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TANZANIA FISHERIES RESEARCH
INSTITUTE (TAFIRI)**



**PROGRESS REPORT
PFZ application awareness report**

SAPPHIRE project

PFZ application awareness

Progress Report

APRIL 2025

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Tanzania Fisheries Research Institute

P. O. Box 9750, 1 TAFIRI Street, Kunduchi

14122 Dar es Salaam, Tanzania

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Principal Investigator:

Eng. Innocent E. Sailale

Contributors: Eng. Innocent E. Sailale, Mr. Said S. Mgeleka, Dr. Baraka L. Kuguru, Mr. Hassan J. Mpuruti, Dr. Happy K. Peter, Dr Mary A. Kishe and Dr. Ismael A. Kimirei

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Background and Introduction

Small- and medium-scale fishers along the Tanzanian coast and Zanzibar predominantly exploit shallow, nearshore waters (Jiddawi and Öhman 2002). These areas, once rich in marine life, have been subjected to increasing fishing pressure due to growing competition and limited access to offshore fishing grounds. This trend has led to a notable decline in fish catch volumes in many traditional fishing grounds, threatening both livelihoods and marine biodiversity (Silas 2022).

To address these challenges, a research initiative was launched aimed at providing sustainable and innovative solutions for artisanal fisheries. This initiative leverages state-of-the-art satellite remote sensing and in-situ oceanographic data to identify and map productive fishing zones in Tanzania's territorial and Exclusive Economic Zone (EEZ) waters. From January to December 2020, fisheries data were collected from 21 coastal districts across mainland Tanzania and Zanzibar, focusing on ring-net fishers who were trained to use GPS devices to mark fishing event locations and record catch and effort data. This information was instrumental in validating potential fishing zones and understanding the spatial distribution of fishing effort.

In parallel, the project identified challenges in the fish marketing chain. Traditionally, the sale of fish takes place at landing sites or nearby markets, where traders and buyers have limited information on the availability and quality of the catch. This localized marketing system often restricts market access, reduces competition, and contributes to lower fish prices. In instances of high catch volumes—especially with the adoption of more efficient fishing methods—significant portions of fish spoil due to the absence of timely buyers, resulting in post-harvest losses (FAO 2022).

As a response to these issues, the **Potential Fishing Zone (PFZ) mobile application** was developed. This mobile-based tool allows fishers to access real-time information on offshore fishing zones, enabling them to make informed decisions, reduce fishing effort, and target more productive areas. Moreover, the app features a digital marketplace where fishers and traders can advertise their catch, thereby expanding their customer base and promoting competitive pricing. Buyers, including households and processing factories, can use the app to browse available products and communicate directly with fishers for delivery, reducing the need to visit physical markets.

To ensure effective adoption, an awareness campaign was conducted across coastal districts of mainland Tanzania and Zanzibar. The campaign aimed to introduce the PFZ mobile application to communities and train users on its functionality. The districts visited included Mkinga, Tanga City, Pangani, Bagamoyo, Kilwa, Mtwara Municipal Council, Lindi Municipal Council, West District

(Unguja), Pemba North, Pemba South, and Unguja North. Raising awareness is crucial to empowering communities with knowledge and tools that enhance fishing efficiency and improve market access.

This report presents the findings and outcomes of the awareness campaign, assessing the level of community engagement, feedback from users, and recommendations for improving the uptake of the PFZ mobile application.

Approach and Methodology

The awareness campaign was initiated with a preliminary assessment of the existing knowledge and understanding of the Potential Fishing Zone (PFZ) mobile application among the target communities. The project team began by engaging local government leaders to ensure buy-in and support at the highest administrative levels. The project's background, objectives, and benefits were introduced through public address (PA) systems and formal presentations, beginning with meetings with District Commissioners and District Executive Directors. This approach ensured that key decision-makers were well-informed and could actively support the campaign within their jurisdictions.

Following this, the campaign was extended to the primary beneficiaries—fishing communities across selected coastal districts. These sessions aimed to build awareness and demonstrate how the PFZ mobile application can support various stakeholders, including fishers, fish traders, transporters, and broader communities dependent on marine resources.

The government played an essential role in empowering local communities by facilitating hands-on training on how to use the PFZ mobile application. Training sessions covered key application modules: **VUA (Fish)** for fishing activity information, **UZA (Sell)** for advertising and selling fish, and **ODA (Order)** for buyers to place orders. Practical demonstrations were conducted on how to download the app via the Play Store or App Store, register as a user, and navigate features such as fishing reports, product listing, and performance dashboards.

The awareness and training campaign was conducted across 14 districts in mainland Tanzania and Zanzibar. These activities were supported by visual learning tools, including TV displays, video advert, project documentary, and practical demonstrations. Both fishers and traders were actively involved in the training, and high-performing users were recognized with branded t-shirts bearing

the PFZ logo and the **SAPPHIRE Project** insignia, increasing visibility and community identification with the initiative.

To expand outreach, media platforms—both television and print—were engaged to broadcast the campaign, further promoting the application to wider audiences. In addition, official launch events were held to mark the operational rollout of the PFZ mobile app. In Zanzibar, the launch took place at Malindi Market, while the mainland Tanzania launch occurred at the Ferry Market in Ilala District, Dar es Salaam. These events were officiated by high-level dignitaries, including the Permanent Secretary for the Fisheries Sector and respective District Commissioners, lending credibility and significance to the initiative.

Key Achievements and Outputs

1. Community Awareness

The awareness campaign significantly enhanced community understanding and interest in the Potential Fishing Zone (PFZ) mobile application across targeted coastal districts. Approximately **1,600 individuals** were reached during the campaign (see Appendix 1), including fishers, traders, buyers, and other marine resource stakeholders.

One of the major milestones was the **official launch of the PFZ application**, which took place in two key locations:

- **In Mainland Tanzania**, the launch was officiated by the **Deputy Permanent Secretary – Ministry of Livestock and Fisheries** at the **Ilala Ferry Market**. The event was attended by senior officials, including the **District Commissioner of Ilala**, the **Executive Director of the City of Dar es Salaam**, directors from the fisheries department, local government leaders, and representatives from the fishing and trading communities.
- **In Zanzibar**, the application was officially launched at **Malindi Fish Market**, led by local fishers and traders, in collaboration with the **Director General of the Zanzibar Marine Fisheries Resource Research Institute (ZAFIRI)**. This grassroots involvement reflected strong ownership and enthusiasm from the community.

2. Media Coverage and Publicity

The PFZ mobile application gained widespread publicity through both **mainstream media** and **digital platforms** see Appendix 2. Key media outlets that covered the campaign include:

- Television and radio stations: **ZBC, ITV, UTV, Clouds Media, TBC**, among others.
- Print media: **Daily News, Uhuru, The Guardian**, and **Wananchi Communications**.
- Online platforms and social media pages also featured awareness content, reaching a broader and younger demographic.

3. Application Uptake and Use

The campaign recorded a promising uptake of the PFZ app:

- Over **2,500 transactions** were recorded during the pilot testing and early usage phase.
- More than **600 users** (including fishers, traders, and buyers) successfully registered and began using the application.
- Early adopters reported satisfaction with the app's ability to support fishing activities, enhance sales, and connect them with broader markets.

The campaign also distributed promotional materials such as **PFZ and SAPPHIRE-branded T-shirts** to selected participants, which helped raise visibility and community identification with the project.

4. Feedback and Testimonials

Several fishers and traders provided positive testimonials during media interviews, expressing their excitement about the PFZ app. Many noted that the app had already started helping them **locate better fishing grounds, reduce fuel costs, and expand their customer base** through online sales. These success stories were broadcast and published across various platforms, reinforcing the app's relevance and potential to improve livelihoods.

5. Ongoing Efforts

Following the successful rollout and initial awareness phase, the project team plans to **continue media engagement**, including:

- Running educational segments on national television and radio.
- Collaborating with local influencers and community radio for awareness in remote areas.
- Publishing periodic user stories and data highlights to sustain momentum and encourage broader adoption.

Launching of PFZ application

1. Tanzania Mainland

Tanzania Fisheries Research Institute (TAFIRI) officially launched the “**Vua, Uza na Nunua Samaki Kidigitali**” a digital system named PFZ (Potential Fishing Zones) App on April 4th, 2025, at the Ferry Fish Market in Dar es Salaam (**Figure 1**).



Figure 1: The Deputy Permanent Secretary – Ministry of Livestock and Fisheries, Dr. Edwin Mhede (seated in the middle) with heads of fisheries sector institutions and project coordinators of the SAPPHIRE Project during the official launch of the PFZ App at Ferry Fish Market, Dar es Salaam.

Mr. Innocent Sailale, the SAPPHIRE Project Coordinator (Figure 2), during the launch event, explained the project's objectives, stating that the launch comes after over a month of intensive awareness and committed efforts by TAFIRI. These efforts included training fishermen, fish vendors, and consumers in various coastal regions of Mainland Tanzania and Zanzibar. The purpose of the training was to equip stakeholders in the fisheries sector with the knowledge and skills needed to effectively use this digital system.



Figure 2: Mr. Innocent Sailale, SAPPHIRE Project Coordinator, giving a presentation about the project during the official launch of the PFZ App at the Ferry Fish Market.

He said that the primary goal of the PFZ App is to empower fishermen to increase their income by helping them identify productive fishing areas using scientific data. The system also seeks to expand the market reach for fisheries products by connecting fish vendors, traders, and consumers to larger and more diverse markets—ultimately improving their economic well-being. This launch marks a significant milestone in transforming the fisheries sector through the adoption of modern technology, contributing to sustainable development and strengthening the Blue Economy sector, he said.

Key Highlights:

The Guest of Honour at the event was the Deputy Permanent Secretary responsible for Fisheries in the Ministry of Livestock and Fisheries, **Dr. Edwin Mhede** (Figure 3). In his official launch speech, he emphasized that the PFZ App will provide fishermen with the opportunity to identify productive fishing grounds and be informed of the weather conditions in real-time. He also noted that the reliability of this system will increase the confidence of financial institutions to offer loans to fishermen, as the data from the app supports income-generating activities. This, in turn, will help boost the country's economy.



Figure 3: Dr. Edwin Mhede, Deputy Permanent Secretary at the Ministry of Livestock and Fisheries, delivering a speech during the official launch of the PFZ App at the Ferry Fish Market in Dar es Salaam.

Another distinguished guest was the Director of Dar es Salaam City Council, **Mr. Elihuruma Mabelya** (Figure 4), who highlighted that the PFZ App will enable fishermen to operate in safer conditions by helping them assess the weather before setting out to sea. He stressed that traditional methods of locating fishing areas have often been unreliable and have led to losses and safety risks, as fishermen ventured out without accurate weather information. With the PFZ App providing real-time data, fishermen can reduce both the time and cost of searching for fish. Mr. Mabelya

added that the system will not only increase fishermen's income but also make it easier for fish traders to access loans. With accurate and verifiable data, financial institutions will be more willing to support them.



Figure 4: Mr. Elihuruma Mabeya, Director of Dar es Salaam City Council, delivering remarks during the official launch of the PFZ App at the Ferry Fish Market in Dar es Salaam.

The Director General of TAFIRI, **Dr Ismael Kimirei** (Figure 5) shared that the development of the PFZ App took seven years to ensure it fully meets the needs of fishermen and traders. He emphasized the app's potential will make a significant contribution to Tanzania's national economy by improving fishing operations and supporting fair market pricing. Greater productivity in the sector is expected to lead to higher revenues, job creation, and improved livelihoods for communities that depend on fishing. Dr. Kimirei concluded by stating that better access to reliable information will empower both fishermen and traders to work more efficiently, thereby strengthening the fisheries sector's contribution to the national economy.



Figure 5: Dr. Ismael Kimirei, Director General of the Tanzania Fisheries Research Institute (TAFIRI), delivering a speech during the official launch of the PFZ App at the Ferry Fish Market in Dar es Salaam.

The launch event was energized by a live demonstration from **Mr. Ismail Seif**, a fisherman, who showcased how to use the PFZ system to identify productive fishing zones and how to digitally sell fish through the platform (Figure 6).



Figure 6: Mr. Ismail Seif, a fisherman, demonstrating the use of PFZ App to identify potential fishing grounds and digitally selling fish through the platform during the official launch of the PFZ App at the Ferry Fish Market in Dar es Salaam.

The Guest of Honour concluded by saying, “We are thrilled to kick off the Vua, Uza na Nunua Samaki Kidijitali, which brings together a chain of stakeholders along the fishery chain (fishers, processors, traders, and consumers). He urged the Ministry to take the lead in rolling out the PFZ App across all coastal communities”.

The launch of the PFZ App was covered by several media outlets (see Annex 2 for details).

2. Launch of PFZ App in Zanzibar

The launch of the PFZ App in Zanzibar took place on March 21st, 2025, at the Malindi Fish Market in Zanzibar. The event was followed by training sessions for fishermen, fish vendors, traders, and fish consumers, led by the Assistant project investigator of the SAPPHIRE Project, **Dr. Happy Kokwenda Peter** (Figure 7). In an interview with the media, Dr. Happy explained that this system will eliminate the need for guesswork in fishing. “Fishermen will no longer have to fish blindly. They will have access to accurate information on where to fish, with the system using satellite technology to identify fish indicators, thus helping fishermen know exactly where the fish are,” she clarified.



Figure 7: Dr. Happy Kokwenda Peter, Assistant Project Investigator of the SAPPHIRE Project, conducting a training session on the PFZ App for fishermen, fish vendors, traders, and consumers.

The fishermen who participated in the training expressed their gratitude to the government for introducing the system, stating that it will help them fish more easily, increase their income, and improve their livelihoods. They mentioned that they have learned all aspects of the application system and are hopeful that it will greatly enhance their economic well-being.

Meanwhile, the Director-General of the Zanzibar Fisheries and Marine Resources Research Institute (ZAFIRI), **Dr. Zakaria Ally Khamis** (Figure 8) stated that both the Tanzanian Mainland and Zanzibar governments recognize the importance of the PFZ App system. He noted that it will enable fishermen to fish and sell their fish in modern ways, connecting them directly to the market, thus making the fish trade more efficient and increasing productivity in the sector.



Figure 8: Dr. Zakaria Ally Khamis, Director General of the Zanzibar Fisheries and Marine Resources Research Institute (ZAFIRI), being interviewed on television during the official launch of the PFZ App at the Malindi Fish Market in Zanzibar.

Conclusion

In conclusion, the awareness and rollout campaign for the Potential Fishing Zone (PFZ) mobile application successfully introduced an innovative, data-driven solution to support artisanal and small-scale fisheries along the Tanzanian coast and Zanzibar. By integrating satellite technology with local knowledge and empowering users through practical training and community engagement, the initiative has demonstrated the value of digital tools in enhancing fishing efficiency, reducing post-harvest losses, and improving market access. The strong participation, media coverage, and positive feedback from users underscore the potential of the PFZ application to transform traditional fisheries management and marketing systems. Continued support, including capacity building, stakeholder engagement, and system integration into national frameworks, will be essential to sustain and expand the impact of this initiative across the region.

References

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Appendix





This report is supported by two appendices that provide additional insights and documentation of the activities conducted. The first appendix (Appendix 1), titled Community Outreach and Training Campaign for the PFZ App in Coastal Areas of Tanzania, presents detailed records of the awareness and training sessions conducted across the selected districts. It includes data on participant numbers, training content, locations visited, and visual documentation such as photos and demonstration materials used during the campaign.

The second appendix (Appendix 2), Media Outlet Coverage During the Launching Events of the PFZ App in Dar es Salaam and Zanzibar, highlights the extensive media engagement that helped amplify the project's visibility. It features a summary of television, radio, print, and digital media coverage, along with links and references to published content and news broadcasts. These appendices collectively offer a comprehensive view of the outreach and communication efforts

that were instrumental in promoting the PFZ mobile application to fishing communities and the wider public.

Appendix 1: Community Outreach and Training Campaigns for the PFZ App in Coastal Areas of Tanzania

District	Registered users on Landing Station/Market	Images Captured During PFZ App Outreach and Training at Various Fish Landing station/markets	
Mkinga	<p>Zingibari</p> <p>04/03/2025</p> <p>Registered users 32</p>		
	<p>Moa</p> <p>04/03/2025</p> <p>Registered users 27</p>		

Tanga City	<p>Deepsea</p> <p>05/03/2025</p> <p>Registered users 29</p>	 
	<p>Kasera</p> <p>06/03/2025</p> <p>Registered users 29</p>	 

<p>Pangani 07/03/2025</p>	<p>Kipumbwi Registered users 21</p>		
<p>Bagamoyo 08/03/2025</p>	<p>Custom (Dunda) Registered users 52</p>		

<p>Mtwara 10/03/2025</p>	<p>Shangani Feri Registered users 45</p>		
<p>Lindi MC 11/03/2025</p>	<p>Benki Registered users 50</p>		

<p>Kilwa 12/03/2025</p>	<p>Kivinje Registered users 75</p>		
<p>Kinondoni 14/03/2025</p>	<p>Kunduchi Pwani Registered users 49</p>		

<p>Unguja 18/03/2025</p>	<p>Nungwi Registered users 36</p>		
<p>Unguja 19/03/2025</p>	<p>Malindi Registered users 48</p>		

<p>Mkoani 20/03/2025</p>	<p>Ngazini Registered users 64</p>	
<p>Wete 21/03/2025</p>	<p>Wete Pwani Registered users 47</p>	

<p>Ilala 28/03/2025</p>	<p>Ferry Registered users 45</p>		
<p>Kigamboni 28/03/2025</p>	<p>Minazi mikinda Registered users 25</p>		

Appendix 2: Media outlet coverage during the Launching events of PFZ App in Dar es Salaam and Zanzibar

Location	Images of Live TV coverage	Images of Print media coverage	Links of Blogs media coverage
Dar es Salaam Fery Fish Market	ITV 	Habari Leo 	MTANZANIA https://mtanzania.co.tz/uvuvi-uuzaji-samaki-sasa-kidijitali/ MWANANCHI https://www.mwananchi.co.tz/mw/habari/biashara/wafanyabiashara-wa-samaki-sasa-kuuza-kidijitali-4989672
	TBC 	Daily News 	SE MEDIA TV https://www.youtube.com/watch?v=NxAE8gUWqzE TBC 2 https://www.youtube.com/live/8esw3MKB8bg tbc_online (Instagram) https://www.instagram.com/reel/DHrWoFuUcc/?igsh=cDUzd2xjazAzOGZl KUSINI KWETU https://kusinikwetu.blog/2025/04/03/tafiri-yazindua-mfumo-wa-kuvua-kununua-na-kuuza-kidijitali/ habarileo_tz (Instagram) https://www.instagram.com/reel/DHUECKSVD/?igsh=MTZ5OXE2aW8

	<p>EATV</p>  <p>UVUVI KUFANYIKA KIDIJITALI Wavuvi katika soko la Samaki Fori kumufika A 6 DUNIANI KOTE SERIKALI YAZINDUA HFA</p>		<p>wZjNtcg%3D%3D</p> <p>ufmradiotz (Instagram) https://www.instagram.com/p/DH-6dTVNqk6/?igsh=MTdpdjF5ZDIwc m8lZg%3D%3D</p>
Malindi Fish Market in Zanzibar	<p>UTV (AZAM TV)</p>  <p>VUA NA UZA KULETA MAPINDUZI YA UVUVI VUA NA UZA KULETA MAPINDUZI YA UVUVI UWANJA</p> <p>ZBC</p>  <p>Vua na Uza Kidigitali HABARI TAMBA TAZINDUA MUMBI WA VUA NA UZA KIDIGITALI JUUU KULANA WEA KATIBA KUTOMBA MAPINDUZI YA UPINDO STADI VETA KULALIM TALAISI ZA UMMA</p> <p>TBC</p>  <p>ARIDHIO MFUMO WA PEZ NI TSA KWA WAVUVI 38A3 TBC NEWS JIMBO FURUKA KERO YA MAJ NGUSU KUNA HISTORIA SCREEN RECORDER</p>	-	<p>azamtvztz (Instagram) https://www.instagram.com/reel/DHcunKSNSlc/?igsh=MTlwZTN6b2x2M zI2Zg%3D%3D</p>
