

Adaptive Capacity, Governance and Small Island Developing States: A Case Study of Sargassum Management in the Eastern Caribbean

Capacidad de adaptación, gobernanza y pequeños estados insulares en desarrollo: un estudio de caso de la gestión del sargazo en el Caribe Oriental

Capacité d'adaptation, gouvernance et petits États insulaires en développement : une étude de cas sur la gestion des sargasses dans les Caraïbes orientales

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EXTENDED ABSTRACT

Governance generally, and appropriate operational institutions specifically, are said to be crucial to increasing human adaptive capacity amidst environmental change. But existing conceptualizations tend to assume a universal model of governance will work for states of all sizes with large to small populations (e.g., the Worldwide Governance Indicators (WGI) used by the World Bank). The problem, as Monnereau et al. (2017) show, is that methodological choices about how to measure country level vulnerability often result in socioeconomic indicators that are (i) not scaled to population size; (ii) rely on a small number of indicators, and (iii) most suited to larger developed countries. The goal of this research is to investigate this orthodoxy which disregards the lack of clarity on size-relevant institutional design and functioning.

We do so by focusing on the role of governance in the adaptive capacity of small island developing states (SIDS) facing a new marine social-ecological threat. We draw on a unique dataset of capacity self-assessments undertaken by thirty-eight key agencies involved in the management of sargassum seaweed influx events in five Eastern Caribbean states. These were Barbados, St. Lucia, St. Vincent and the Grenadines, Dominica and Grenada. In 2021, we asked key informants representing government agencies, fisherfolk organizations, tourism associations and other private sector entities to self-assess their capacity to respond to sargassum influxes in order to determine if or how their assessments corroborated arguments about the effects of population size on governing capacity in SIDS.

A self-assessment tool was created in the form of a questionnaire divided into seven thematic components. It consisted of closed-ended questions and respondents provided scores in response to each question on a scale of 0 to 5. The tool also allowed stakeholders to provide evidence to substantiate and/or refine their scores. The average score of the responses to the questions in each component was calculated. Then the overall average of the seven categories was calculated. Once the data were collated, to determine the contribution of each of the seven components to adaptive capacity by and among countries, the percentage contribution was calculated. This allowed for comparisons between components and also between countries.

The key finding of the capacity self-assessments is that by and large our data echo those of previous studies of politics and administration in SIDS that emphasize the way small country size is a disadvantage for overall capacity that is partially offset by informal co-ordination and communication. Across the seven components, the average capacity scores by country ranged from 0.39 to 1.04 out of 5, indicating a very low adaptive capacity (Table 1). All the countries identified a general lack of resources, most significantly trained human resources, funding, and equipment and technology for management and adaptation as key challenges affecting the capacity to effectively address sargassum influxes. In terms of the percentage contribution, on average across the five countries, Coordination and Stakeholder Engagement and Information and Communication together attributed to slightly over half of the total adaptive capacity score, 30% and 21% respectively. Countries were weakest in Risk Assessments (6% of contribution) and MEL (5%) (Figure 1). Of the five countries, Dominica consistently scored the lowest in all capacity areas reviewed.

This study highlights the challenges of attempting to fulfil all the functions that citizens typically expect of a large state with limited budgets and human resources. Respondents identified two ways around these constraints, both of which could be considered forms of adaptation: 1) informal processes that rely heavily on interpersonal networks; and 2) external assistance, either by leveraging regional solutions or relying on expertise from larger states and international organizations. However, these forms of adaptation are not well captured by existing metrics. Furthermore, existing metrics of governance typically see informality as synonymous with clientelism and corruption and thus in predominantly negative terms. Improvements can be made at the margins—no system is ever perfect—and our self-assessments point to areas, such as communication, where these countries can learn from each other. But by and large systemic change, and perhaps transfor-

Table 1: Self-assessment scores by country

Component	Barbados	Dominica	Grenada	St. Lucia	St. Vincent & the Grenadines	Category Average (capacity score)
1. Policy, Legislation, Management Plans and Networks	1.16	0.50	0.63	0.86	0.94	0.82
2. Institutional Sargassum Risk Assessment and Adaptation Planning	0.72	0.00	0.41	0.39	0.11	0.33
3. Monitoring Measures	1.08	0.50	0.85	0.60	0.49	0.70
4. Resources (financial and equipment)	0.63	0.33	1.13	0.85	0.63	0.71
5. Coordination and Stakeholder Engagement	1.54	0.67	2.17	2.44	1.74	1.71
6. Information and Communication	1.81	0.75	1.44	1.17	0.89	1.21
7. Monitoring, Evaluation and Learning (MEL)	0.34	0.00	0.50	0.33	0.06	0.25
Country Average (capacity score)	1.04	0.39	1.02	0.95	0.69	0.82

mation, will require alterations to the fundamental economic structures in which SIDS are embedded in order to release additional resources that can be translated into increased governing capacity.

In conclusion, we found support for the findings of public administration scholars who show that country size is a contextual factor affecting adaptive capacity beyond the control of managers. To ensure assessments of adaptive capacity are contextually appropriate we need a more nuanced appreciation of the impacts of state size on governance outcomes.

KEYWORDS: adaptive capacity, governance, SIDS, Caribbean, sargassum

LITERATURE CITED

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