Bahamas Best Catch: Using Knowledge, Perceptions, and Motivations to Design a Sustainable Seafood Campaign

Bahamas Best Catch: Uso de conocimientos, percepciones y motivaciones para diseñar una campaña de productos del mar sostenibles

Bahamas Best Catch : Utiliser les connaissances, les perceptions et les motivations pour concevoir une campagne de fruits de mer durables

KARLISA A. CALLWOOD[1], MAKEDA SERJU[1]
[1]*Perry Institute for Marine Science, 5356 Main St, PO Box 435, Waitsfield VT 05673*
kcallwood@perryinstitute.org

EXTENDED ABSTRACT

The fishing industry in The Bahamas employs over 9,000 individuals and has an export value of $70 million, with the top targeted species being the Queen Conch (*Aliger gigas*), Caribbean Spiny Lobster (*Panulirus argus*) and Nassau Grouper (*Epinephelus striatus*) (FAO 2016). Yet, landings for these species have fluctuated throughout the years. Seafood has both cultural and economic importance in The Bahamas. These seafood items are commonly used to create iconic cultural dishes that are eaten throughout the year locally. Tourism also has a large impact in the industry, often leading to increases in demand. Additionally excessive fishing pressure/overfishing, habitat degradation, inefficient management, and other factors, have led to the decline in population of many of these species. (Stoner et al 2019; Sherman et al 2018; Smith and Zeller 2016)

The Perry Institute for Marine Science (PIMS) has conducted extensive research on Bahamian fisheries over many years and frequently uses this data to inform policy and government action. However, it's no surprise that change at the policy level tends to be slow. As such, PIMS is attempting to pivot some of this effort towards directly reaching seafood consumers in The Bahamas to encourage them to avoid consuming illegally caught (e.g., out of season or undersized) species, and reduce the consumption of species that are at risk of overfishing (e.g., Nassau grouper and queen conch) or play key roles on coral reefs (parrotfish). With the Bahamas Best Catch Campaign, the goal is to drive a shift in consumer preferences and demand in The Bahamas from declining, traditional seafood species towards more sustainable options and encourage sustainable seafood purchasing and consumption by providing consumers with simple tools to understand the sustainable options available, thereby helping them to make informed decisions and shift behaviors that support sustainable fisheries throughout the country. Both ecological and socioeconomic considerations were used to inform recommendations for a range of species to promote their sustainability and develop a simple stoplight system for the campaign representing the Best (sustainable) Choice, when to Go Slow Moderation Matters, and when to Avoid (unsustainable choices). This project aimed to understand people's seafood choices and environmental behaviors in The Bahamas, with the goal of further informing the design of the campaign.

In March 2024, an online survey was shared via email, WhatsApp, and social media to seafood consumers in The Bahamas and interviews conducted in locations where seafood purchasing and consumption is common. A total of 101 responses were collected over the course of 2 months. Quantitative and qualitative data from the surveys were analyzed using descriptive statistics and deductive thematic coding, respectively, to identify key patterns, behaviors, and perceptions related to seafood purchase and consumption.

Survey respondents were primarily women (65.3%), predominantly mid 20s to 30s (56%), with just over half obtaining at least a bachelor's degree. They were also primarily Bahamian citizens residing in New Providence and represented a wide variety of occupations with the top 3 being folks working in the conservation, education, and tourism sectors.

Almost 50% of respondents stated they ate seafood at least once or more times per week. Top mentioned species included: Queen conch, grouper, and spiny lobster. However, when evaluating seafood consumption frequency by species, tuna emerged as the top species consumed regularly (71.3%), followed by conch (60.8), spiny lobster (58.4%), and grouper (54.4%). As there was no distinction made between canned tuna and wild caught finfish tuna in the survey, this percentage may be higher due to a combination of the two. When these data are compared to the stoplight system, 5 out of the top 6 frequently consumed species fall in the go slow/avoid group, with the exception of certain species of snapper (Figure 1). For the species found in the Best Choice section, 20-30% of respondents are currently eating mahi, grunts, and jacks, while a smaller percentage of respondents are eating stone crab, lionfish and triggerfish. Because many of these species are consumed regularly by Bahamians, there is an opportunity to think about strategizing to actively promote these as options for consumers to consider.

Almost half of the respondents (49%) stated they purchased seafood with the minimum catch sizes in mind. A higher

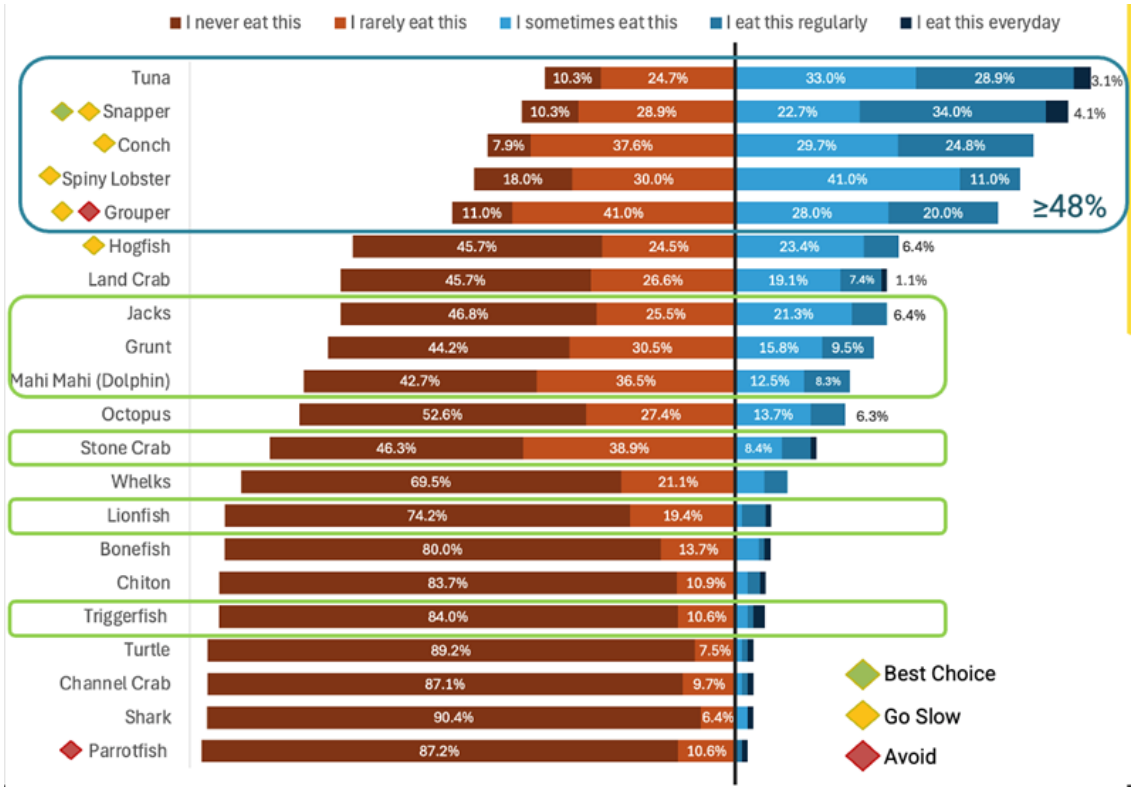

Figure 1. Seafood Consumption Frequency by Species.

percentage (69%) make their purchase with the closed seasons in mind. However, it's important to note that 26% and 7% of respondents, respectively, also mentioned they did not know what these terms mean. Respondents were also asked to identify which dates were associated with the closed seasons of the four top fisheries; more than 50% of respondents answered each of these questions correctly.

Lastly, respondents were each asked to define the term "sustainable seafood". Their definitions were compared to one found on NOAA's official website (NOAA n.d). Respondents' understanding of the term was determined by how many aspects of this definition was included in their personal definition (see Table 1). Most of the respondents had "some understanding" of the term (46%), correctly including at least 2 of the components. Very few had "great understanding" of the term (4%) and none included all 5 aspects. However, 36% of individuals mentioned minimizing negative social and economic impacts on the local community in their definition, highlighting that respondents recognize there is a need to preserve fisheries to sustain their local economies and culture.

This study provided valuable information that can be utilized to guide further development of our sustainable seafood campaign. There is not only a lot of interest in learning more about sustainable seafood, but that people will be willing to support and purchase from fishers and vendors who prioritize sustainable options and tactics. We were also able to confirm that consumption is high for those species we are concerned about, and we can prioritize shifting focus and attention in the campaign towards seafood options our audience already enjoys eating but for which consumption is low. While many respondents are knowledgeable on closed seasons and keep these in mind, they aren't as knowledge on other regulations like size limits and don't prioritize these as much. Additionally, the understanding of what makes something "sustainable seafood" is low. These findings present the opportunity to increase awareness and messaging around why this concept of sustainability is important; what it means to be truly sustainable in terms of having sustainable practices and making sustainable choices; and the importance making decisions to shift behaviors with regards to the currently implemented regulations (e.g. sharing why despite it being legal to eat lobster, grouper, and stone crab during their closed seasons, why it might be better to simply avoid them during those months).

LITERATURE CITED

FAO. 2016. Fisheries and aquaculture in the Bahamas: A Review. https://www.fao.org/fileadmin/user_upload/faoweb/FI/safetyatsea/bahamas_fisheries_aquaculture_sector_review_2016.pdf

NOAA. n.d. Sustainable seafood: Understanding sustainable seafood: NOAA fisheries. Understanding Sustainable Seafood | NOAA Fisheries. https://www.fisheries.noaa.gov/topic/sustainable-seafood/understanding-sustainable-seafood

Sherman, K. D., Shultz, A. D., Dahlgren, C. P., Thomas, C., Brooks, E., Brooks, A., Brumbaugh, D. R.,

Gittens, L., & Murchie, K. J. 2018. Contemporary and emerging fisheries in the Bahamas—conservation and management challenges, achievements and future directions. Fisheries Management and Ecology, 25(5), 319–331. https://doi.org/10.1111/fme.12299

Smith, N.S., & Zeller, D. 2016. Unreported catch and tourist demand on local fisheries of small island states: the case of The Bahamas, 1950-2010. *Fishery Bulletin, 114*, 117-131.

Stoner AW, Davis MH, Kough A. 2019. Relationships between fishing pressure and stock structure in Queen Conch (Lobatus gigas) populations: synthesis of long-term surveys and evidence for overfishing in the Bahamas. Reviews in Fisheries Science and Aquaculture. 27:51–71. doi: 10.1080/23308249.2018.1480008.

KEYWORDS: Sustainable Seafood; Science Communication; Stakeholder Engagement; Social Science; The Bahamas

Understanding of the term "Sustainable Seafood"	Components Included	Percent of Respondents	Examples
Complete	All	0.0%	None
Great	4	8.5%	"Seafood that is fished using best practices, such as respecting size limits, closed seasons and minimum/maximum catch per vessel to ensure the species survives for future generations."
Good	3	27.7%	"I think it means seafood that will, if harvested and protected properly will be available for Bahamians for long years- for future generations " "Seafood that could be harvested with out causing harm to they ecosystem and reproductive rates"
Some	2	46.8%	"[Sea]food you can enjoy for generations at the same replenishment rate" "Maintaining and enriching the environments we acquire seafood from; or growing or fostering seafoods outside a normal environment to have a lower impact on surrounding ecosystems."
Little to No	0-1	17.0%	"Seafood that was caught sustainably or with a limit in mind" "Ensure undersized are not fished" "Consuming a small amount of seafood during the opening season"

Figure 2. Respondents understanding of the term “Sustainable Seafood”.