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Inclusive engagement for environmental sustainability in small island states

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Environmental sustainability and inclusive engagement have had numerous interpretations over the past decades, with small island states being at the forefront of seeking and applying multiple approaches. This short review selects key peerreviewed papers from 2020 to mid-2022 on the topic of inclusive engagement for environmental sustainability in small island states. It particularly focuses on and presents different approaches to and representations of inclusive engagement, environmental sustainability and their intersection. Much is obscured through complicated jargon and processes, in terms of knowledge systems valued, wordings expressed and underlying assumptions. Nonetheless, many of the papers selected provide important and beneficial contributions to support depth in and action for key aspects that have not always been fully recognised or applied in science or in practice.

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Current Opinion in Environmental Sustainability 2023, 61:101253

This review comes from a themed issue on Small Island States and Environmental Sustainability

Edited by Kalim U. Shah

Available online xxxx

Received: 3 June 2022; Accepted: 16 December 2022 https://doi.org/10.1016/j.cosust.2022.101253

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Introduction

Fifty years after the United Nations Conference on the Human Environment was held from 5 to 16 June 1972 in Stockholm, Sweden [1], the world continues to struggle with the concepts and practices of environmental sustainability. Debates and discussions are ever-present

regarding the meaning and implementation of environmental sustainability, although there is broad agreement that it must cover all space scales, from local to global, and all timescales, from meeting immediate needs through to many generations into the future [2]. These topics affect small island states that have long been at the forefront of both adverse impacts of environmental unsustainability and action to tackle the problems [3].

As an example, the Small States Conference on Sea Level Rise took place from 14 to 18 November 1989 in Malé, Maldives (https://islandvulnerability.org/slr1989. html) followed by the founding of the Alliance of Small Island States in 1990 and then the Small Island Developing States (SIDS) in 1992. The SIDS concept has since morphed from the old vocabulary of 'developing' and 'developed' into 'Small Island States'. To highlight the countries' resources, some advocate for calling themselves 'Large Ocean States' [4], while Indonesia, the Philippines, Japan and perhaps Australia could be considered a separate group of Large Archipelago States.

However, the small island states are termed, they comprise an evolving set of three-to-five dozen countries and territories in the tropics and subtropics listed by the United Nations. As two examples, UNESCO identifies 39 SIDS and 9 affiliates, while the Sustainable Development Goals provide 58 SIDS divided by UN and non-UN members. Often, the countries of the Caribbean Sea, Indian Ocean and Pacific Ocean are assumed to be the main small island states. Other examples are Bermuda and Cape Verde in the Atlantic Ocean, Singapore and Bahrain in other bodies of water, Belize and Guinea-Bissau with significant non-island land and Haiti and Timor-Leste that do not cover an entire island. Some, such as Cuba and Papua New Guinea, are large in land area and population compared with several non-island countries.

As such, the small island state groupings are fluid, inconsistent and amorphous. Consider, for instance, the connections between native Hawaiians and indigenous peoples from Pacific small island states [5]. Small island states nonetheless tend to incorporate (with exceptions) relatively poor island and archipelago countries and territories with generally small populations and land areas.

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Many similarities emerge in their environmental sustainability challenges, some of which are managing development and waste, having sufficient resources for social services and overreliance on externally dependent livelihoods with migration, remittances, aid and tourism being prominent [3]. Governance, governing institutions, bureaucracy and resources for functioning administration can be problematic, although strengths in addressing these difficulties are sometimes said to be tight kinship networks, local knowledge systems and traditional approaches [6]. While participation in decision-making and local engagement remain core to many small island state cultures and governance systems, inclusiveness varies, especially as outside influences gain traction [7,8].

This short review selects key peer-reviewed papers from 2020 to mid-2022 on the topic of inclusive engagement for environmental sustainability in small island states. It particularly focuses on and presents different approaches to and representations of inclusive engagement, environmental sustainability and their intersection.

Environmental sustainability

Environmental sustainability for small island states is interpreted widely and loosely, covering multiple overlapping sectors and not always being clearly defined. Sometimes, topics are partitioned and sometimes they are connected. Broad sectoral approaches for small island states were presented in papers for energy [9,10] and health [11,12]. More particular approaches were seen for climate change impacts on freshwater [13] and the contributions of women and science to ocean management [14]. International-to-local influences on specific countries' environmental sustainability are connected for topics ranging from oil prices [15] to child marriage [16].

Environmental sustainability was further examined across different scales, in terms of both actions and impacts:

- Individual: action [17] and impact [18].
- Household/organisation: action [19] and impact [20].
- Community/neighbourhood: action [21] and impact [22].
- Municipality: action [23] and impact [24].
- Country: action [25] and impact [26].
- Region or small island states grouping: action [27] and impact [28].

Not all scales were or could be addressed exclusively or delineated clearly, because small island states tend to overlap in scales. Notably, community/neighbourhood, municipality and country can be nearly the same in some cases, with Nauru and Anguilla illustrating.

Additionally, community/neighbourhood and municipality often overlap significantly with another scale that was not evident across the papers: island. The reason might be one typical island ethos that land and water are inseparable [29], so the island as an object in reality or of representation [30] might not be a suitable governance jurisdiction. Intermingling islands and oceans, most small island states are archipelagos, sometimes indicated by the plural name as in Maldives and Federated States of Micronesia. The names of some directly indicate two main islands, considering Trinidad and Tobago as well as Antigua and Barbuda. Others are presented as one main island surrounded by many smaller ones with Cuba and PNG being prominent examples. As noted previously, some are part of an island, yet studies did not cover the entire islands of Hispaniola, New Guinea or Timor — although publications outside this review's topic and scope exist on a multicountry single-island basis. Overall, in line with island studies [6,31], environmental sustainability is presented as geographically interconnected, not just across time and space scales but also for all parts of an island enveloping the sea.

Inclusive engagement

Approaches to 'inclusive engagement' also vary, with the level and legitimacy of inclusivity not always clear from the publications. Some papers describe collectives such as 'Pacific peoples' [14] and 'islanders' [32], although no group is homogeneous, not even within a country or community. Other studies detail participatory, consultative and review processes that engage inclusively within known and inescapable limitations and power relations [33,34].

Some examples:

- Methodological development for public participation [35].
- Online surveys [36].
- A test case [23].
- Stakeholder analysis [37].
- A systematic review [38].
- A comparative case study [39].
- Policy analysis [40].
- Training workshops and structured interviews [12].
- Focus groups [41].

Inclusive engagement appears in different formats. Some involve people directly, gleaning their knowledge, perceptions and advice. Others draw on what people have previously documented, to include and engage with publications.

For the latter, not all papers selected here publish research with direct human-to-human engagement. Instead, some are written by academics from small island

Geographic scales in the papers selected.					
Scale World Region	Location with the remit of at least one selected paper				
	SIDS		Small island states		
		Caribbean Sea	Indian Ocean	Pacific Ocean	
Country	Cape Verde	Bahamas Cuba Haiti Jamaica Puerto Rico St. Vincent and the Grenadines Trinidad and Tobago	Mauritius Seychelles	Cook Islands Fiji Guam Kiribati Papua New Guinea Tonga Vanuatu	Singapore

states who are at universities in and/or researching their home country. While acknowledging elitism from academia [42], these authors include and engage themselves for their research about their small island state. This approach parallels autoethnographies [43] and selfinterviews [44], especially overcoming academia's biases for and against certain groups [45,46]. Researchers without direct connections to small island states still publish legitimate and needed work on environmental sustainability, being inclusive when involving people from the studied locations.

Meanings of inclusive engagement for environmental sustainability

Inclusive engagement for environmental sustainability covers different knowledge forms, methods, disciplines and professions, as demonstrated by the papers selected here. Yet, all these papers are peer-reviewed science in English, because that was the main language used for searching. They represent a subset of physical sciences, professions and social sciences, with the latter dominating given the topical focus here. Arts and humanities are underrepresented, partly because those fields tend to favour books (and sometimes exhibits) over papers and partly because those fields' recent work was completed in places not typically within the small island states group such as Indonesia and the Philippines.

Many of the papers selected here are not straightforward to classify disciplinarily, being interdisciplinary or nondisciplinary, especially with author teams from diverse backgrounds. Examples of explicit disciplines are energy engineering [47], law [48], political science [49] and medicine [41]. Knowledge forms referred to in the papers, although all presented through scientific approaches, are indigenous knowledge [50], traditional knowledge [51], expert knowledge [52] and local ecological knowledge [32].

The geographic scales and locations, demonstrating links and exchanges, are in Table 1. Evident domination emerges of places where English is the main language. Not all selected articles were exclusively about small island states or islands. A comparison with the United States [22] indicated the potential for learning and exchange with small island states. Analysing relationships with China [49,53] corroborates how small island states are part of and connected to the world. One study [38] compared Australia, Bahamas, Belize, Finland and Latvia.

One overall sense lacking throughout many of the papers is in this section's title: meanings. Environmental sustainability buzzwords can obscure and distract inclusive engagement, with examples as 'blue economy' [25] despite earlier concerns about the phrase [54] and 'citizenship' [55] despite long-standing analyses citizenship as exclusion [56]. Some of this vocabulary might have self-accepted meaning for scientific papers, policy discussions and funders. Scientific approaches could do more to understand meaning(s) for peoples impacted by environmental unsustainability and seeking actions for environmental sustainability. As an example, the term 'socio-ecological' is used uncritiquingly [39,57], without acknowledging that many small island state peoples live the enfolding of society and environment [29], while numerous island-relevant scientific fields have always rejected a duality or dichotomy between culture and nature [6].

Some island-focused publications, such as Island Studies Journal and Shima, actively seek contributions from different people in different formats, including more personal writings and arts pieces. They nonetheless concentrate on English, scientific structures and a linear, journal-based format. These reflections do not obviate science-based meanings and meaningfulness, rather indicating the need to expand, interact and connect without losing what science offers.

Conclusions

Ultimately, lessons and practices from selected, recent, peer-reviewed papers on small island states are that inclusive engagement for environmental sustainability converges on being mainly about subjective definitions. As the introduction notes, even 'small island states' is defined subjectively, not just changing over time, but also according to the entity defining it. Overall, the papers selected here indicate that it might be easier to define what something is not, instead of what it is:

- Small island states: If a jurisdiction does not appear on any list of small island states, then it is not a group member, although Malta and New Zealand might disagree. Appearing on one list does not necessarily mean appearing on other lists or that it is small, an island, a sovereign state or lacks wealth or resources.
- Inclusive engagement: If an individual or group, or their knowledge and material, is not involved in a process, then it is not inclusive engagement. Involvement does not necessarily mean inclusive engagement.
- Environmental sustainability: If a resource is destroyed or becomes unusable, then it is not environmental sustainability. Retaining or maintaining a resource does not necessarily mean environmental sustainability.

Five decades after environmental sustainability was formalised through an international governance process [1], setting off a continuing cascade of increasingly lengthy and complicated jargon and engagement processes, small island states might be no nearer to any form of environmental sustainability to which they aspire. Instead, much has been lost in terms of knowledge systems valued, wordings expressed and underlying assumptions imbuing analyses. This overarching statement should not denigrate the important, contributory advances evidenced in the selected papers. Supporting inclusive engagement for environmental sustainability in small island states means avoiding losses to existing beneficial contributions while reaching more deeply into key action-related aspects that have not always been fully recognised or applied in science or in practice.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Acknowledgements

This research was supported through the Belmont Forum by the UK's Natural Environment Research Council (NERC) [Grant number NE/T013656/1].

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