

The Indian coastal area are completely are in trouble due to freaky climate change

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Abstract - Due to constant increase of temperature in atmosphere , excess rainfall and flood , most of the coastal areas are affected and damaged. All most all the coastal cities and ports are devoted because of this. Due to maximum temperature, snow of Antarctica melted down and sea level rise gradually and thereby livelihood of people of coastal region comes at grate loss.

Keywords - Abruptly, Inhabitant, Urbanization, Civilization, Victimized, Frequent, Disaster.

INTRODUCTION

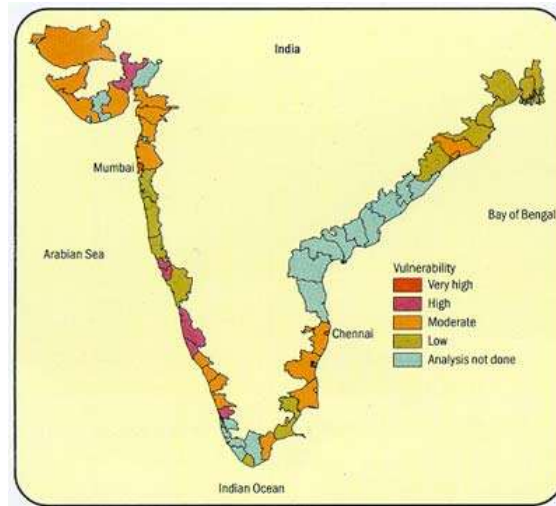
Climate change, it is a very vital environmental problem nowadays. Almost for few decades , the climate has changed abruptly and we the people in this world are suffering from this. Climate change means excess rainfall, drought, flood, sea level rise etc. India is not outside of it. The green house gas is increasing sharply and due to this the temperatures also increasing rapidly. The coastal areas of India facing a terrible loss. Global warming has brought about serious impact on Indian coastal region.



SOURCE- <http://goo.gl/images/OatMHQ>

From the ancient time , human civilization is dependent on coastal area. At present, the mega cities are situated in coastal area. The coastal area is the land and water channels connection. Near about 15% of wealth comes from coastal zones and 100 million people are inhabitant of coastal zone.

The coastal region of India are divided into two parts—east and west coast. West Bengal, Odisha , Andhra Pradesh , Tamilnadu, are in the eastern coast and Maharastra, Kerala are situated in the western side.



Vulnerability and adaptation

Source- <http://goo.gl/images/aQHPLf>

The east coast of India is surrounded by Bay of Bengal, similarly west coast by Arabian sea and south coast by Indian ocean. In the 17th item of agenda 21, at Rio, the matter of coastal zone has been mentioned. Continued increase of greenhouse gases, various unwanted activities of man, cutting of trees, urbanization etc., temperature of the atmosphere is going to be increased gradually. As a result, melting of snowfall in various sector are going to be increased gradually and therefore the height of sea level water are rising. The average rates of sea-level rise was 0.07 inches on 20th century. But in 1993 to 2003, it has been increased in double. Ports like Mumbai, Mangalore, Kakinara are compelled to move towards sea. Continued increase of green house gases by 2100 AD, height of sea level gradually will rise from 0.51 meter to 1.31 meter as per report of National Oceanic and Atmosphere Administration. Continued increase of sea level water at coastal area, ground water and agricultural land has become salted. As a result, production of crop has become very poor and uncertain which has given in secured future of agriculture of India. Besides this, many crops of coastal area are in the face of destruction.

Potential effects of 1mt sea level rise on India's coastal area and population

State/Union territories	Coastal area (million hectares)			Population (millions)		
	Total	Likely to be inundated	Percentage	Total	Likely to be affected	Percentage
Andhra Pradesh	27,504	0.035	0.19	66.36	0.617	0.93
Goa	0.37	0.016	4.34	1.17	0.085	7.25
Gujarat	19,602	0.181	0.92	41.17	0.441	1.07
Karnataka	19,179	0.029	0.15	44.81	0.25	0.56
Kerala	3,886	0.012	0.3	29.08	0.454	1.56
Maharashtra	30,771	0.041	0.13	78.78	1.376	1.75
Odisha	15,571	0.048	0.31	31.51	0.555	1.76
Tamil Nadu	13,006	0.067	0.52	55.64	1.621	2.91
West Bengal	8,075	0.122	1.58	67.98	1.6	2.35
Andaman and Nicobar Islands	0.825	0.006	0.72	0	0	0
India	139,394	0.571	0.41	416.74	7.1	1.68

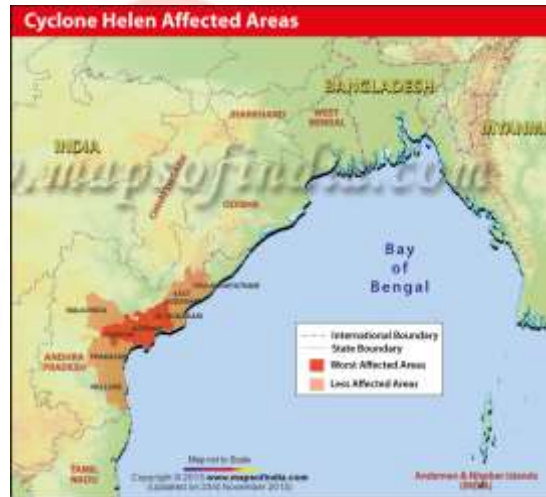
Source- <http://goo.gl/images/VxFPiV>

The year 2016 was the year of maximum temperature. AS per report of UNITED NATIONS, 2016 AD approximately 40 millions people will face danger by 2050 AD. Due to rise of water level of sea, urbanization, pressure of population and other economical activities of chief coastal cities like Kolkata, Mumbai situated on danger zone. Tourism industry is very much developed at coastal region Digha, Shankarpur, Sundarban, coast of Andhra, Gopalpur, Puri, and Marina sea beach of Chennai are becoming of seriously victimized due to change of climate since last several years. Sea level rise, Cyclones, natural disaster etc are in the face of alarming situation of tourism industry.



Source- <http://goo.gl/images/ynTA7e>

Cyclones, Tornadoes are the dangerous natural disaster on the sea. The lead effect of change of climate frequent cyclone appear and destruct the coastal area. In the last several years, frequent cyclone destroy the ecology and environment of coastal area. The people of coastal line are worst sufferers of this disaster.



SOURCE- <http://goo.gl/images/4YPWGC>

High rise of sea level water in coastal area gives red alert of coastal cities and towns. There is very possibility to go out the cities like Chennai, Kolkata, Veshakhapattanam, due to high rise of water level, from India map.

State Tamilnadu of 1076 Km length, is situated in the east coast of India. Rainfall becomes twice in a year at Karamandal coast of Tamilnadu. Chennai, the capital of Tamilnadu is famous for its situation of Marina sea beach. The rich effect of change of climate is in existence in this state.

About 43% area of 1030 km length coastal zone of Andhra Pradesh, situated in the eastern zone of India, has gone under danger zone for the rise of height of sea level water. The sea level of Bhubaneswar and Vishakhapatnam are continuously rising in India's east coast. The island of river Krishna, situated on the coast of Bay of Bengal was very famous as a very fertile agricultural land. 45 lakhs population are engaged in fishing, agriculture etc. These are influenced by tropical and sub-humid climate. But due to whimsical change of climate maintenance of livelihood of these area of people has become very difficult.

Mumbai, main commercial city of India surrounded by Arabian sea. Due to rise of sea level water, some part of Muland, Eastern Suburbs, Haji Ali, Worli, Marine Drive are going to the deteriorated and near future more deterioration is warning. Population at Mumbai city is being increased at all times. Due to one of the main city of India capital town, commercial complex, the pressure of population is gradually increasing at a great extent. Economical activity, urbanization makes the city over populated, As becoming city of Coastal zone, Mumbai city is not living escaped from the whimsical change of climate.

As a result, about 190 sp. Km. area of Mumbai will go down with Arabian Sea. A data report Publish from NASA, it appears that Mangalore city of Karnataka has gone under the danger level due to coastal flooding. The negative result of change on climate is a lead effect of the gradually increasing height of sea water and it is harmful for commercial city like Mumbai. And for this, roads, a streets, infrastructures, flyover, bridge, ports, commercial complex, may face great loss.

Global warming has invited alarming disaster at the coastal area of Sundarban. Sundarban is the biggest mangrove forest of the world is situated in the east coast of India. The leading effect of change of climate, frequent cyclone appear to

destruct the coastal area. The public life as well as natural environment of West Bengal has been totally disrupted due to 'AILA' storm in 2009 AD. The "Ganges – Brahmaputra river delta" is sinking in the water 1 inch every year. This is happening because of the rise of sea water level. The low lying mangrove forest is highly damaged by the rise in sea water level. Due to heavy temperature of water, high waves, continued ups and down of temperature help to forms a change of land of this area. Excessive rains , flood , tidal, malfunction destroyed area of 9990 hectares of forests in Sundarban. Ghoramara village has already lost their near about 50 % . At the time of tide period, salted water from Bay of Bengal enter into the river and canals at Sundarban area. To protect from this salty water, embankment is given to protect lands of this area. But frequent cyclones, high rise of sea water is going to change the nature of land of this area.

Conclusion

It can assume that due to rise of sea level , many coastal areas will disappear from Indian map. Its protection is very essential . We must be look forward to prevent this horrible swallow . We can protect our Indian coastal area by creating appropriate infrastructure , government help, public awareness etc.

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