

PACIFIC ISLANDS CLIMATE OUTLOOK FORUM - 13

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NADI, FIJI



Session 5: Looking Forward Long-Term: Status of key variables



Sea Level



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SPREP
Secretariat of the Pacific Regional
Environment Programme



Pacific Community
Communauté
du Pacifique



NIWA
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Global Mean Sea Level (GMSL) Predicted

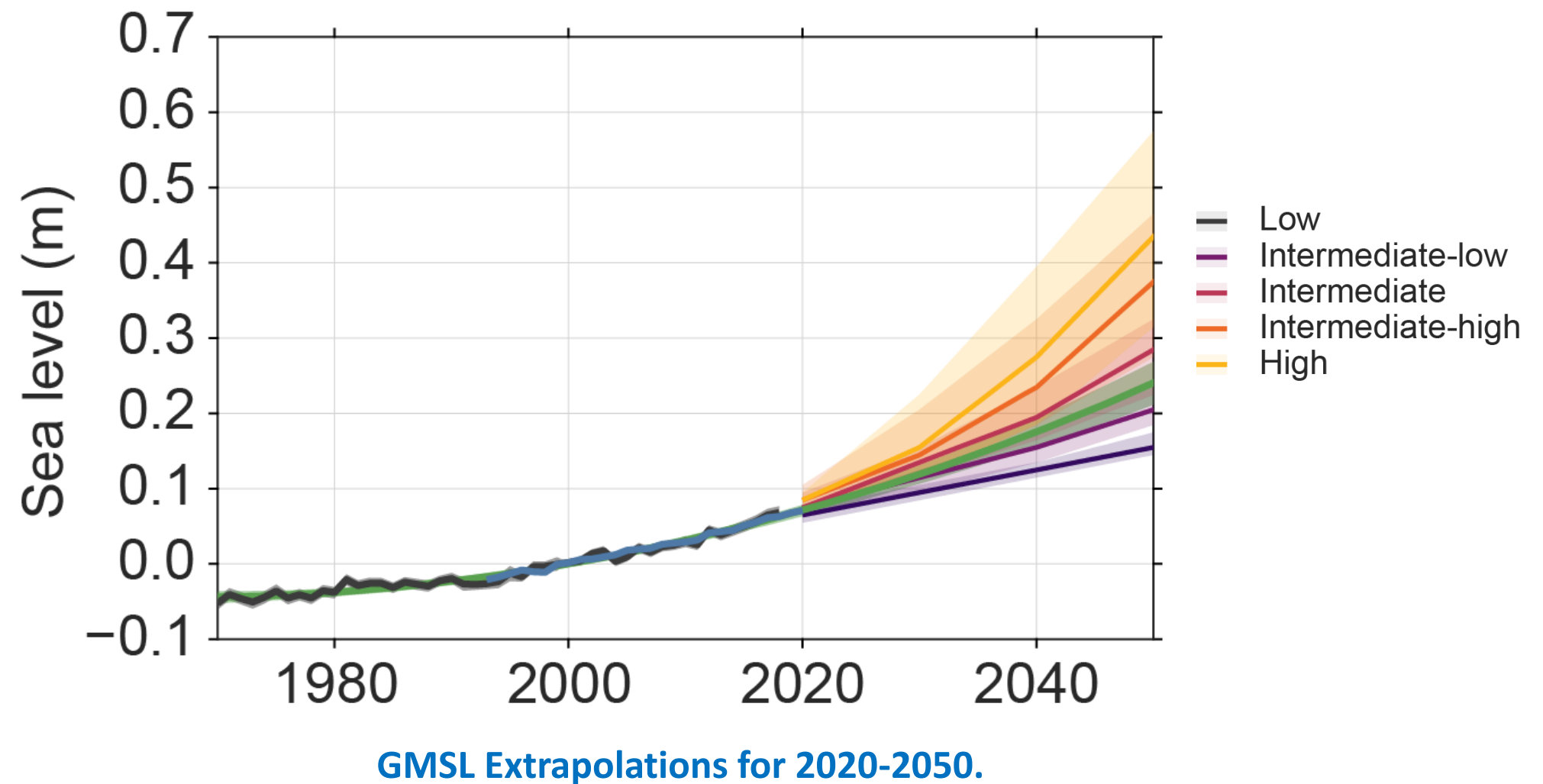
Global and Regional Sea Level Rise Scenarios for the United States: Updated Mean Projections and Extreme Water Level Probabilities Along U.S. Coastlines. NOAA Technical Report NOS 01 (Sweet et al., 2022)

Near-Term Sea Level Change (2020–2050)

As a result of improved science, the time path of scenarios is now more realistic.

The range between the Low and High scenarios in 2050 is now 0.28 m (i.e., 0.15 to 0.43 m rise *relative to a 2000 baseline*).

There is less divergence between the GMSL scenarios in this near-term time period, which reduces uncertainty in the projected amount of GMSL rise up to the year 2050.



Regional Mean Sea Level Predicted

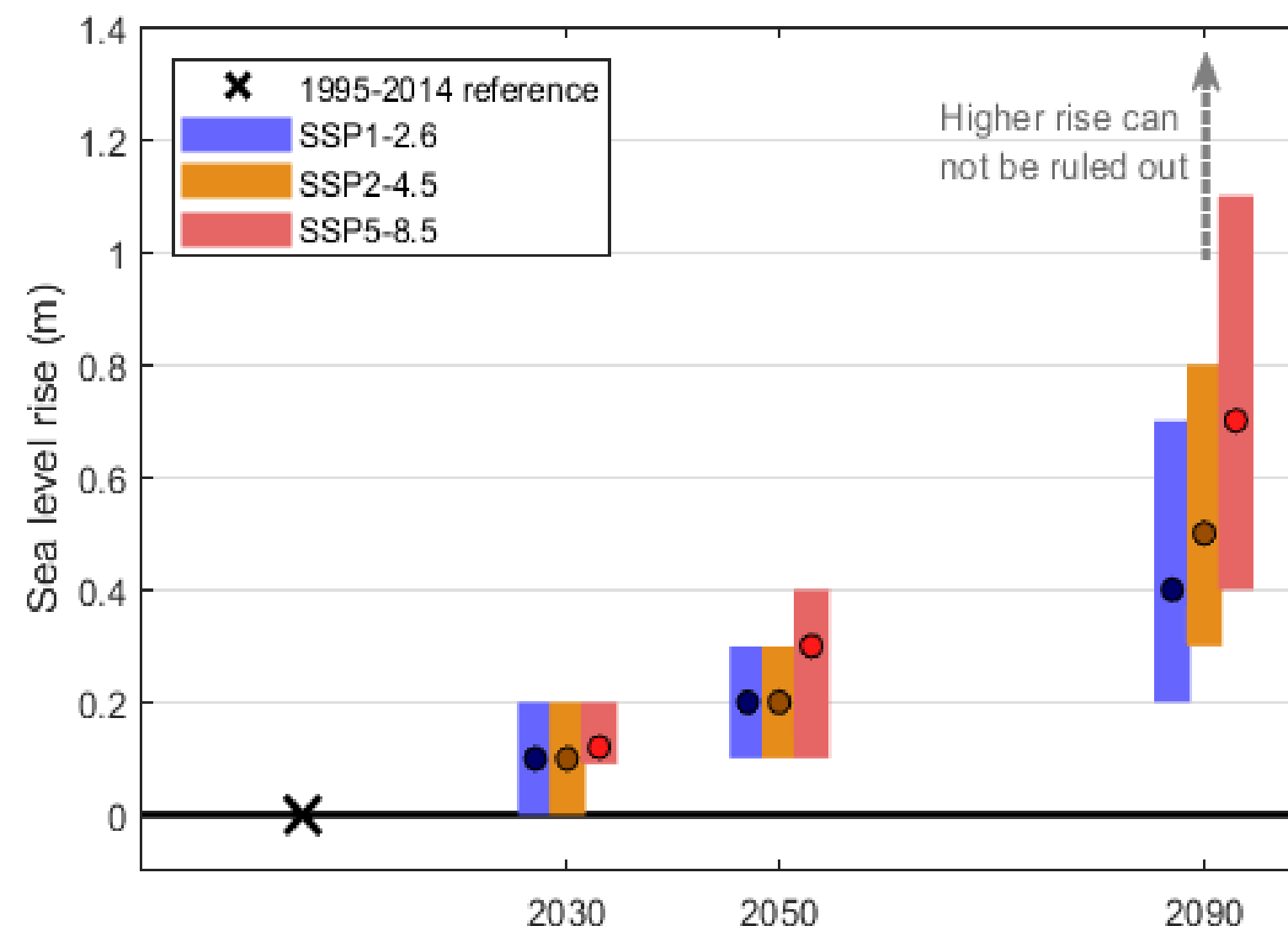
Pacific Climate Change Monitor 2021

Pacific Islands-Regional Climate Centre (PI-RCC) Network Report to the Pacific Islands Climate Service (PICS) Panel and Pacific Meteorological Council (PMC)

Long-Term Sea Level Change (2050–2150)

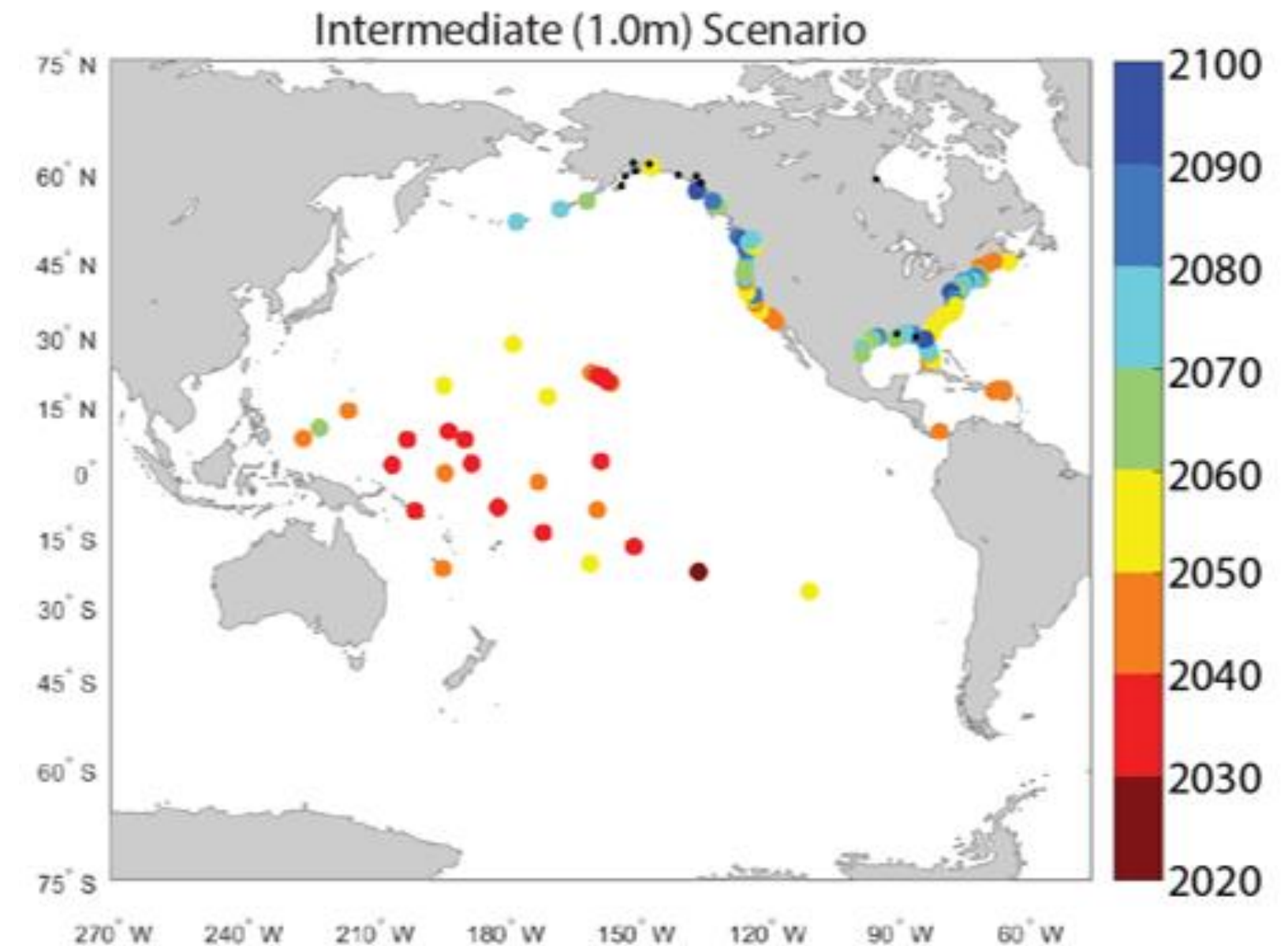
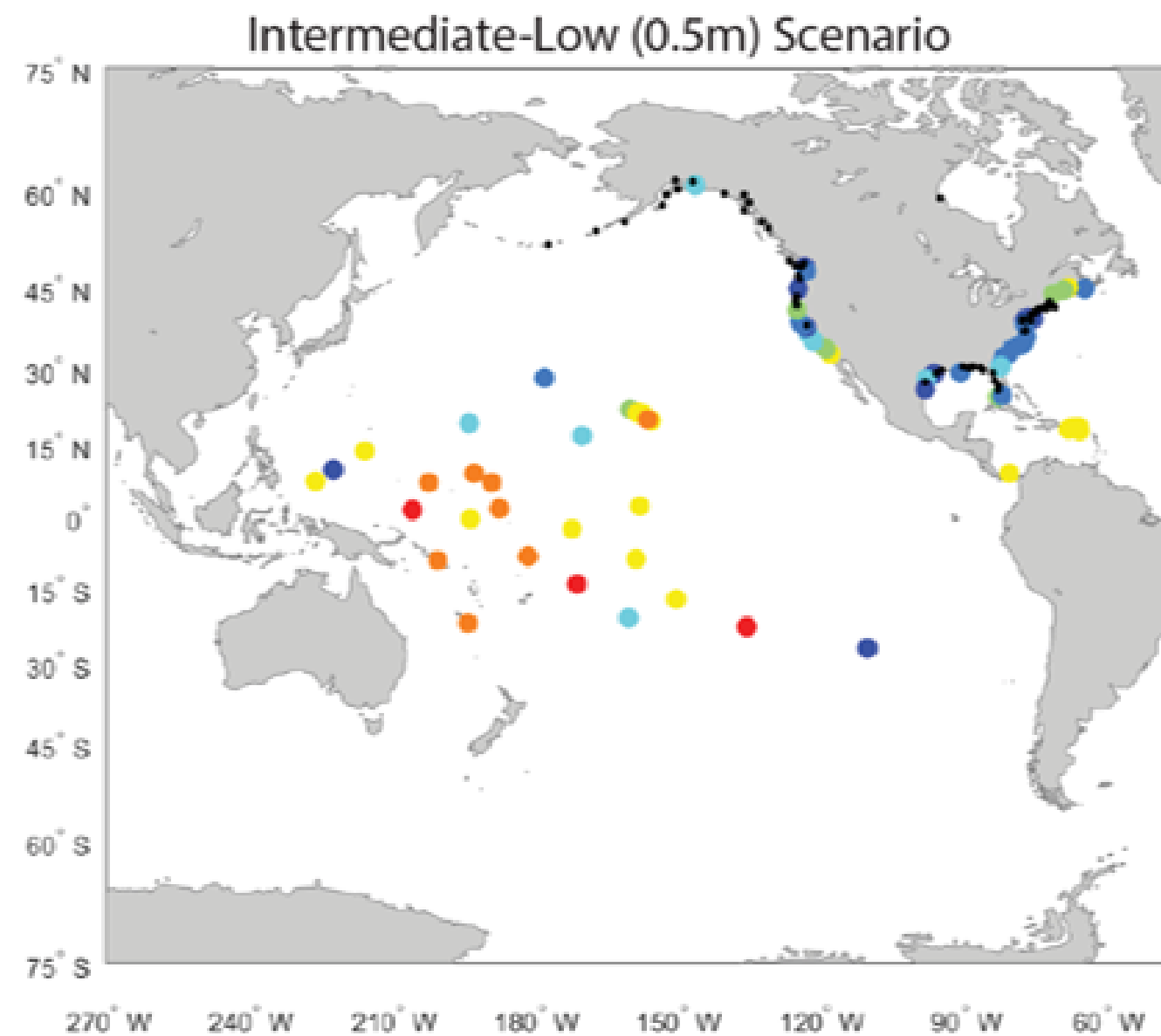
The GMSL is projected to continue to rise, the amount depending on the emissions pathway. **Due to regional influences, sea level is projected to rise slightly faster in the Pacific than the global average.**

Even if emissions stabilize, **we are committed to further SLR for hundreds of years** (e.g., 2-5 m (6 to 16 feet) by 2150).



Range of *likely* sea level rise averaged over the Pacific Small Islands region.

Flood Frequency and Severity will continue to increase in the Future.



Decade in the future in which the elevation currently associated with 100-year Return Level becomes associated with the 1-year Return Level.

Source Marra et al., 2023

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Thank You

