



SEA LEVEL RISE

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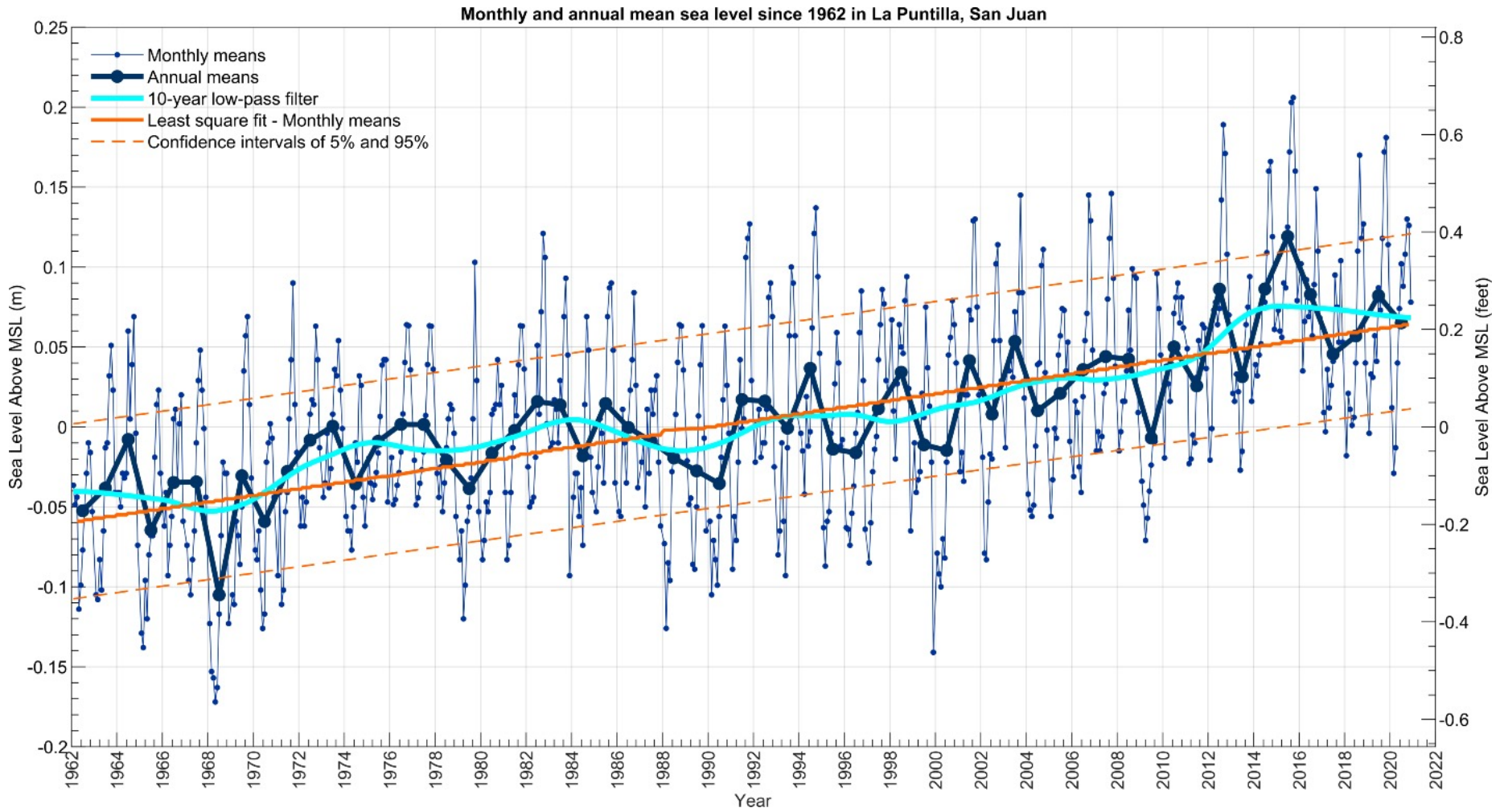
Collaborators: Prof. Aurelio Mercado, Juan González, PhD, William Sweet, PhD

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Relative Sea Level Change and Projections Up to 2100

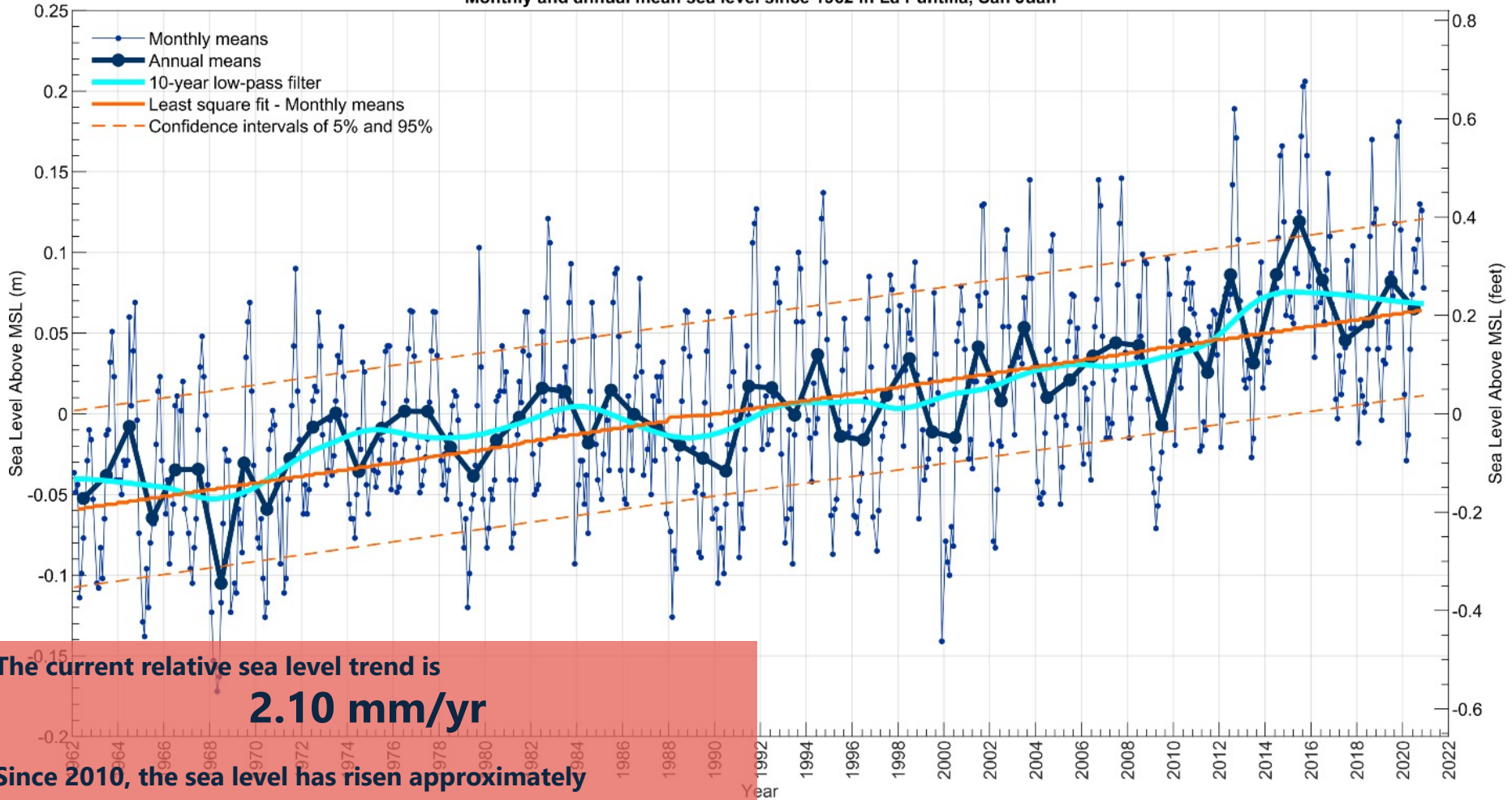
- The PRCCC WG-1 selected and reconstructed monthly means of water level elevations from NOAA NOS/CO-OPS stations at Magueyes Island, La Parguera, Lajas and La Puntilla, San Juan Bay.
- The data in this report do not account for erosion, subsidence, or future construction.





Data for the current analysis were collected between 1962 and 2020.

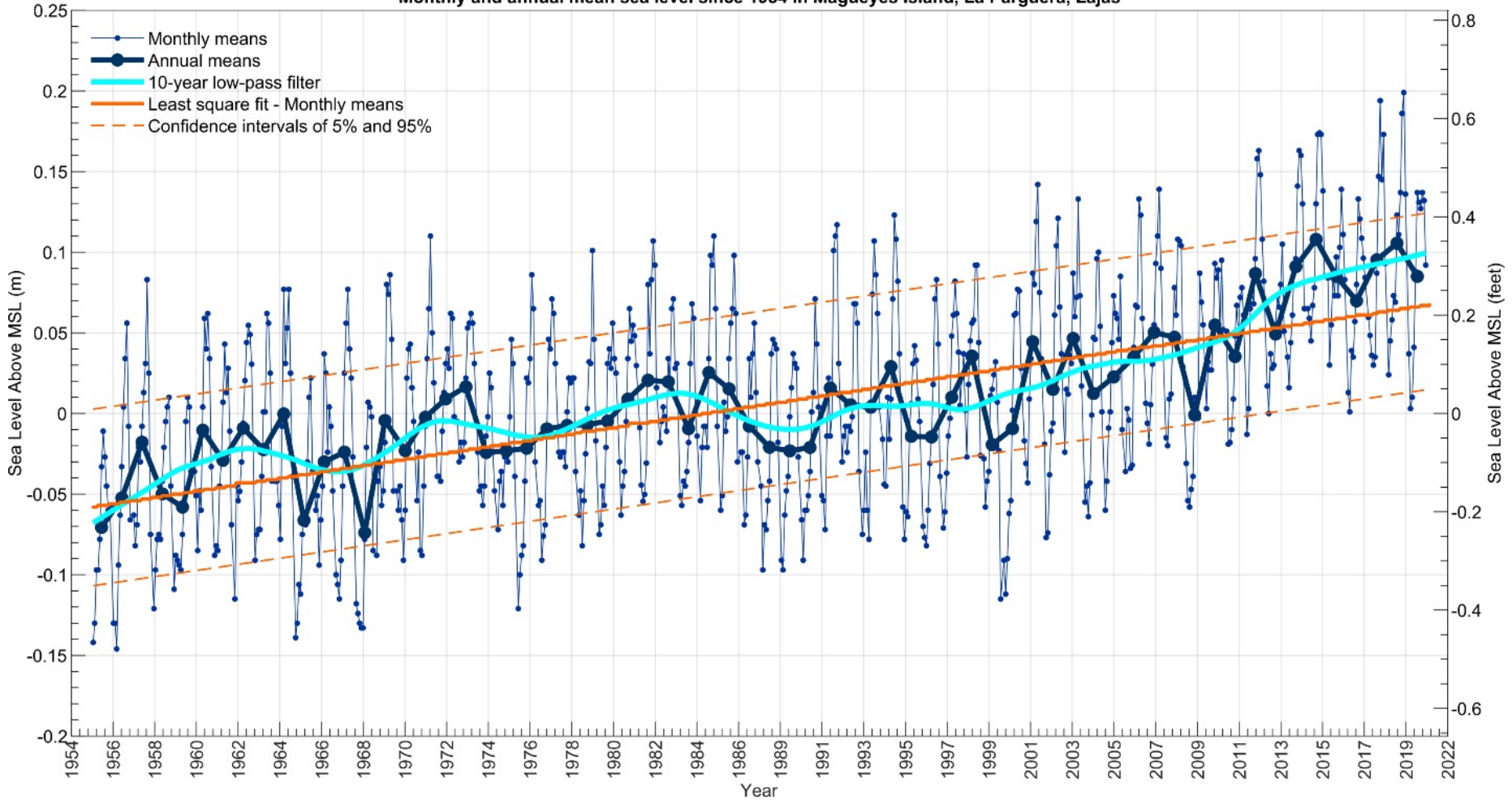
Monthly and annual mean sea level since 1962 in La Puntilla, San Juan



The current relative sea level trend is
2.10 mm/yr

Since 2010, the sea level has risen approximately
1.80 mm/yr

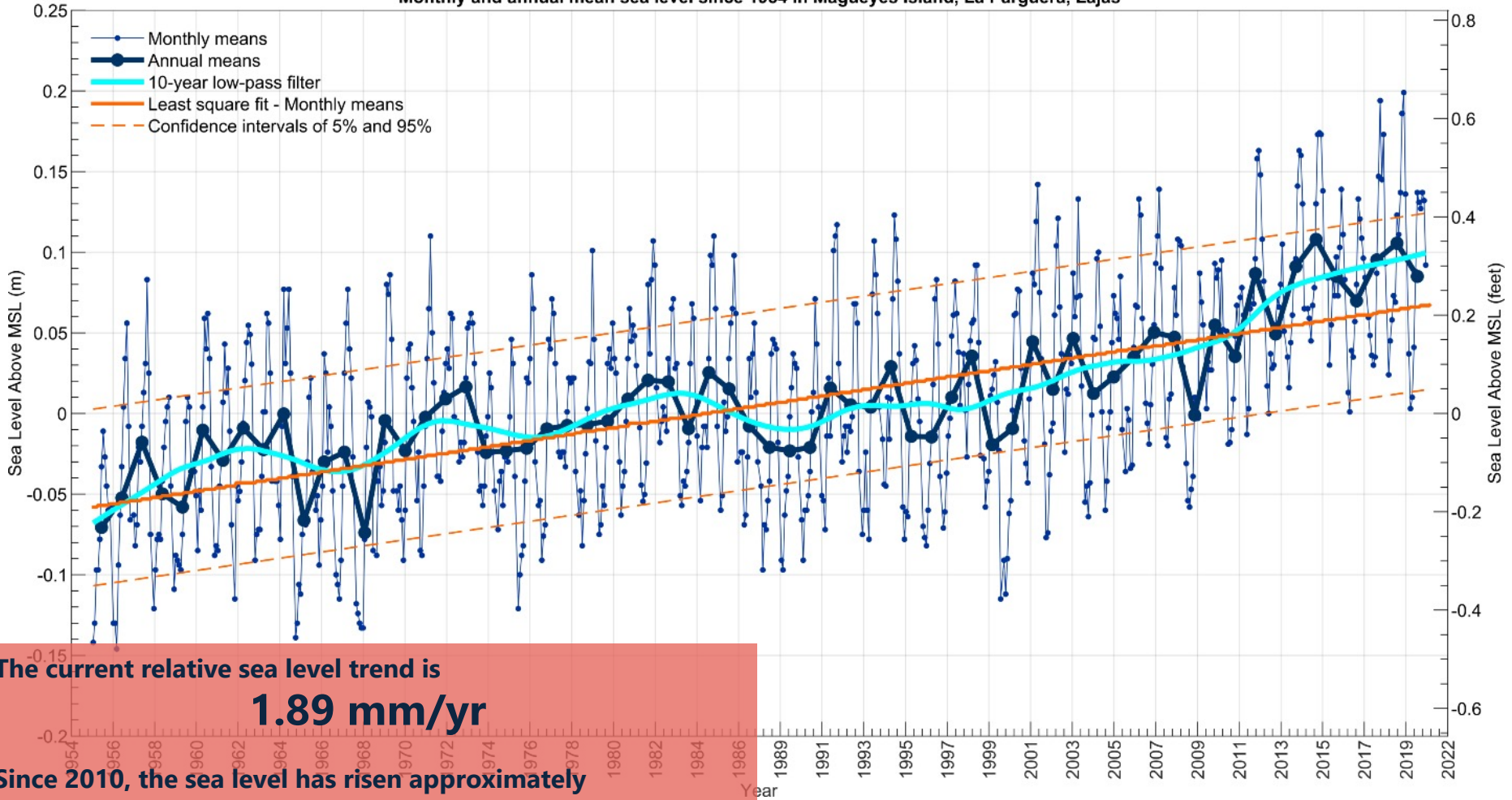
Monthly and annual mean sea level since 1954 in Magueyes Island, La Parguera, Lajas



Data for the current analysis were collected between 1955 and 2020.

SEA LEVEL RISE – MAGUEYES ISLAND, LA PARGUERA

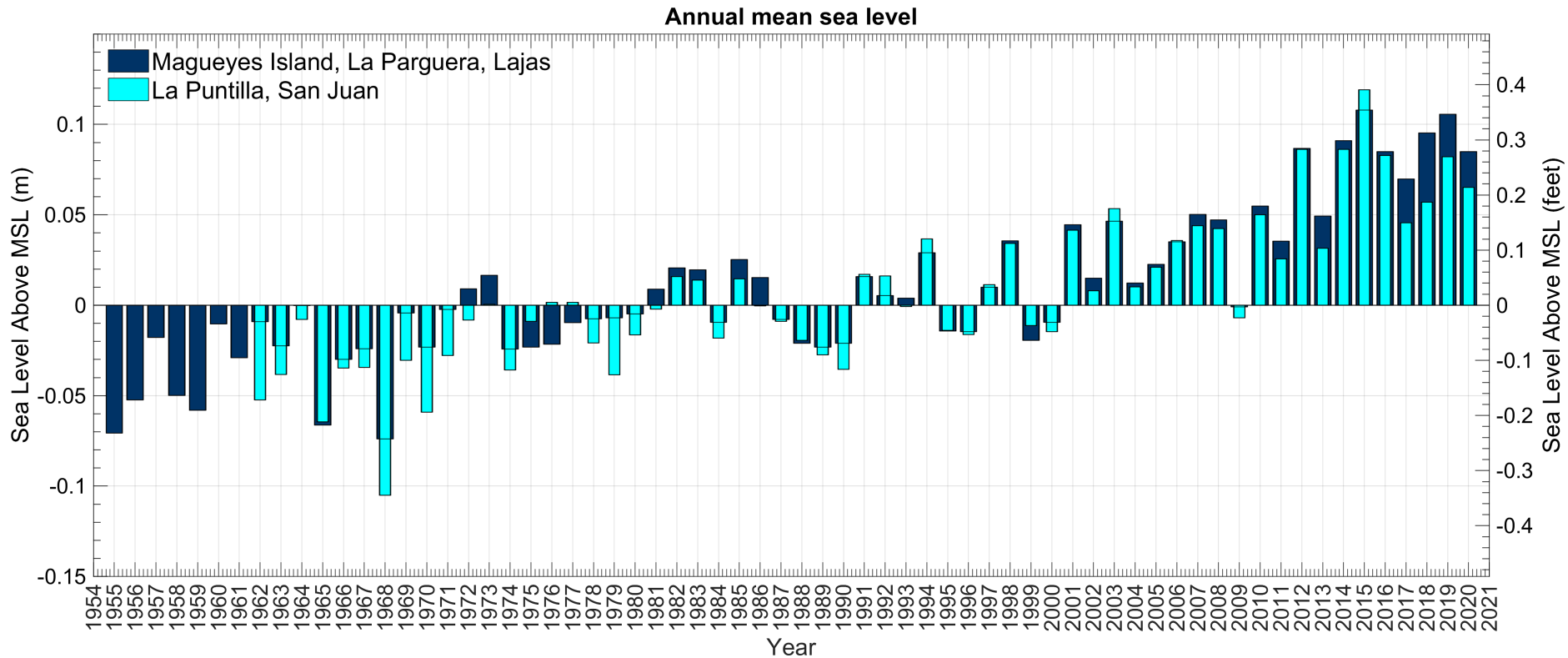
Monthly and annual mean sea level since 1954 in Magueyes Island, La Parguera, Lajas



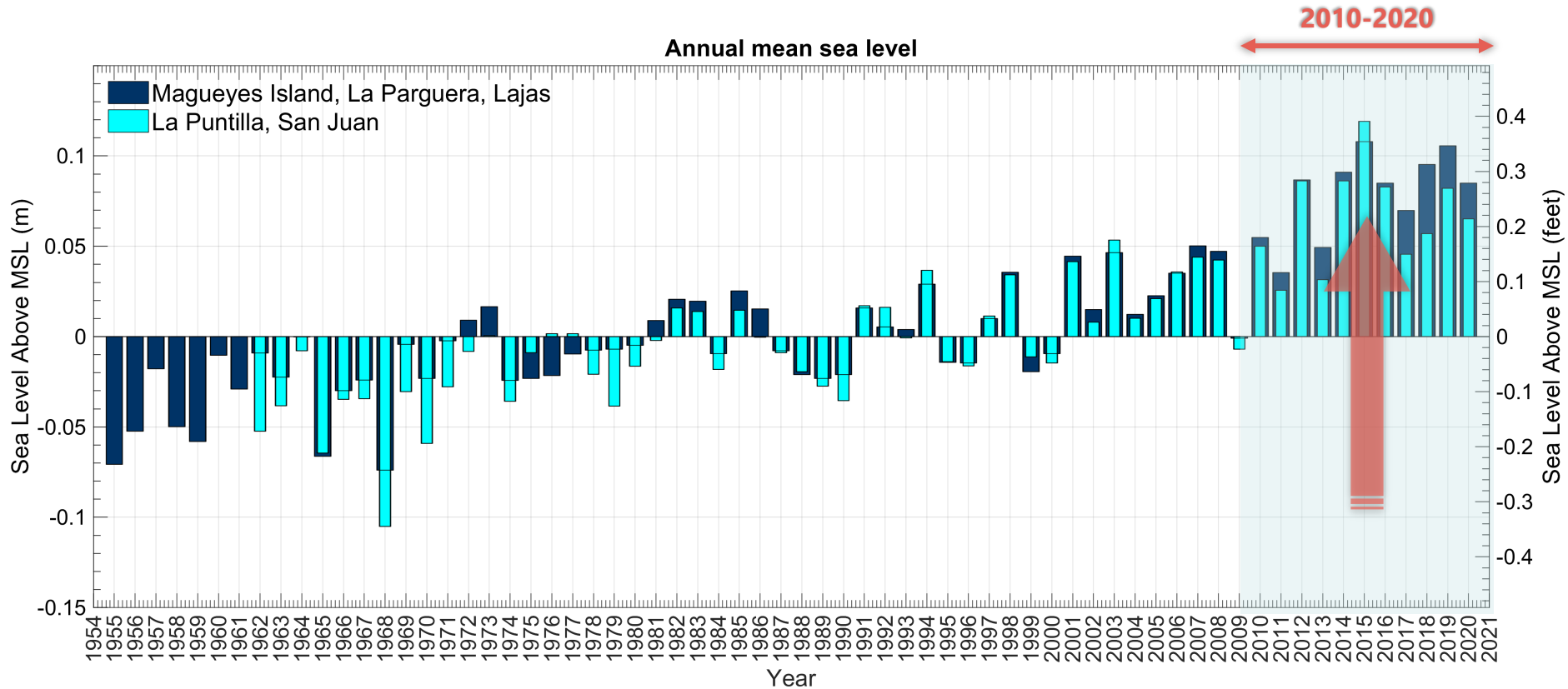
The current relative sea level trend is
1.89 mm/yr

Since 2010, the sea level has risen approximately
4.40 mm/yr

What lies ahead as sea levels rise?

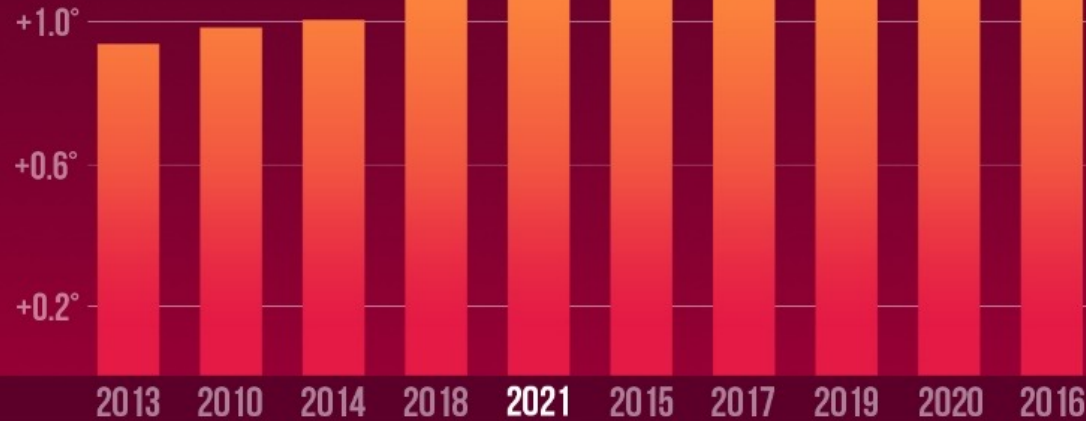


What lies ahead as sea levels rise?



10 HOTTEST GLOBAL YEARS ON RECORD

+1.4°C 2.52°F



Source: NASA GISS & NOAA NCEI global temperature anomalies averaged and adjusted to early industrial baseline (1881-1910). Data as of 1/13/2022.


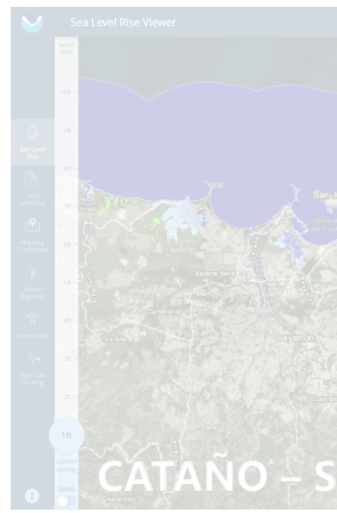
CLIMATE  CENTRAL



Photo Credits: Before Google Earth After (AFP)



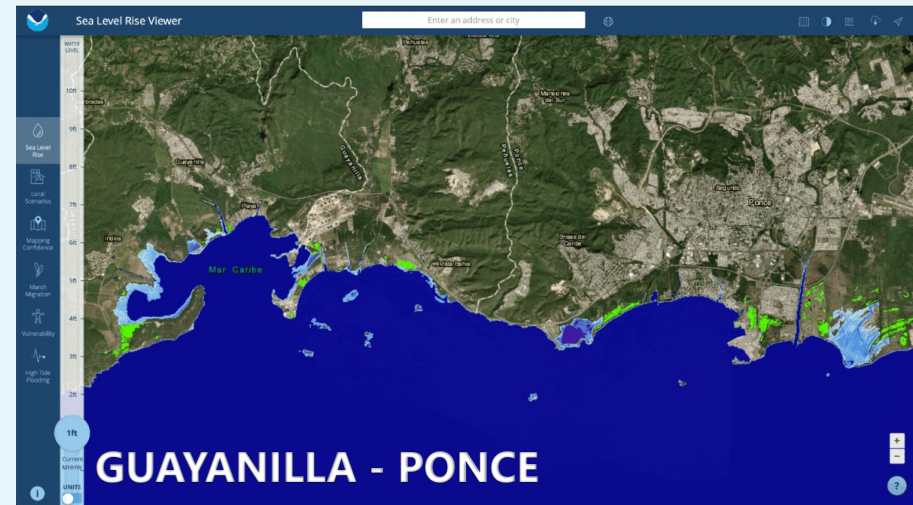
WHAT LIES AHEAD AS SEA LEVELS RISE?



Photo Credits: Before Google Earth After (AFP)

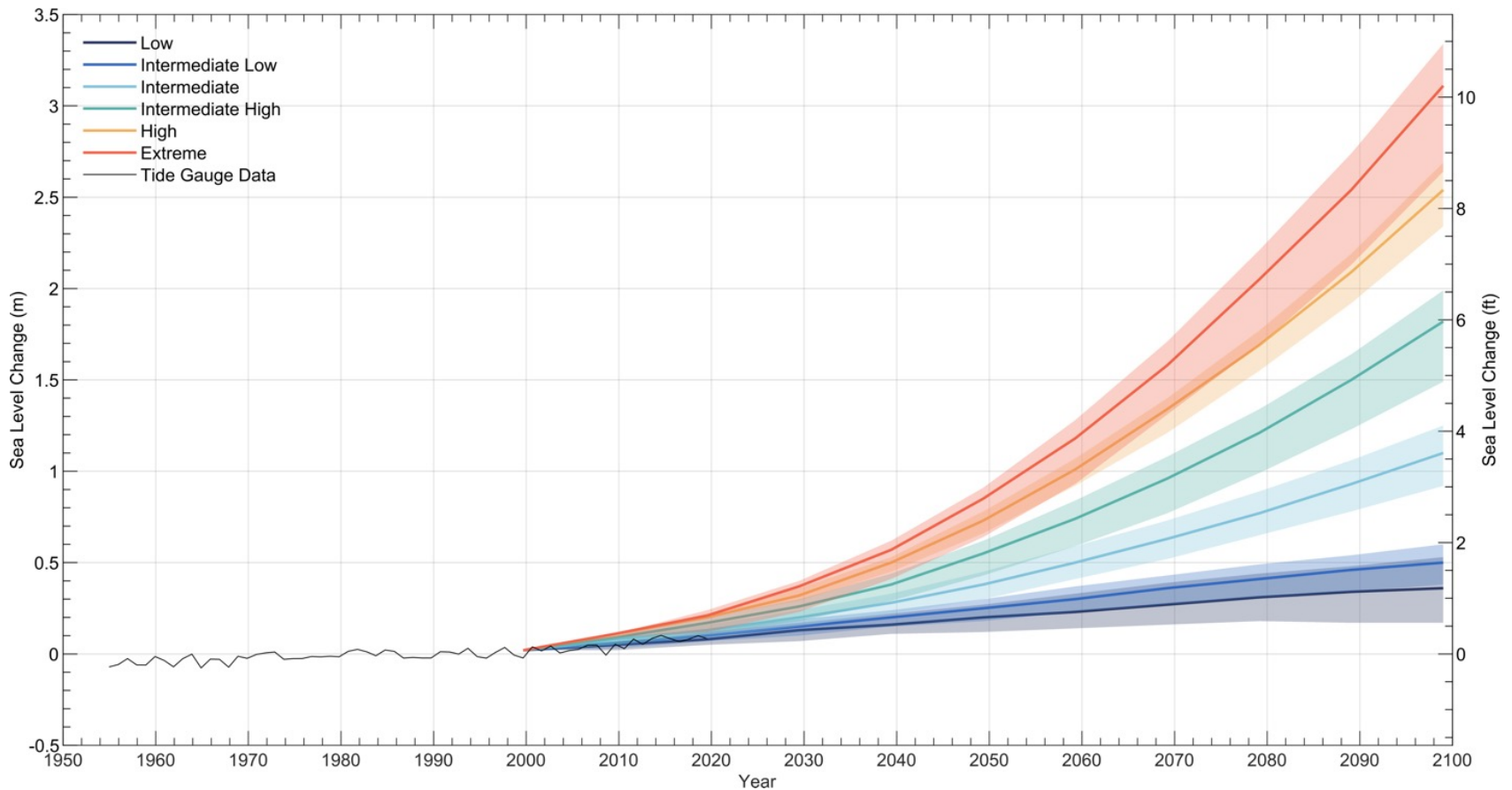


Photo Credits: Primera Hora; GFR Media



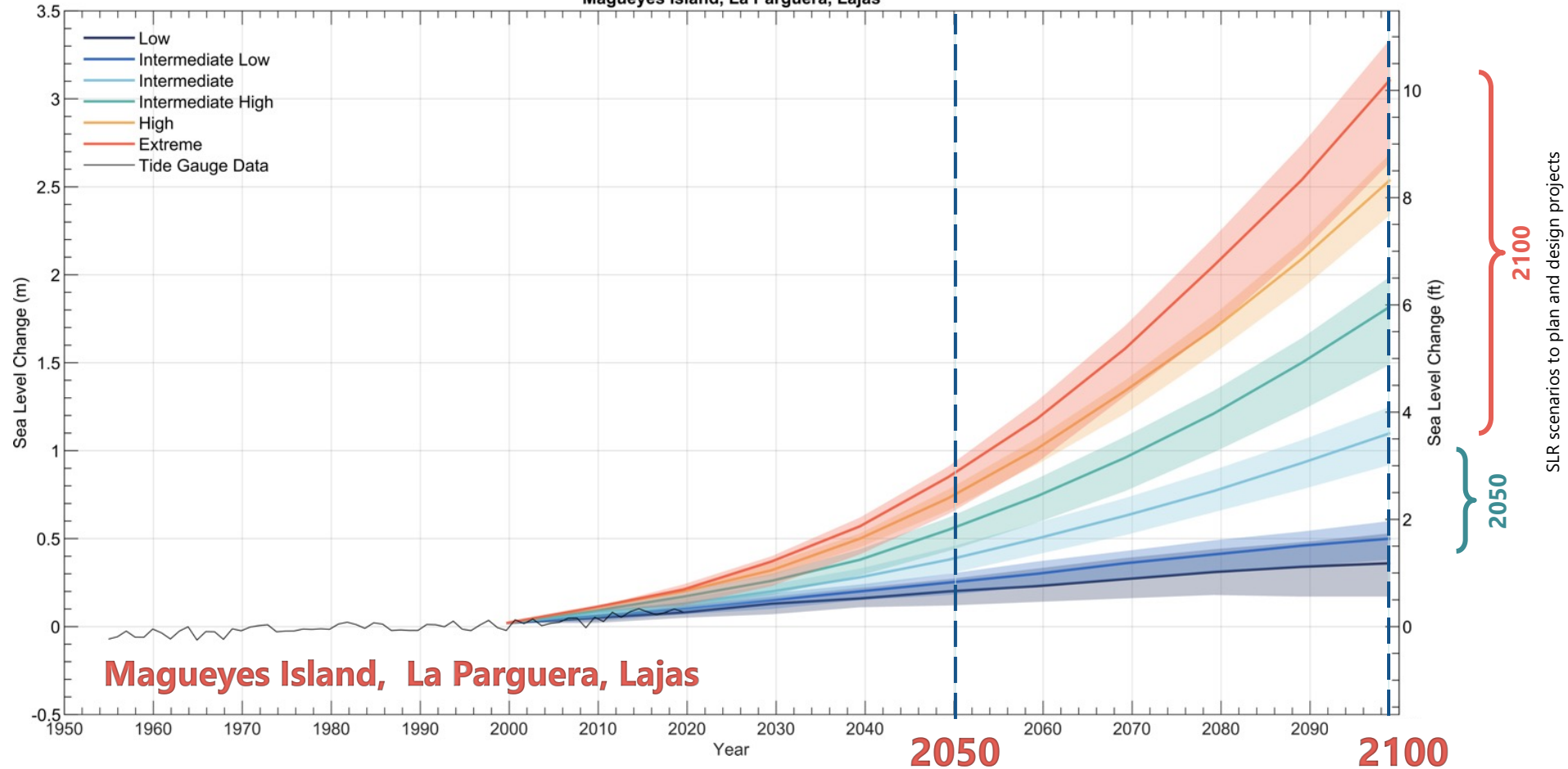
What lies ahead as sea levels rise?

- Six (6) Sea Level Rise (SLR) scenarios reported by NOAA.
- Each scenario assumes a non-linear rate of rise (extrapolation)



What lies ahead as sea levels rise?

NOAA Regional Sea Level Rise Scenarios
Magueyes Island, La Parguera, Lajas

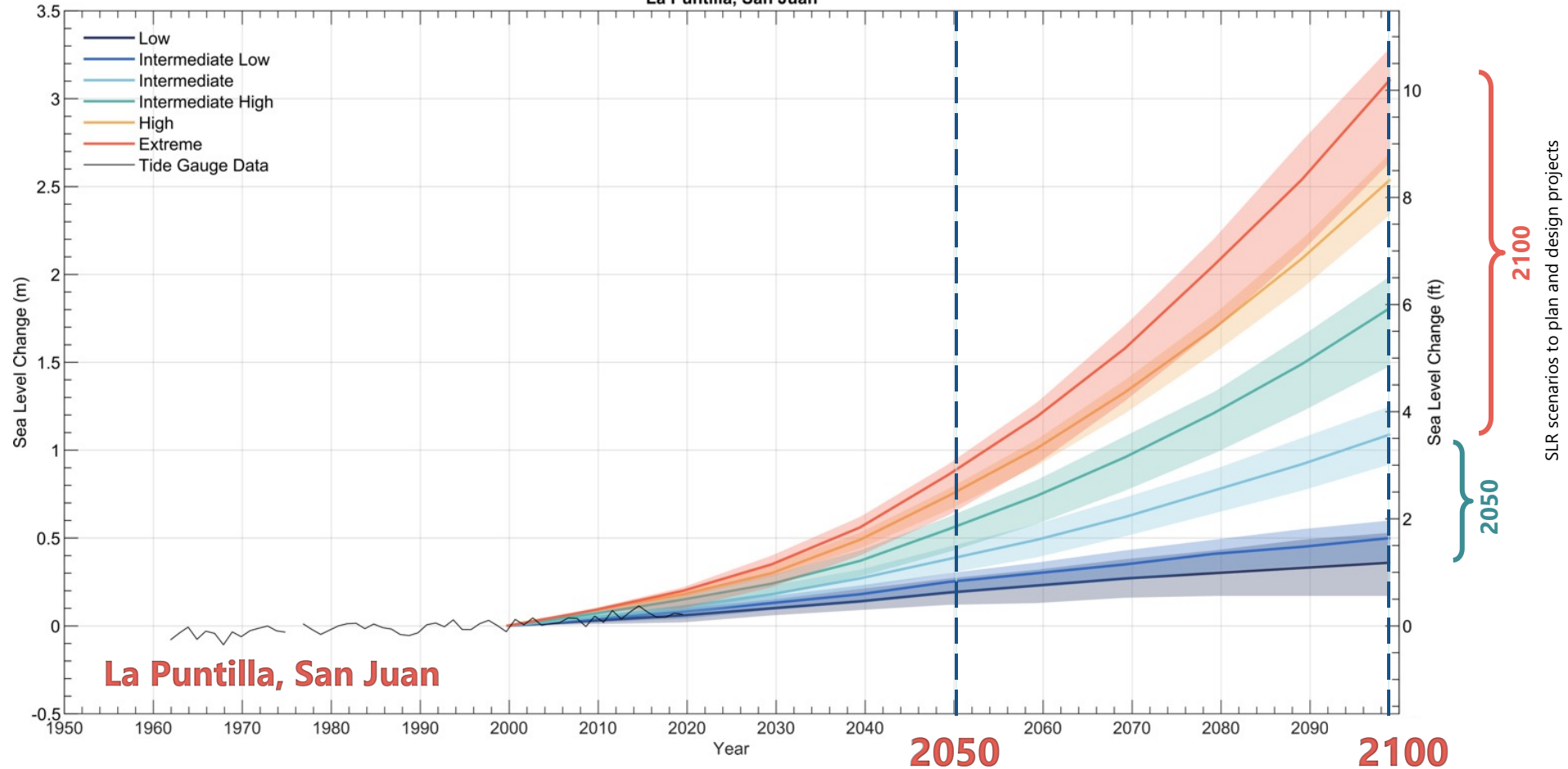


Magueyes Island, La Parguera, Lajas

SLR scenarios to plan and design projects

What lies ahead as sea levels rise?

NOAA Regional Sea Level Rise Scenarios
La Puntilla, San Juan



1. What lies ahead as sea levels rise?
2. What does your community value the most that is at risk?
3. Do you feel that the Caribbean islands are in a good position to adapt to climate change?
4. Are there some industries in Puerto Rico that you feel are more or less vulnerable?
5. How can stakeholders actively participate of the decision-making process?
6. What are the biggest challenges your organization or community encounters when making decisions about sea level rise?
7. How can policy and practice be integrated to ensure that the effects on coastal, estuarine, marine, and terrestrial ecosystem are mitigated?
8. What strategies can be used to promote long-term integrated multi-disciplinary collaborations?



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