

# **Evaluation of Spaced Based Technology in Disaster Management in Sri Lanka**

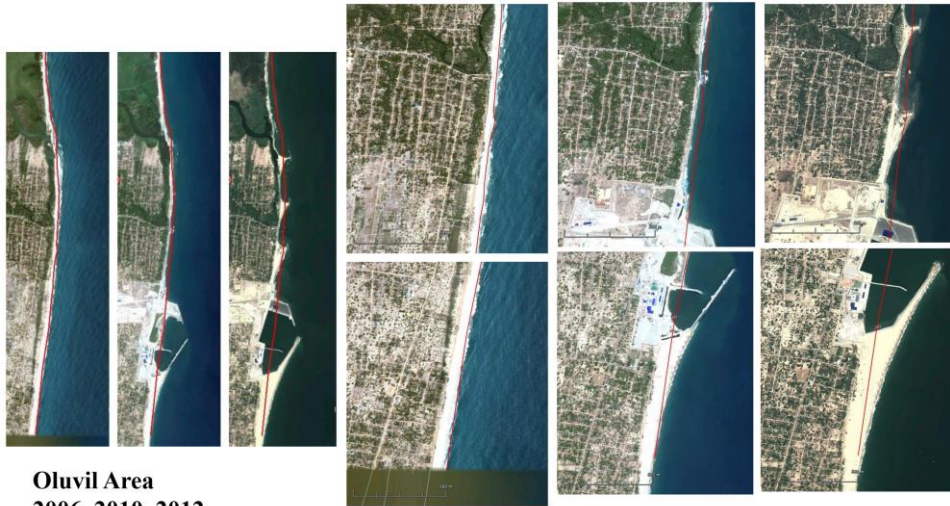
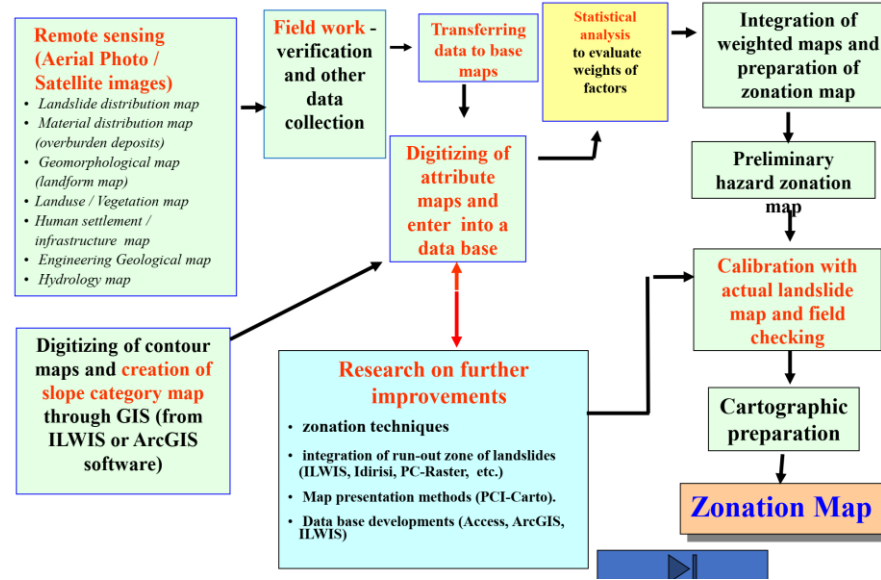
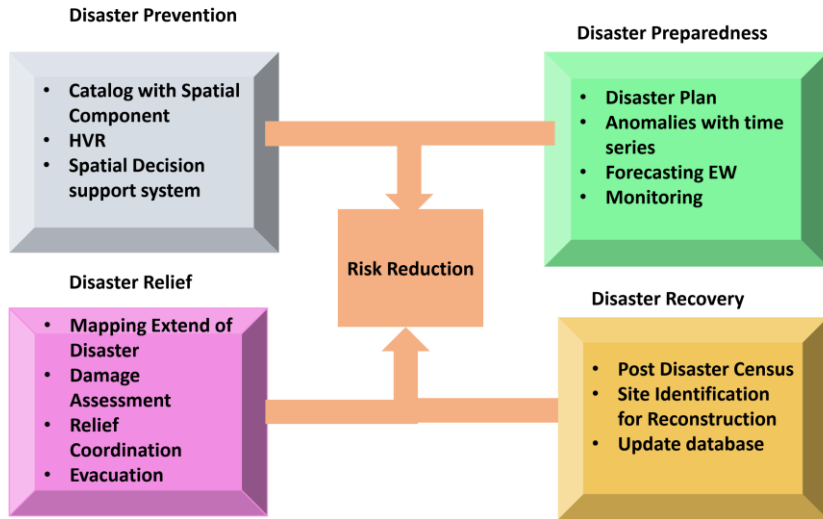
**Anoja Seneviratne**

**Director**

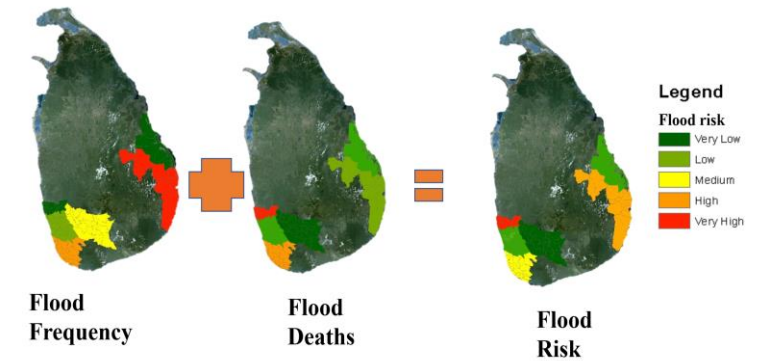
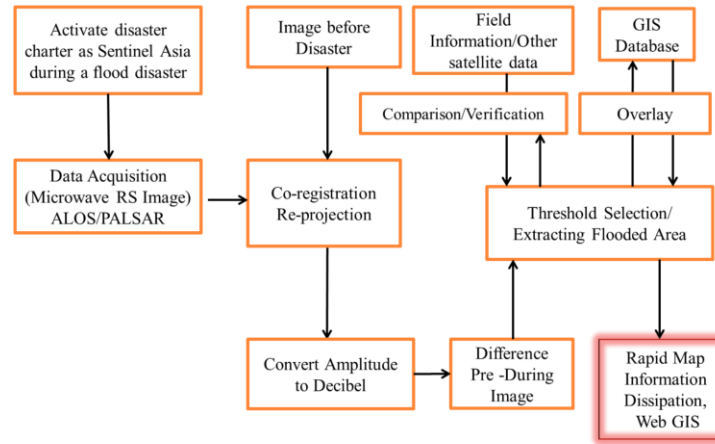
**Disaster Management Center**

**Sri Lanka**

# Application in DRM

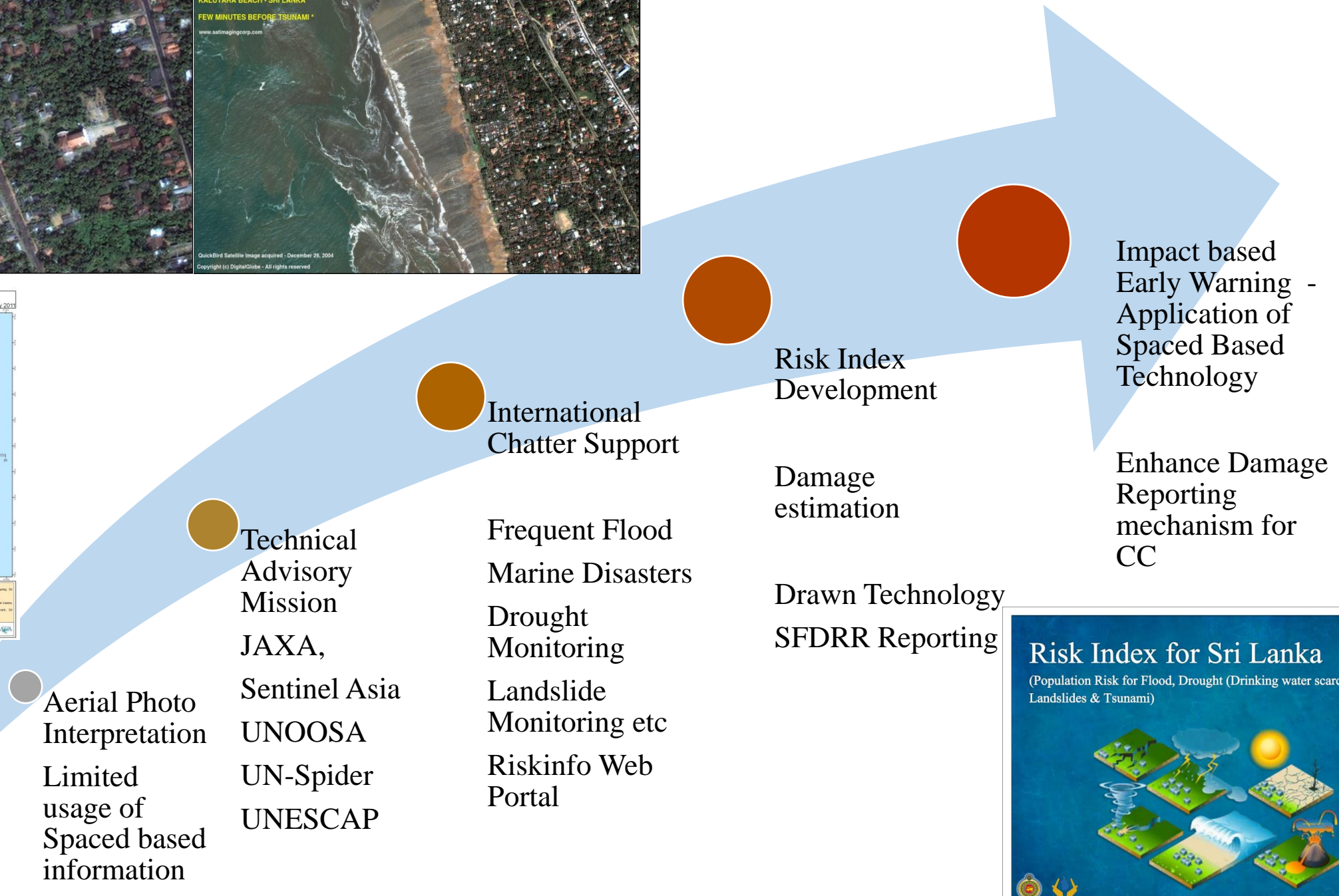


Olivil Area  
2006, 2010, 2012



# Recent collaboration with UN-Spider

- **Forest Fire Damage assessment methodology - quantitative calculations of SFDRR indicators**
  - Collaboration with Department of Forest Conservation (DFC),
  - DMC has implemented an approach to mapping fire extent with their severity through the Google Earth Engine (GEE) platform using either Landsat-8 or Sentinel-2 satellite image. Burned areas classify into five severity classes: unburned, low, moderate-low, moderate-high and high.
- **Forest fire monitoring methodology using active fire data**
  - With the help of two satellite observations (VIIRS (375 m X 375 m) and MODIS (1 km X 1 km) ) that was introduced to produce a spatial database of forest fires detected since 2000.
  - This is particularly valuable for Sri Lanka, where the actual information is lacking or not available.
  - This will support the forest fire management authorities to effectively monitor and manage approximate occurrence patterns and changes in annual fires.
- **Drought-induced rice crop damage assessment using satellite observations**
  - Cropland (paddy) cover of the entire country was obtained from the following satellite data products:
    - 1. Copernicus annual land cover map (2019) at 100 m resolution and,
    - 2. GlobeLand30 land cover dataset (2020) at 30 m resolution.
- **Capacity building training programmes**



Aerial Photo Interpretation  
 Limited usage of Spaced based information

Technical Advisory Mission  
 JAXA,  
 Sentinel Asia  
 UNOOSA  
 UN-Spider  
 UNESCAP

International Chatter Support  
 Frequent Flood Marine Disasters  
 Drought Monitoring  
 Landslide Monitoring etc  
 Riskinfo Web Portal

Risk Index Development

Damage estimation

Drawn Technology  
 SFDRR Reporting

Impact based Early Warning - Application of Spaced Based Technology

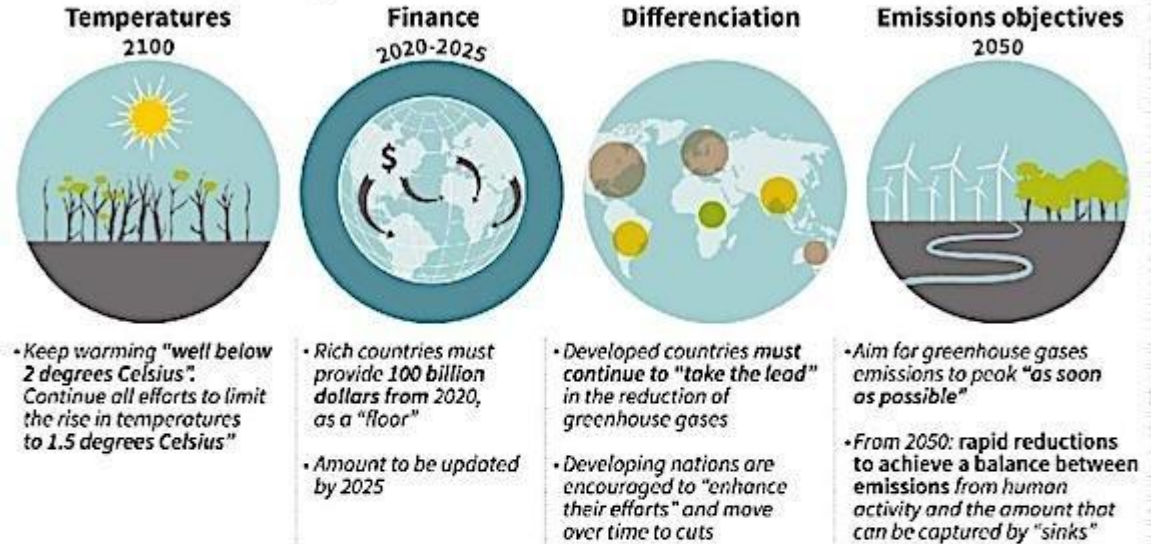
Enhance Damage Reporting mechanism for CC

# Reporting for Global Framework



## The Paris climate agreement: key points

The historic pact, approved by 195 countries, will take effect from 2020



### Burden-sharing



- Developed countries must provide financial resources to help developing countries
- Other countries are invited to provide support on a voluntary basis

### Review mechanism



- A review every five years  
First world review: 2023
- Each review will inform countries in "updating and enhancing" their pledges

### Climate damage



- Vulnerable countries have won recognition of the need for "averting, minimising and addressing" losses suffered due to climate change

# Way Forward

- Continuous support for Sustainability of Different Platform
- More support on Technology transfer
- Freely available Resources
- Support to validate Spaced based application
- Support to established National Platform
- Capacity Development , Training

**Thank You**