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A "Green Growth Framework for Islands" - Final Project Report

Abstract

Islands are some of the smallest contributors to global carbon emissions, yet are among the most vulnerable to the impacts of climate change (e.g. rising sea levels, extreme storms, and declining fish populations due to warming seas). At the same time, due to their smaller scale and local limitations on resources, island communities have been driving adaptation efforts for responding to the impacts of climate change based on their lived experiences and indigenous knowledge. Recognizing that local community members are in the best position to advance sustainability solutions in their respective island communities, our project sought to uncover best practices of islands that are collaboratively working with their communities to adapt to climate change and lead the way on implementing the United Nations Sustainable Development Goals (SDGs). To this end, we interviewed island leaders from Hawai‘i, Guam, and Tasmania, who have already launched strategies for achieving these goals, and combined their experiences into a framework requested by other island leaders to encourage locally-driven, culturally-relevant green growth initiatives in partnership with our project partner, the Local2030 Islands Network (Local2030IN). Through designing the framework, we learned sixteen possible actions islands can take when developing their own green growth initiative and key insights for implementing the SDGs on islands and how to engage communities in the sustainable development process. .

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Introduction and Background

Islands are among the most impacted groups by climate change due to their geography, dependence on vulnerable ocean ecosystems, limited resource availability, nature-dependent economies, and other physical and economic characteristics (Nurse et al., 2018, pp. 1618). Current and future climate risks include sea-level rise (SLR), increasing frequency and severity of tropical cyclones, increasing air and sea temperatures, and changing rainfall patterns (Sadat, n.d.). These impacts result in the degradation of freshwater resources, flooding of coastal areas, reduction in food yields, increased coral bleaching, loss of human life and biodiversity, damage to infrastructure, and among others (Sadat, n.d. and Olsson, 2018).

For islanders, both land and ocean ecosystems have huge economic, political, and cultural significance. For instance, a single climate-related disaster can cause economic damages several times that of an island's GDP (GFDRR, 2016). Further, more than 67% of island jobs are reliant on agriculture and fisheries, which could be lost due to the impacts of climate change (Adb.org, n.d.) If livelihoods are no longer able to be sustained or maintained due to economic burdens or the destruction of homes, forced migration will occur—even though it is deemed as the last resort for some island communities (Mcleod et al., 2019). Fragmented communities risk losing their identity and generational indigenous knowledge, as it is not often documented or frequently shared (Clarke, 1990). It is important to conserve indigenous knowledge systems because they serve as a representation of cultural pluralism, help many indigenous people understand their history, and assist with designing tangible solutions.

Historically, islands have relied on international funding, community partnerships, and local indigenous knowledge to assist with natural disasters or other external events wreaking havoc on their ability to thrive. However, as climate change creates new threats and international funding dwindles (Pal et al., 2020), islands face the challenge of adapting to climate change on their own.

While the outlook for the future of islands is dire, there is hope. Due to the smaller scale and local limitations on resources, islands are better able to understand how human and natural influences affect resource availability, and adapt accordingly (McMillen et al., 2014). For example, in Hawai‘i, “Malama ‘Aina”, taking care of the land and waters that feed them, is a guiding principle in their way of life which has informed how they have been autonomously responding to natural disasters for hundreds of years. Our project recognized that because island economies and islanders have experience adapting to a scarcity of resources and threats from natural disasters, they are best positioned to help our “island earth" navigate towards a more sustainable future.

Our project partner, the Local2030 Islands Network (Local2030IN), seeks to provide islands with the navigation tools necessary for implementing the SDGs through working with islands to share experiences, advance climate action, promote solidarity, and identify and implement best practices for a sustainable future. One concept the Local2030IN promotes as a tool for implementing sustainability on islands is the concept of “Green Growth,” which alludes to promoting economic growth and development while conserving natural assets and environmental services to ensure future well-being (OECD, 2011). Our project goal aimed to enhance the Local2030IN’s efforts to advance green growth on islands by creating an island-specific Green Growth Framework based on the experiences of three existing green growth initiatives in Hawai‘i, Guam, and Tasmania. To learn more about the processes used by the existing green growth initiatives, we conducted case study interviews with island leaders and stakeholders. Through our analysis we hoped to gather information and experiences to inform the creation of a “Green Growth Framework for Islands” as a tool for elevating local-relevant, culturally-informed island-led solutions to climate change.

Literature Review

Even if the world stopped emitting greenhouse gases today, islands would still be faced with rising sea levels, drought, and increased frequency and severity of storms leading to negative social, environmental, and economic impacts for at least several more decades (NASA, 2020). The Fifth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC), the 1994 Barbados Programme of Action for the Sustainable Development of SIDS, and the 2015 Paris Climate Agreement recognize that islands need to develop effective adaptation strategies since they are comparatively more vulnerable to climate change impacts (Nurse et al., 2018, p. 1616; Robinson, 2018). However, due to limited academic research and evidence that substantially examines climate change and adaptation strategies among islands (Robinson, 2018; Nurse et al., 2018; & Thomas, Martyr-Koller, and Pringle, 2020), many islands have struggled to identify and implement effective adaptation strategies, much less implement the Sustainable Development Goals (SDGs) identified as essential for achieving a sustainable future.

Sustainability indicators have been identified as the best tool for developing actionable sustainable development plans because they serve as knowledge-agents that simplify and communicate evidence to decision-makers and stakeholders (Janoušková, et al., 2018 & Hák et al., 2016). However, adaptation and sustainable development efforts on islands are often stifled by lack of island-specific sustainability indicators (Nurse et al., 2018; Janoušková, et al., 2018 & Hák et al., 2016). Additionally, in many cases, efforts to include local 'voices' in the development of sustainability indicators are often tokenistic (Howard and Wheeler, 2015). As a result, many indicators for tracking sustainable development efforts and assessing adaptive capacity on islands often misrepresent actual vulnerabilities and lack a connection to local needs (Nurse et al., 2018).

Due to a lack of institutional support and quality localized data, many islands have resorted to taking measures into their own hands. Kiribati, Tuvalu, and the Marshall Islands have already purchased land in Fiji and Hawai'i, respectively, to relocate their endangered populations (McNamara and Des Combes, 2015). The Marshall Islands are also considering dredging and reclaiming a lagoon, which—despite negative environmental impacts—might be their only hope at surviving SLR (Letman, 2018). Chris Fletcher, a Marshall Islands Climatologist, describes this tradeoff, saying "we would rather destroy some reef than see an entire culture go extinct" (Letman, 2018). Challenging decisions such as these showcase the dire situation—and limited options—faced by many islands. However, while relocation is considered an effective adaptation strategy, some experts claim it is a short-term solution (Salem, 2020).

Another strategy for enhancing the adaptive capacity of islands for dealing with the impacts of climate change, while advancing efforts to fulfill the SDGs, is through the development of a "Green Growth Initiative." The phrase "green growth" was first introduced during the Fifth Ministerial Conference on Environment and Development of the Asia and Pacific Region in 2005 (OECD, 2011). Green growth initiatives recognize that natural assets cannot be infinitely replaced by technological or manufactured ones, which is why we need strong, new, dynamic, and integrative strategies for achieving a sustainable future. So far, only Hawai'i, Guam, and Tasmania have built off the momentum for green growth established in the mid-2000s. Our project sought to highlight the efforts of those three islands to provide a robust strategy for other islands to follow their lead in designing locally-relevant and culturally-informed indicators. We hope that implementation of green growth initiatives will foster long-term adaptive capacity to climate change and fulfill the SDGs on islands.

Project Approach and Intervention Methods

Project Outcomes

To generate an evidence-based policy tool that integrates the SDGs into strategic planning processes at the local level, our team used case study analysis to create a locally-relevant and culturally-informed framework that islands can adopt, adapt, and apply towards building their green growth initiative. By creating this framework, we expected an increase in island-led green growth initiatives to occur, thereby positioning islands as models for the future.

Through implementing a green growth initiative proposed in our framework, we believe islands will be better able to prepare for future natural disasters, which can save islands $500 million in damage control (Adb.org, n.d.) and enhance their adaptive capacity to various cascading effects of climate change shared in the background section above. The social, economic, and environmental outcomes will change depending on the islands' contexts of demographics, geography, sociopolitics, the SDGs the island decides to focus on, and much more, as every island is different. However, we are confident that islands implementing the framework will enhance their job and food security, increase their resilience to climate change, safeguard their cultural practices and traditions, build a stronger sense of community, and protect fragile ecosystems. Most importantly, the framework will promote networking and knowledge sharing across island communities, increasing the number of best practices and strategies islands can rely on for dealing with the uncertain impacts of climate change.

Intervention Methods

To inform the creation of our framework, our team conducted case studies of existing green growth initiatives on islands. Working with case studies enabled us to collect a variety of experiences, assumptions, opinions, and outcomes from different islands in a real-life setting while examining sustainability practices within specific cultural, environmental, and social circumstances (Barton et al., 2014; Baxter and Jack, 2008; Crowe et al., 2011). Through interviewing green growth leaders of Hawai‘i, Guam, and Tasmania, we uncovered how their experiences shaped the development of their respective green growth initiatives, about the significance of high-level catalyzing events for fostering political will (e.g. AIPAC and UNGA), and the importance of collaborating with community members such as Polynesian Voyaging Society, the University of Guam, and Kamehameha Schools. Lastly, we learned that to enhance trust among stakeholders, it is vital a non-governmental organization (NGO) facilitates and leads the design and implementation processes of the green growth initiative. In addition to interviews, we planned to distribute questionnaires to relevant stakeholders in both HGG and G3 to gather their interpretations of the green growth initiative design process. We hoped to use these survey responses to build support for the ideas we shared in the final framework.

We analyzed our interviews using SWOT analyses in order to uncover opportunities and risks of green growth initiatives not previously identified and aid in repositioning islands toward higher performance by capitalizing on their strengths (Nordmeyer, 2019). In designing our framework, we looked to 'The UN Roadmap for Localizing and Implementing the SDGs' (Global Taskforce of Local and Regional Governments, 2016). We chose to model our framework after this roadmap because it combines a series of processes for localizing the SDGs with international examples, which is how we plan to display our findings using an island context. Each of these tools were instrumental in helping us produce an island-specific framework for localizing the SDGs to support islands in adapting to climate change and building an equitable future.

Outcomes/Findings

Using the interviews from 10 island leaders across Hawai‘i, Guam, and Tasmania, we designed a robust “Green Growth Framework for Islands" (See Appendix 1 for the Framework Executive Summary) meant to inform islands’ efforts to implement the SDGs and increase their adaptive capacity to climate change. The final deliverable opens with the story of green growth on islands. Specifically, it details how the term “green growth” emerged and what influenced Hawai‘i, Guam, and Tasmania to take on the challenge of launching a green growth initiative. We follow the story with a detailed explanation of what green growth is in order to set the stage for sharing the recommendations we collected from island leaders. We consolidated our findings from the interviews into four overarching design principles that islands can consider following when designing a green growth initiative. The four design principles, which are aligned with those of the Local2030IN, include:

- Identifying Diverse Leaders, Participants, and Partners
- Strengthening Long-Term Political Leadership and Community Support
- Designing an Action Framework for a Localized Green Growth Initiative
- Measuring and Tracking SDG progress

Each design principle has a set of priority actions that were recommended by island leaders from existing initiatives as tools for ensuring the successful creation of an action framework for a green growth initiative. Within each action item is a description of the implementation process, key insights from island leaders on that specific action, exemplar actions from Hawai‘i, Guam, and Tasmania, and possible barriers with suggested solutions for overcoming them. A few of the interesting action point recommendations we learned from island leaders include the importance of:

- thinking deeply about the name of the initiative;
- hiring a coordinator to lead the design process;
- identifying a facilitating organization outside of the public sector to ensure longevity as politicians change; and,
- including Indigenous communities and community leaders in the working group process, as they will uphold the deep, cultural connections of the respective islands that are pertinent for *aina,* the sense of place that this “green growth” initiative will represent.

Most of the recommendations and exemplar actions included in the framework are from island leaders of HGG and G3. In our interviews with Tasmanian Way (TW) leadership, we learned that they were just starting the development of their initiative and in the coalition building process. As such, most of the framework is built off the experiences of HGG and G3. However, the TW leadership team is very excited to be among the first islands to implement the recommendations shared in the framework. We cannot wait to see what they accomplish! Lastly, we used Canva to create an aesthetically pleasing framework for our island partners and future green growth leaders to learn from.

Due to logistical constraints, we were not able to distribute the surveys to participants in the green growth process nor share our framework with island leaders who have not participated in the green growth process. As a result of the lack of additional feedback, we were not able to build the efficacy of our framework. Nevertheless, the processes followed by the three islands were noted as bright spots by UN, OECD, and GLISPA partners, which provides us with some level of efficacy and support for the ideas presented in our final framework.

Rather than serve as an external document for islands to use, our final product will start out by being used as required reading for all incoming staff members and as a base-level strategy building document for the Local2030IN. This is because the framework requires approval by Local2030IN Steering Committee members, which is not something we had time to obtain during this project. Despite being an internal document, the Local2030IN assured us that we will be credited for any of our work or recommendations used in future documents shared with island leaders. We are excited to see how it influences the Local2030IN's priorities and long-term strategy for advancing the implementation of green growth initiatives on islands.

Recommendations

When ready, we recommend our client offer our Green Growth Framework to island leaders seeking to design a green growth initiative, but with little idea of how or where to start. In the same way green growth initiatives are recommended to be updated frequently to reflect new knowledge and needs, so should this framework. As more islands begin implementing recommendations from the framework and design their own initiatives, we hope that the Local2030IN will add additional good practices.

Additionally, because only one island has implemented a green growth initiative, the designed framework has a strong focus on development rather than implementation. Thus, we recommend the Local2030IN build out the implementation process as more islands implement green growth initiatives. Because of how valuable the stories shared in interviews were to creating our framework, we suggest that the implementation methods section be built out using interviews as well.

When ready, we recommend that the Local2030IN share the framework with their Steering Committee members to obtain feedback. Additionally, due to their strong intent on launching a green growth initiative, we also recommend that the Local2030IN launch a pilot run of the framework with Puerto Rico Green Growth, Tasmanian Way, and Diné Green Growth to determine if the proposed recommendations are effective.

Conclusion

Through learning from the lived experiences of island leaders taking charge on designing green growth initiatives, our team was able to successfully achieve our goal of creating a "Green Growth Framework for Islands." As confirmed by interviews with island leaders, the proposed framework recognizes, and prioritizes indigenous island experiences and knowledge that has driven island sustainability and adaptation for centuries. Local2030IN executives have given the framework positive reviews, boosting our confidence that this framework will make a difference in the ways islands approach sustainability.

As mentioned above, the majority of our framework focuses on the development process of a green growth initiative rather than the implementation process. We realize now that including a larger implementation section would have been very useful. However, since Hawai‘i is the only island that has fully implemented their plan, we felt it was best to focus on development at the time of creating our project plan. Additionally, having more specific interview questions would have helped us to refine the exemplary actions included in the framework, allowing us to save time on trying to obtain information via email post-interview.

We recognize that in the same way it takes islands years to design and implement a green growth initiative, it will take time for the Local2030IN to be in a place where they feel confident sharing the framework and have the capacity to support islands in utilizing the recommendations. We are optimistic

that this framework will serve as the foundation and launchpad the Local2030IN needs to organize their efforts. While our project did not produce an immediate impact regarding islands' adaptive capacity to climate change and SDG implementation efforts, we are confident that these changes will occur in the future when the framework is distributed.

Should this project be continued by other students, they could help the Local2030IN build out the implementation portion of the framework or serve as liaisons for piloting the framework in Tasmania, Puerto Rico, or the Diné community.

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- Laura Kam - Network Manager at HGG/Local2030IN Leader
- Kate Brown - Director of GLISPA/Local2030IN Leader
- Austin Shelton - G3 Steering Committee Co-Chair
- Lauren Swaddell - Coordinator of G3
- Lt. Governor Josh Tenorio - G3 Steering Committee Co-Chair
- Jessica Robbins - Founder and Director of TW
- Rikki Mawad - Advisor and Facilitator of TW

Appendix 1

Achieving the Sustainable Development Goals (SDGs) does not just mean setting targets, raising money, or planning. It also means working together to combine everyone's strengths to effectively design integrative programs for accelerating ambitious climate action and adaptation efforts, while encouraging growth in our economy. One way islands can develop a collaborative strategy for implementing the SDGs is through designing a green growth initiative. 'Green growth' means "fostering economic growth and development while ensuring that natural assets continue to provide the resources and environmental services on which our well-being relies" (OECD, 2011).

This framework brings together good practices of islands that are collaboratively working with their communities to promote green growth and adapt to climate change, while leading the way in measuring progress on the SDGs. Specifically, this framework provides a series of four design principles and sixteen priority actions recommended by island leaders from existing green growth initiatives as tools for ensuring the successful creation of a locally-relevant, culturally-informed green growth initiative. The priority actions outlined in this framework are from island leaders of Hawai'i, Guam, and Tasmania.

The key design principles of this framework include:

- Identifying Diverse Leaders, Participants, and Partners
- Strengthening Long-Term Political Leadership and Community Support
- Designing an Action Framework for a Localized Green Growth Initiative
- Measuring and Tracking SDG progress

A green growth initiative offers an opportunity for islands to self-identify, build coalitions among ongoing efforts to implement the SDGs, and become global leaders on climate action. While the below framework outlines several actions other island leaders found important for creating a successful green growth initiative, it should be noted that these are only suggested good practices. We encourage islands to build off these principles when designing a framework that fits their own local and cultural context.

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