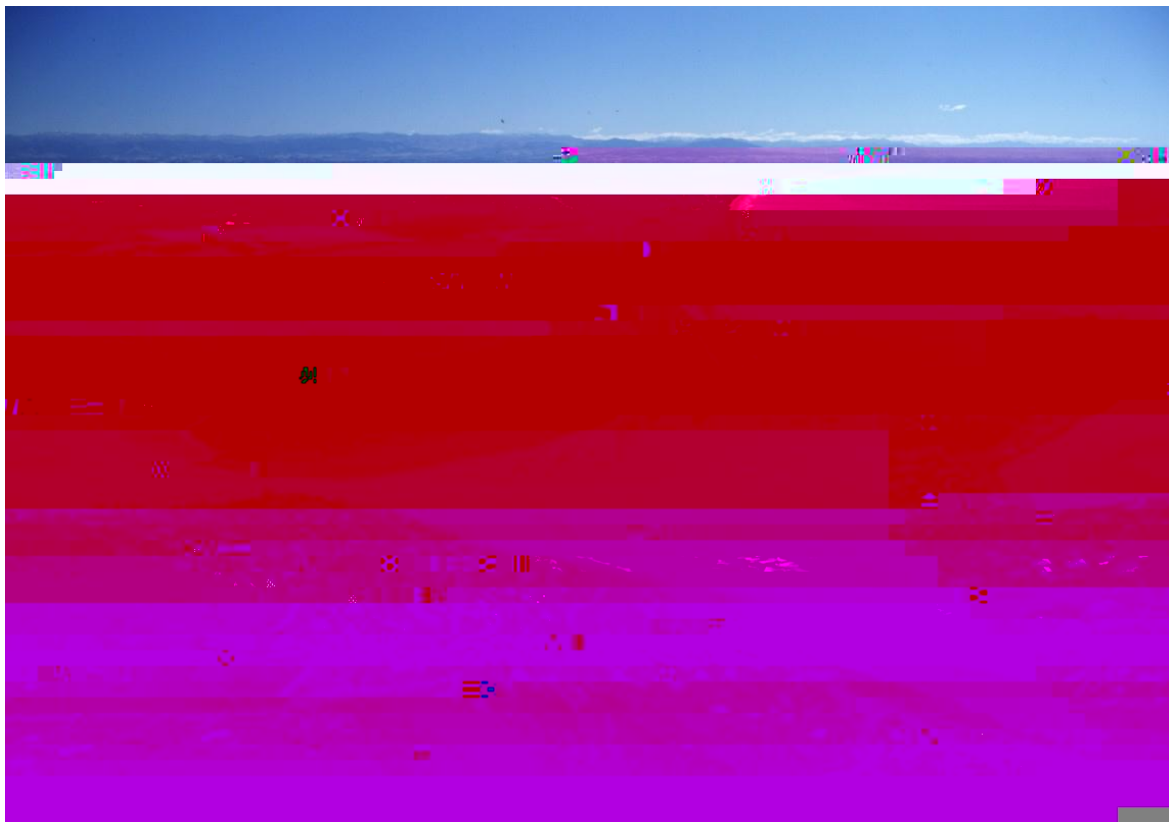


\$±> "Yá a £š£j ©j a °¥' «Š-°Š'° YŠ-°¥a

---

What is the best way for the Christchurch City Council to engage the Christchurch community when planning for and implementing adaption for sea level rise?



Sam Creed, Gautham Praburam

Geog 402

## **Abstra**

# Table of contents

<b>Abstract.....</b>	<b>0</b>
<b>Introduction.....</b>	<b>4</b>
<b>Background .....</b>	<b>5</b>
Sea Level Rise .....	5
Tonkin and Taylor Report.....	5
Options for responding to sea level change .....	7
Particularly effected groups and communities.....	8
<b>Practices and Approaches used elsewhere.....</b>	<b>9</b>
IAP2 Spectrum.....	9
Case Study: Whitianga.....	10
Case Study: Lake Macquarie .....	11
<b>Focus group meeting.....</b>	<b>13</b>
Concerns .....	13
Information needs .....	14
Principles to follow .....	15
Processes to use .....	16
<b>Online Survey .....</b>	<b>17</b>
<b>Overall recommendations .....</b>	<b>18</b>
Council needs to be committed to collaboration.....	19
Education on the topic .....	19
Smaller scale meetings.....	19
Involve various communities.....	20

**Acknowledgements ..... 20**

**References..... 21**

**Appendix: Online survey questions – Constructed through Qualtrics..... 23**

## **Introduction**

Christchurch, as a coastal city is very vulnerable to a multitude of natural hazards that can occur from many different origins. This has been demonstrated by the recent major earthquakes that hit the Canterbury region in 2010 and 2011, causing extreme damage to many areas of the city. This resulted in many areas being zoned as 'red' – meaning that the land is unsuitable for residential occupation for a prolonged period of time (Canterbury Earthquake Recovery Authority (CERA), 2011). A significant proportion of these red zoned houses were located either along the Avon River or on the Estuary side of the New Brighton Spit, which is an area that is especially vulnerable to extreme on-set hazards such as tsunami, or long term hazards such as sea level rise.

The benefit of a long term hazard such as sea level rise is that to some degree, it can be predicted. This provides the opportunity to plan for the adaption of our built environment and the way in which we use the areas that may be affected by a change in the natural processes of the area. As adaption planning may require some large scale and expensive actions not only for the regional authorities, but also for the residents of the affected areas, involving the community in the process of planning for this adaption is crucial to ensure that the process will be as successful as possible, with full implementation and support from the local citizens involved.

This report is focussing on establishing the best way for the Christchurch City Council to engage the community when planning for adaption to sea level rise, with a particular focus on the New Brighton / South Shore location. Involving the community from the very start of this kind of process has been determined as an important factor in the successful implementation of a large scale adaption plan. We chose to follow Twyfords five step 'collaborative governance' approach

## **Background**

### **Sea Level Rise**

With the changes in the global climate, and the warming of the ocean, the global mean sea level is expected to rise significantly in the next 100 years. With the release of the Climate Change 2013, The Physical Science Basis contribution to the Fifth Assessment report by the International Panel on Climate Change, there have been new official estimates for the predictions of global sea level rise. They predict that the global mean sea level could rise by up to 0.55m in the best case scenario, to 0.98m in the worst case scenario by 2100 (Church et al., 2013, p. 1180). This is a rise



**Figure 2: Projected inundation due to sea level rise and 1% AEP inundation event at Sumner, Christchurch.**







**Figure 3: IAP2 Spectrum of Public Participation.**

**Case Study: Whitianga**





**Figure 4: Twyford's five step Collaborative Governance Model.**

We have chosen to follow the third step of this process for establishing the best way for the Christchurch City Council to engage with the Christchurch Community when planning for and implementing adaption to sea level rise.

## **Focus group meeting**

We held a focus group meeting on the 15<sup>th</sup> of May at the Southshore Residents Association community house. Representatives from the Southshore Residents Association, Avon-Otakaro Network, Surf Lifesaving NZ, National Institute of Water and Atmospheric Research (NIWA) and the Christchurch City Council (CCC) were present. We also invited representatives from the Avon-Heathcote Estuary Ihutai Trust, New Brighton Business and Landowners Association and New Brighton Residents Association who unfortunately couldn't attend. The main purpose of this focus group was to find their opinions on:

How to best engage the community when planning for and implementing adaption for sea level rise?

How to engage the wider public?

Examples of ways to engage the community.

The outcomes of this focus group meeting can be grouped into several categories, including concerns that they had which could act as hindrances for community engagement, Information needs, principles to follow and processes to use.







people may have been a part of the engagement process, or may have chosen not to be involved. Either way, the council needs to offer support to these people to help them deal with the decisions that have been made.

### **Processes to use**

The participants had also come up with some possible processes that can be followed in Christchurch to engage the communities.

Small publ 0 0 1.





### **Council needs to be committed to collaboration**

The council has to play a major role in encouraging collaborative efforts. It has to interact closely with the people, paving the way for effective community engagement. By doing this, it will also serve as an example for the other agencies involved in this or similar processes.

As well as being committed to the process, the Council also needs to assure the public that they will offer them support during the process of making these decisions, as well as dealing with the results of the collaborative process.

### **Education on the topic**

Educating the people on the topic of sea level rise and the major issues involved is the first step of successful community engagement. The very purpose of community engagement fails if the people are not aware of the exact problem. Thus, proper education is needed to increase the awareness of the issue among the public. Drop in centres with 3d models and maps may serve as useful tools to educate the community, as this kind of information is easier to understand and relate to than textual data. Easily accessible online information and informal sessions with experts may also serve this purpose.

### **Smaller scale meetings**

Multiple public meetings and workshops targeting a smaller number of participants have to be organised instead of a single meeting for the entire community. Meetings with large crowds function best as an information session, as they can be intimidating for expression of personal opinions. Small scale meetings would pave the way for addressing the concerns of a majority of the community, as well as giving people the chance to speak up about issues that may affect them.

## **Involve various communities**

## References

- Canterbury Earthquake Recovery Authority (CERA). (2011). Latest Christchurch land information released. Retrieved 5 June, 2014, from <http://cera.govt.nz/news/latest-christchurch-land-information-released-23-june-2011>
- Church, J. A., P.U. Clark, A., Cazenave, J. M., Gregory, S., Jevrejeva, A., Levermann, M. A., . . . Unnikrishnan, A. S. (2013). Sea level Change. In T. F. Stocker, D. Qin, G.-K. Plattner, M. Tignor, S. K. Allen, J. Boschung, A. Nauels, Y. Xia, V. Bex & P. M. Midgley (Eds.), *Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*. Cambridge, United Kingdom and New York, NY, USA: Cambridge University Press,.
- Collins, M., Knutti, R., Arblaster, J., Dufresne, J.-L., Fichet, T., Friedlingstein, P., . . . Wehner, M. (2013). Long-

Rouse, H., Blackett, P., Hume, T., Bell, R., Ramsay, D., Rickard, D., . . . Pickett, V. (2011).

Engaging with communities on coastal adaptation to climate change: Whitianga experience. Christchurch, NEW Zealand: NIWA.

Stevens, H., Dufty, N., Waters, S., & Giles, G. (2010). *Sea no evil, hear no evil community engagement on adaptation to sea level change*. Paper presented at the NSW Coastal Conference (Tweed).

Tonkin & Taylor. (2013). Effects of Sea Level Rise for Christchurch City (report). . In C. C. Council (Ed.).

Twyfords. (2011). Collaborative Governance. Retrieved 5 June, 2014, from <http://www.twyfords.com.au/uploads/cg-brochure.pdf>

## **Appendix: Online survey questions**

**Do you own or rent the house you are currently residing in?**

- Own
- Rent
- Other

**Which age bracket do you fit in to?**

- Under 18
- 18 – 24
- 25 – 34
- 35 – 44
- 45 – 54
- 55 – 64
- 65 or older

**1. Where would you rate your knowledge of sea level rise and the associated effects on a scale of 1-10?**

- Scale -



