



Submission

to The Greater Regional Wellington Council's Draft
Climate Change Strategy

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Introduction

Coastal Ratepayers United Inc. (CRU) has given the Kapiti Coast District Panel (KCDC) much assistance with submissions, the Science Panel and various technical reports and inputs etc.

CRU rejects in very strong terms the view that property owners are a negative influence on policy formation. To the contrary, we are the ones with most at stake in getting an accurate and competent analysis done.

Our experience to date is that the treatment of risk and decision making under uncertainty in official material to date has been unfit for purpose.

CRU submits that this weakness is also apparent in the Greater Regional Wellington Council's draft discussion document.

In CRU's view the crucial problem is lack of input from experts in statistics and flawed decision-making under "uncertainty".

Instead there has been over-reliance on scientists and coastal engineers who are failing to exhibit such expertise and misunderstanding their role.

These concerns, and more, have been spelt out in full in the submission by Joan Allin and CRU's submission below .

Matters Included as Part of CRU Submission

The CRU supports and adopts the following submissions:

1. The Allin submission
2. The Dunmore submission
3. A further submission from Dr De Lange to be forwarded in due course as previously discussed with Ms. McKim.

GWRC's Questions Answered

- 1.

Not as currently drafted.

- 2.

No comment.

3.

The statement could be improved by making it clear who is responsible for managing impacts and adapting to risks e.g. "Risks to property from climate change-related impacts are best managed in the first instance by those who have assumed those property risks."

4.

No. It is submitted that the primary issue for GWRC is not one of causation. It is not the role of a relatively small regional council to establish causes of climate change that by definition are extremely complex. The only possible role is to update the public with progress in the best available research and where there are conflicting reports the public is so informed.

5.

No comment.

6.

No comment.

7.

Page 6 fails to point out to the public the uncertainties in the IPCC report. We have attached a *f g f f g f* that needs to be used as a basis for rewriting the Strategy, but make the following specific comments on the draft:

- Contrary to what page 6 asserts, the IPCC's AR4 report did not make sea-level rise predictions; instead it made model- and 4 scenario-specific projections. It expressed no view as to the relative likelihood of those scenarios. This is a serious crippling omission from a decision-making perspective.
- Further NIWA's June 2012 report for the GRWC, *f*, that was report cited in footnote 11 made no statistical case that the sea-level is tracking towards a rise of 0.8m by the 2090s. NIWA's report clearly stated that evidence of a statistically significant acceleration (no matter how small) was lacking.

Page 6 is replete with non-scenario dependent expectations. The IPCC cannot be the source of these statements since its projections are model and scenario-dependent.

Uncertainty in Future Climates

The way the climate is currently evolving is uncertain, as are the consequences, particularly on a local scale. The global temperature is one of the key measures that reflect what is happening – ocean warming and expansion with consequent sea level rise, potential ice melt, changes in the atmosphere including circulation patterns etc.

There is little scientific doubt that a higher atmospheric concentration of CO₂ and other Greenhouse Gases (GHGs) increases the global average temperature to a greater or lesser degree and there has been a steady increase in the former since mid 20th century, accompanied by a more erratic increase in the latter. However at the end of the century the latter have plateaued and General Circulation Models (GCMs) of the climate have not captured this development.

Much of the basis for the policy advice from the IPCC relies on GCM projections. Model- and scenario-dependent uncertainty contributes to the uncertainties that the IPCC acknowledge. Difficulty in modelling clouds and aerosols contribute the largest uncertainty to temperature estimates for a given scenario and thereby impact on the extent to which the direct effects of GHG concentrations are amplified or damped. Oceans are another area where knowledge has only recently improved and still remains relatively poor. Convection processes are important but problematic to model relative to energy balance considerations.

There are a number of hypotheses for why the current mismatch is occurring

and with that the performance of the models. The biggest policy uncertainty is whether this is just a short-term variation or the models are systematically over estimating future temperatures. The IPCC has expressed medium confidence in the former. This is something that needs to be continually reviewed and is an added argument for adaptive planning.

Putting aside this uncertainty in the performance of the GCMs, the IPCC itself includes significant ranges of uncertainty around each of its scenario projections. Representative Concentration Path (RCP) 6.0 of the GHGs is the current path; RCP 8.5 is designed to be the upper bound of the RCPs.

Uncertainty as to which of these (or indeed other) scenarios will best represent the future concentration path contributes to the overall uncertainty concerning how the climate will actually evolve. Another uncertainty concerns unpredictable natural variability, for example in chaotic solar activity, convection processes, volcanoes or meteorite strikes. Independent natural activity could aggravate or offset human-induced-effects in any given time frame.

Downscaling to regional impacts from the IPCC's global assessments increases these uncertainties.

In adaptive planning by GRWC and the local community all this uncertainty *g* needs to be reported, monitored and taken into account in any response. The point that is often forgotten is that just as there is a risk of loss from failing to act at the right time, there is also a risk of loss from acting too precipitously. Risks from a posited major acceleration in sea-level rise are slow unfolding risks, allowing some decades of time for verification of the acceleration hypothesis against the unfolding observational record. Locking in unlikely extreme events in the distant future into today's regulation has immediate and certain costs for the community, for as yet speculative benefits. Regulators and property-owning decision-makers need to base their decision on best estimates of the actual likelihoods for the full range of outcomes rather than solely on extremely unlikely events.

Good governance involves understanding the need for this balance and developing regulations that allow uncertainty to be appropriately taken into account in resource management.

Conclusion

For a background on CRU and its role we refer you to our website www.coastalratepyers.co.nz.

We are very happy to meet with your team as your policy is being developed.

We have had constructive meetings in the past and anticipate that we can do so in the future as everyone wants to achieve the best outcomes for our great region