

# BATTICALOA CITY AND NEGOMBO CITY

SRI LANKA

CITIES AND CLIMATE CHANGE INITIATIVE

## BATTICALOA CITY

**CITY OVERVIEW:** Batticaloa is a coastal city located in the eastern coast of Sri Lanka. It covers an area of 75.09 km<sup>2</sup>. It has a shoreline of 4 km along the eastern boundary and is flat with an elevation between 1.20 M and 4.0 M Mean Sea Level (MSL).

## CLIMATE CHANGE RISK AND VULNERABILITY

Batticaloa City is the administrative capital of the Batticaloa District. Most of the settlements in the city are located in low elevation coastal areas which are highly vulnerable to the impacts of climate change, particularly sea-level rise. In 2004, approximately one third of the coastal areas in the city were severely damaged by a tsunami. The city and its environs are also highly vulnerable to cyclones, and floods are increasing in frequency. These climate disasters negatively impact on the economy especially agriculture, fishing and tourism.

## NEGOMBO CITY

**CITY OVERVIEW:** Negombo is located in the western coast of the Gampaha District of Sri Lanka and covers an area of 30.8 km<sup>2</sup>. The city has a shoreline of 5 km along the western boundary and is situated at the estuary of the Negombo Lagoon, a major fishing harbor. Negombo city is flat with elevations from -1.0 M to 3.5 M Mean Sea Level (MSL).

## CLIMATE CHANGE RISK AND VULNERABILITY

Due to its hydrological setting and topography (a large part of the city situated below MSL), Negombo is highly vulnerable to the impacts of climate change, particularly floods, sea level rise and coastal erosion. In fact, some parts of the coastal belt of the Negombo Municipality were affected by the tsunami of 2004. The city's vulnerability is further exacerbated by the high level of urbanization and a population that is concentrated in the coastal areas. The city is also highly prone to sea water intrusion in its lagoon and inland water bodies. Increased flooding and sea level rise would have severe impacts on slums and permanent coastal structures; rehabilitation and reconstruction costs; and the health of the community from increased outbreaks of water borne diseases such as diarrhea as dengue fever.

Both Batticaloa and Negombo lack proper tools and facilities to manage disaster risk situations, and there is limited awareness of climate change related hazards and risks which hinders the cities resilience to climate change.



Batticaloa - damage due to tsunami ©Batticaloa Municipal Council

### BATTICALOA CITY

**Population:** 78,963 (2001); Growth rate: 0.57%

**Economy:** Agriculture, Fishing, Trade and Tourism

**Political/Administrative Structure:** Elected/Decentralized

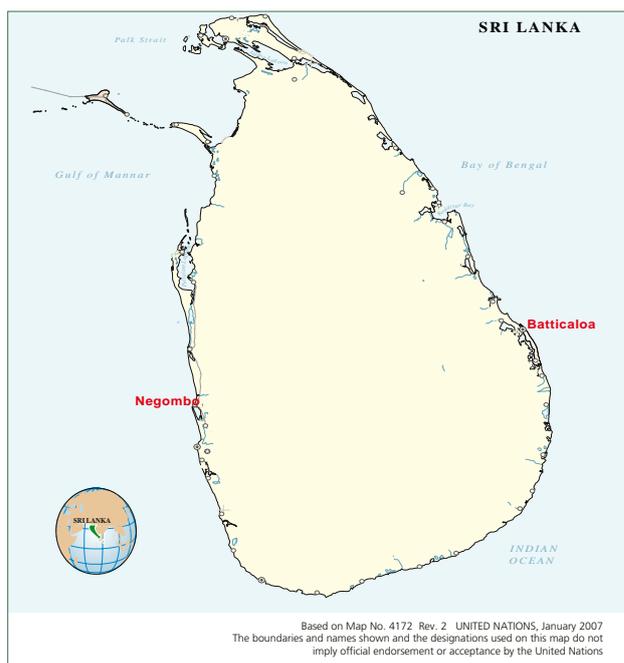
**Role in the Province:** Administrative and Commercial

### Climate Indicators

**Rainfall:** Annual rainfall ranges from 864- 3081mm. The area is influenced by the North – East monsoons during October to January.

**Mean Annual Temperature:** Varies around 32° C.

**Seasons:** Warm throughout the year. During the monsoon season from November to February the average temperature falls to 15° C.



### NEGOMBO CITY

**Population:** 137,223 (2001); Growth rate: 2.0%

**Economy:** Fishing, Trade and Tourism

**Political/Administrative Structure:** Elected/Decentralized

**Role in the Province:** Administrative, Educational and Commercial

### Climate Indicators

**Rainfall:** Annual rainfall ranges from 2,000-2,500 mm. The area is influenced by the south – west monsoons during May to August. Annual mean rainfall is 2,383 mm

**Mean Annual Temperature:** Varies between 27 °C - 28° C

**Seasons:** The highest mean daily maximum of 31.5°C occurs in April and the lowest mean daily minimum of 22.3 C in January



Traditional Fishing in Negombo © Moratuwa University

## PREPARING FOR CLIMATE CHANGE

In March 2010, with the support of UN-HABITAT's Cities and Climate Change Initiative, the University of Moratuwa (UOM) and the Ministry of Environment in collaboration with the Local Authorities of Batticaloa and Negombo initiated the formulation of a city development strategy for Sri Lankan cities to respond to Climate Change. A Green House Gas (GHG) inventory and a participatory assessment of the cities vulnerabilities to climate change will be carried out and the results will be used for the preparation of city development plans. The Environmental Planning and Management (EPM) process will be adopted to formulate the city development strategy to integrate the climate change aspects into the planning process. The lessons will be replicated to the other cities of the country and up-scaled to the national level through policy discussions.

## KEY ACTIVITIES PLANNED

- Carry out surveys and mapping of sources of GHG emissions.
- Preparation of Inventories and audits of GHG emission.
- Review national CDM process and develop policy for city level mitigation.
- Assessment of climate change risks and vulnerability i.e. sea level rise, epidemics, flooding, damage to ecosystems etc.
- Establishment of appropriate institutional mechanism at National, Provincial and City level to ensure proper management and implementation of mitigation and adaptation plans and actions.
- Localizing climate change issues and initiatives at local authority level.

## THE NATIONAL CONTEXT: SRI LANKA

As an island country in the Indian Ocean, Sri Lanka's coastal areas are highly vulnerable to climate change, especially to sea level rise and increased salinity in rivers and damaged habitats. The Minister of Environment has indicated that around fifty-five percent of the coast has been eroding at a rate of 0.3 meters a year. An average of seventy percent of natural disasters in Sri Lanka is weather and climate related.

Being party to the UNFCCC and Kyoto protocol, Sri Lanka has taken certain policy decisions to address this global issue at national scale. The national policy on Clean Development Mechanisms (CDM) is currently being formulated with the objective of establishing institutional, financial, human resource, and legislative frameworks necessary for the development of a mechanism for trading 'Certified Emissions Reductions' (CERs) and Emission Removal Units (ERUs) earned through CDM activities. The Climate Change Secretariat (CCS) of Ministry of

Environment and Natural Resources has the key task of formulating policies and initiating measures that would mitigate the GHG emissions and to introduce appropriate adaptation measures to counter adverse impact on climate change. Together with the Centre for Climate Change Studies (CCCS), they play a leading role in research and development and also undertake baseline data collection and development of national inventories on the climate system.

Since the impacts of climate change are experienced at the city level where households and livelihoods are seriously affected, the present national policy needs to be localised and actions to implement appropriate mitigation and adaptation measures undertaken. The activities undertaken under CCCI Sri Lanka aim to emphasize the need for localizing national policies so that cities become more resilient and better prepared for climate change.



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**Negombo low income settlement** © Dept. of Town & Country Planning,  
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