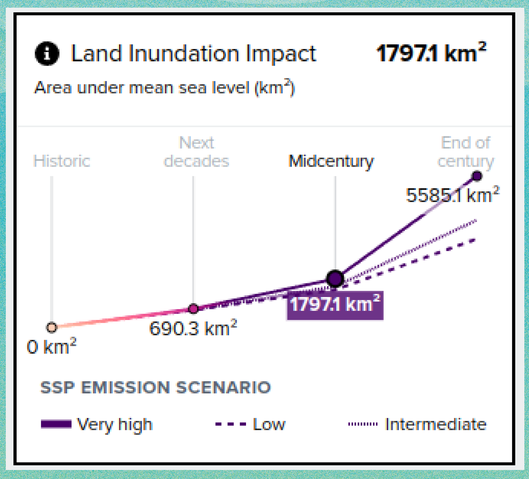
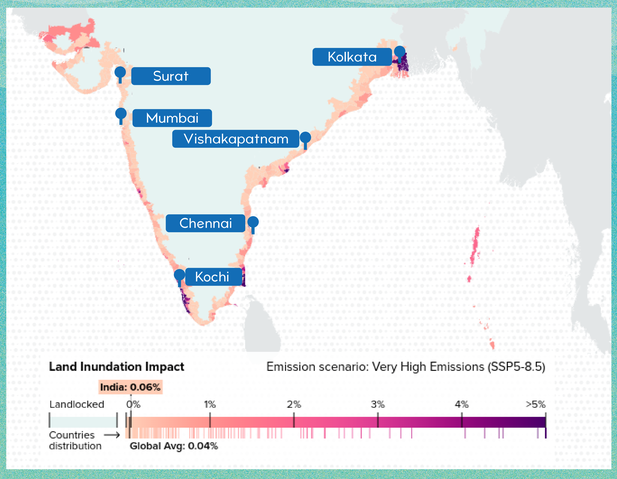
CLIMATE CHANGE IN INDIA: WHAT DO WE KNOW AND HOW?

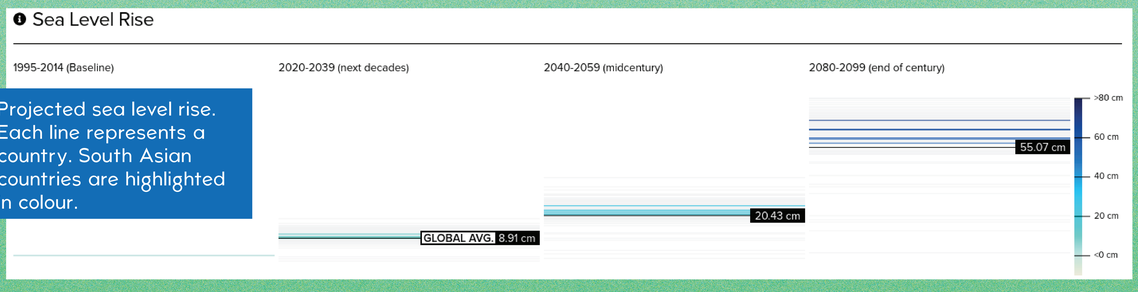
SEA LEVEL RISE AND CONSEQUENCES

Oceans cover 71% of the Earth's surface and contain about 97% of the Earth's water. Over 90% of the heat generated by global warming heats up the oceans leading to expansion in volume. This, along with the increasing melting of polar ice sheets and glaciers elsewhere, has resulted in a rise of the mean sea level.

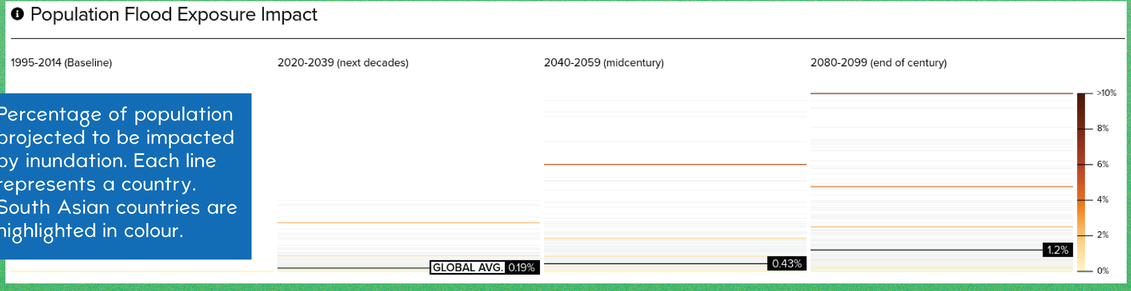




Sea level rise causes severe challenges for coastal communities around the world. Regions around the Indian Ocean are home to about 260 crore people which is about 40% of the global population. Satellite data shows that sea level has increased by almost 12 centimeters along the Indian subcontinent in the last 30 years.



Climate science models predict further sea level rise which will lead to inundation of coastal regions. Depending on the global future emission scenarios, India could lose coastal land up to 700 square kilometers by 2040 and up to 5600 square kilometers by 2100. While the actual inundation might vary significantly by location, on average, our coastlines will advance by 130 meters by 2040 and 1 kilometer by 2100.



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Poster series designed by Radha Sunder

*All projections based on Socioeconomic Pathways (SSP) 5-8.5. These could change based on our current and future emissions.

Data from UNDP

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