

# Hon James Shaw

Minister of Climate Change

Associate Minister for the Environment (Biodiversity)



OIA567

Sam Hill

By email: [fyi-request-22058-218d2fcf@requests.fyi.org.nz](mailto:fyi-request-22058-218d2fcf@requests.fyi.org.nz)

Tēnā koe Sam,

Thank you for your request of 10 March 2023 for the following:

*I request all data and scientific evidence that you relied on to conclude that ex tropical cyclones will either increase in intensity or frequency due to a gradually warming climate.*

The New Zealand Government is approaching climate change using a scientific lens. Scientific evidence of climate change is unequivocal. The Government considers it essential to implement policies to reduce human-caused greenhouse gas emissions, and to prepare for the impacts of climate change, as shown by our commitment to the Paris Agreement.

The science of climate change is clearly explained in a number of peer-reviewed, publicly available papers, following the traditional and trusted scientific method. Hundreds of scientists and researchers from around the globe participate in the Intergovernmental Panel on Climate Change (IPCC) working groups, reviewing thousands of these papers. This is summarised in the IPCC Sixth Assessment Report, which provides a comprehensive summary of the state of scientific, technical, and socio-economic knowledge on climate change, its impacts and future risks, and options for adaptation and mitigation. The Sixth Assessment Report is available at <https://tinyurl.com/yenz8tys>.

The IPCC states (*FAQ box 11.3 Did Climate Change Cause That Recent Extreme Event In My Country*) that “scientists cannot answer directly whether a particular event was caused by climate change, as extremes do occur naturally, and any specific weather and climate event is the result of a complex mix of human and natural factors. Instead, scientists quantify the relative importance of human and natural influences on the magnitude and/or probability of specific extreme weather events.” The attribution study, run by World Weather Attribution for Cyclone Gabrielle, concluded that emissions of greenhouse gases from human activity caused a 20 – 30 % increase in rainfall during the cyclone. You can find the study here: <https://tinyurl.com/2s43th4j>.

The Sixth Assessment Report states that floods will continue to become more frequent in response to climate change, severe convective storms will carry more rain in a warming world, and that one degree of warming of the atmosphere translates, on average, to about 7% more water vapour in the air. The National Institute for Water and Atmospheric research states that intense regional cyclonic storms in the southern hemisphere will increase in intensity. For more information on science and evidence for why weather extremes will increase in a warming world, please refer to the Ministry for the Environment’s website here: <https://tinyurl.com/9uyujk75>.

I can assure you that this Government will continue to follow the latest science and show global leadership on what needs to be done to leave a safer planet for future generations.

You have the right to seek an investigation and review by the Office of the Ombudsman of my decision relating to this request, in accordance with section 28(3) of the Act. The relevant details can be found on their website at: [www.ombudsman.parliament.nz](http://www.ombudsman.parliament.nz).

Nāku noa, nā,



Hon. James Shaw  
**Minister of Climate Change**