

## Recovering Big Fish: Communication Strategy for Fish Spawning Aggregations Conservation and Management in the Wider Caribbean

## Recuperando el Gran Pez: Estrategia de Comunicación para la Conservación y el Manejo de Agregaciones de Desove en el Gran Caribe

## Retrouver Big Fish: Stratégie de Communication pour la Conservation et la Gestion de l'Agrégation des Reproducteurs de Poissons dans les Caraïbes

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### ABSTRACT

The Wider Caribbean is a culturally diverse region, where three main languages are spoken and/or understood by most of the population: English, Spanish and French. To reach and unify the entire region, we envision a 3-year tri-lingual public engagement campaign that has a twofold goal: first, to unite a diverse set of collaborators, geographically dispersed, around a common vision and common story. Second, communications should be used to leverage the power of the growing constituency to inform public opinion, put FSAs on the political agenda, and influence the decision-making process.

KEYWORDS: Big Fish, fish spawning aggregations, wider Caribbean

### INTRODUCTION

At the 2018 meeting of the Western Central Atlantic Fishery Commission ---Spawning Aggregation Working Group (WECAFC SAWG), participants expressed a sense of urgency to conserve existing fish spawning aggregations (FSAs). Experts agreed that a critical component of conservation is to educate the public and stakeholders regarding the vulnerability, value, and benefits of FSAs throughout the Wider Caribbean region. In addition to create awareness, there was also agreement on the need to employ communications to change behavior and promote specific actions among stakeholders as part of a long-term conservation strategy.

Participants recommended that given the vast amount of disparate communication work that has been produced to date, there was a need to develop a standardized, objective driven and unified communication strategy, as a first step of the long-term communication initiative.

The goal of this communication strategy is to build regional awareness and a constituency for fish spawning aggregations (FSAs) among stakeholders. This strategy should unite geographically dispersed participants through consistent messaging, a shared vision and a common story, while providing a framework to develop sub-regional and local campaigns that will meet specific needs of participant countries and regions.

To develop and produce the unified communication strategy, BelugaSmile Productions (BSP) proposed the creation of the WECAFC-SAWG's Communication Sub-Committee, whose members have knowledge and experience in science, outreach, education and public engagement. Their participation provides BSP insight into the places where they work, as well as an informed perspective of regional needs and challenges for the strategy to consider.

From July 2018 to present, BSP has built upon previous communication efforts, to progress on the strategy's development and to forge strong partnerships.

### METHODOLOGY

The first phase of designing the communication strategy has been focused on research and assessment of the basic issues that need to be addressed. This was accompanied by the collection and evaluation of the education and outreach products that are available for FSAs in the Caribbean. Sub-committee members have provided information, materials and

feedback throughout the region to achieve the following goals:

- i) Determine communication needs and goals
- ii) Identify priority audiences, themes, messages and tone, as well as potential products
- iii) Assess the existing education and outreach materials
- iv) Curate existing education and outreach materials

In order to achieve the goals above, we have relied on:

- i) **Surveys** – Sub-committee members, as well as other stakeholders, completed structured surveys designed to assess the state of FSA communication efforts in their country or region.
- ii) **Interviews** – Interviews with stakeholders, including fishers, managers, conservationists, scientists, tour operators and everyday citizens throughout the region have been designed to collect data. Data from these interviews has been used to determine and prioritize the elements that would strengthen the strategy.
- iii) **Audience Identification and Audience Research** – Public perceptions and communication habits for target audiences were researched to understand where and how target audiences get their news and information. This step is critical in designing the type of messages that will resonate with each audience. There are few research studies on audience habits in the Caribbean region, therefore informal conversations with stakeholders and the knowledge of partners working in the field, as well as international studies on analogous audiences have been consulted.
- iv) **Curating** – A database of existing FSA web-based communication materials is being compiled, reviewed and curated to establish a collection of communication materials that align with the strategy. After proper licensing, these education and outreach products could be used and distributed by project partners with the regional campaign, sub-regional and national communication efforts.

**This report is organized into four sections:**

- i) **Section One** presents what we have learned about our three target audiences, as previously identified by the Communication Sub-Committee.
  - Fishing Community
  - General Public
  - Youth

This section describes where target audiences get their news, information and entertainment, as well as their general perceptions about the environment, science, and conservation.

- ii) **Section Two** presents initial themes, messaging, tone and approach recommended for reaching target audiences.
- iii) **Section Three** presents the results of the collection and curation of web-based material and information available on social media.

- iv) **Section Four** presents a set of recommendations to be considered in the development of a regional Public Engagement Campaign. It includes a list of education and outreach products, as well as the preferred distribution mechanisms recommended to reach target audiences.

## SECTION ONE – TARGET AUDIENCES

- i) The Fishing Community
  - Commercial Fishers
  - Subsistence Fishers
  - Recreational fishers
  - Marine managers and decision makers
  - Tour-operators or charters
  - Market members (direct fish buyers on site)
- ii) General Public
  - Fish consumers both on Coastal Communities and Internationally.
  - Science Curious
- iii) Youth — We distinguish two different audiences based on age:
  - Millennial — Birth Year: 1981 – 1996 / Age in 2019: 23-38
  - Generation Z — (post-millennial): Birth Year: 1997-2015 / Ages in 2019: 4-22

### Public Perceptions and Media Habits of Target-Audiences

Audience research was largely focused on The United States (US) and Latin-American region. For one of the target audiences, the fishing community, there are few data available on how they get their news and their means of communication. Therefore, we have relied on one study from Mexico (COBI) and anecdotal information from members of the Communication Sub-Committee, as well as interviews conducted by BSP with fishers and other stakeholders.

For the other target audiences, we relied on public opinion and survey data – among other publicly available sources, and we were able to glean considerably more information, specifically about millennials, adults and decision makers. Less data is available for Post-Millennials (AKA Generation Z). Not much is known about their perceptions and communication habits, beyond what platforms they use.

While country-specific audience research is still ongoing, a few regional patterns have been identified, taking into consideration the complex cultural diversity throughout this region.

It is worth noting that there is considerable support among people in the US and Latin America related to the environment, science and conservation. For example:

- i) In 21 countries in Latin America and the Caribbean, more than 50% of people see environmental protection as a priority. (<https://www.vanderbilt.edu/lapop/insights/IO918en.pdf>)
- ii) Men in rural areas in Latin America and the Caribbean are more supportive of environmental

- protection than women in urban areas. (<https://www.vanderbilt.edu/lapop/insights/IO918en.pdf>)
- iii) In the US, 74% support protecting the environment and 55% rank environmental protection as a top priority. (<http://www.pewresearch.org/fact-tank/2017/04/20/for-earth-day-heres-how-americans-view-environmental-issues/>)
  - iv) In the US, majorities believe the environment should be given preference over economic growth and strongly believe in enforcing environmental regulations. (<https://news.gallup.com/poll/1615/environment.aspx>)
  - v) More than 8 of 10 adults in Mexico and Central America believe climate change is a serious issue for their countries. (<https://earthr.gizmodo.com/latin-americans-take-climate-change-seriously-1822448379>)
  - vi) In the Caribbean the number that believe climate change is a serious threat is 6 of 10. (<https://earthr.gizmodo.com/latin-americans-take-climate-change-seriously-1822448379>)
  - vii) In the US, public trust of information from scientists is higher than for industry leaders, news media, and elected officials. (<http://www.pewinternet.org/2017/12/08/mixed-messages-about-public-trust-in-science/>)
  - viii) Over  $\frac{3}{4}$  of adults in the US think contact with nature is very or extremely important for their health and emotional outlook. (<https://www.fws.gov/southeast/news/2017/04/new-study-shows-americans-deep-appreciation-for-nature-barriers-to-connection/>)
  - ix) In the US, fishing ranks as a “high level” of interest across all age groups (6 - 65). (<http://www.physicalactivitycouncil.com/pdfs/current.pdf>)
  - x) Vast majorities of adults in the US are concerned about the oceans and beaches. (<https://news.gallup.com/poll/1615/environment.aspx>)

### Fishing Community

Generally speaking, most *commercial fishers* use smart phones and social media, listen to the radio, and view local TV channels. While Mexican fishers basically use WhatsApp, Facebook & local radio to communicate with each other and to get their news, in the US GoM, fishers and managers are pro-active users of Facebook and other social media platforms.

Research thus far suggests that one of the most popular and highly effective ways that fishers communicate among themselves and with managers is through **Fisher-to-Fisher** exchange activities. These live-events provide a space for fishers to exchange information on problems and potential solutions and to better understand the bigger picture. Fishers that have participated in these exchanges declared that these experiences provide a great opportunity to learn and expand their professional and personal networks. Participants communicate with each other by regular email, and by using social media platforms. These live events also help fishers to increase their knowledge regarding new communication tools and platforms that they can apply to their work.

Fishers also value the international institutional support and exposure that these live events provide, and they believe that their participation increases leverage and impact back in their home communities.

Data on the habits of the *recreational fishers* are currently being gathered, but to date we can assert that they are avid users of social media and other specialized media such as magazines, digital blogs, and news rooms, as well as sophisticated smart-phone applications. Recreational fishers also tend to have an open communication channel with the brands associated with the sport (through newsletters, blogs, events, etc.).

Throughout the region some *fisheries management professionals* have been wary of using social media as a way to communicate, in no small part due to unfamiliarity. The strategy will benefit from existing efforts to promote the professional benefits of social media usage that are applicable for fisheries science and management professionals, such as Facebook, Twitter and blogs, for example.

*Decision makers* use social media, as well. With not much time on their hands, they rely on Twitter to communicate directly with their constituency. That’s the case in the US GoM, as well as in areas within the MAR region and the Bahamas, for example. More so than other audiences, materials produced to reach this audience need to be short/brief, informative and visually compelling (info-graphics, animations and images of high production value).

We still need to collect more information about *tour operators* and charters for both sports fishing and diving. Contacts have been made with tour operators and conservation partners in Puerto Rico (Marcos Hanke and Robert Reyes), Mexico, Belize, Florida, and Cuba (for now).

The *Diving Community* has a strong online presence, which is frequently intertwined with their dive centers and their brands. To collect additional data regarding the habits of *divers* in the region, we are working with Akumal Diving Center (Mexico), and recently initiated contact with Ned & Anna DeLoach, who play an important role in the diving community in the region. Ned DeLoach is the author of the recently updated bible of Florida diving: “Diving Guide to Underwater Florida.” Ned and Anna also run a diving business and edit a magazine which will be integral to some of our production and distribution planning. We also have direct access to the magazine called, DIVE Magazine, via the World Editor, Douglas David Seifert. In Puerto Rico, we have links to José Rafols of Aquatica Dive and Surf (Aguadilla), Pedro Padilla from Island Scuba (Guánica), and Carlos Félix from Ocean Sports (San Juan).

### General Public

Admittedly, it is nearly impossible to gauge the media preferences of the millions of people that inhabit our focal region that includes Central America, the Wider Caribbean, and the south eastern US. To assess the perceptions and communication habits of the general public we relied on data from Latin America and the US as there is scant data on the Caribbean.

Although not a perfect analog, we assume for this project that media consumption habits of Latin America and the US are generally indicative of those in the Wider Caribbean.

We know that 92% of U.S. adults listen to radio in an average week in the US, but while it might be hard to

believe, a majority of American adults get their news on social media, even though many have concerns about its accuracy. (For further details on the different platforms used, see “*News Use Across Social Media Platforms 2018*”).

In general, this is how the general public interacts with content on social media, and there are differences across platforms. For example, both Facebook and YouTube emphasize video, but audience behavior varies significantly between the platforms.

- i) Video on Facebook (FB) gets better audience engagement and reach than photos and text
- ii) 85% of viewers watch their Facebook News Feed with the volume off.
- iii) Most FB videos experience a significant drop off in views within seconds, reinforcing the notion that Facebook Feed videos must immediately capture attention and be on the shorter side (60 – 90 seconds).
- iv) Conversely, on YouTube, viewers have the expectation of longer viewing experiences and are therefore willing to give content more time to deliver.

Among the general public, there is a unique segment identified as “science curious.” To meet their needs, they turn to traditional, long-running programs, like PBS Nature, one of the highest rated shows in the PBS system, which still outperforms brands like National Geographic and Discovery. Increasingly, the science curious has access to different outlets, such as streaming services like Netflix, Amazon Prime and Curiosity Stream. It is worth exploring these developments further in order to incorporate this audience as a priority of the strategy.

Among streamers, Netflix stands out, largely due to its rapidly growing global subscription base. With hits like “Chasing Coral” and “Virunga,” Netflix is expanding its science and documentary footprint. In the spring of 2019, it is launching its largest documentary project to date – a multi-part series focused on conservation and produced with World Wildlife Fund and Silverback Films, a global leader in nature filmmaking.

Theatrical science and conservation documentaries are also growing in popularity. Terra Mater, a leading international producer of documentaries, recently launched its feature documentary unit, which is focused on conservation, as underscored by its hits, “The Ivory Game,” the soon to be released “Sea of Shadows,” focused on the Sea of Cortez, and its film about Sea Shepherd, currently in production.

The number of companies moving to offer streaming services including science/nature programs keeps increasing, and currently includes newcomers such as Disney, and Apple.

What is of particular interest related to these developments is that programming can reach audiences through synchronized distribution. For example, programming can debut at festivals, secure limited release in theaters, be broadcast on traditional TV and then placed on streaming services.

## Youth

It is widely recognized that the youth audience gets its news and information largely from web-based content, accessed via a variety of technologies. This section describes youth beliefs and media preferences.

There is an abundance of information from both the US and Latin America about Millennials, a “*confident and connected generation, open to change*”.

According to the preliminary results of “*Cracking the Millennial Code*” (a new study focused on millennials, launched at SMASH, 2018), *millennials* are the most science and nature curious generation in the US. The improvement of science education and the explosion of social media use in the Caribbean are encouraging. This should be a key consideration in the implementation of this strategy.

In summary, the preliminary results from this millennial study show the following indicators:

- i) Twice as many millennials as older non-Millennials show a high level of science curiosity: 1 in 8 (13%) of Millennials has a high rating on the Science Curiosity Scale (compared to 6% of Non-Millennials). The percentage of younger millennials is even higher (15%).
- ii) This science curiosity includes life science, computer science and technology as well as health and wellness.
- iii) Most Millennials say they can separate their personal political and religious views from their opinions on science, and 72% agree that religion and science can coexist.
- iv) Perceptions on key environmental topics, such as climate change or ocean pollution, are clearer in this group than for older generations. It is also their perception that climate change and plastic pollution are real and human responsibility.

When it comes to science content consumption among all Millennials, the king and queen are online video (YouTube) and social media (Facebook).

- i) Women and men use Facebook and Twitter similarly; women use YouTube less.
- ii) When it comes to science content, Millennials are most likely to rely on their own instinct (rather than recommendations or familiar/trusted sources).
- iii) It is important for 51% Millennials that the media product “look or sound good to (me).” Yet, Millennials rate “expertise in the field” as an important criteria when evaluating the credibility of science content

Research on the demographic of today’s 6- to 21-year-olds of the region is needed, but early benchmarks show ‘*Post-Millennials*’ on track to be the most diverse, best-educated generation yet in the wider Caribbean region. Like younger Millennials, Post-Millennials are very receptive to stories about animals and heroes -super and anti-heroes.

The children of *Generation Z* have grown up in a social media world, and are more sophisticated, technologi-

cally speaking, than Millennials or any other generation that precedes them. More interactive programming is better for this group, as most avoid Facebook and predominantly use Instagram, Reddit, and SnapChat. It is also worth noting that Generation Z is less loyal to platforms and they are more apt to abandon the known and explore new offerings.

While youth audiences have a tremendous number of options for getting news and entertainment, most share one point of contact in common regardless of where they live: **school**. Primary school through higher education institutions represents a unique opportunity for reaching young people about FSAs.

## SECTION TWO — THEMES, MESSAGING, TONE AND APPROACH

### Themes

Based on what has been researched regarding the target audiences chosen for this strategy and feedback from the WECAFC SAWG Communication Sub-Committee, we have determined the following unifying set of themes:

- i) **The Importance & value of FSAs** – critical to maintain populations of marine fishes, reef ecology, economics and cultural heritage
- ii) **What’s at Stake** – populations of vulnerable marine fishes, fisheries, ecosystem function and the future of millions of people whose lives are tied to the ocean.
- iii) **Connectivity** – reef fish populations in Mexico can supply larvae to Florida and Cuba, and larval exchanges for some species in the Caribbean transcend international boundaries. Population connectivity is a key process for population replenishment. Sustainable management and conservation demand regional governance, therefore regional collaboration is necessary.
- iv) **Build a Constituency** – project participants serve their communities by working together across international boundaries to protect FSAs, fisheries and marine systems they depend on. In doing so, they are protecting ecosystems, jobs, food security, and cultural heritage for generations to come.
- v) **Stories of Success & Hope** – inspirational stories get stake-holders and the general public excited about the benefits of FSAs conservation. Examples of inspiration stories include groupers coming back in The Cayman Islands, the Belize Case Study, and Mexican participatory processes that integrate fishers into FSAs monitoring and recovery.
- vi) **Calls to Action** -- what each target group can do to become part of the solution, with target-specific actions, tasks and ideas.

### Initial Messages

While it is early to present specific messages, effective message attributes that have been identified include:

- i) **Fishers Are Part of the Solution** – They have the knowledge and experience to help advance

science and conservation, and they are indispensable.

- ii) **Economic Benefits — The Banking Analogy: spend the interest (recruits) not the capital (FSA);** or as fishers often put it, “don’t kill the goose that lays the golden eggs.”
- iii) **Sustainable Fisheries, Sustainable Future** -- Protecting spawning fish protects vulnerable populations, the fisher community and cultural heritage against the looming threat of climate change.
- iv) **Food Security** — Protecting FSAs (in conjunction with effective fisheries management) is an insurance policy to safeguard food security.
- v) **Intrinsic Benefits** — Beyond the practical, protecting FSA can improve quality of life through recreational activities, like diving, fishing, as well as the connection to the natural world.
- vi) **Fish are Charismatic Animals** — Protecting spawning fish is as important as protecting other animals, like breeding turtles and nesting birds.
- vii) **Ocean Stewardship & Pride** — We all have a responsibility to protect the ocean and its a legacy that we can proudly pass to future generations.

### Tone and Approach

In times of political bad news, specifically related to the environment, audiences can feel overwhelmed by the seemingly insurmountable declining trends. The regional communication campaign will not be doom-and-gloom. It will focus on the positive and pro-active possibilities.

In developing themes and presenting messages, the following approaches have been identified as being effective:

- i) **Compelling Storytelling** versus didactic/academic style (talking down)
- ii) **Mathematical reasoning**
- iii) **Opportunity** (more than loss)
- iv) Tapping into **emotions**
- v) Evoking **natural beauty**
- vi) **Inclusiveness** in all senses and for all stakeholders (especially, fishers)
- vii) **Hope** (more than fear) and **#oceanoptimism**
- viii) **Avoid the use of negative or technical words.** Instead, focus on positive concepts and more appealing wordy (for example, say “fish shelter”, “Fish Management Area” and “breeding ground”, instead of “no-take zone” or “fish spawning aggregation site.”)
- ix) **The use of humor** (but avoid puns on Twitter)
- x) **Celebrity involvement**
- xi) Effective use of **Sound & Music**

## SECTION THREE — CURATED CONTENT AND SOCIAL MEDIA

### Curated Web-based Material

The WECAFC SAWG Communication Sub-Committee and other partners of the initiative have been instrumental at gathering widely dispersed, existing education and outreach materials. Materials include: films,

campaigns, social media presence, educational materials, websites and blogs. Sub-Committee members are helping to prioritize the most valuable and effective materials.

The criteria for evaluation are:

- i) **Content Quality** -- Scientific and/or other information relevant to target audiences.
- ii) **Production Value** – The quality of the product. For video, it included elements like style, storytelling, cinematography, and sound. For print: layout, story-telling, photography.
- iii) **Success** -- This is defined by high impact on public opinion (TV ratings, social media metrics, etc..) and/or influence on the actions and behaviors of decision makers and policy.

Many of the outreach materials produced by partners are remarkable –from SCRFA’s educational materials and the fabulous images as part of the Grouper Moon Project <https://www.reef.org/programs/grouper-moon-project-protecting-caribbean-icon>) to the scientific content of the “Natural numbers” short-film (<https://www.youtube.com/watch?v=bpLMCyx9cic>). Going through all curated materials is an ongoing task, and we are still in the process of evaluation, looking for the best-of-the best to serve as examples from which others can build.

Additionally, we are developing a list of Social Media Best Practices that can be used by project partners.

While the Sub-Committee’s evaluations have been invaluable, we also consulted with professionals involved in the production and/or distribution of the communication materials. We asked about the effectiveness of these efforts, and they identified the following weaknesses that prevented communication materials and efforts from achieving a bigger/sustained impact:

- i) Lack of materials in Spanish, French and Dutch.
- ii) Lack of strategic planning
- iii) Lack of follow-up
- iv) Lack of distribution strategy
- v) No proper mechanisms/indicators in place to measure impact.
- vi) Lack of continuous/longer-term statistical reports (data) Without local government/ngo support for this type of data/numbers, it is hard to measure or make strategic plan.

#### SECTION FOUR — PRELIMINARY PROPOSAL, TESTING & NEXT STEPS

To reach and unify the entire region, we envision a three-year tri-lingual *Public Engagement Campaign (PEC)* that has a twofold goal: first, to unite a diverse set of collaborators, geographically dispersed, around a common vision, a common story and a common goal. Secondly, communications will be used to leverage the power of the growing constituency to inform public opinion, put FSAs on the table at fisheries discussions, and impact policy.

Furthermore, the PEC should create awareness and support for sustainable management and protection of populations of the critically endangered Nassau grouper and other species that aggregate to spawn in the Wider Caribbean. By protecting FSAs, we are protecting fish populations threaten with extinction, ensuring ocean and

coastal ecosystem functioning and helping to support the livelihood of millions of people that depend on the sea.

Throughout the Caribbean, the desire to research and to protect FSAs is growing. The PEC should seek to pull these stories together, to be a source of pride for people of the region, and to stand as an example to the rest of the world, underscoring the power of participatory conservation.

Core to the initiative is the unique network of partners that will participate throughout the entire project –from inception to distribution, and it includes scientists, government agencies, NGOs, international institutions, and fishers from all over the region. Fishers, in particular, are critical to the initiative because they intuitively understand the linkages between protecting FSAs and healthy fisheries, and thus are inclined, often enthusiastically, to support the work.

Fisher and stakeholders’ commitment is critical for the success of the initiative. This includes the fundraising effort to produce products to implement the PEC.

In order to measure the impact of the communication plan, a regional poll among target audiences should be conducted to set a baseline. Additional metrics from social media platforms will complete the data.

#### The Public Engagement Campaign: Creating Momentum and Finding Synchronicity

It is well known that American and international validation is highly influential on public opinion and decision-makers from countries of the Caribbean region. Hence, international efforts will be key to reach and engage an important target audience (fish consumers) but also instrumental to support conservation initiatives at the local level.

The proposed public engagement campaign is both “top-down” and “bottom-up.” In this instance, top-down refers to attracting large international audiences through the documentary film and associated social media. Bottom-up refers to efforts at the regional and country-specific levels, such as fisher-to-fisher exchanges, local events, and social media. In this way, the initiative creates awareness and constituencies from two directions, which meet in the middle.

Critical to the success of the regional PEC to create awareness is:

- i) Set clear, tangible, written short-term and mid-term goals
- ii) **Consistent themes, messaging, tone, storytelling**
- iii) Coordinated and **aligned timelines** and releases
- iv) Creation or identification of a communication team that will manage the **project hub**, where the PEC’s communication efforts are coordinated, and content and messaging aligned.

In order to change behaviors, it will be indispensable to follow-up with the implementation of the sub-regional and country specific campaigns that tackle specific needs locally.

### Media Production and Programs to Reach Target Audiences

The umbrella for the proposed campaign is a **1-hour film for broadcast** in English with international distribution (and translation) to reach the general public regionally and internationally. To maximize impact, project partners for the film will provide extensive social media infrastructure that will serve as a platform for other education and outreach products of the campaign, enabling us to reach global audiences.

To achieve its mission, the plan would also rely on **multi-media products** (e.g. short-films, virtual (VR) and augmented reality (AR), interactive websites, blogs, radio kits & podcasts). Products will be hosted by the campaign's interconnected platforms and be incorporated into the fisher exchanges and live events to maximize impact.

PEC's media platforms will also be fed by the **educational products** produced in partnership with academic institutions and outreach materials produced as part of sub-campaigns in different nations.

Continuing the program "**Fisher-to-Fisher Exchange**" is a key piece of this strategic plan. Some of the multi-media products produced as part of the PEC will be used in these exchanges, but other target-specific products will be designed with and for fishers to facilitate and disseminate the impacts of these events.

Given that the general public and fishers throughout the region **listen to radio**, it's clear that radio should be used as a communication tool, including VHF radio that many fishers keep on to chat regarding local conditions, etc.

At the local level, partners will need to work with local radio stations to implement the local campaigns.

### Advanced Testing & Production

One important component of the strategy is the testing of themes, messaging and style through mockups and produced materials. While still conducting research and assessment, BSP has begun production of mockups and short-films that have allowed us to obtain preliminary feedback from different audiences. The continued feedback will keep informing the design of the PEC.

i) BSP produced a **6-minute film** that introduces general audiences to FSAs, while providing a sense of what is at stake.

- Objective:
  - ⇒ To test the strategy main themes, messaging, tone and style with the general public and potential institutional partners.
  - ⇒ To attract international co-production and distribution partners for a long format film on FSAs.
- Steps taken: BSP shared the short-film with over 85 individuals at the 2018 WildScreen Wildlife Film Festival, the 2018 GCFI Conference, the CFMC meeting (Dec., 2018) and through individual online screenings.

- Results:
  - ⇒ The feedback from potential partners and the general public, including young viewers (millennials) has been extremely positive. General comments include: "we want to see/learn more" and "we love the main character because he's passionate, dynamic and articulate". One negative comment is that the word "geomorphology" should be replaced by a more common term for a lay audience. All in all, this feedback leads us to believe that we are on the right path regarding themes, messaging, tone and style.
  - ⇒ BSP succeeded in attracting the interest of international co-production and distribution partners.

Given the positive feedback, BSP proposes to tailor, translate, license and publish the short-film as part of the PEC, so it can be distributed by project partners on their digital platforms and screened at live events. **The goal** is to reach the general public, who are unaware that FSAs exist. The expected outcome is an engaged audience that has learned the basic ideas and crucial importance of protecting FSAs, and looks forward to learning more about them.

ii) (2) short-films of regional scope: These ~2-3 minutes films will have a high production value, with the blend of testimonials, breathtaking images of natural history, engaging animations and extraordinary sound components.

- ⇒ Objective: Reach, engage and influence behavior of two target audiences at the regional level: fishers & decision makers, respectively.
- ⇒ Steps taken: BSP has advanced the pre- and production phases. Post-production would begin in early 2019
- ⇒ Results expected: In addition to specific objectives, these short-films are the first target-specific pieces produced as part of the PEC. Therefore, both products will serve to test the strategy's themes and tone, as well as the impact of preliminary messaging.

- **Film 1: Fisher-to-Fisher Advice** (*Working title*)

- ⇒ Characters: Angelica Méndez (Guatemala) and a group of fishers
- ⇒ Audience: Fishers & Fisheries Industry
- ⇒ Objective: Create a regional constituency of fishers
- ⇒ Languages: English, Spanish (additional funds are needed for French version)

⇒ Synopsis: An international chorus of empowered fishers offer their perspective on the benefits of protecting breeding grounds, and they briefly describe how their work is leading to new, alternative sources of income that enable them to support their families and their communities while maintaining their traditional ties to the ocean. The piece will end with an invitation (from fisher-to-fisher) to become a part of the growing army of citizen/fisher-scientists working to protect their present and future livelihoods.

- **Film 2: Big Fish Against the Clock**

⇒ Length: TBD (~3 minutes)  
 ⇒ Audience: Decision makers  
 ⇒ Objective: Improve protection and management measures for FSAs at the policy and enforcement level.  
 ⇒ Languages: English, Spanish (and French, TBD)  
 ⇒ Synopsis: This short-film is a Call to Action to protect Nassau grouper and their Fish Spawning Aggregation Sites (FSAs); the film will feature Dr. Yvonne Sadovy, a global scientific authority on Nassau grouper. Dr. Sadovy will raise awareness regarding Nassau grouper fisheries as a critically endangered (IUCN) species as well as the exploitation of their FSAs. Dr. Sadovy will be joined by a cadre of international scientists (including Dr. Heyman, Dr. Schärer, and Dr. Sherman) that describe a common vision and a bold plan: throughout the Wider Caribbean, scientists, fishers and other stakeholders are working together to describe, monitor and protect FSAs; their goal is to sustainably manage a valuable fish species, which is threatened with extinction and is an integral part of coastal marine ecosystems that millions of people depend on. In doing so, they are protecting an extremely vulnerable species, jobs, food security, and cultural heritage for generations to come.

⇒

#### NEXT STEPS

- i) Keep building the PEC's brand: Finalize testing (mockups, "sticky" catchphrases, search tags and a Twitter hashtag, etc.) to articulate and refine the brand.
- ii) Finalize curating content and complete database of the *FSA Collection*, a selection of the best existing communication products.

iii) Extend the network of project partners

- **The Cultural Cognition Project** at Yale Law School and Texas Tech University, KQED, the NPR and PBS affiliate in San Francisco, by Sue Ellen McCann and Dan Kahan, among others. We have been in touch with Dr. McCann to use the preliminary results from their 1st phase of the study (run in March-April, 2018.) The study resumed in November to develop audience profiles, audience engagement strategies, and content testing protocols. We will continue our collaboration with Sue Ellen and NAS to use their findings to refine our strategy.
  - We will continue to network with **local and international press and media**. For example, with Associate Press (HHMI's Science Press Program) and the **National Press Foundation** with whom BSP and Will Heyman have already established contact. Some of the reporters are Patrick Whittle (AP), Andres Pruna (CNN), and Debbie Elliot (local NPR, GoM). We are also seeking collaboration with freelance journalists. For example, Greg Uyeno, a freelance science journalist based in New York City, who is "interested in the language of science and science of language".
  - **Institutional Partners** whose efforts dovetail with ours, such CLME+ and UNEP, for example
- v) Draft general recommendations for testing and impact measurement tools.
  - vi) Campaign with specific goals and intended outcomes of the proposed PEC in the short, medium and long term
  - vii) Write Draft a timeline of the 3-year Public Engagement a Final Report that will include:
    - Key-findings regarding stakeholders' current perceptions of FSAs and related issues;
    - A database of the existing FSA communications materials;
    - An analysis of the obstacles faced while implementing awareness campaigns in the region;
    - Results of materials tested by BSP with an analysis of what has been learned regarding targeted audience and key messages, i.e. "Do's-and-Don'ts" for communicating to specific audiences;
    - A summary of the regional communication plan that includes a common vision, frame, priority target audiences, messaging, and a timeline with intended outcomes in the short, medium and long term;
    - A style-guide to serve as the voice and tone for the campaign, establishing the basic parameters for developing the brand. It includes a relatable, attractive name that will



unify products, a word and phrase bank for creating a common messaging-vocabulary, as well as “sticky” catchphrases, search tags and a twitter hashtag, guidelines for framing and messaging;

- A list and brief description of recommended products to be produced as part of a regional communication campaign;
- A log of curated communication materials that will include element type, URLs/location, and licensor’s information;
- A distribution plan for both the recommended new products and the curated materials.
- Recommendations for testing and measuring impact: recommended tools.

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