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THE GLOBAL CLIMATE CHANGE ALLIANCE PLUS INITIATIVE

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CLIMATE CHANGE FACTSHEET SEYCHELLES

THE EARTH'S CLIMATE IS CHANGING

Severe erosion beach recession at Anse la Mouche between 2000–2010.
Source: Ministry of Environment, Energy and Climate Change

Scientists from the Intergovernmental Panel on Climate Change (IPCC) agree that the earth's climate is changing due to increased greenhouse gas emissions – having risen from 280 parts per million (ppm) in pre-industrial 19th century, to more than 400ppm today – as a direct result of human activities. It is anticipated that the levels of emissions will remain above that level for the generations to come, committing our planet to a warmer future with more weather, water and climate extremes. The impacts of climate change are already widespread and evident on various human and natural systems. They include but are not limited to warming of the air and sea, an increase in the intensity and frequency of severe weather events such as storms and cyclones, and changes in weather patterns across the globe (1). In 2015, the world came together to agree on the Paris Accord, an international agreement to reduce greenhouse gas emissions and support efforts for countries to adapt to the changing climate.

WHAT DOES THE FUTURE HOLD?

Based on many different types of data collected over decades, scientists are able to model and predict reasonably well the kinds of changes we can expect to see as a result of climate change.

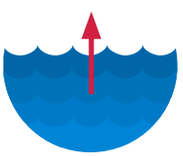
The most recent predictions for the globe include:

Increase in air temperatures, particularly near the arctic. The global average for surface warming is 0.85°C over the period 1880 to 2012 (1).

Since the beginning of the industrial era, oceanic uptake of CO_2 has resulted in acidification of the ocean; ocean surface water has increased in acidity by 26% (1).

Melting of the polar ice caps due to warmer temperatures. The Greenland and Antarctic ice sheets have been losing mass since 1992 and the rate is likely increasing. Glaciers have continued to shrink almost worldwide, and since 1979 Arctic sea ice has decreased at about 4% per decade.

Rising sea levels. From 1901 to 2010, global mean sea level rose by 0.19m, a rate of sea level rise larger than the mean rate during the previous two millennia. IPCC scientists predict that due to melting icecaps and thermal expansion (warmer water takes up more space), sea levels could rise as much as 82cm by the year 2100.



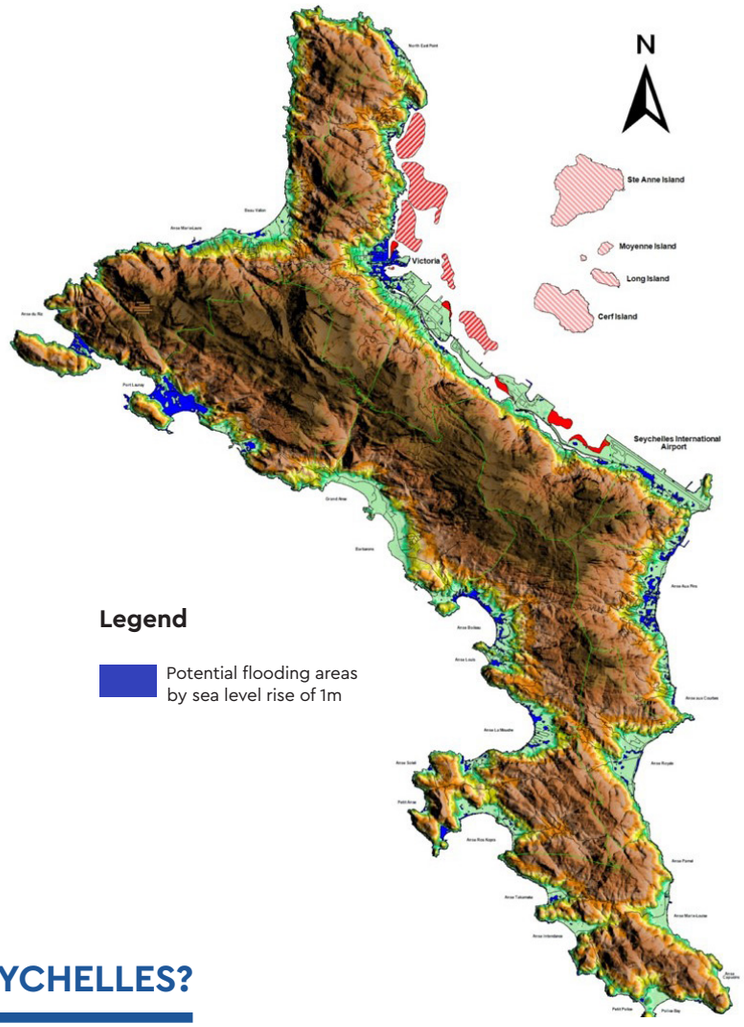
Changes in global atmospheric and ocean currents. This is one of the most uncertain areas but could drastically change the climate in many different regions of the earth.

HOW WILL CLIMATE CHANGE AFFECT SEYCHELLES?

Local scientists have already observed changes and modeled data to predict the following:

- Continued sea level rise from melting glaciers, causing coastal erosion and salt water intrusion into farmland.
- Changes in precipitation patterns with a general trend towards a wetter South-East monsoon and a drier North-West monsoon. The rainfall events are expected to be more intense resulting in flooding and possible landslides which might be damaging to property and infrastructure. The flooding may result in increased cases of vector-borne diseases.
- Increase in air temperatures, causing heat stresses on habitats, biodiversity and humans – Increasing reliance on air conditioning.
- Continued warming of the ocean will result in increased coral bleaching events subsequently degrading coral habitat for reef fish which greatly affects the artisanal fish catch. Degraded coral reduces protection from waves, causing further coastal erosion and flooding.
- Increased risk of storm surges from intense storms and cyclones in the region, causing further coastal erosion and damage.

Climate change can often exacerbate other factors such as the unsustainable exploitation of natural resources, pollution and inappropriate planning, often in unpredictable ways. One thing is predictable climate change is and will continue to have increasingly significant consequences for the people, economy and environment of Seychelles.



WHAT KIND OF ACTION IS NEEDED IN SEYCHELLES?

Action can be taken in two different ways:

ADAPTATION = PLAN AHEAD

Once we understand that our islands will be very different as a consequence of climate change, we can start working towards a progressive multi-sectoral adaptation plan to relook at how we will ensure that our future generations are energy, water and food secure. We can plan and build new infrastructure like roads, drains, ports, reclaimed land and housing, taking into account a changing coastline and climatic conditions. We can protect critical habitats and biodiversity that provide us with natural protection against the impacts of climate change. We can ensure that tourism and fisheries, the mainstays of our economy, are exploring innovative responses to climate change that will ensure their sustainability for years to come. And we can educate our people to ensure that they understand how to reduce risks presented by climate change, and to keep their families and communities safe, vibrant and resilient.

MITIGATION = REDUCE OUR GREENHOUSE GAS EMISSIONS.

Although we are a tiny country, our emissions per person are nearly as high as industrialized countries and we have a responsibility to help solve the global problem. We can reduce emissions by changing the way we generate electricity, shifting to renewable energy sources and moving away from fossil fuels. We can change our transportation habits – shifting to electric vehicles charge using renewable energy sources and investing in excellent public transport. We can demand the application of energy efficiency regulations to technologies, buildings and appliances. And we can practice energy conservation by reducing wastage of electricity.

REFERENCES AND FURTHER READING:

1. Intergovernmental Panel on Climate Change (IPCC). Climate Change 2014: Synthesis Report Summary for Policymakers.
2. IPCC. Climate Change 2014: Impacts, Adaptation and Vulnerability, Summary Report for Policymakers
3. Seychelles National Climate Change Strategy (2009)
4. Seychelles Intended Nationally Determined Contributions under the United Nations Framework Convention on Climate Change (2009)
5. Mendez et al. (2012). Analysis of sea level rise and coastal flooding in the Seychelles islands due to climate change. Current scenario and future projections for 2025, 2050 and 2100. Republic of Seychelles.

This leaflet was produced by the GCCA+ for the Ministry of Environment, Energy and Climate Change, 2018.