ICT4Fisheries in Practice

Cape Town, South Africa, October 2019

ABALOBI

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beyond conservation

Contents


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Summary

The second Information Communication Technologies for Fisheries (ICT4Fisheries) conference, named 'ICT4Fisheries in Practice', was held in Cape Town, South Africa 7th-10th October 2019. The conference brought together 63 individuals from 17 countries representing various organisations using technology within the small-scale fisheries sector. The overall objective was for actors to share insights that enable the adoption of technology in small-scale fisheries. Key learnings from the conference included identifying the pros and cons of ICTs, determining opportunities for tech and establishing key user engagement strategies. These were derived from case studies that were presented as well as group discussions. In this report we present an overview of the key learnings from the conference.

Introduction

The second Information Communication Technologies for Fisheries (ICT4Fisheries) conference was held in Cape Town, South Africa between October 7th and 10th, 2019

The 'ICT4Fisheries in Practice' conference sought to bring together actors working within the fisheries digital space to share insights about innovative methodologies that enable the uptake of technology in small-scale fisheries. The main objectives addressed during the course of the four days included;

1. Discuss and identify participatory and inclusive methodologies that foster the uptake of technology and scalability of these solutions across diverse contexts.

2. Identify and collate the pros and cons of technology-based solutions for small-scale fisheries;

3. Foster an ICT4Fisheries community of practice, and share lessons as well as best practice with regards to co-design and ownership models, data ownership and sharing mechanisms as well as feedback challenges and opportunities for scaled use/impact;

4. Examine policy implications of ICT4Fisheries within the context of the FAO Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication (SSF guidelines).

The conference brought together 63 individuals representing 17 countries from across the globe. Individuals attending the conference represented various actors from the small-scale fisheries sector including government, non-governmental organisations, fishers, private sector, research groups and intergovernmental organisations (Annex 1). In addition, key sessions were streamed online. There were approximately a total of 50 individuals from 17 countries that followed the online sessions on October 8 and 9th.

Participants represented a range of countries and organisations which stimulated fruitful shared learning experiences. The structure of the conference ensured that participants had adequate time to network and engage with fellow ICT4Fisheries actors. Participants took part in a field trip on day one and this served as a warm up to the week, it provided insights into the ABALOBI tech and elicited key themes. Day two and day three of the conference consisted of presentations and small group discussions to facilitate the uptake of lessons from case studies, the identification of positive elements of ICT4Fisheries and the challenges. The final day was

composed of a series of learning labs whereby participants could focus on topics of interest such as the practicalities of the ABALOBI/Blue Ventures monitor app, fisher feedback session or exploring the scalability of ICT4Fisheries. As stated by several of the participants, the structure and flow of the conference (see Appendices) as well as the diversity of individuals fostered continued engagement and rich learning opportunities.

Key learnings

Pros and cons of ICTs in small-scale fisheries

Key questions throughout the week focussed on the positives and negatives of using technology in small-scale fisheries. These could be grouped into main themes, listed below with case studies.

Pros

- *Data Processing*: improved efficiency and processing of quantitative data
    - Faster data capture
    - Faster data analysis
    - Capable of processing larger volumes of data at any time
    - Reduce errors in data collection and analysis
    - Accelerate reporting
    - Easier to standardise collected data and how these data are used
    - Improved integrity: more difficult to corrupt or falsify post-data collection, and harder to 'lose' data (e.g. misplace a piece of paper or get paper wet)
    - Less paperwork
    - Can reduce the cost of process
- *Sharing Information*: better communication and sharing of information
    - Instant and reliable communication
    - Increased transparency - electronic data easier to access, analyse and share than paper-based documentation
    - See and understand data more easily and in real time - dashboards and online comms
    - Can bridge skill gaps in analysis

Case study

In the Comoros, Dahari (with support from Blue Ventures) are partnering on a project working with fisherwomen to manage an area of their reef flat. Monitoring is done with mobile phones using Open Data Kit (ODK), these data connect to data feedback systems through the software 'Tableau'.

Fiona Moejes, **Dahari**, **Comoros** - "the aim of participatory catch monitoring is to ensure all small-scale fishers, regardless of literacy, have access to data"

Abigail Leadbeater, **Blue Ventures**, **UK** - "Platforms such as Tableau and PowerBI opened up new doors for data vis and feedback. Sharing visualisations with small-scale fishing communities has sparked cyclical interactions between data users and data providers and application to local context"

- *Planning and management*: efficient corrective action and ability to improve processes more quickly and access to information required for planning, ability to improve processes more quickly and take efficient corrective action

    - Predict future trends using predictive algorithms (leading to improved yields and efficiencies)

    - Monitor real time data

    - Analyze trends over time

Case study

Julie Robinson (The Nature Conservancy, Belize).
The Nature Conservancy (TNC), in partnership with Future of Fish (FoF), and the National Fishermen Producers Cooperative Society Ltd. (NFC) sought to identify an electronic traceability system for the small-scale artisanal Spiny lobster and Queen conch fisheries that supply NFC in Belize. The aim was to find a system that meets NFC's vision for:

a) reducing operational costs by modernising administrative processes;

b) creating a data-rich fishery that supports effective co-management and preservation of stocks, and

c) paving the way towards opening new markets for their marine products.

The Tally electronic traceability system developed by ThisFish was ultimately selected as the most suitable solution to meet the particular needs of this cooperative and fishery.

Tally can be used to increase seafood processing plant efficiency and improve fisheries management, bringing the Belize lobster and conch fisheries closer to meeting criteria for FIPs and FDMs (fishery improvement programmes and fishery development models), and in-so-doing creating a business-driven motive for Belizean fishers to fish sustainably.

Cons

- *Cost*

  - Buying or replacing lost/damaged hardware

  - Cost of connectivity (particularly phones and network provider)

  - Developing software (co-design or other) can be expensive

  - Maintaining software and providing support/training costly

  - Sometimes unclear who will cover these costs

- *Time*

  - Co-developing tech is time consuming

  - Training people in using tech takes time

- *Infrastructure and practicalities*

  - Internet is limiting factor in remote places

  - Charging devices at remote landing sites

  - Unfavourable environmental conditions e.g. wet hands, messy, sandy, sunshine

- *Socio-cultural barriers*

  - Tech can lose a 'human touch'

  - Cultural disconnect between fishers, NGOs and software developers (meaning tech is either not relevant to the intended user, meets their needs nor is used)

    • Many developers/s are in US, while SSF are not = disconnect
    • There's a great risk that tech does not meet actual small-scale fisher needs
    • Incentives for fishers to record data (if no market), it is a challenge to communicate this at times - this is an example of cultural disconnect where we expect fishers to collect data for us.

Case Study

Traci Linder from SALT (seafood alliance for legality and traceability)
"The majority of seafood technology companies serving the global market are based in North America. While many of them are successful at adapting to the needs of operations around the world, there is a nuance that's lost when providers are not from or based in the country of use. Cultural norms that may facilitate uptake of the technology may not be considered in its development, there may not be in-country tech support when systems malfunction
We're especially hearing the need for collaboration among technology providers, so this could be an opportunity for large North American based tech companies to subcontract with smaller in-country companies for support"

- *Technophobia*

  - Fear of getting something wrong

  - Fear of accidentally breaking/damaging something expensive and unaffordable to replace

- *Skills and literacy*

  - Need 'experts' to troubleshoot and maintain ICTs

  - Need basic levels of literacy and numeracy to operate/use tech in remote coastlines.

Case Study

In Lakshadweep, the Dakshin Foundation are working with fishers to collect fisheries data using mobile phones and the open source application "Open Data Kit". The move to ICT was prompted by the labour involved in digitising fisher data from their analogue logbooks. While the data was important, when fishers saw full logbooks they were overwhelmed by the work it would entail to digitise them. The idea was to streamline the process, but the app actually made it complicated...the fishers still really like the logbook over the app because logbooks are easier to fill out.

- *Language is a barrier to codesigning and/or scaling software*
- *Dynamic nature of technology and fisheries contexts*
    - Many fisheries contexts. You can customise tech extensively at the expense of scalability to other contexts, or keep it more general to have a wider applicability, with tradeoffs in functionality.

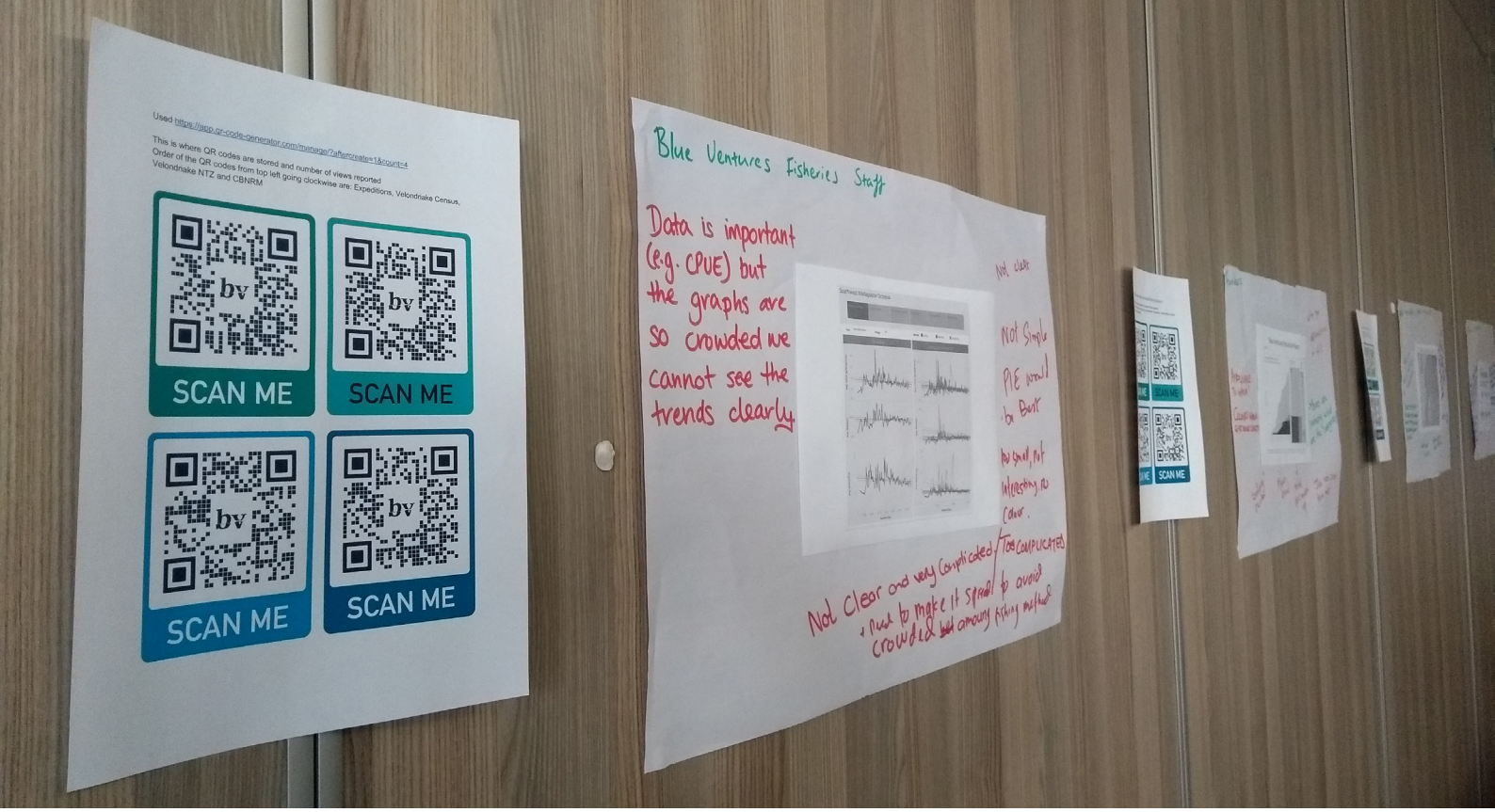
Opportunities for tech: what can you use ICTs for?

There are positives and negatives for using ICTs, but what are the opportunities for their use? How does technology fill gaps in the sector and what are people using technology to do?

Data Collection

Technology can make data collection and digitisation faster, more effective and efficient as well as add additional layers of verification. Examples include:

- Fisheries monitors collecting catch data at the landing site
- Fishers recording their own catch in a "digital logbook"
- Data loggers on vessels can track spatial & temporal information on fishing areas and travel patterns



- Time lapse cameras on vessels

Technology: ODK, custom apps, ssid, phone surveys, smart pens, vessel trackers

Case study

Wildan Ramadhan (MDPI, Indonesia) spoke about their data collection process, involving spot tracers and 'PELAGIC' data systems to track small-scale tuna fishing vessels around Maluku, Indonesia. This system, combined with the use of the I-FIsh app for monitoring landings and time-lapse cameras on boats for validation, makes collecting data across an entire province (almost 650km north to south) feasible.

Traceability

Technology allows for better identification of products from source through processing and the supply chain. The use of technology can increase efficiency of data processes during transportation and processing.

- Traceability allows for specialised marketing of product, especially if linked to certification

- IUU fish can be identified when all products are linked to a source.

- Knowing provenance of fish also allows for human rights transparency in supply chains

- Understanding operations within supply chain can drive efficiencies and support decision making

The limited number of processors in comparison to fishers and vessels at one end of the supply chain, and consumers at the other, mean that digitisation of at processing plants can provide incentive for doing the same at other levels.
Technology: QR and barcodes, apps, smart scales, dashboards

In this context, if traceability tools further marginalise and exclude small-scale fishers, then we need to rethink how we use these tools and explore ways in which traceability and transparency can rather drive positive transformation in small-scale fishery supply chains.

Case study

Chris Kastern, Abalobi, South Africa spoke about improving traceability and transparency of the West Coast Rock Lobster Fishery through a pilot program involving a small group of fishers. Utilising the ABALOBI app, a user friendly tool that ensures inclusion, fishers demonstrated that traceability and transparency in a sector plagued by IUU (illegal, unreported and unregulated fishing) was possible. This pilot showed that simplified tech could be utilised to drive transformation towards improved management of a resource, improved livelihoods through equitable prices and a transparent marketplace.

Data Sharing

Technology allows for more efficient and timely data analysis and production of reports, graphics and dashboards. Technology often also facilitates better sharing of these outputs for a range of different audiences:

- **Fishers** can see trends in their catches or the weather, or document earnings and profit

- Data can be presented with **community management groups** to aid in decision making.

- Data from numerous locations can be combined to give **governments** an overview of fishing activities.

- **Project staff** are able to assess their work and track progress towards goals.

- Organisations can easily share the impact of their work with **funders/ donors**.

- Best practice and interesting insights can be made easily available to the **wider public**.

Sharing data can create opportunities for wider conversations - for example engaging both men and women, or to understand better what information fisheries/communities want to see.
Technology: BI software (e.g. Tableau, powerBI, data studio), websites, within apps, Excel!

Capacity Building

Using technologies can necessitate or aid in building capacity in administrators, users and audiences. For example, by training data collectors to use an app to collect data, this also increases general skills in using phones, and confidence working with numbers. Use of technology can also build capacity in softer skills such as problem solving or communication.

Case study

Jenny House (Blue Ventures, Timor Leste) piloted a mobile-monitoring system to collect fisheries data with women from Ilik Namu, a small village on Atauro Island, Timor Leste. The questionnaire in the app was co-designed with these women, and training covered actually using the technology itself, as well as confidence building and communication so that they would feel empowered to take part in fisheries management meetings.

"Initially women were drawn to the programme to contribute to their community. As the programme progressed, the women became strong advocates for fisheries management and conservation"

Big Data

- Technology that makes data capture/digitisation more effective means that more data is available.

- AI can be used to process and find meaning in large datasets e.g. identifying IUU fishing, trends in catches

Communication & Knowledge Sharing

The ever increasing reach of mobile phones and connectivity means that communication and sharing of information is ever easier. Examples include:

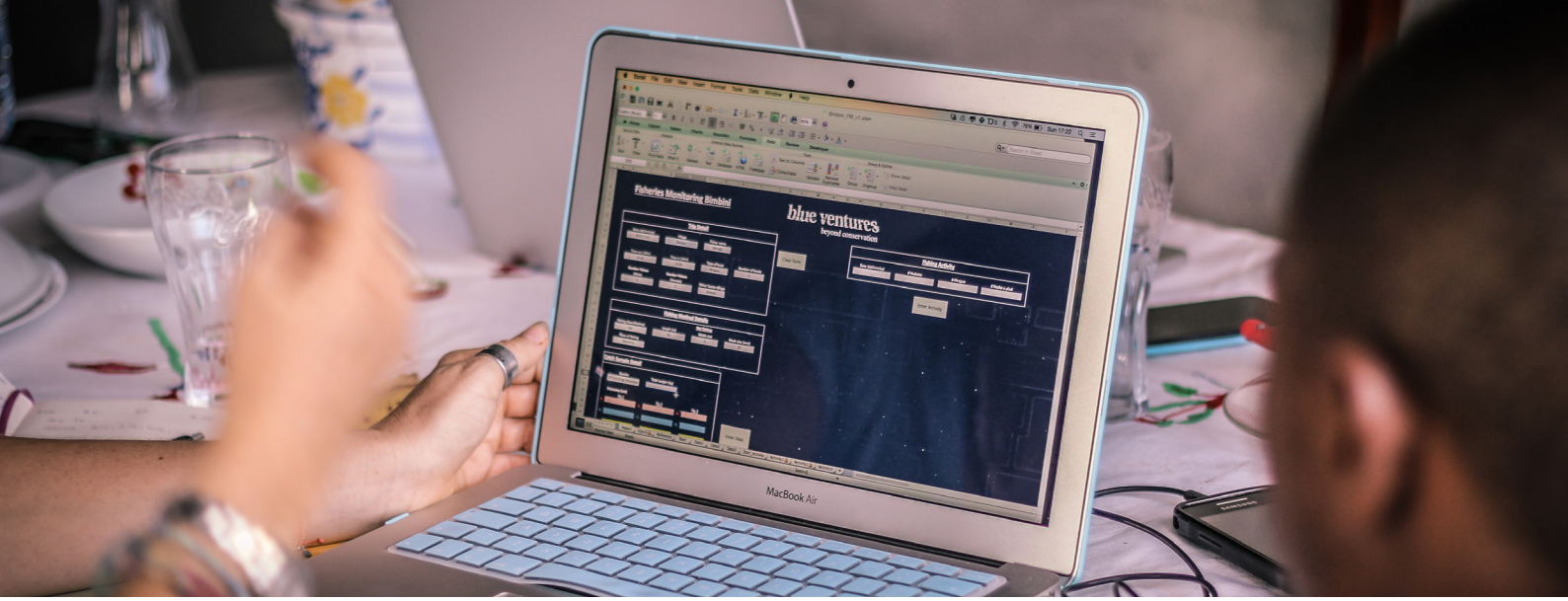
- Fishers in a local areas sharing information on weather or catch conditions
- Fishers or data collectors from differet communities continuting communication and support after trainings or exchnages
- Practicioners and communities of practice sharing learnings
- Organisations sharing news with stakeholders and the general public

Technologies: Messaging apps (Whatsapp, FB Messenger), Social Media (Facebook, Instagram), Mobile Phones

Many technologies, many outcomes

Often single technologies can serve multiple purposes; supporting both primary intended activities and other secondary outcomes. For example:

- Data collection using mobile phones can gather important fisheries information but also build capacity for users and support wider community engagement.



- Data collected for marketing for traceability can also be used by fishers to verify their rights and livelihoods.

- Data collected for management of products during processing can also provide data for co-management decisions.

Conversely technologies can be combined to enhance outputs for example by using vessel tracking data and catch data collected using mobiles to produce an online dashboard.

Fostering touch with tech: keeping people at the heart of ICT implementation

Key approaches for implementing tech emerged from the presentations and discussions during the ICT4Fisheries conference. ICT4Fisheries can be designed by anyone but what is critical is the touch - how tech is designed, introduced, implemented and utilised. Engagement approaches varied based on the stage of implementation. The following section outlines approaches that were used during various stages of implementation.

Initial engagement

Prior to designing, adopting or implementing a form of tech within a fisher community, a clear understanding of the context must be established. Formulating a broad knowledge of the community with a specific lens related to small-scale fisheries and tech must be conducted. This can be done in partnership with local fishers, leaders, community workers or the general population. Understanding the needs of the community will facilitate the development of tech that fulfils their needs and provides better solutions.

Relationship and trust building

Throughout all stages of tech development and implementation is it critical to build trust with people who will use the technology as this fosters better communication, shared understanding and ownership. This can take many different forms, whether it be identifying and reaching out to community leaders, meetings with fishers, and engagements with the wider community. It is important to move at the speed of the community, be humble and receive permission to work with them. Throughout the process, trust-building and relationship building can take different forms but should be a constant. Trust when implementing any tool, and in particular tools that capture data, is paramount.

Case study

Matt Roscher (WorldFish, Malaysia) presented on the WorldFish review of capacity building and the use of ICTs to support small-scale fisheries in Asia. One of his key points was; "trust shapes the way people interact with technology –being transparent in what the data is going to be used for is a valuable tool for developing trust."

Co-design: Collaborative, consultative, cooperative

Co-design can be defined as "user centered design leveraging local conditions, local knowledge, literacy levels and the experiences of the target user base will focusing on the real (not perceived) need". Co-designing tech is a time intensive and iterative process with the target group. Trust must be established and expectations must be managed. Ensuring the number of people consulted is sufficient and this is an inclusive process is critical- all voices must be heard. It is important the builders of the tech understand the needs of the users and prioritize their needs. In addition, during the co-design process, the users actual needs, not their perceived needs must be teased out.

Training: Data monitors, community members and fishers

In training users of the tech such as data monitors, fishers or other community members, the process must be inclusive and participatory and participants should receive training so they understand WHY tech is being used. Sensitivity and awareness raising with community around what the tech is and how it works is also critical - not just those collecting the data need to be trained. Training should not just be for the use of the tech but should also include training in data analysis, communication, leadership, financial management or other identified needs. Leadership and communication is a vital part of capacity building surrounding the implementation of tech. Learning exchanges can be part of training to

develop capacity with new individuals and communities. Lastly, training must be on going and facilitating a larger user base can be addressed through training.

Using technology: Fostering uptake and consistent use
Approaches to encourage the uptake of tech included proper consideration of other commitments of fishers and ensuring flexibility in data collection. Another approach was to pair older and younger community members together to share skills and overcome tech literacy problems. If possible data monitors could be rotated to spread opportunities and increase the number of knowledge champions. Acknowledging data champions through t-shirts or events provides incentives or enthusiasm which facilitates the use of tech.

Feedback
Data feedback sessions are an important part of the process. Discussing data leads to improved understanding of the initiative as well as broader project participation and achievement of objectives. When presenting data keep it simple, use pictures and stories. Also provide training to users on how to draw graphs, selecting what visualisations work best for them and how they can put graphs together. Encouraging fishers and community members to present their data contributes to overall understanding.

Areas for further thought

Although plenty was discussed throughout the week of the conference, there were still many questions left unexplored and unanswered. Some of these are listed below.

- How do we validate data that is being collected using tech?
- Who collects the data? Fishers vs data collection staff? How do we balance the pros and cons of each option? (e.g. using fishers to collect data engenders ownership and involvement and reduces burden on staff, but may require intensive training and by in)
- Intellectual property and data ownership. What is "community /fisher owned data"? What does this really mean in practice? How can we ensure fishers are involved throughout the whole data cycle?
- Qualitative data: How can use tech to collect, process, analyse and share fishers voices and important impacts that cannot be quantified?
- How to ensure marginalised groups are included in this action? How do we address the challenges of the digital divide for adopting technology? How do we take into account social dynamics when deploying tech? How do we take into account language barriers when deploying tech?
- More discussion on gender. What evidence is there for the use of tech in gender transformative action? How can we ensure gender is taken into account when deploying tech?
- How do we fund a co-design process, when this may take longer than expected?
- More specific case studies and examples - detailed reviews of technology (including cost and first hand experience), lessons learnt etc
- Practical hints and tips for real world implementation.
- What is the identity of our community practice? Who is it for? What is it for?

Looking ahead for ICT4Fisheries

We want to build upon the connections and learning exchanges that have occurred at the conferences and subsequent engagements. Moving forward, our aim is to foster and build upon these connections by developing a platform to build and grow a community of practice. This community of practice will serve as a space whereby actors within the small-scale fisheries tech space can continue to share ideas and troubleshoot challenges encountered. In addition, we hope to plan more engagements in the future whether they be virtual or face to face meetings. Let's stay in touch and grow this community together!

Thanks and acknowledgements

Special thanks go to the Oak Foundation, Waterloo Foundation and WorldFish for generously supporting the ICT4Fisheries conference. Thanks to Abalobi and Blue Ventures staff who generously gave their time to arranging workshop sessions and note taking and all attendees for their invaluable contributions. Finally (and most importantly), thanks go to fishers from South Africa and Seychelles for keeping our feet firmly planted in reality throughout the week.

Appendices

Appendix 1: Conference Agenda

#ICT4FISHERIES2019

ICT4Fisheries Conference Agenda

'ICT4Fisheries in Practice' - 6-10 October, 2019

CAPE TOWN WATERFRONT BREAKWATER LODGE, CAPE TOWN, SOUTH AFRICA

#ict4fisheries2019 @ict4fisheries

SUNDAY 6 OCTOBER 2019

Time	Workshop item
10h30 onwards	Registration at City Lodge, Victoria & Alfred Waterfront

MONDAY 7 OCTOBER 2019

Field Trip: Lessons from South Africa's Small-Scale Fishers and the Use of ICT4Fisheries Tools	
Time	Workshop item
08h30 – 09h15	Registration (Con'd), City Lodge, Victoria & Alfred Waterfront
09h15 – 10h00	Leave Waterfront to Kalk bay Harbour
10h00-10h15	Arrive in Kalk Bay • Introductions and overview of the day
10h15-12h00	Small-Scale Fishers and Application of ICTs • Brief explanation of Kalk Bay Fishery • Demonstration of technology • Q&As
12h00-13h30	Lunch
13h30-15h15	ABALOBI Container, Marketplace and Technology
15h15-16h00	Return to V&A Waterfront
16h00-18h00	Two Oceans Aquarium Tour

TUESDAY 8 OCTOBER 2019

ICT4Fisheries in Practice: Technology, Implementation and Methods to Foster Knowledge Uptake	
Time	Workshop item
08h30-9h00	Registration (Con'd), Cape Town Waterfront Breakwater Lodge
09h00 – 09h30	Welcome & Proceedings • Overview of workshop • Workshop logistics • Introductions
09h30-10h15	Opening Talks • ICTs and FAO's Voluntary Guidelines For Securing Sustainable Small-Scale Fisheries, Lena Westlund, FAO • Global Perspectives Related to ICT4Fisheries, Traci Linder, Fishwise/SALT
10h15-10h45	Coffee break
10h45-12h45	ICT4Fisheries in Action: Case Study Presentations • Ishaan Khot, Dakshin Foundation, India • Abigail Leadbeater, Blue Ventures • Julie Robinson, The Nature Conservancy, Belize • Alexander Tilley and Joctan Dos Reis Lopes, World Fish, Timor-Leste
12h45 – 14h00	Lunch

14h00-15h30	Knowledge Cafe
15h30 – 16h00	Coffee break
16h00-16h45	**P**lenary Feedback (Key Lessons Learnt from Day One) and Wrap Up

WEDNESDAY 9 OCTOBER 2019

Extracting Key Learnings, Failures and Best practices	
Time	**Workshop item**
09h00 – 09h30	Summary of Day Two and Icebreaker
09h30 – 09h45	Global Review of ICT4Fisheries FAO - VGSSF, Matt Roscher, Worldfish
9h45-10h45	Exploration of Critical Topics • Fisheries Monitoring and Gender, Jenny House, Blue Ventures • Innovative Feedback Tools, Wildan, MDPI • ICTs and Literacy: Overcoming the Challenges, Fiona Moejes, Dahari
10h45 – 11h15	Coffee Break
11h15– 11h45	Exploration of Critical Topics • Traceability and Marketplaces, Chris Kastern, ABALOBI • Seafood Markets and Processing, Eric Tamm, ThisFish
11h45-13h15	Exploration of Critical Topics (Con'd): Discussion
13h15-14h15	Lunch
14h15-15h15	Building a Community of Practice • Identifying next steps to ensure a community of practice
15h15-16h00	Review of Day Three and Closing
16h00 – 16h30	Coffee Break

THURSDAY 10 OCTOBER 2018

ICT4Fisheries Platforms: Deep Dive into Technology and Related Topics	
Time	**Workshop item**
09h00 – 09h15	Overview of the Day
09h15-09h35	Early warning and emergency response ICT4SSF systems
09h40 -10h30	Deep Dive into Tech - Part one - Parallel • ABALOBI/ BV Monitor • Scalability, costs and sustainability models
10h30 – 11h00	Morning Tea
11h00 – 12h30	Deep Dive into Tech (Con'd): Parallel Sessions • ABALOBI/ BV Monitor • Scalability, costs and sustainability models
12h30- 13h00	Reflections & Learnings
13h00 – 14h00	Lunch
14h00-15H15	Learning Labs • Facilitating Positive Market Incentives, ABALOBI • Power of Data: Visualisation and Community Engagement, Blue Ventures • Co-Designing Tech: Building Tech With Users, ABALOBI & Techairos
15h15-16h00	Review of the Day, evaluation and Closing
16h00-16h30	Coffee Break
-- END OF WORKSHOP --	

Appendix 2: List of Participants

Name	Affiliation	Location	Type of organisation
Abigail Leadbeater	Blue Ventures	Bristol, UK	NGO
Alex Tilley	WorldFish	Malaysia	Research
Andre Standing	CFFA (Coalition for Fair Fisheries Arrangements)	Kenya	NGO
Andrew Cawood	ABALOBI / Techairos	Stellenbosch, South Africa	NGO
Caitlynne Francis	ABALOBI & University of Cape Town	Cape Town, South Africa	NGO
Chris Kastern	ABALOBI	Cape Town, South Africa	NGO
Christo Peter Whittle	Council for Scientific and Industrial Research	Cape Town, South Africa	Govt
Daniel Smith	ABALOBI	Cape Town, South Africa	NGO
Danielle Stern	Mwambao Coastal Community Network	Zanzibar, Tanzania	NGO
Danny Roy Oreddy	Fishermen and Boat Owners Association Seychelles (FBOA)	Seychelles	Fisher
Derrick Labrosse	Fishermen and Boat Owners Association Seychelles (FBOA)	Seychelles	Fisher
Doreen Nasimiyu Simiyu	Community Action for Nature Conservation (CANCO)	Nairobi, Kenya	NGO
Fiona Lugo-Mulligan	Future of Fish	USA	NGO
Fiona Moejes	Dahari	Mutsamudu, Anjouan, Comoros	NGO
Franck Magron	Pacific Community	Noumea, New Caledonia	Research
Greg Duggan	ABALOBI	Cape Town, South Africa	NGO
Greg Burke	ABALOBI and Seychelles FBOA	Seychelles	NGO
Hannah Gilchrist	Blue Ventures	UK	NGO

Name	Affiliation	Location	Type of organisation
Ishaan Khot	Dakshin Foundation	Bangalore, India	NGO
Jean Luc Ramahavelo	Blue Ventures	Toliara, Madagascar	NGO
Jeff van Breda	Abalobi	Cape Town, South Africa	NGO
Jenny House	Blue Ventures	Timor-Leste/Australia	NGO
Julianne Robinson (Stock-bridge)	The Nature Conservancy	Belize	NGO
Jumanne Mohamed Sobo	WWF	Tanzania	NGO
Junaid Francis	WWF-SA	Cape Town, South Africa	NGO
Kiran Viparthi	Food & Agriculture Or-ganizations of UN (FAO)	Rome, Italy	Intergovernamental
Lily Dali Mwasi	WWF Kenya	Coastal Kenya	NGO
Margaret MacDonald	Abalobi	Cape Town, South Africa	NGO
Matthew Richardson	Abalobi	Cape Town, South Africa	NGO
Matthew Roscher	WorldFish	Penang, Malaysia	Research
Nick Calothi	Abalobi	Cape Town, South Africa	NGO
Nicolaas David Waldeck	Abalobi	Lambert's Bay, South Africa	NGO
Novia Sagita	Yayasan Planet Indonesia	West Kalimantan, Indonesia	NGO
Putra Satria Timur	MDPI	Bali, Indonesia	NGO
Rakotonaivo Miarisoa Lalaina	WWF Madagascar Coun-try Office	Madagascar	NGO
Robin George	Abalobi	Cape Town, South Africa	NGO

Name	Affiliation	Location	Type of organisation
Samantha Petersen de Villiers	WWF International	Cape Town, South Africa	NGO
Sara Fröcklin	Swedish Society for Nature Conservation (SSNC)	Sweden	NGO
Stuart du Plessis	Abalobi	Struisbaii, South Africa	Govt
Traci Linder	FishWise / SALT	California, United States	NGO
Wildan	MDPI foundation	Denpasar - Bali, Indonesia	NGO
Mereseini Bower	Women in Fisheries Network - Fiji	Fiji	NGO
Pedro Rodriques	Minitry of Agriculture and Fisheries, Timor-Leste	Timor Leste	Govt
Hilda adams	Weskus mandjie/Abalobi	Mamre, South Africa	Fisher
David Shoshola	ABALOBI Fisher	Lambert's Bay, South Africa	Fisher
Wilfred Poggenpoel	ABALOBI Fisher	Lambert's Bay, South Africa	Fisher
Martinus Newman	ABALOBI Fisher	Struisbaii, South Africa	Fisher
Timotheus Marthinus	ABALOBI Fisher	Arniston, South Africa	Fisher
Sarah Niemand	ABALOBI Fisher	Buffeljai, South Africa	Fisher
Serge Raemaekers	ABALOBI	Cape Town, South Africa	NGO
Tsele Nthane	ABALOBI/UCT	Cape Town, South Africa	NGO
Lena Westlund	FAO	Sweden	Intergovernmental
Karan Khanna	ABALOBI	Cape Town, South Africa	NGO
Magenta English	ABALOBI	Cape Town, South Africa	NGO

Name	Affiliation	Location	Type of organisation
Justin Rodgers	ABALOBI	Cape Town, South Africa	NGO
Albert Minnie	Techarios	Cape Town, South Africa	Business
Stephan Luyt	Techarios	Cape Town, South Africa	Business
Hafeez	Slegdehammer	Cape Town, South Africa	Business
Etika Sokowaqnilotu	Fiji Locally Managed Marine Area (FLMMA)	Fiji	NGO
Joctan Dos Reis Lopes	Worldfish	Timor-Leste	Research
James Crossely	ABALOBI	Cape Town, South Africa	NGO
Christian Adams	Fisher	Cape Town, South Africa	Fisher
Stewart Bernard	Council for Scientific and Industrial Research	Cape Town, South Africa	Govt