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" Global Climate Changes- Impact and Adaptation – A case study from Southern Sri Lanka“

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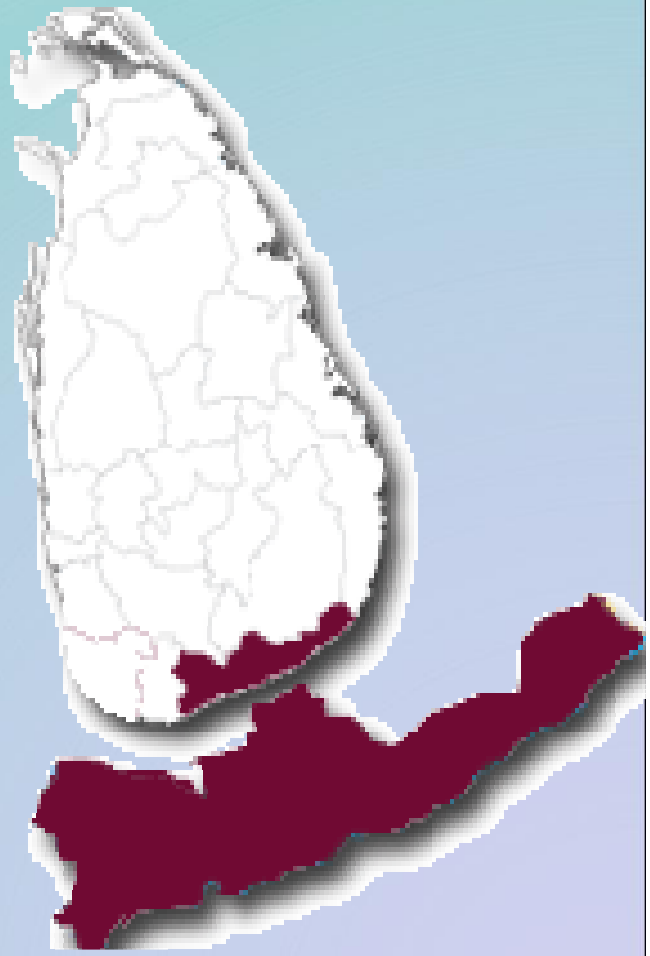
IHDT
Human Development Through Training

Map of Sri Lanka



Climate change impacts

Impact Area	Sea level rise	Temperature rise	Droughts	Rainfall	Thunder Activity
Agriculture	Salt water intrusion on low lying agriculture (loss through degradation of arable land)	Salt water intrusion on low lying agriculture (loss through degradation of arable land)	Reduce the availability of water for irrigation which would lead to a drop in crop production. Dry Zone especially vulnerable.	Decrease yields of many crops with the increased cloud cover and precipitation	
Coastal Zone (include fishery)	Inundation and Coastal erosion, Loss or damage to boat landing sites, fisher folk settlements, shrimp fishing under coastal aquaculture.	Loss of coral reefs, substantial effect on the distribution growth and reproduction of fish stocks.			
Forestry			Fire hazard in forests		
Health		Dehydration and loss of salt from the body cause disorders such as heat cramps and rashes	Hygiene of the population will be affected due to the water scarcity, leading to various types of diseases	Hygiene of the population will be affected due to the water- ways and wells being polluted, leading to some diseases	Loss of life by Lightning strikes
Human settlement	People who live in areas that are under threat to the natural hazards are likely to be aggravated by climate changes. They will be vulnerable from all the impacts				

Sri Lanka - vulnerable small island nation (UNFCCC 1992; IPCC 2001)

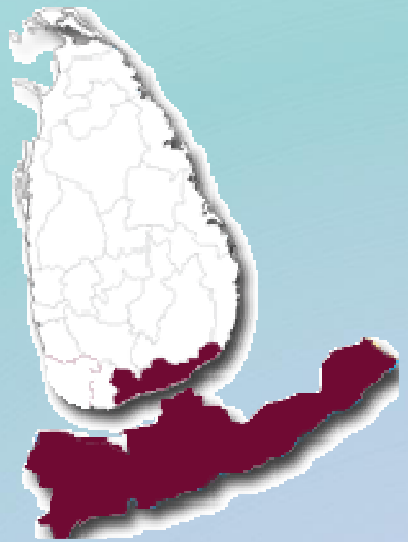
- Sri Lanka falls into the UNFCCC and IPCC's category of vulnerable' small island nations under serious threat from various climate change impacts, such as sea level rise and severe floods and droughts (UNFCCC 1992; IPCC 2001).

Key impacts of Climate Change

- **33% of the land area of Sri Lanka is affected by soil erosion**
- **30% - 35% of the coastline is eroded at the rate of 0.3 – 0.5 meters per year.** (This will further increase with anticipated sea level rise, which will occur due to the projected increase in temperature. Salt-water intrusions are experienced in Sri Lanka during the dry period)
- **Annual average of rainfall over Sri Lanka has been decreased** by an amount of 144 millimeters**, about seven percent**, during 1961 to 1990 period compared to 1931 to 1960 period
- The rate of increase of mean air temperature for the 1961-1990 period is in the order of 0.016 0C per year

Our Location Bundala AGA Division, Hambantota

Key vulnerabilities related to climate change



- 30 -40 % yield loss of rice due to salinity (salt water intrusion) in the District
- Coastal erosion and increased hazards

- Invasive plants

Participatory Action by farmer community on how to mitigate climate changes

Local Knowledge：

- Rain fall variations
- Temperature variations
- Changes to the Cropping calendar

Identified problems	***Possible alternatives identified***
Low yield of available new varieties	Try out the traditional varieties
Abounded areas are increasing Need / use of higher chemical inputs	Low input / Organic cultivation
Soil organic material levels are low and water retention is poor	Treated paddy husk and bio manure
Pest and diseases levels are increasing	Use of bio pesticides

Sea water affected paddy lands

Discussions with farmers

Establishment of demonstration site

10 varieties tested

4 varieties selected according to the yield, grain color, etc

Sustainable agriculture practices

Organic manure

Premium price for traditional rice Rs.80- 100/Kg (Normal rice – Rs. 60 - 70 / Kg)

coastal zone hazards

- Sea level rise leading to coastal erosion, and salt water intrusion
- Increasing incidence of cyclones
- Threat to coral reefs and coastal wetlands

Solution implemented- coastal green belt

- In 3 locations
- 10, 700 plants
- 350 families involved

Awareness creation on climate change

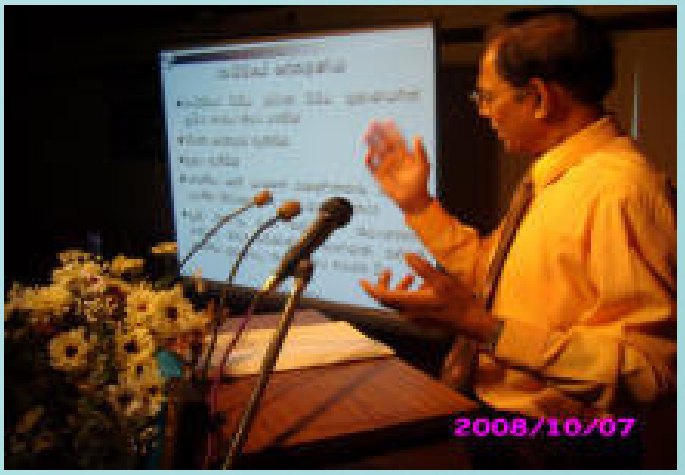
- Nearly 850 Households
- 1500 school children

Coordination and information Sharing programs with

- Coastal Conservation Department
- District and National level NGO's ,GO's and Donors

Awareness creation on Climate Change at National Level

Center for Disaster Risk Reduction



Awareness creation on climate change at district level


THANK YOU
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