

How perception shapes response?

The impacts of rising sea levels in an Australian coastal community

Andrew P Samuel

Kosa Architects Pty Ltd
Melbourne, Vic, Australia
andrew_samuel@outlook.com

Simone Leao*

School of Architecture and Built Environment
Deakin University, Geelong, Vic, Australia
*Corresponding author: simone.leao@deakin.edu.au

Abstract— Sea levels have been rising over the past decade at a magnitude greater than ever before. It is crucial for Australians to respond to the impacts of rising sea levels as 85% of the population live within 50 kilometers of the coastline. A framework for environmental risk assessment commonly applied on climate adaptation strategies are based on the triad Pressure-State-Response (PSR). Although very useful and somewhat effective, it is argued here that PSR frameworks can be improved through the introduction of the concept of human perception. We believe that not only the pressure (P) itself, but the ‘perception of the impact of that pressure’ is a determinant in shaping how individuals respond to the pressure. This paper explores how the perceptions, described through the concepts of awareness, concern, and experience about the impact of rising sea levels, shape the response to it by different stakeholders within a coastal community. A case study in Ocean Grove/Barwon Heads region involving a survey with 24 participants indicated that significant correlations between perception and responses, variations of this relationship among different stakeholders, and also the different magnitude of the role of awareness, concern, and experience as drivers of responses. These results suggest the potential relevance of incorporating perception to the PSR frameworks if for more effective community responses to climate adaptation are expected.

Keywords— *Sea level rise, coastal communities, impact, perception, response, adaptation*