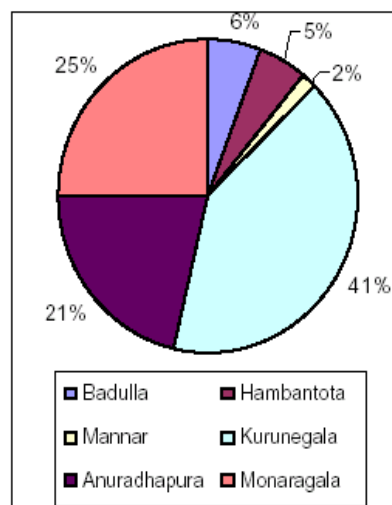
Drought 2004 in Sri Lanka

July, August and September

The significant loss caused up to now is the failure of the paddy crop in Maha season as reported by the District Secretaries of the seven drought affected Districts mentioned above. The chena cultivation and highland crops in these Districts too have been severely affected according to the reports received

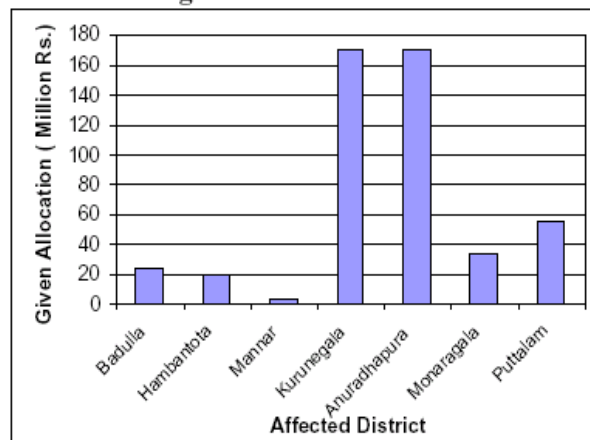
Crop Damages by Districts

District	Crop Damaged (ha)
Badulla	3,087.00
Hambantota	2,809.70
Mannar	792.20
Kurunegala	21,561.00
Anuradhapura	11,272.00
Monaragala	13,130.00
Puttalam	N.A.
Total	52,651.90

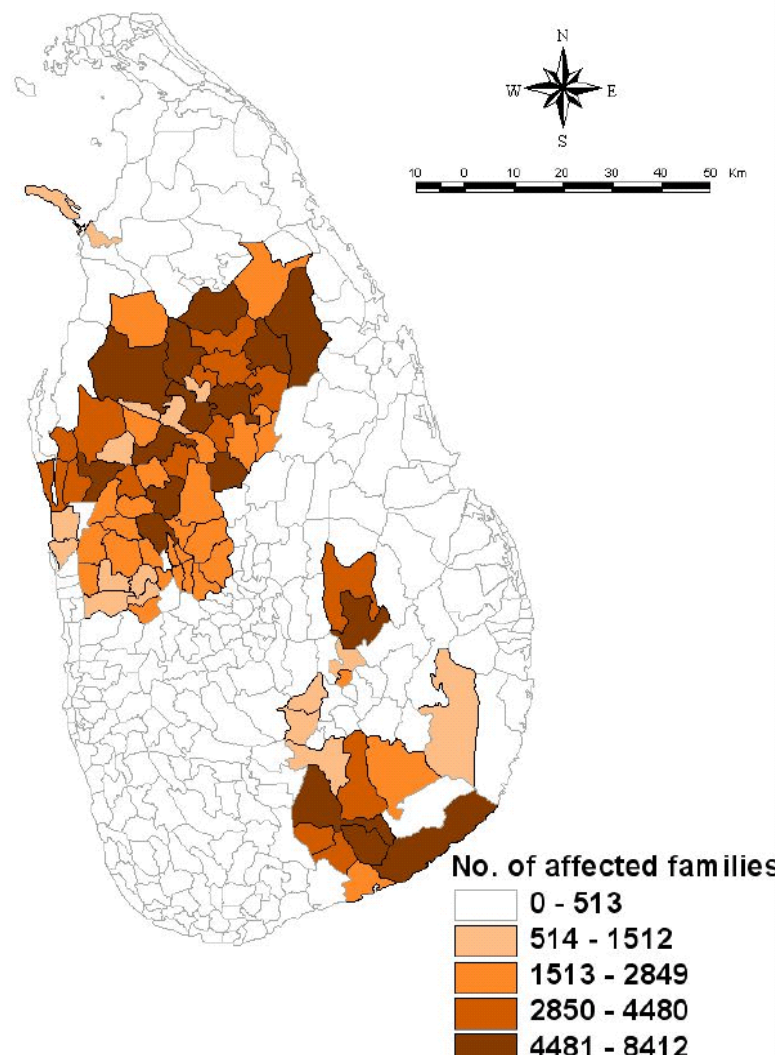


Given Allocation for Drought – 2004

District	Given allocation (Million Rs.)
Badulla	25
Hambantota	20
Mannar	3
Kurunegala	170
Anuradhapura	170
Monaragala	33
Puttalam	56
Total	477



Spatial Distribution of Drought 2004



Look ... Impact of Disasters



Displaced people need to be treated with dignity and honour

Disaster prevention & management should not be a effort only of the governments but it should be a join effort and responsibility of each one of us of the entire world



Thank You for your Attention



23 5:23AM