



StewardFish

COMMUNICATION TOOLS AND PRACTICES IN USE FOR FISHERIES INFORMATION



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April 2020

**The University of the West Indies - Centre for Resource
Management and Environmental Studies (UWI-CERMES)**



**Developing organizational capacity for ecosystem stewardship and
livelihoods in Caribbean small-scale fisheries**

StewardFish Project

StewardFish

StewardFish is focused on empowering fisherfolk throughout fisheries value chains to engage in resource management, decision-making processes and sustainable livelihoods, with strengthened institutional support at all levels in the Caribbean and North Brazil Shelf Large Marine Ecosystem (CLME+) region.

The project is being funded by the Global Environment Facility (GEF), implemented by the Food & Agriculture Organisation of the United Nations (FAO) Sub-Regional Office for Latin America and the Caribbean, and executed by five (5) regional partners - Caribbean Natural Resources Institute (CANARI), Centre for Resource Management and Environmental Studies (UWI-CERMES), Caribbean ICT Research Programme (UWI-CIRP), Caribbean Network of Fisherfolk Organizations (CNFO), and the Caribbean Regional Fisheries Mechanism Secretariat (CRFM Sec.) in Antigua and Barbuda, Barbados, Belize, Guyana, Jamaica, St. Lucia and St. Vincent and the Grenadines

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Acknowledgements

The development of this information product has benefited from the generous support of the 'Developing Organizational Capacity of Ecosystem Stewardship and Livelihoods in Caribbean Small-scale Fisheries' (StewardFish) project of the Food and Agriculture Organization (FAO) and the Global Environment Facility (GEF). The authors would also like to express their gratitude to their colleagues from the Fisheries Divisions and National Fisherfolk Organisations (NFO) in the CRFM Member States for their assistance in distributing surveys to fisherfolk. We're also grateful to the respondents who took their time to complete the survey.

Abstract

The provision of timely and salient fisheries information tailored for fisherfolk use is critical in promoting ecosystem stewardship for fisheries sustainability. Fisheries information in the Caribbean is communicated in several ways using different communication tools and platforms. However, the information is generally not packaged or tailored for fisherfolk, the intended end users. This may limit their awareness of new concepts, guidelines and policies that have implications for their day-to-day operations, and exclude them from making valuable input into fisheries policies, plans and practices. This report provides a summary of an investigation of the communication tools and practices in use for fisheries information in the 17 CRFM member states. This exercise provided valuable insight to the tools used by end users and their practices for accessing information. We found that WhatsApp and word of mouth (used daily in many cases) were the preferred means of communication for fisheries information. This exercise also revealed that potential tools such as Email and Facebook can be explored. The extent to which fisheries information providers in the region are using WhatsApp to communicate with fisherfolk needs to be determined, as well as their capacity to use the platform effectively. We recommend that the CRFM leads an assessment of the capacities of fisheries information providers/producers in the Caribbean to effectively employ the communication tools used by fisherfolk to receive fisheries information. We anticipate that this assessment will help to inform interventions at regional and national levels to improve communication and promote ecosystem stewardship for fisheries sustainability.

Citation: Cox, S-A., K. Alleyne and L. Soares. 2020. *Communication tools and practices in use for fisheries information in the Caribbean*. CERMES report to FAO on Developing Organisational Capacity for Ecosystem Stewardship and Livelihoods in Caribbean Small-scale Fisheries (StewardFish) Project. 20 pp.

Table of Contents

<i>Disclaimer and copyright</i>	<i>iii</i>
<i>Reproduction Message</i>	<i>iii</i>
<i>Acknowledgements</i>	<i>iii</i>
<i>Abstract</i>	<i>iv</i>
<i>Table of Contents</i>	<i>v</i>
1 INTRODUCTION	1
2 METHODOLOGY	2
2.1 Limitations.....	3
3 RESULTS	3
3.1 Respondent profile	3
3.2 Communication tools.....	4
3.3 Practices	8
3.4 Providers/Producers of fisheries information in the Caribbean	9
5 DISCUSSION	10
5.1 Communication tools and practices	10
5.2 Recommendations	11
6 CONCLUSION	12
7 REFERENCES	12
8 APPENDIX	15

1 INTRODUCTION

Communication tools can be defined as mechanisms that facilitate the act or an instance of communicating; the imparting or exchange of information, ideas, or feelings. Globally, a wide variety of communication tools exist to facilitate internal and external communication, including many open source communication and collaboration tools. However, in the Caribbean, such tools are not utilised by fisherfolk due to the technical skill-set required for effective use. Other tools used by Caribbean fisherfolk such as social media platforms are user-friendly and allow fisheries information to be delivered and accessed at an individual's fingertips. There is a dearth of literature that speaks to communication tools and practices in use for Caribbean fisheries information. Existing literature^{i,ii,iii} emphasizes the importance of timely, accurate fisheries information on tools that are easily accessible^{iv}.

Official or government fisheries information is usually associated with data and statistics on landings, size of the fishing fleet and a registry of fishers. The term [fisheries information] is also frequently used as part of the larger concept 'fisheries information systems'. These systems are developed in an effort to effectively manage living marine resources while still preserving regional fishery science and management autonomy^v. For example, the Fisheries Information System (FIS) of Ifremer¹ has been described as a multidisciplinary monitoring network and an integrated approach for the assessment of French fisheries, including small-scale fisheries^{vi}. Leblond et al. (2018) state that 'the FIS aims at building an operational and multidisciplinary monitoring network for scientific purposes, allowing a comprehensive view of fishery systems including their biological, technical, environmental and economical components.' Another example of a Caribbean FIS is the Fisheries Management Information System (FISMIS) of Trinidad and Tobago which was developed through International Development Research Centre (IDRC) in the 1980s^{vii}. The FISMIS incorporates databases used internally at the Fisheries Division to support fisheries management^{viii} and as a research tool in quantifying marine biodiversity changes in the southeastern Caribbean^{ix}.

Many of the FIS platforms that exist are created by scientists for scientists yet they contain valuable information that can help fisherfolk in their day-to-day operations and inform decision-making processes. The challenge is the technical way in which the information is presented and the absence of additional information that explains the context of the fishery and existing policies that may further explain patterns in the data. Comprehensive fisheries information systems are needed to create timely and accurate content which can be tailored for fisherfolk and communicated using tools that are frequently used.

Fisheries information goes beyond what is currently available on existing FIS. Fisheries information often pertains to: international guidelines, regional policies, catch regulations, gear regulations, the opening or closing of a fishery, marine management area information, fisheries incentives and subsidies, vessel inspections, fishing licenses, catch and effort statistics, biological data, size of fleet, a registry of fisherfolk and similar administrative management content. However, fisheries information should also include recorded local knowledge related to fisheries social-ecological systems as well as observations of environmental changes, including climate change and variability.

¹ The Institut français de recherche pour l'exploitation de la mer (Ifremer) is an oceanographic institute in France with satellite offices in its Caribbean territories.

This report provides a summary of an investigation of the communication tools and practices in use by fisherfolk for receiving fisheries information in 17 CRFM states² from official and unofficial sources. The narrative that follows outlines the methodology employed, results, discussion and recommendations.

This research forms part of the 'Developing Organisational Capacity for Ecosystem Stewardship and Livelihoods in Caribbean small-scale fisheries (StewardFish) Project' which aims to empower fisherfolk throughout value chains to engage in resource management, decision-making processes and sustainable livelihoods, with strengthened institutional support at all levels. This research exercise forms part of activity 2.1.2.3 in component 2 of the project which aims to enhance ecosystem stewardship for fisheries sustainability. The expected outcome is increased participatory ecosystem approach to fisheries (EAF) application with focus on healthier habitats and pollution reduction. This exercise is the first step towards increasing public awareness of EAF so that fisherfolk can successfully apply EAF. Information on communication will be collected and updated throughout the project in order to better inform collective action for stewardship.

2 METHODOLOGY

Our research design employed a multi-method approach which consisted of primary and secondary data collection. Primary data collection was accomplished through the dissemination of a short survey which was developed using Google forms (see appendix). The survey was designed to assess the use of 10 means of communication and tools for fisheries information in 17 CRFM states. The means and tools included email, newspapers, websites, Facebook, Instagram, Twitter, YouTube, WhatsApp, word of mouth and radio.

Based on the most recent CRFM statistics and information report, as of 2016, approximately 124,842 fisherfolk are directly employed in the Caribbean fishing industry^x. There is no sampling frame for this estimated and variable population. We knew from experience that even a small non-random sample (e.g. 5%) might not be attainable. However, we disseminated the survey through various distribution channels with the potential of reaching a purposive sample of the target population within the very limited time and budget available to conduct and complete the research exercise.

The survey was first distributed on 18 September 2019 to 7 fisherfolk leaders in StewardFish countries³ via emails, WhatsApp groups and direct text messaging using WhatsApp. To reach a wider audience of at least 100 respondents, the survey was also shared with fisherfolk in other CRFM states, in the Caribbean Network of Fisherfolk Organisations' (CNFO) WhatsApp group. The link to the survey was also posted on the Barbados National Union of Fisherfolk Organisations (BARNUFO) Facebook page as well as in a Barbados Fishing Facebook group. In addition to the aforementioned channels, hardcopies were distributed at the CANARI Mentorship workshop held in St. Vincent from 29 October – 1 November 2019 and the Annual Fisherfolk Training workshop (October – November 2019) implemented by BARNUFO. Prior to data analysis all hardcopies were manually transcribed into the online Google form. Data analysis and visualization were done using Microsoft Excel. Results of the survey were supplemented with secondary data collection. This involved the review of journal

² Anguilla, Antigua and Barbuda, Bahamas, Barbados, Belize, Dominica, Grenada, Guyana, Haiti, Jamaica, Montserrat, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Suriname, Trinidad and Tobago, Turks and Caicos

³ Antigua and Barbuda, Barbados, Belize, Jamaica, Guyana, St. Lucia and St. Vincent and the Grenadines.

articles^{i,ii,iii,iv,xi,xii,xiii}, grey literature^{v,vi,vii,viii,ix,x} and past assessments^{xiv,xv,xvi,xvii,xviii,xix} of the needs of fisherfolk organisations in the Caribbean.

An informal group interview with fisherfolk leaders, officials from fisheries management authorities and mentors from StewardFish project countries was conducted at the CANARI Mentorship Workshop. Nineteen (19) participants were given the opportunity to share their preferences for communication tools and how effective these tools were in distributing fisheries information. Participants also offered examples of information sharing in their countries and shared success stories.

A quick review of the communication tools used by fisheries information providers/producers in the Caribbean was conducted to determine the current reach of each tool. For each CRFM member state, we searched for websites, Facebook, Instagram, Twitter and YouTube pages of the country's fisheries authority and fisherfolk organisations. We also searched for the websites and social media pages of fisheries information producers in the Caribbean including NGOs, IGOs and academic institutions (see results). We took note of the ease of access to websites, the number of followers on each social media page, frequency of post and interaction with audiences. Our budget and time limitations did not allow us to investigate reach based on email correspondence, participation in workshops and virtual and in-person meetings.

2.1 Limitations

The fact that most survey respondents reside in Barbados created a bias in the results. However, it has been widely observed that fisherfolk in the region usually share similar perspectives with some nuances seen at the country and local levels. As it relates to this research exercise, we believe that fisherfolk in the region generally use the same communication tools and their practices are likely to be similar. This was validated by key informants and results from past assessments.

It was evident during data entry that many respondents did not understand the questions, which were reflected in incoherent responses. For example, respondents would select a specific tool in one question as applicable, but later also select it as not applicable. In these cases, where it was clear of the respondent's intended answer, we corrected the responses. Fisherfolk generally respond better to one-on-one interviews, but our time and budget limitations did not allow for this type of investigation. The informal group interview was useful for insight on what worked well at the national level but time limitations restricted responses on specific use and practices for each tool outlined in the survey.

3 RESULTS

3.1 Respondent profile

Information on communication tools and practices was obtained from the responses of 98 individuals (8 online and 90 hard copy submissions). Respondents were fisherfolk participating at all points along the value chain, from harvest to postharvest.

Fisherfolk respondents were 49% female and 51% male. Survey respondents can be classified as being an older demographic with 83.7% being 36 years or older (Figure 1).

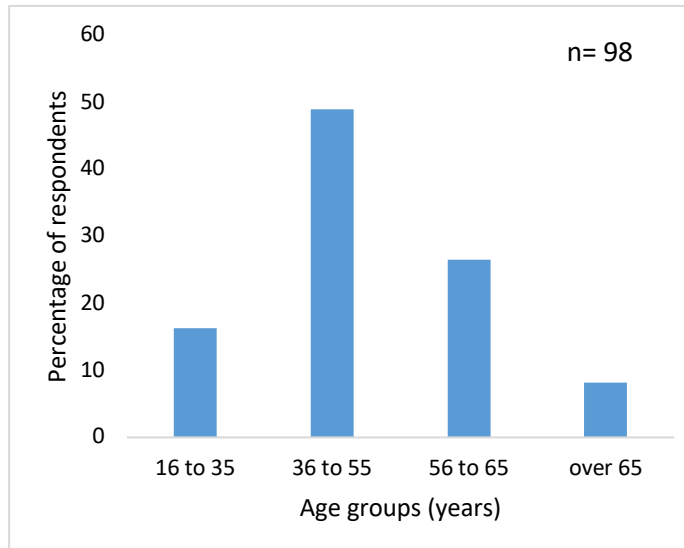


Figure 1. Percentage of respondents across 4 age groups.

Fisherfolk participating in the survey came from four out of the seven StewardFish countries. Barbados had the highest response rate making up 70% of the overall respondents (Figure 2).

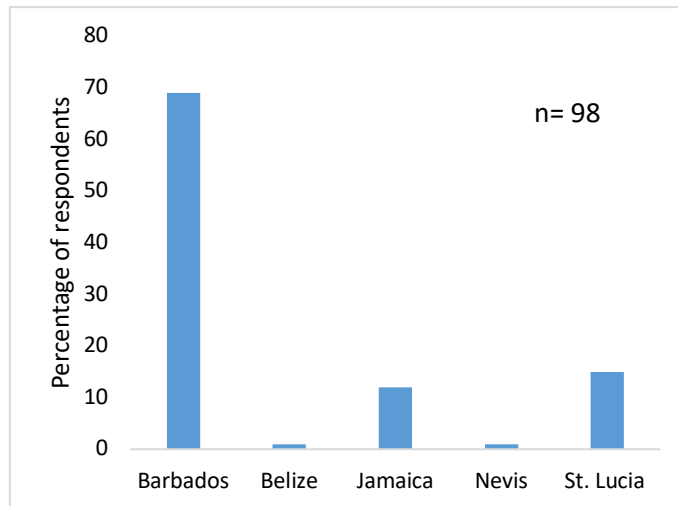


Figure 2. Percentage of respondents by country.

3.2 Communication tools

All tools and means investigated were utilized to some extent, however WhatsApp and word of mouth⁴ were the predominant communication tools with over 70% of the respondents utilising them for receiving fisheries information of any type from any source globally. Overall, Twitter, Instagram, websites and YouTube were the least utilized tools for receiving fisheries information (Figure 3).

⁴ Phone calls and informal face-to-face conversations.

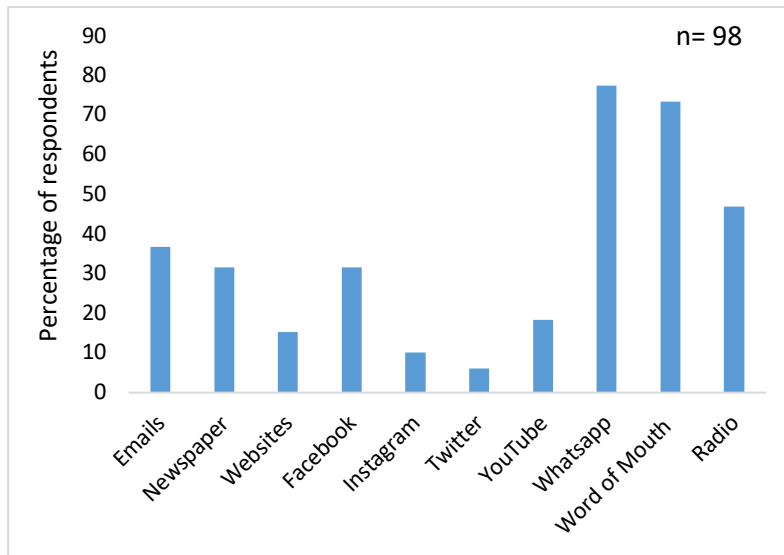


Figure 3. Use of communication tools for fisheries information.

When asked to indicate their preferred communication tool to receive fisheries information, 56% of the respondents selected WhatsApp. Word of mouth, public broadcast radio and emails were also identified as viable channels to relay fisheries information albeit to a lesser extent (11-13% of respondents). None of the respondents selected Twitter, Instagram, YouTube or websites as their preferred communication tools for receiving fisheries information (Figure 4).

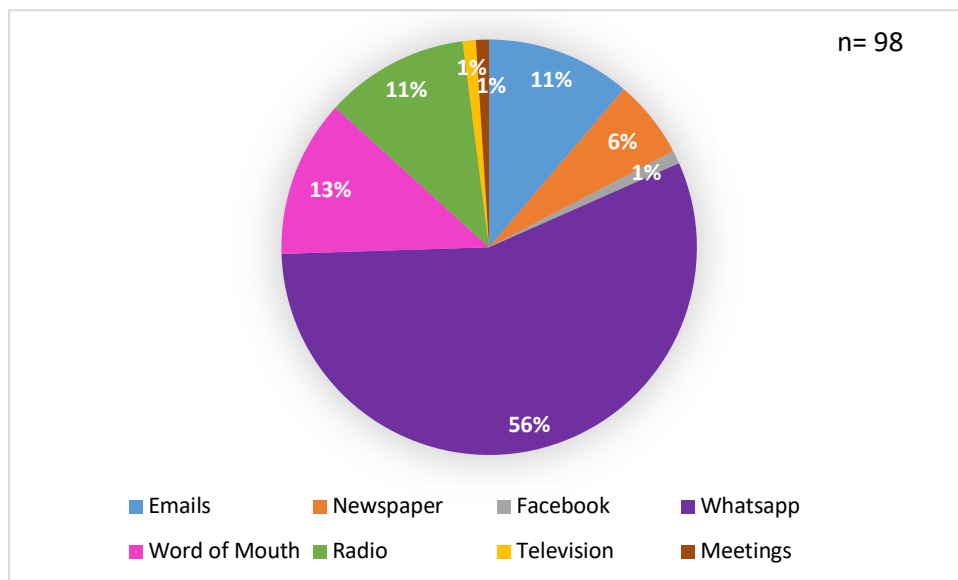


Figure 4. Preferred communication tools for receiving fisheries information.

WhatsApp was selected as the preferred tool for receiving information about the StewardFish Project and its activities by 49% of respondents. Emails, word of mouth and public broadcast radio⁵ were also identified as possible communication platforms for informing fisherfolk about the StewardFish project (Figure 5).

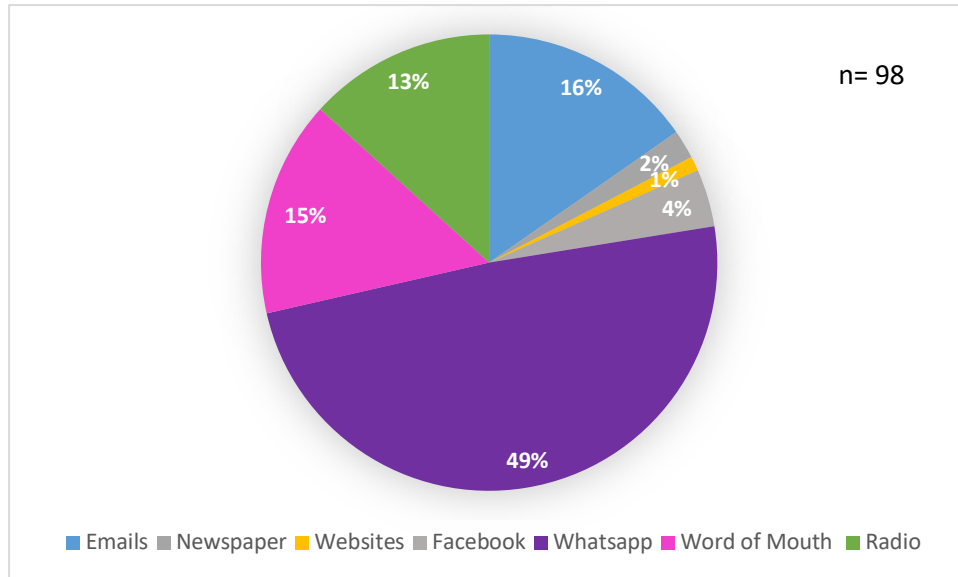


Figure 5. Preferred communication tools for receiving information about the StewardFish project.

WhatsApp, word of mouth and radio were the top 3 communication tools identified for receiving information relating to management and governance; the harvest sector; and the post-harvest sector. Of the 3 communication tools, fisherfolk generally relied on word of mouth for all types of fisheries information. Twitter, Instagram and YouTube were the least utilised communication tools for receiving any type of fisheries information (Figure 6). These tools are currently used by fisheries management authorities to disseminate fisheries information. For example, the CRFM YouTube channel only has 40 subscribers and of the 107 uploaded videos, only 10 have more than 100 views with little or no comments.

⁵ News features, call in programmes and programmes such as ‘Farmer’s corner’ in Barbados. It was not distinguished in this survey whether VHF or HF radio were being utilised by fisherfolk to receive fisheries information.

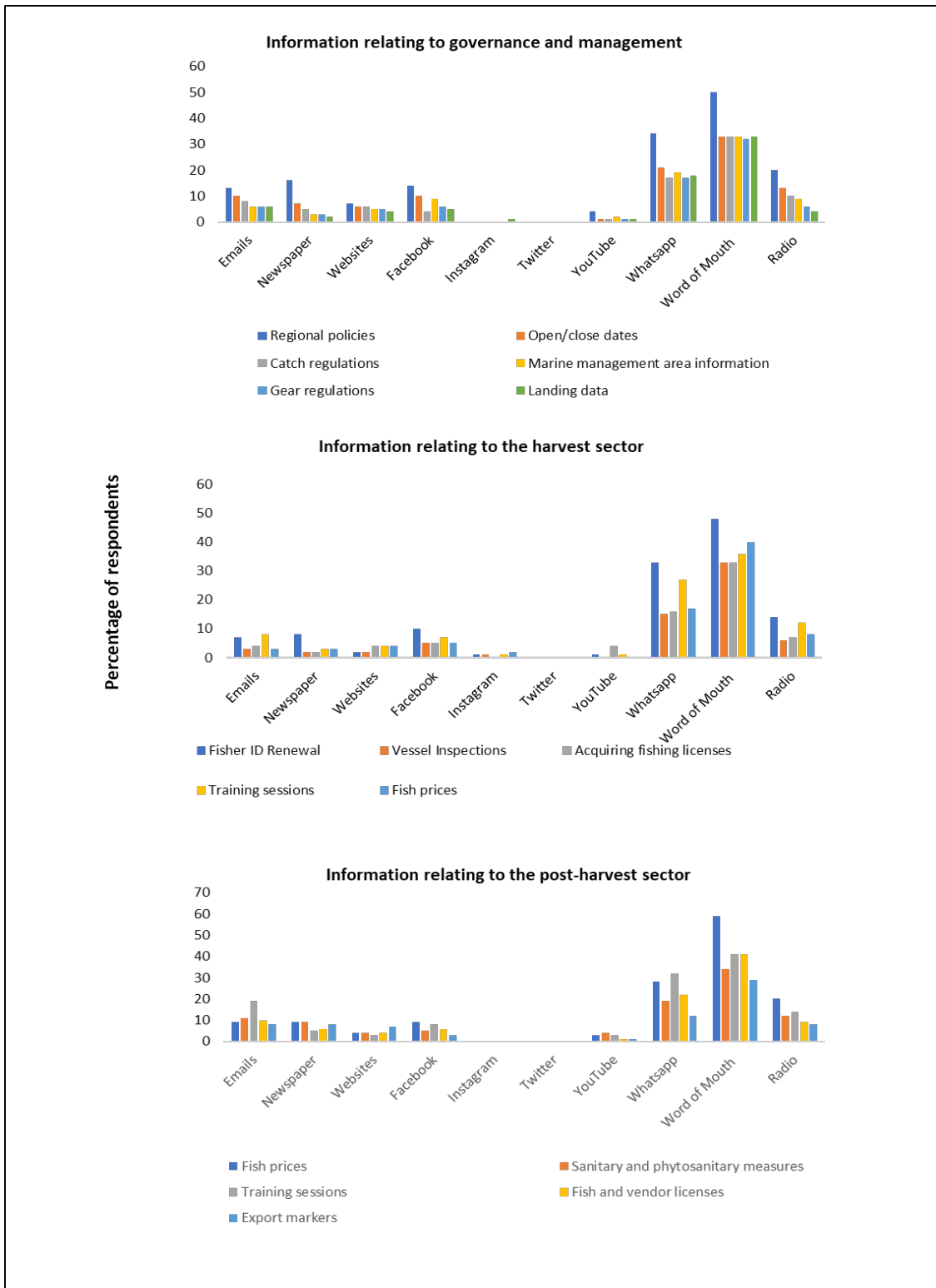


Figure 6. Use of communication tools for information on fisheries management and governance, the harvest sector and the post-harvest sector.

Apart from the 10 communication tools presented, respondents were asked to highlight any other communications tools which they found useful that may have been excluded from this study. Whilst 94% of the respondents indicated that the tools highlighted in this study are the only tools they

utilise, 6% of the respondents provided alternative tools. Suggested communication tools for relaying fisheries information include: Skype; Zoom; flyers on bulletin boards; face-to-face formal meetings at the Fisheries authority or other government agencies and one-on-one consultations at landing sites.

3.3 Practices

Fisherfolk generally utilise the communication tools listed for personal and recreational purposes rather than work purposes with the exception of Twitter, YouTube and Instagram which they seldom used. WhatsApp and word of mouth are the predominate communication tools utilized by fisherfolk for personal purposes (85%), work purposes (63%) or both (60%). Twitter was the least used communication tool with only 9% utilising it for personal purposes and 7% utilising it for work purposes (Figure 7).

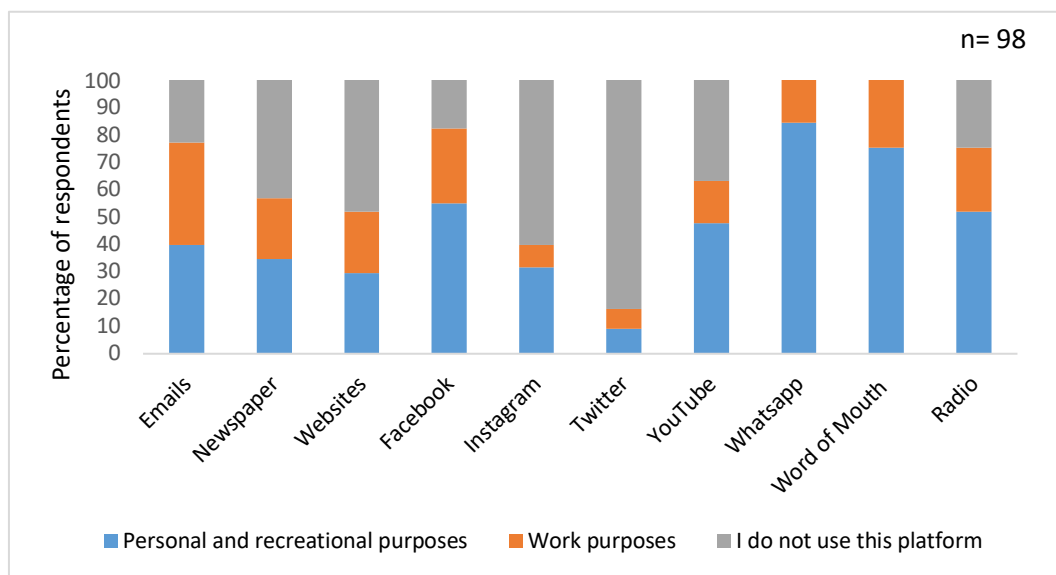


Figure 7. Use of communications tools for personal and work purposes.

WhatsApp and word of mouth are not only the most utilised communication tools, but fisherfolk also use these communication means or tools daily; and, in fact use them more frequently than any other tool presented. Public broadcast radio was also identified as a frequently used communication tool for receiving information with 37% of fisherfolk listening to it on a daily basis (Figure 8).

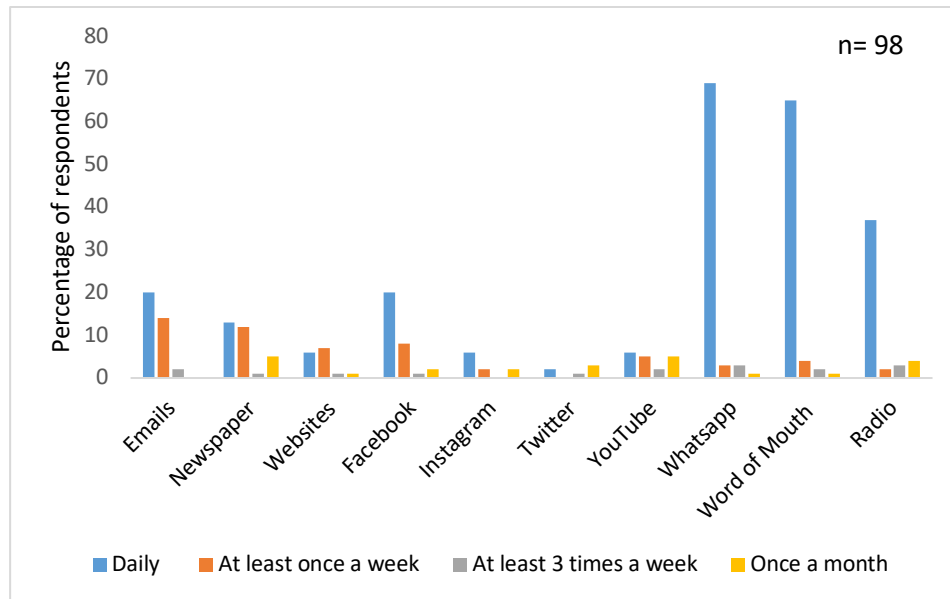


Figure 8. Frequency of use of communication tools

All tools outlined in the survey with the exception of word of mouth, public broadcast radio and email, require some form of active fetching to access fisheries information. Daily use may indicate keen interest in receiving fisheries information. On the other hand, it is also plausible that getting information may just be a collateral benefit from other habits, like checking email or reading the newspaper. This can be explored further in semi-structured interviews.

3.4 Providers/producers of fisheries information in the Caribbean

There are several providers/producers of fisheries information in the Caribbean. They include but are not limited to the Caribbean Regional Fisheries Mechanism (CRFM), Caribbean Network of Fisherfolk Organisations (CNFO), Fisheries Divisions/Departments and National Fisherfolk Organisations in the 17 CRFM member states, the Centre for Resource Management and Environmental Studies (UWI-CERMES), UWI-CIRP, Caribbean Natural Resources Institute (CANARI), Organisation of Eastern Caribbean States (OECS) Ocean Governance and Fisheries Unit, Gulf and Caribbean Fisheries Institute (GCFI), The Food and Agriculture Organization of the United Nations (FAO), Western Central Atlantic Fishery Commission (WECAFC) and The Nature Conservancy (TNC).

A quick review of communication tools employed by these producers of fisheries information revealed several deficiencies. Generally, websites are either not functioning well (faulty URLs), or very difficult to access (websites are down), and navigate. Some websites of Fisheries Divisions/departments are simply web pages with basic contact information and very little information on the parent ministry’s website (e.g. The Ministry of Agriculture, Forestry, Fisheries, Rural Transformation, Industry and Labour in St. Vincent and the Grenadines). Social media pages (Facebook, Instagram, Twitter and YouTube) have limited reach with less than 1000 followers⁶ in most cases. We found that the frequency of posts on social media platforms (Facebook, Instagram,

⁶ Competitive benchmark engagement rate frequently used by marketers.

Twitter and YouTube) is quite low. It was difficult to determine existing WhatsApp groups without speaking to group admins directly.

We found some good examples of effective use of communication tools which can be used as best practices. For example, the Department of Marine Resources in St. Kitts and Nevis has a very attractive website that is easy to navigate and their Facebook page has over 4000 likes. Their following is a result of frequent thematic posts that engage their audience. Belize Fisheries Department's website and Facebook page can also be used as an example to demonstrate effective delivery of fisheries information.

5 DISCUSSION

5.1 Communication tools and practices

The survey results, although heavily skewed, have validated anecdotal evidence which suggests that WhatsApp and word of mouth are tools frequently used by Caribbean fisherfolk to receive fisheries information. They also use these tools to communicate among themselves. Public broadcast radio was also a popular tool used for receiving fisheries information. WhatsApp, word of mouth and radio were also the communication tools identified for receiving different types of fisheries information relating to management and governance. This is quite an interesting finding given the fact that it is generally thought by informants that information about regional policies would require a more formal means of communication.

These results also support the findings of past assessments^{xiii,xiv,xv,xvi}, with the use of WhatsApp⁷ as a preferred communication tool. A needs assessment^{xvii} conducted by Caribbean Natural Resources Institute (CANARI) in 2014 examined governance issues within the NFOs in select countries⁸ and the regional Caribbean Network of Fisherfolk Organisations (CNFO). As it relates to communication, they found that internally, members communicate via e-mails, meetings, text messages, phone calls, flyers and notices on boards. Externally, some groups use wider media such as television, radio and meetings. Their assessment also revealed the existence of a region-wide Yahoo group to share information with persons willing to join the group. Key informants have indicated that the Yahoo group is now inactive with only a few subscribers with valid email addresses. At present it is only used by very few persons as a bulletin board and seldom used by CNFO. WhatsApp and Skype have become the communication tools of choice by CNFO and their membership.

An organizational needs assessment^{xviii} of Caribbean fisherfolk organisations conducted by the Caribbean Regional Fisheries Mechanism (CRFM) a decade earlier, highlighted skills training and modernization as key areas to address in an effort to improve communication. A major recommendation coming out of the assessment was the establishment of an integrated electronic communication system that would link the network of fisherfolk organisations. This integrated communication system did not come to fruition, but according to CNFO informants, an informal

⁷ WhatsApp was officially launched in 2009 but only became popular in the Caribbean in the last 5 years.

⁸ Jamaica, St. Kitts and Nevis, Dominica, Trinidad and Tobago and Montserrat

system that employs a wide range of communication tools including WhatsApp and Skype is currently in use.

There are two main activities under the StewardFish project that will supplement the findings in this research exercise. CANARI will be conducting an institutional analysis and organisational assessments with key fisheries-related state agencies and National Fisherfolk Organisations (NFOs) to assess gaps in support for Fisherfolk Organisations (FFOs) and their role in stewardship. The findings from this assessment will shed light on the capacity of these organisations to provide tailored fisheries information and the gaps that exist that limit effective delivery.

The Caribbean ICT Research Programme (UWI-CIRP) is leading a gap analysis of NFO use of information and communication technology (ICT) in governance. NFO capacity will be compared to context-appropriate reference points in order to establish gaps. The gaps identified will reveal the capacity of fisherfolk to use specific communication tools and the potential tools that can be explored. It is anticipated that these gaps will inform the development of training materials for FFO officers to put ICTs to work in governance; and of a training programme for FFO trainers.

The results of these assessments along with findings from this exercise will inform how we implement the social media and low-cost communication campaign to promote ecosystem stewardship for fisheries sustainability.

5.2 Recommendations

We recommend that an in-depth fisheries information provider/producer capacity assessment is conducted to determine the tools in use for dissemination of fisheries information, the capacity that exists in house to use these tools and how effective the tools are in reaching end users (fisherfolk). The results of this assessment can inform the priority of interventions needed to improve communication between information providers and end users (fisherfolk). We propose a list of interventions below:

1. The implementation of a regional project to enhance or create websites and social media platforms for fisheries management authorities, CNFO and NFOs is needed to facilitate wider access of fisheries information. This project should also include a regional training exercise on the effective use of these platforms.
2. The development of a collaborative regional communication plan and strategy is also important in promoting the delivery of key messages related to regional policies and plans. Messages can be synchronized across all platforms in each country to promote reach.
3. Fisheries management authorities should consider hiring a communications officer on staff at fisheries management authorities. Alternatively, data collectors and extension officers can be trained to maintain websites and manage social media pages. A communications specialist can be hired to create a social media content calendar to make updates hassle free.
4. Establishment of a regional Monitoring and Evaluation framework that tracks the performance of communications using web and social media analytics to determine the effectiveness of the tools employed.

5. The identification of national communication champions who are willing to share their knowledge and expertise with fisheries information providers. These champions can be radio personalities or editors of media houses who can bring a new perspective on tailoring information for fisherfolk and the general public.

The assessment and interventions recommended above are beyond the scope of the StewardFish project, but it remains a critical step towards improving communication and engaging fisherfolk in policy development. This assessment should be led by the CRFM in collaboration with other regional partners.

The extent to which fisheries information providers/producers in the region are using WhatsApp to communicate with fisherfolk needs to be determined, as well as their capacity to use the platform effectively. We recommend that a preliminary investigation should be conducted as part of the StewardFish project to address this gap. Finally, we recommend that the survey should be revised and redistributed later in the project (October/November 2020) to get a larger sample from all StewardFish project countries. Semi-structured interviews can also be conducted to supplement responses from surveys. Delays are to be expected given the current circumstances surrounding the COVID-19 pandemic.

6 CONCLUSION

This exercise provided valuable insight to understanding existing communication tools used by fisherfolk and their practices for accessing fisheries information, and the potential platforms that can be explored. We found that WhatsApp and word of mouth were preferred communication tools for fisheries information (used daily in many cases). This validated anecdotal evidence which suggests that WhatsApp was a platform frequently used by fisherfolk. The extent to which fisheries information providers in the region are using WhatsApp to communicate with fisherfolk needs to be determined, as well as their capacity to use the platform effectively. We recommend that a fisheries information provider capacity assessment should be conducted to inform interventions at regional and national levels that will promote ecosystem stewardship for fisheries sustainability.

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http://www.crfm.int/~uwohxjxf/images/documents/Report_of_the_Regional_Workshop_on_Organizational_Needs_Assessment_of_Caribbean_Fisherfolk_Organizations.pdf (accessed December 9, 2019)

8 APPENDIX

Message in a bottle: Communication tools and practices in use for fisheries information

Thanks for agreeing to take part in this important survey that seeks to determine communication tools and practices in use for fisheries information. Fisheries information can be classified as information pertaining to: regional policies, catch regulations, gear regulations, the opening or closing of a fishery, marine management area information, fisheries ID renewal, vessel inspections, fishing licenses and landing data.

This research forms part of the Developing Organisational Capacity for Ecosystem Stewardship and Livelihoods in Caribbean Small-Scale Fisheries (StewardFish) project coordinated by FAO and implemented by UWI-CERMES and other regional partners. The project aims to strengthen the capacity of fisherfolk and their organisations to better participate in the governance and management of the shared living marine resources in the Caribbean and North Brazil Shelf Large Marine Ecosystems (CLME+ region) to enhance their livelihood opportunities.

This survey should only take 5-10 minutes to complete. Be assured that all answers you provide will be kept in strictest confidence.

* Required

1. Which of the following communication tools do you currently use? (Tick all that apply) *

Check all that apply.

	For personal and recreational purposes	For work and professional purposes	I do not use this platform
Email	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Newspapers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Websites	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Facebook	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Instagram	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Twitter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
YouTube	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
WhatsApp	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Word of mouth	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Radio	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2. **Currently, which of the following do you use to get news and updates about fisheries? (Tick all that apply) ***

Check all that apply.

- Email
- Newspapers
- Websites
- Facebook
- Instagram
- Twitter
- YouTube
- WhatsApp
- Word of mouth
- Radio

3. **How often do you check each of the available communication tools for updated fisheries information? ***

Mark only one oval per row.

	Daily	At least once a week	At least 3 times a week	Once a month	At least 3 times a month	Never
Emails	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Newspapers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Websites	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Facebook	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Instagram	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Twitter	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
YouTube	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
WhatsApp	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Word of mouth	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Radio	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

4. How useful are each of the communication tools in relaying fisheries related information? *

Mark only one oval per row.

	Not useful at all	Somewhat useful	Very useful	Not applicable
Email	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Newspapers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Websites	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Facebook	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Instagram	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Twitter	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
YouTube	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
WhatsApp	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Word of mouth	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Radio	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

5. What is your preferred communication tool for receiving fisheries information? *

6. Which communication tool would you prefer to receive information about the StewardFish project? *

Mark only one oval.

- Email
- Newspapers
- Websites
- Facebook
- Instagram
- Twitter
- YouTube
- WhatsApp
- Word of mouth
- Radio
- Other: _____

7. Which communication tool(s) do you use to receive information about fisheries management and governance? (Select all that apply)

Check all that apply.

	Regional policies	Open/close dates for fishing	Catch regulations	Marine management area information	Gear regulations	Landing data	Not applicable
Email	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Newspapers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Websites	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Facebook	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Instagram	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Twitter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
YouTube	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
WhatsApp	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Word of mouth	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Radio	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8. Which communication tool(s) do you use to receive information related to the harvest sector? (Select all that apply)

Check all that apply.

	Fisher ID renewal	Vessel inspections	Acquiring fishing licenses	Training sessions	Fish prices	Not applicable
Email	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Newspapers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Websites	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Facebook	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Instagram	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Twitter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
YouTube	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
WhatsApp	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Word of mouth	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Radio	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

9. Which communication tool(s) do you use to receive information related to the post-harvest sector? (Select all that apply)

Check all that apply.

	Fish prices	Sanitary and phytosanitary measures	Training sessions	Fish vendor licenses	Export markets	Not applicable
Emails	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Newspapers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Websites	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Facebook	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Instagram	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Twitter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
YouTube	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
WhatsApp	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Word of mouth	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Radio	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

10. Are there any communication tool(s) you currently use to receive fisheries information which were not listed in this survey? *

Mark only one oval.

- Yes
 No

11. If yes, please state the name of the communication tool(s) and the type of information you receive from this platform.

Skip to question 12.

Additional Information

12. Gender *

Mark only one oval.

- Male
 Female
 Other

13. **Age ***

Mark only one oval.

- 16-35
- 36-55
- 56-65
- Over 65

14. **Country ***

15. **Email address**

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