

RECENT FLOOD IN GAMPAHA DISTRICT AND ITS' CONSEQUENCES

M.A.F. Igshana, K. JeevaDacksha, M.N. Fathima Rishna

South Eastern University of Sri Lanka

ihshana25@gmail.com, jeevadacksha@gmail.com, rishnanadar@gmail.com

Abstract

As a research of short periodical time basically using secondary data we focused on the severe critical reasons for the recent flood based on Gampaha district. The main water resource of this area "Kelani River Basin" is deeply analysed on a perspective view. Illegal constructions on wetlands in this thickly populated area are a main strategic reason that we had analysed. The sudden climate changes also use to occur in Bay of Bengal affected with heavy rain the foold with highest rain fall. But there natural ways had been blocked to flow into sea. These points are reliably explained with the map of Survey Department and Irrigation Department. Water reservoir dams play a certain role in this case.

Our major objective is to prevent and secure the Gampaha and Colombo sub urbans from flood. Stopping illegal constructions and reducing the population by facilitating all facilities to villages, and transferring or replacing the present crowd to another place are some alternative long term plans regressed. In future we expect to do a very large scale of research with ample primary data collections.

Key Words: Flood, Climate Change, River Basin

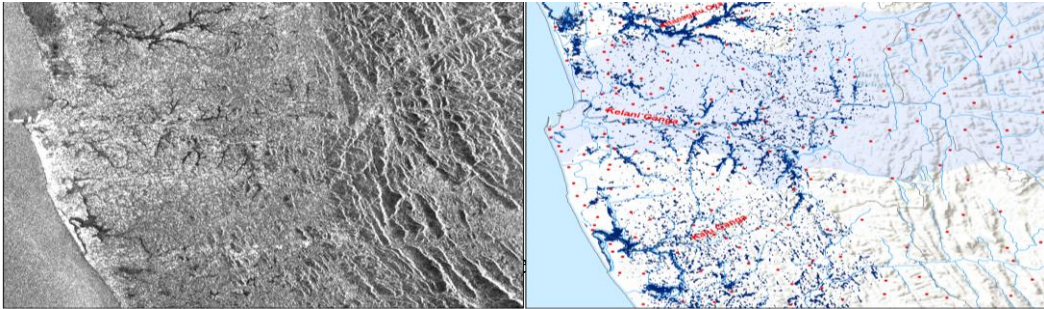
Introduction

Flood can be defined as the temporary inundation of land which otherwise no usually under water. Flood is usually most destructive form of natural hazards in both local and global contexts.

Recent highest rain falls monsoon drown in Bay of Bengal affected Sri Lanka specially in Central and Western Provinces, Gampaha and Colombo district were severely damaged by the flood after proceeding 355mm rainfall of couple days in May 16,17. Deluged by the torrential rains caused by a slow moving tropical depression in the Bay of Bengal which has brought flash floods and landslides

According to the disaster Management Centre, five towns in the Colombo and six in the Gampaha districts suffered severe flooding since May 15. The suburban towns affected in the Colombo District were Kaduwela, Angoda, Kolanawa, Wellampitiya and kottikawatte. These towns lie on the lower flood plains of the Kelaniya river. According to the Mega polis and Western Development Ministry there are illegal constructions including business premises along the Kelaniya river, within the Colombo district.

Research Area



(Source: Mapping Flood Extent for Kelani Ganga River Basin and its surrounding using RISAT-1 Satellite imagery)

The irrigation officials and disaster management officials said the flooding in the Colombo was the result of the heavy downpour in all the catchment areas of the Kelaniya river namely Castlereigh, Northern, Canyon and Laxaphana. The upper and lower catchments received record rainfalls throughout the week from May 15th to 20th, with the same areas receiving nearly 350mm within a couple of days.

After ten days of the disaster flood waters in certain areas were yet to recede water remained clogged in the Sedawate, Wennawatte and Angoda areas due to the blocking of antiquates by washed up debmismhd and polythene. In Meethotamulla a thick black garbage ooze, thus enveloping the area with unbearable. He warned that such abnormal weather patterns would be the order of the day, due to global warming and other adverse phenomena.

(Jagath Gunawardhana an Environmental law expert said). Illegal settlements along the river bank and the lower plain flood of the Kelaniya river was an issue the authorities should look into but a similar, if not an even bigger threat is posed by the construction of business establishments in the area.

Ministry of mega polis and western development plans were afoot to build housing blocks for people living in the Kelaniya river flood plain low income groups are attracted to this area owning cheap real estates.

It has revealed that a sand wall has been erected between the waters of Dandugam oya and the lagoon which allows the water to stagnate instead of preventing the water from moving in to the lagoon.

Sri lanka's department of meteorology say that during a 24-hour period between 15th and 16th May. Deraniyagala recorded 355mm of rain, Colombo 256 mm, Katunayaka 262 mm.

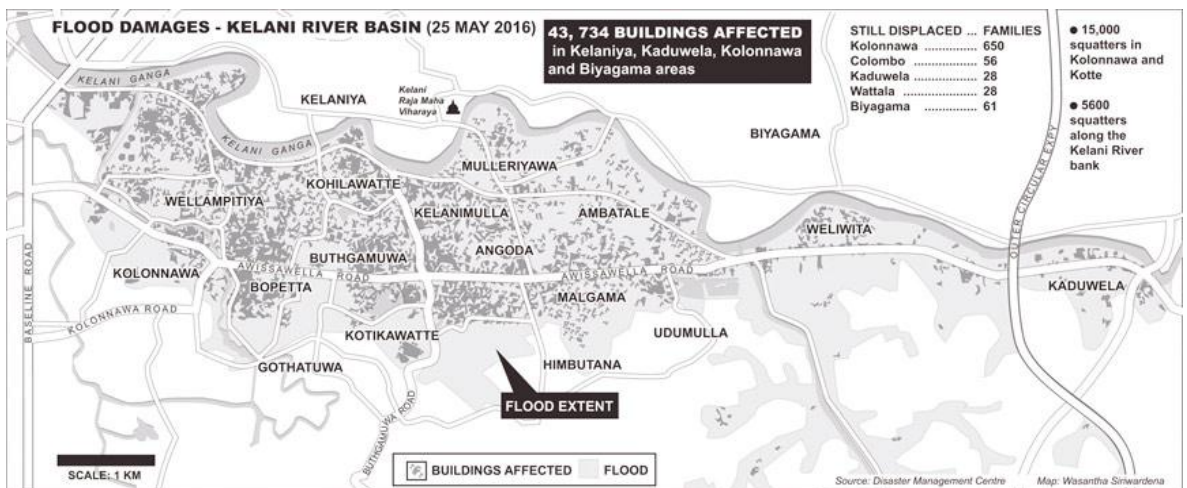
Research problem

In Gampaha District access to pure drinking water was reported as before among and 33% of the displaced households were using bottled water.

Around 20% of the camps reported that total facilities were not available. Most of the welfare Centre's didn't meet SPHERE standers. Diseases were reported among the flood victims but the health centers were functional cover 75%. In Gampaha District over 40% of the camps reported that toilet facilities were not satisfactory or not functional.

Red Cross society provided first aid and relief support to flood affected. Teams from Sri Lanka navy have been drafted in to help share up flood defenses including around the country's parliament along which was threatened by floods from the risely levels of Diyawanna oya.

Flood Affected Areas



(Source: www.sundayobserver.lk/2016/05/29/fea11.asp)

Objectives

The prime aim of the research is to access the changes in several anthropogenic Activities harms the environment and to reduce the disasters. The research has been undertaken with the following objectives in order to achieve the aim.

1. To map out The re constructional environmental friendly view in Colombo-Gampaha wetland usage with the help of authorities.
2. To awake the mentality of the people who are living in the illegal constructions near Kelaniya river Bank, and find the replacement settlement.

3. Promote urban facilities to the rural areas to limitate the growing population in Colombo –Gampaha Sub urban.

Methods

The research has been under taken with the secondary data sources to focus on both spatial and non-spatial data Analysis secondary data were collected from the published sources. The published sources are listed in the bibliography. The basic mapping of geology, physiography and land use flood monitoring bulletin, monitoring assessment of flood situation using satellite data and unmanned Air Vehicle, Colombo, Sri lanka from which the district information on land use population and occupational structure were obtained.

The research focus on preparing a comprehensive land use profile and flood inundation areas to identify the changes conducted in that place. Ministry of Mega polis and wsestern Development, Disaster Management center, National Housing Development Authority and the Irrigation officials.

In order to supplement data gathered such as relevant research reports and articles written on the town and its functions of land issues and officials publications and reports issued by UDA (Urban Development Authority), DMC (Disaster Management Center) and the Department Cenus and statistics, published by authorities. Samples were proceeded and analysis using advanced spatial and statical technologies. The current research focused the Characteristics of the serve flood occurred near Kelaniya bank. However the potential developments and replacements of people will be considered.

Findings and Conclusion

As the urban expansion progresses the Kelani River Basin natural resource base is expected to face a number of challenges in terms of ecological changes including impacts on wetlands and other habitats. However, it is encouraging to note that positive steps are being taken by the Government to ensure the development and urban expansions follow environmental management principles (UDA, 2016).

One of the potential approaches to reverse the conclusion of Kelani River being the most polluted river is to better understand and appreciate the natural resource base of the basin and take action to conserve and use the natural resources to provide alternative employment in place of polluting industries.

They recommended that, “detailed local-level hazard maps for key settlements be developed, stimulate greening of settlements and preservation of natural ecosystems; promote land use planning and monitoring for both urban and rural areas and research climate change impacts on human settlements and link to planning.”

There are also plans to pump the water near Parliament to the Kelani River to prevent water entering the Colombo city. Tunnels with a three metre diameter will be constructed in the Muttuwal area and it will be diverted directly to the sea. Additional tunnels from Thunmulla junction to Bambalapitiya will be built as the area surrounding the Colombo University is inundated at even the slightest downpour. Improvements will be made to the diversion channels while enlarging its capacity in order to make the water flow faster,” Amarasinghe, under whom the project is run, explained

Padmakeerthi explained that the very same areas identified as flood prone were inundated this time around too, the impact has worsened due to urbanization: “In 1989, a greater area was flooded than at present but now many of the agricultural lands have been turned into settlements. Thus the impact is more,” he said. The recent floods have given the Irrigation Department an opportunity to study the Kelani Basin and rethink flood mitigation in Colombo.

“The UDA does not have the authority to remove the people who have built houses without approval and own unauthorised lands,” said Urban Development Authority Director Mahinda Withanarachchige

With a large number of industries and high population centres located within the Kelani River Basin, any chemical accident (industrial, transport, fire, storage etc.) can be disastrous not only to the humans but also to the natural environment. Some accidents can be instant accidents or others may be slow such as leaking petrol station storage or storage of agro-chemicals or radio-active material. Therefore, it is necessary to prepare contingency plans for different type of chemicals and potential scenarios and train and prepare both public and private sector stakeholders as well as public to take necessary steps.

Government offices at present are in frenzy about the various ways to identify the exact number of unauthorised settlements in and around Colombo. It began when both the President and the Disaster Management Minister Anura Priyadarshana Yapa announced that unauthorised settlements were to blame for the recent floods.

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