

**Subject:** Submission to Extreme Weather Inquiry

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I am a physicist worked and lived in the US for 40 years. I worked next to the National Center for Atmospheric Research, Boulder CO in the 70's, where the early climate modeling was ongoing, and it was clear that even a 1 deg global average temperature rise was a significant change that would cause extreme weather events. In recent years I have been learning and teaching the public about climate change and solutions.

Now with less than a 1 deg rise we are already experiencing the final stages of melting of our arctic sea ice, and extreme weather events causing hundreds of billions in damage and a hundred thousand deaths annually.

Recently our river flooded on my property to the highest level we have witnessed in 10 years. While not ascribing this necessarily to climate change, this like all other extreme events is a harbinger of worse to come. This is not not by speculation, it is dictated by the laws of physics.

Sea level rise is almost certainly to be at and beyond the upper limit projected by IPCC. By the turn of the century, we can expect much of the Gold Coast infrastructure to be underwater or impacted in regular events, let alone extreme events.

Therefore I urge a massive projection of adaptation requirements to run society in extreme weather at and beyond the upper limit projects by scientist, knowing that events are and will transpire more quickly than expected by current conservative and incompletely modeled projections. This should include full costing projections, and an analysis and encouragement of climate mitigation measures. It will be clear that mitigation will be by far cheaper than adaptation (in fact it will be more profitable than business as usual), which may not even be possible.

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