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'Redraw coastline to cope with rise in sea level'

Gear up for 2050 by moving residential, industrial areas: Risk management expert

VINSON KURIAN

Thiruvananthapuram, August 20

Global catastrophe risk management consultancy RMSI finds itself on the same page as the Intergovernmental Panel on Climate Change (IPCC) with respect to assessing multi-hazard risk assessment for interests in India as also estimating a potential new coastline for year 2050.

Pushpendra Johari, Senior Vice-President-Sustainability, RMSI, told *BusinessLine* that the flood maps created by it for Mumbai as early as in 2009 itself had presented the case of inland flooding (non-coastal) scenarios which are now being projected in the latest IPCC report as well.

Sea level threat

The IPCC Asia Chapter indicates that the sea level in the Indian Ocean may rise by 3.7 mm every year. "RMSI has utilised the IPCC projections about sea level rise for Asia and estimated a potential new coastline of India for 2050," Johari said.

As per the IPCC report, the sea level is expected to rise by nearly three feet in and around Mumbai by 2050. Based on these findings, it may be assumed that all areas that have an elevation of up to 3-4 ft may get submerged, taking into account the ocean waves as well as high tides.

In parts of Mumbai located on the coast, the sea will come closer to majority of buildings on the coastline, covering most beaches and open areas between sea and these buildings. Areas around the Mithi River, Vasai creek, Panvel Creek, the Patalganga and Amba Rivers, may go under water.

Pushpendra Johari, Senior V-P, Sustainability, RMSI

'Beaches will disappear'

This is because water level in the river will also rise resulting in inland areas in Varsova, Thane, Kalwa, Navi Mumbai, Dadar and Vashi getting submerged.

Juhu airport is at risk as after high tides the airport will be inundated. The area around the Jawahar Lal Nehru Port is also likely to get submerged.

'New coastline'

"In light of the new sea level rise forecasts for 2050, it is high time we created India's new coastline. All interests to the left of the new coastline - residential, industrial or infrastructure, will have to be relocated. Additionally, increase in water level of all rivers and creeks should be modelled and areas permanently under water marked for purposes of flood-mapping Mumbai."

Johari says all this should be incorporated into a Decision Support System to guide planners for relocating assets, plan new development in light of the new flood risk maps, and decide plinth levels and basements. This system will also help forecast risk in case of extreme rainfall events, he added.