

WHAT IS CLIMATE CHANGE?

A change of climate is attributed directly or indirectly to the human activity that alters the composition of the global atmosphere and which is in addition to the natural climate variability observed over comparable time periods according to the Pacific Climate Change Portal (PCCP Glossary).

A 30 years record of climate data based on the World Meteorology Organisation (WMO) standards were used to trace the changes of our climatic conditions.

CAUSES/DRIVERS OF CLIMATE CHANGE

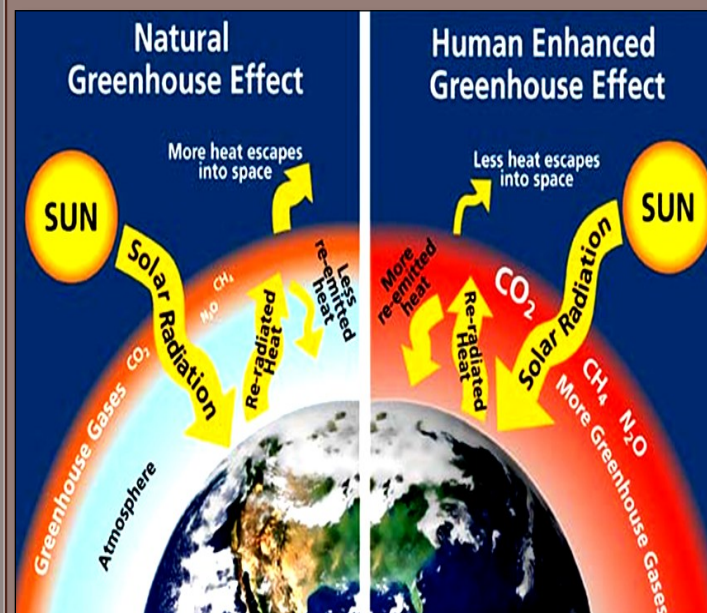
- ⇒ Economic and Population Growth
- ⇒ An increasing tons of carbon emissions to the atmosphere fuels extremism from Climate Change activities.
- ⇒ Increasing Green House Gas (GHG) Emission were anthropogenic caused and mainly driven by population size, economic activity, lifestyle, energy use, land use patterns and technology.
- ⇒ Natural activities contributing to the GHGs emissions such as volcanic eruptions.

WHAT IS GLOBAL WARMING?

- ⇒ Gradual increase in the Global atmospheric temperatures
- ◇ Maximum (Day) and Minimum (Night) air temperatures increased at Bauerfield and Aneityum indicates a steady rise in Temperature for Vanuatu.

WHAT CAUSES GLOBAL WARMING?

- ◇ An increase in Human induced activities through Green House Gas (GHG) emission influences global warming through human enhanced Greenhouse effect.



(Source: IPCC, 2015)



AIR CONDITIONING

Gases contained in refrigerants also contributes to Green House Gas (GHG) emissions with high Global Warming Potential which influences global warming and climate changes

GLOBAL WARMING & CLIMATE

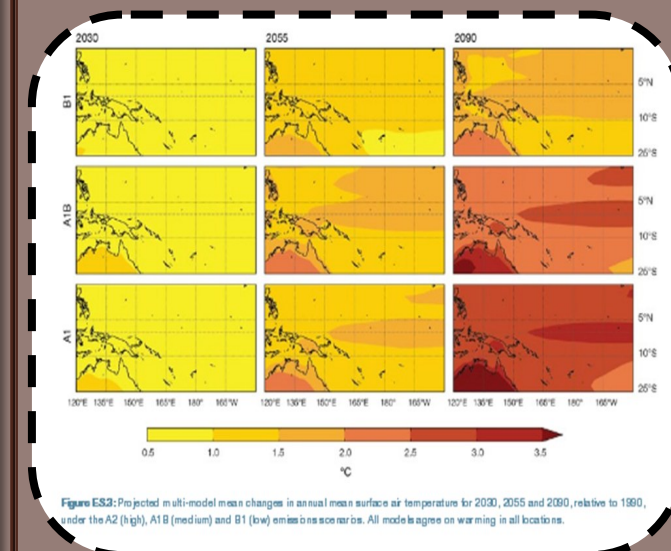


Figure ES3: Projected in multi-model mean changes in annual mean surface air temperature for 2030, 2055 and 2090, relative to 1990, under the A2 (high), A1B (medium) and B1 (low) emissions scenarios. All models agree on warming in all locations.

(Source: IPCC, 2015)

IMPACTS OF CLIMATE CHANGE

1. VANUATU'S CHANGING CLIMATE:

- ◆ Temperatures have increased
- * Minimum (night temp) & maximum (day temp)
- ◆ Rainfall varies from year to year
- ◆ Sea level has risen
- ◆ Ocean acidification has been increasing

2. VANUATU'S FUTURE CLIMATE PROJECTIONS:

- ◆ El Niño and La Niña events will continue to occur in the future, but there is little consensus on whether these events will change in intensity or frequency.
- ◆ Annual mean temperatures and extremely high daily temperatures will continue to rise.
- ◆ Mean annual rainfall could increase or decrease with the model average indicating little change, with more extreme rain events.
- ◆ Incidence of drought is projected to decrease slightly under the high emission scenario and stay approximately the same under the other emissions scenarios.
- ◆ Sea level will continue to rise.
- ◆ Ocean acidification is expected to continue.
- ◆ The risk of coral bleaching is expected to increase.
- ◆ More extreme rainfall in the wet seasons and less rainfall in the dry seasons.

Table 1:

Projected annual average air temperatures changes for Vanuatu for three emissions scenarios and three time periods. Values represent 90% of the range of the models and changes are relative to the average of the period 1980-1999.

	2030 (°C)	2055 (°C)	2090 (°C)
Low emissions scenario	0.2 – 1.0	0.5 – 1.5	0.7 – 2.1
Medium emissions scenario	0.3 – 1.1	0.8 – 2.0	1.3 – 3.1
High emissions scenario	0.4 – 1.0	1.1 – 1.7	2.0 – 3.2

(Extracted from Pacific Climate Change Science Program, 2011)

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GOVERNMENT OF VANUATU



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“Working Together for a Resilient Vanuatu”