CLIMATE CHANGE THREATENS MANGROVE FOREST GLOBALLY

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ABSTRACT- The climatic change is a severe problem in present world. Neither plants nor living creature, none is out of the reach of the dangerous impact of climatic changes. At various corners of the earth the mangrove forest are highly effected by these kind of unnatural climate changes, for the last two decades 35% of the mangrove forest has been damaged.

KEYWORDS- EXHAUSTION, GRADUALLY, EXTINCT, EVAPORATION, ADAPTATION,

INTRODUCTION - Global warming is now a vital environmental problem. The ever increasing density of CO2 in the atmosphere happens to be at the root of green house to be at the root of green house effect paving the way for global warming. There had been changes in temperature more often than not while the earth had long been in the process of its natural evolution. In this automation based modern civilization, different kinds of Reckless human activities, excessive exhaustion of fossil fuels, industrialization, urbanization, deforestation, etc. pose green house gases that make temperature rise in the atmosphere. As a result, of this, our planet is gradually on its way to destruction.

The climatic change means- excessive rain, no rain(draught) unnatural rate of rising temperature, the rise of carbon dioxide, the changer in seabed, cyclone, super cyclone, earth quake etc. This unnatural change of climate has pushed the plants of the earth to be extinct.

MANGROVE FORESTS THREATENED BY CLIMATE CHANGE IN THE SUNDARBANS OF BANGLADESH AND INDIA-

Source- www.google.co.in/search?q=mangrove+forest+in+sundarban&rlz=1C1CHBD_enIN785IN785&tbm=isch&tbo=u&source=univ&sa=X&ved=2ahUKEwjWvqy9s63dAhXSWisKHSIDAUIQ7Al6BAgEEA0&biw=1024&bih=662#imgrc=hNRPZcRAqhWk5M:
Mangrove forest is a forest which has some special characteristics. The plants in this coastal forest have some, characteristics like-viviparous germination, etc. Though, these forest are not seen everywhere on earth but in some places these forests are remarkably grown. Sundari, Garan, Geao, Hogla, Golpata are the mentionable plants in these forests.

MANGROVE ECOSYSTEMS ARE LOCATED IN WARM TROPICAL WATERS NEAR THE EQUATER

SOURCE- https://goo.gl/images/1aYU2Z

Gradually rise of temperature, and the rise of sea level, the rise of salinity of soil, increased exposure to storm surges, increased coastal erosion, rising salinity in ground and surface water- cyclone, and the effect of all these unnatural causes on the plants.


In last few years the changes of weather is a global scenario. The change of climate leaves different impacts on various places of the world. Now days often we see the cyclones which are caused only by
the changes in temperature in the seas. These calamities remarkably damage the coastal mangrove forests. The high waves of the seas disrupt the mangrove forests. For various reasons, the temperature of the earth gradually rising. The regular rise of temperature have grown the rate of atmosphere evaporation, as a result the salinity of soil gradually rise and leaves impacts on mangrove forests diversity, size, and productivity (Smith and Duke 1987, Ball and Sobrado 2002).

The right temperature of photosynthesis for the mangrove forest plants like “Sundari”, ”Garan”, “Geoa” etc is 28 degree–32 degree Celsius. But the rise of temperature in the atmosphere is harmful for those plants. For excessive rise of temperature in the atmosphere the plants do not get proper growth. Besides, less rain, excessive evaporation, salinity of soil also badly affects the plants and don’t allow a healthy and proper germination.
After 1990, the ‘Elnino’ also had damaged the mangrove forests in a greater extent.
In 20th century, many areas of South and south East Asia have been submerged in water, for the regular rise in temperature the mangrove of these areas also have gone into the sea. The low lying mangrove forest is highly damaged by the rise in sea water level. According to UN Environment Program, 13% of mangroves in pacific regions are vanished just because of the rise of sea level.
The percentage of mangrove forests as noticed in various. Continents are as follows- 41.9% in Asia, 20% in Africa, 13% in Middle America, Caribbean Islands, 11.1% in South America.
Sundarban is the largest mangrove ecosystem in the world. About 300 species of trees are found here. The Sundarban forest has been spreaded around 10,000 square Kilometer of area. Amongst, 60% of area falls in Bangladesh and the rest (40%) fall in India. The ‘Ganges – Bramhaputra river delta’ is sinking in the water by 1 inch every year, This is happening because of the rise of sea water level. The “Jammudwip “ is one of the small islands of Sundarbans delta. The island has lost near about 10% of its forest in the time period of 1986 to 2012. Where total area of forest in the island captured 6.095 sq.km of area, now that has reduced to 5.003 sq.km. The land erosion is another problem in Sundarban area. Excessive rains, flood, tidal malfunction remained as the reasons behind the land erosion in this area. The erosion is obviously a great reason behind the destruction of the mangrove forests. It’s been seen, in one decade and area of 9990 hectares of forest has been destroyed only for the land erosion.

In last two centuries by many Bay of Bengal cyclones like “Aila” etc the mangrove forests of Sundarbans have been destroyed. In 2009, the cyclone ‘Alia’ which was created because of the rapid global warming had badly disrupted the mangrove ecosystem of Sundarbans.
In the western coast of India, like Sourastra and Kachh, the salinity of soil has been risen so much that its now allowing natural adaptation.

Naturally the height of tide in “Khambat” gulf is 8-9 miters, In Kachh it is 5 miters. Naturally by the hit of these high tidal waves the mangrove forests in these regions get damaged.

The Sundarban and other mangrove forests of Asia are damaged even by the floods. Because of the floods many ‘Sundari’, ‘Garan’, trees are destroyed periodically.

The mangroves of Asia and America mainly are affected by various cyclones, hurricanes etc. Unnatural changes in climate often create hurricanes in USA which are highly dangerous for the mangrove forests of those areas.
Amazon is a large mangrove forest. Regular rise in temperature caused a huge destruction in the mangrove forests of south American Amazon valley. According to IPCC, in last 100 years, the sea level has been risen up to 1.0 to 2.5 mm. The Amazon mangrove forests are facing huge destructive threats just because of the rise in global temperature. The rise of sea level caused by the rise of temperature vividly impacted the mangrove forests. The mangrove forests in North East Coast of Brazil regularly migrating landward.

The Amazon Macro tidal Mangrove coast (AMMC) and the North East Semiarid Coast mangrove forests rapidly migrating towards the land side for only the rise of the sea water level. The climatic changes in North and Middle America and in Caribbean Islands have left remarkable impact on mangrove forests. Tropical cyclone, rise of temperature and steep gradients of precipitation caused huge damage on the mangrove forests. Mangrove are raised in all 34 countries of this region.
Historical Losses of Mangrove Systems in South America from Human-Induced and Natural Impacts

Source: https://goo.gl/images/vqBMML

The mangrove forests of the Pacific coast are highly damaged. In 1973-2002, in gulf of Papua in Papua a large area of mangrove forest had been damaged. According to a UN Environment Program, by 2100 the islands of this region would have lost at least half of its mangrove forests. The report also says – American Samoa, the Federated States of Micronesia, Fiji and Tuvalu are mostly affected. Tropical cyclone and hurricane are a regular phenomenon in the Caribbean islands. Unnatural changes is climate and regular cyclone are sufficient to damage the mangrove forests in this region.

So, here we see, that climatic change has deeply impacted on every mangrove forest across the globe. May not be yet everywhere, but in many places the mangrove forests have been damaged largely already. Due to climate change, the condition of the postal forest has become very severe. The costal ecosystem is said to be endangered almost. It is our duty to protect this mangrove forest on earth so that the mangrove forest can live healthy in the environment.
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First published, 25 April 2016
http:// doi.org/10.1002/ehs2.1211 Cited by :5