



CLIMATE PROJECTIONS FOR SAMOA

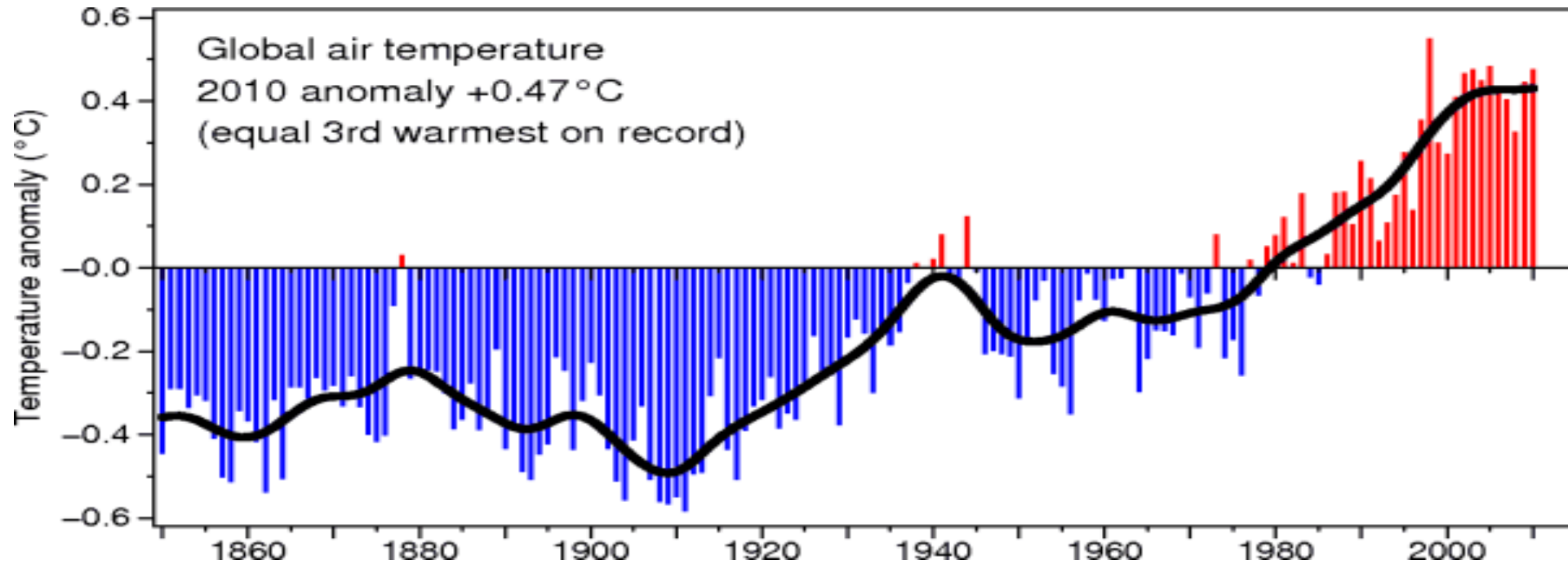
Pacific Climate Change Round Table 2015

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Samoa Meteorology Division

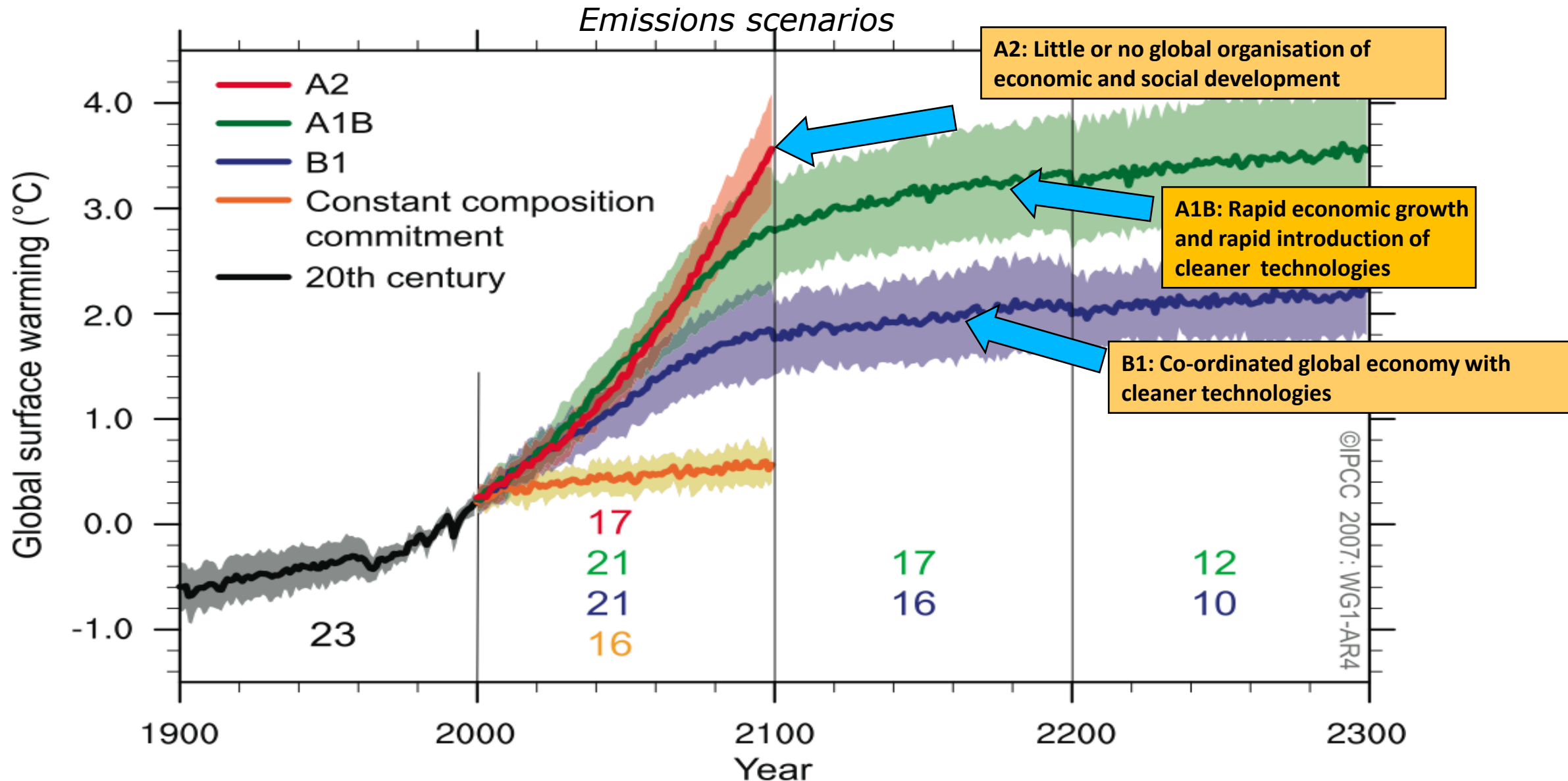


Global average temperature



- 1998 was the warmest year, followed by 2003, 2005 and 2010
- The 2000s was the warmest decade on record, then the 1990s, then the 1980s

How do we make climate projections?



How do we make climate projections?

PCCSP projections

- Emission scenarios

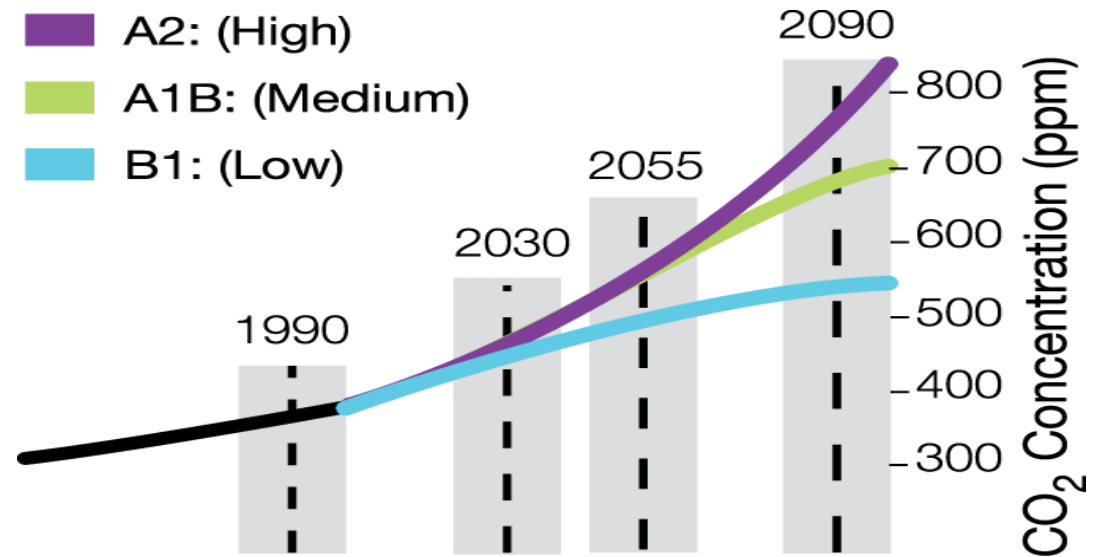
- A2 (high), A1B (medium),
B1 (low)

- Years

- 2030, 2055, 2090

- Variables

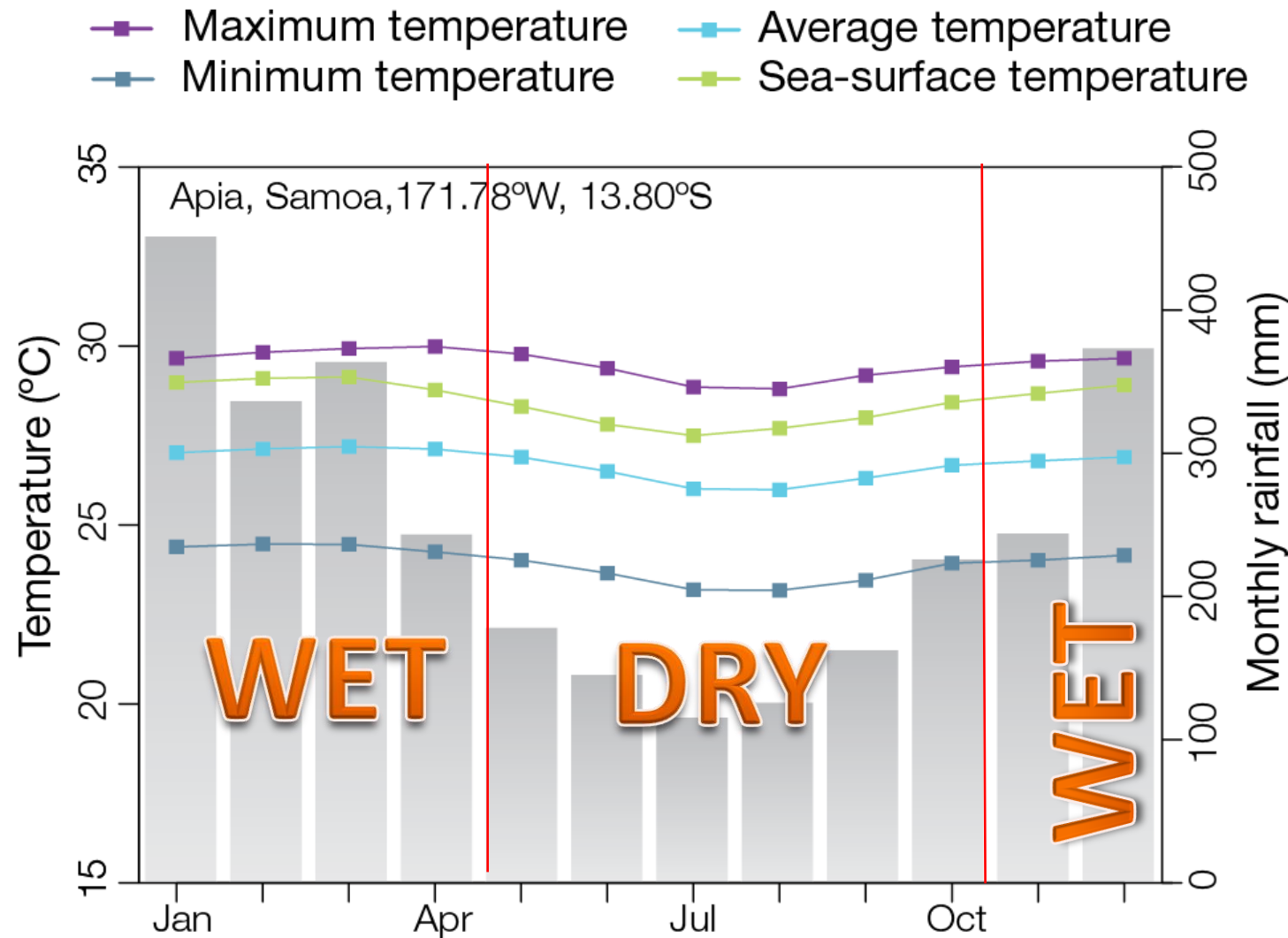
- Temperature, rainfall, wind speed, humidity, solar radiation, sea surface temperature, ocean acidification, sea level rise, tropical cyclones



Seasonal Cycles

Seasons	Wet – November to April Dry – May to October
Temperature	<ul style="list-style-type: none"> •Very small seasonal temperature difference
Rainfall	<ul style="list-style-type: none"> •Has distinct seasonal variation •75% of total annually receive in the wet season
South Pacific Convergence Zone (SPCZ)	<ul style="list-style-type: none"> •Determine and influence the amount of rainfall •Samoa Island Topography has a significant effects of the rainfall

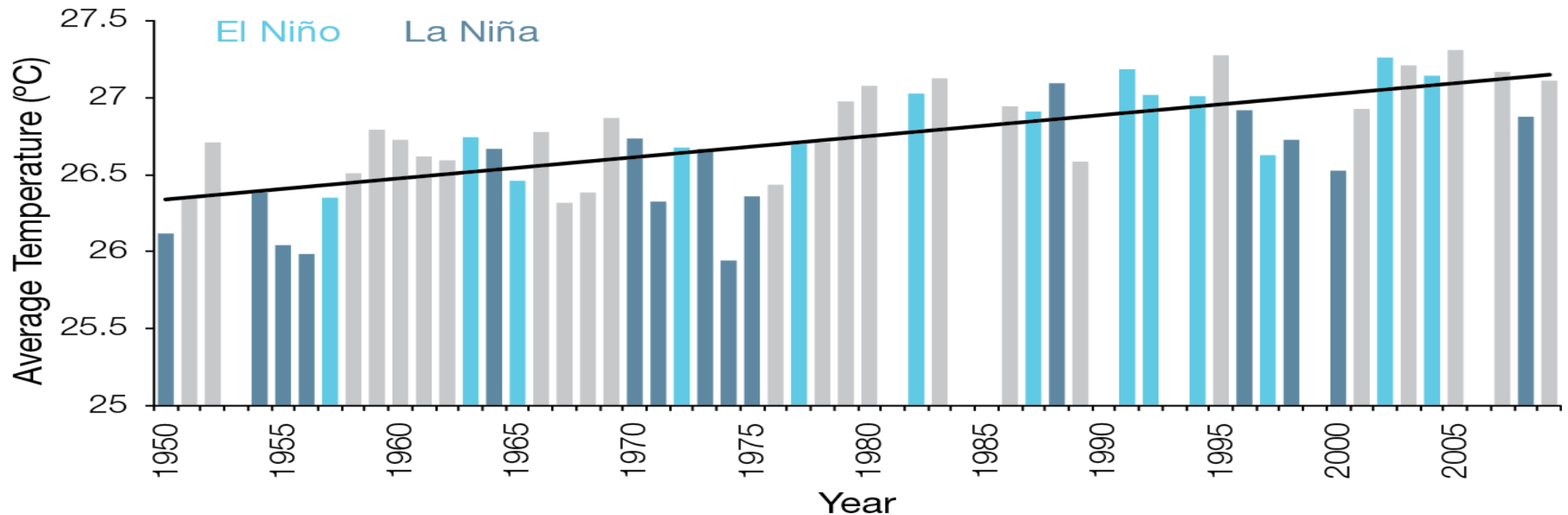
Mean Annual Climate Cycle



Trends – Air Temperature

Observed	Future Projections
Maximum temperature increased at a rate of 0.22°C/decade in Apia	Temperature have warmed and will continue to warm with more very hot days in the future

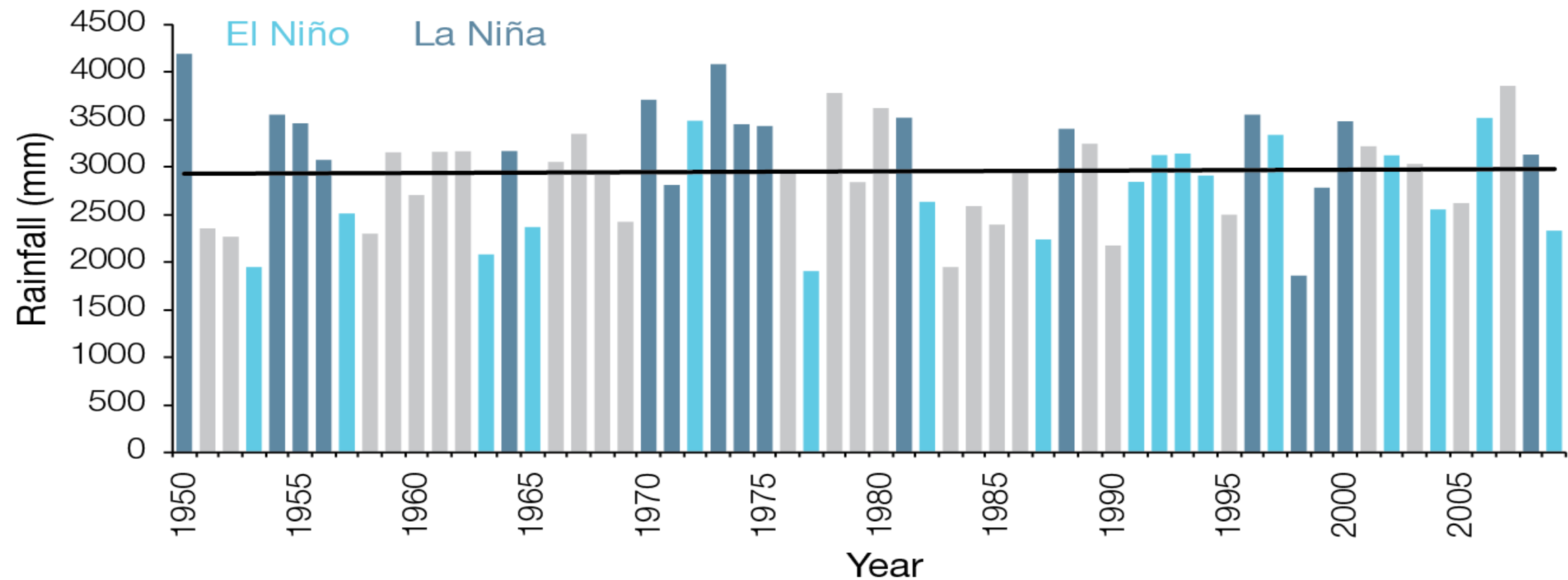
Annual Mean Temperature – Apia



Trends - Rainfall

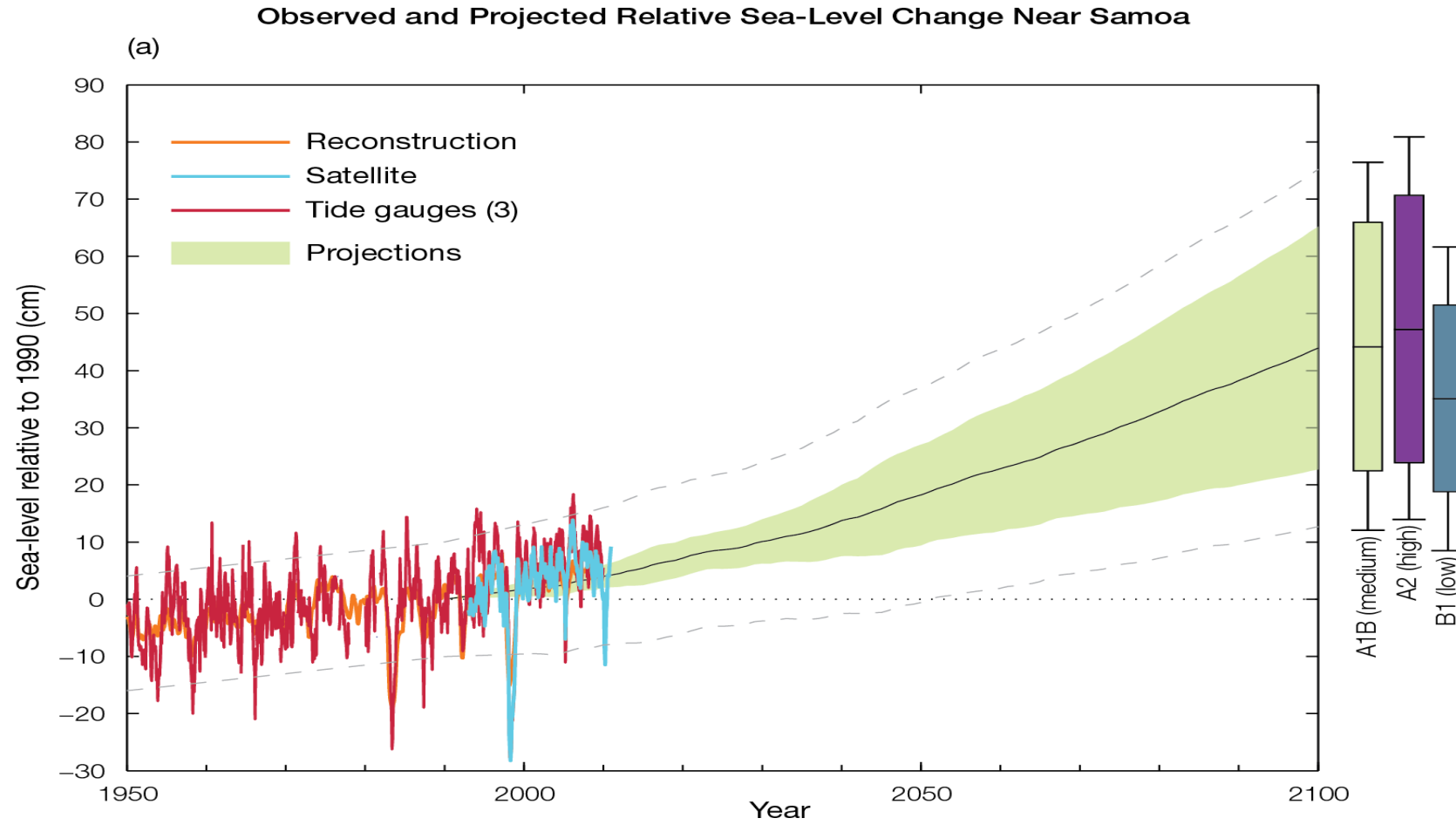
Observed	Future Projections
Not statistically significant	More extreme rainfall days expected

Annual Rainfall – Apia



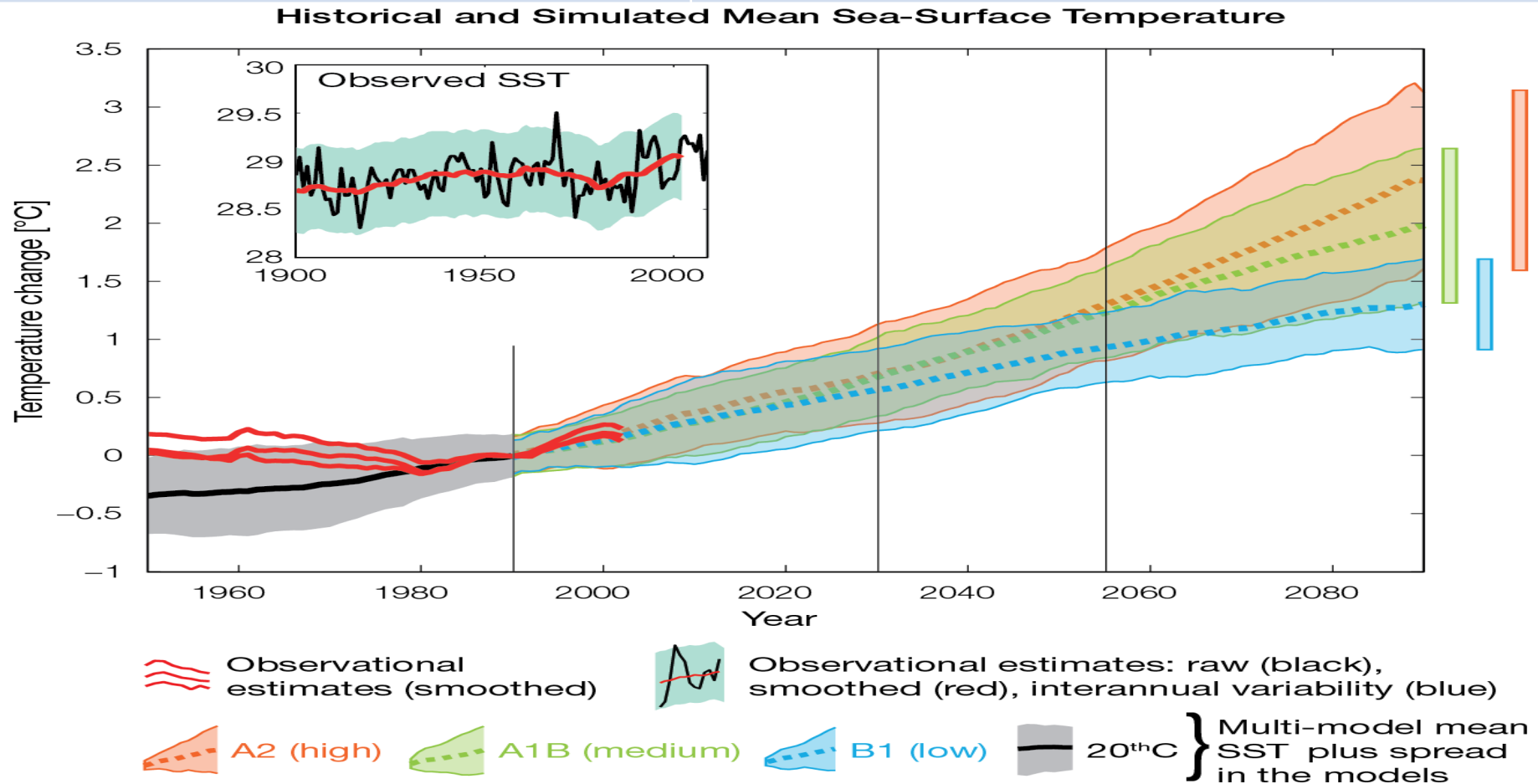
Trends – Sea Level

Observed	Future Projections
4mm rise/year since 1993	Continue to rise



Trends – Sea Surface Temperature

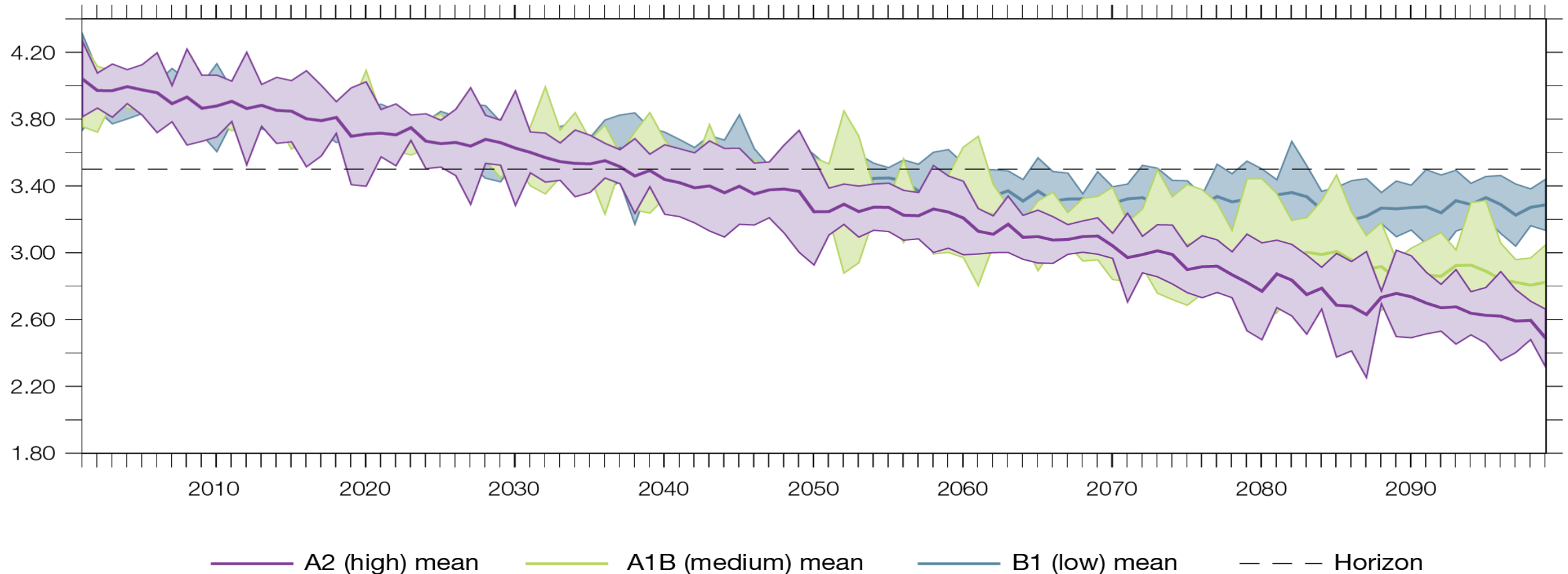
Observed	Future Projections
Increasing since 1980	Continue to increase



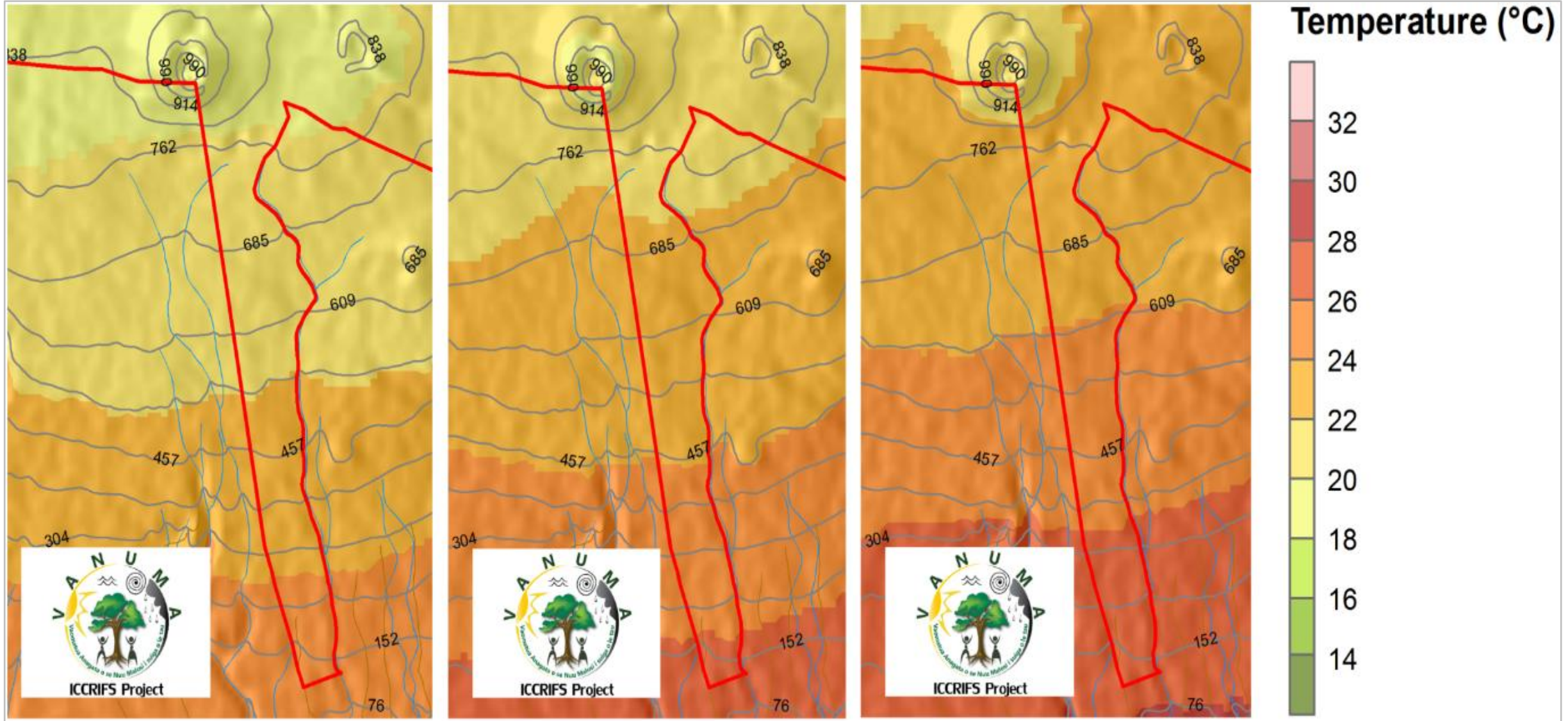
Trends – Ocean Acidification

Observed	Future Projections
Increasing	Acidification will continue to increase

Maximum Annual Aragonite Saturation State – Samoa



Future climate scenarios



A photograph of a weather station enclosure. The enclosure is made of a chain-link fence and contains various meteorological instruments, including a white anemometer and a white rain gauge. In the background, there is a large, leafy green tree and a clear blue sky. The text "THANK YOU" is overlaid in white capital letters.

THANK YOU

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