Research Priorities for Coastal Geoscience and Engineering: A Collaborative Exercise in Priority Setting From Australia

Power et al. (2021)
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For which topic were research priorities identified?
coastal geoscience and engineering

In which location was the research priority setting conducted?
Australia - Australia

Why was it conducted at all?
Coastal geoscience and engineering (CGE) is a broad research discipline that covers the physical processes and environmental changes that occur along the land-sea (coastal) interface. It encompasses both researchers (basic and applied) and practitioners that specialise in coastal oceanography, sedimentary geology, geomorphology, geochemistry, sedimentology, and engineering, as well as coastal zone managers and communicators, who have important roles in making decisions that balance the needs of communities, industry, and the natural environment (Vila-Concejo et al., 2018). Greenslade et al. (2020) recently identified 15 research priorities for wind wave research in Australia, however, their analysis focussed on one aspect of oceanography and does not represent the full breadth of CGE research.

What was the objective?
to compile a list of priority research activities and research-enabling activities that could be used to inform the direction of future coastal geoscience and engineering research

What was the outcome?
a ranking list of 74 research topics

How long did the research prioritization take?
June 2020 - November 2020

Which methods were used to identify research priorities?
survey; workshop

How were the priorities for research identified exactly?
Step 1: survey 1: to identify long-list of priority activities and infrastructure needs, participants were asked to describe up to 10 priority activities that they thought the Australian CGE community should address over the next 5–10 years. Step 2: data processing: removing invalid responses, assigning responses to 16 initial categories. Step 3: workshop: participants were asked to edit, clarify, and merge research activities from the long-list of responses, participants were then asked to generate a short-list of priorities and to conduct a preliminary prioritization of these priorities. Step 4: review of shortlist: to ensure that all responses had been captured by the refined priority activities developed in the workshop, duplicates were removed, resulting in shortlist of 74 priorities across 7 categories. Step 5: survey 2: participants were presented with shortlist of priorities grouped into 7 categories, each category was presented with list of priorities within each category, participants were asked to rate each priority

Which stakeholders took part?
CGE researchers, practitioners (policymakers, educators, NGOs, NR managers). Survey 1: 161 participants. Workshop: 29 participants. Survey 2: 132 participants.

How were stakeholders recruited?
Invitations were emailed to a list of participants generated from a search of the academic and grey literature (e.g., technical and government reports), online listings of professional staff from relevant organizations, as well as from the professional networks of the project team (invitations = 282). In addition, the survey was promoted via national and international mailing lists to maximise the reach of the project. For the workshop, invitations were emailed to all Stage 1 participants who had provided contact details. The workshop was also advertised at the conference opening session.

Were stakeholders actively involved or did they just participate?
Stakeholders were mere participants of the research prioritization process; they were not actively involved in the process.