SMART SEAS TOOLKIT for DISASTER RESILIENCE

ITU/CTU/TATT Project

Joint Meeting of 51st Executive Council and 30th General Conference of Ministers

CTU ICT Week 2024 | St. Kitts & Nevis | 1 Oct 2024

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Meaningful Connectivity for All

- Initiatives to promote meaningful **connectivity for all** generally *exclude* some vulnerable populations

- Forms of exclusion include:
  - affordability
  - accessibility

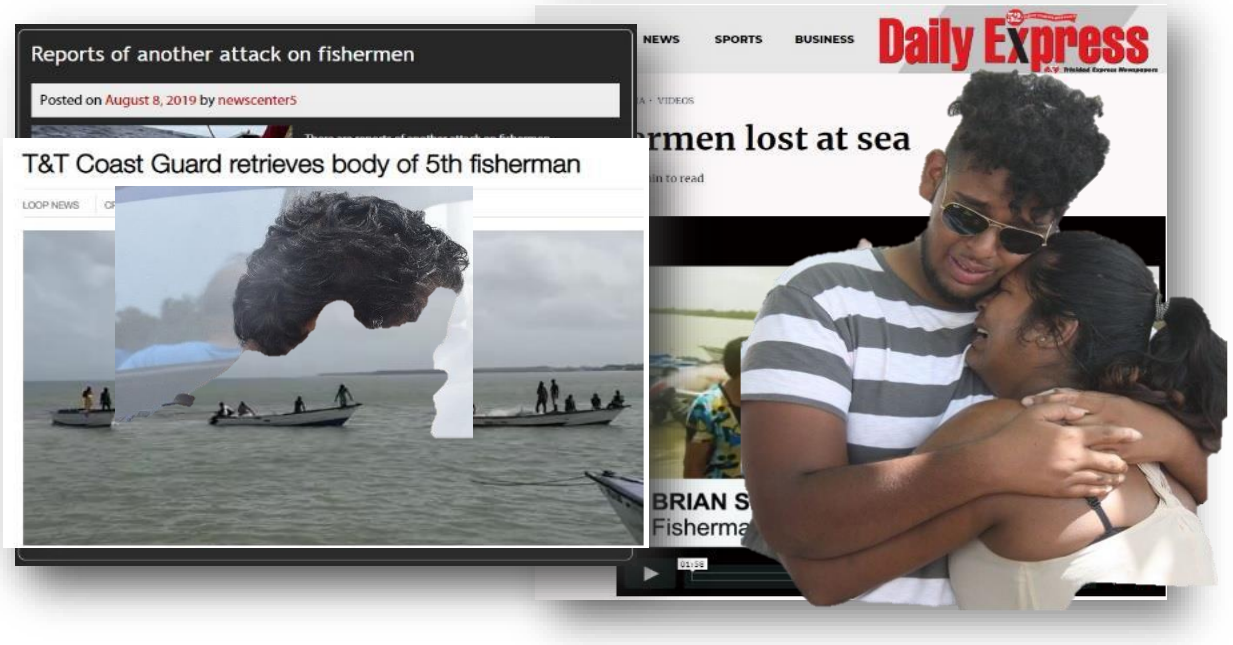
- Accessible, affordable ICTs requires action by several agents within the ecosystem: policy makers, regulators, service providers, innovators, etc.

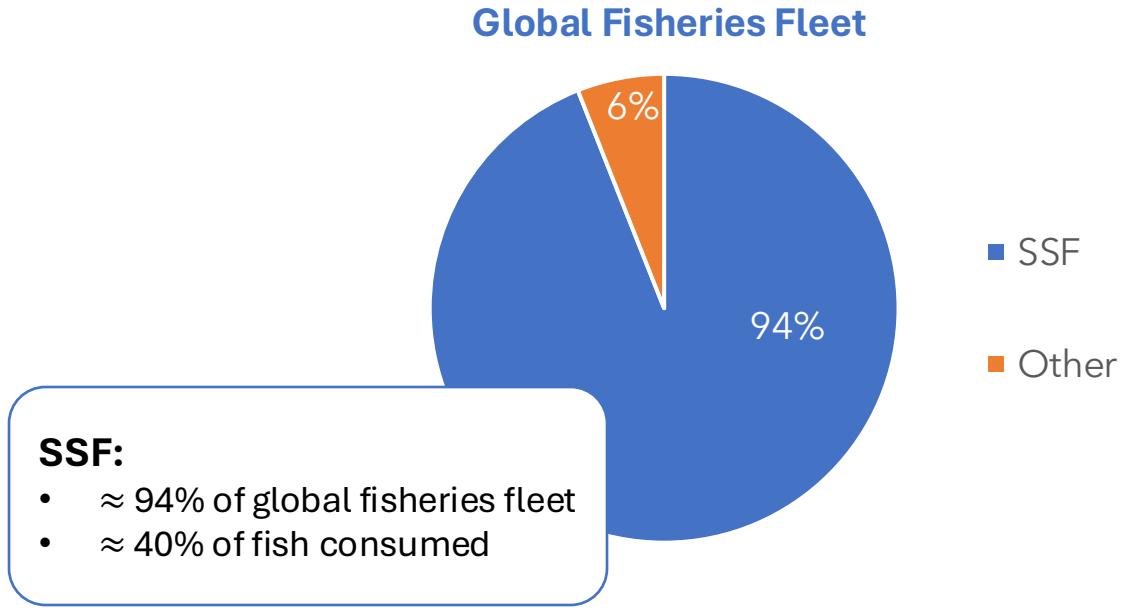
A Vulnerable Group: Small-Scale Fishers

- Fishing often ranked as most dangerous job; 32,000 annual fatalities @ sea (FAO 2020)
- Low visibility of small-scale fisher (**SSF**) vulnerability:
  - **Livelihoods**: digitally & financially
  - **Lives**: physically in undecked vessels

ICTs critical to both lives & livelihoods

Simply having ICTs is not enough, **enabling environment** *essential* for *affordable*, *accessible* ICTs





SSF:
- ≈ 94% of global fisheries fleet
- ≈ 40% of fish consumed

Strengthening Enabling Env: Smart Seas Project

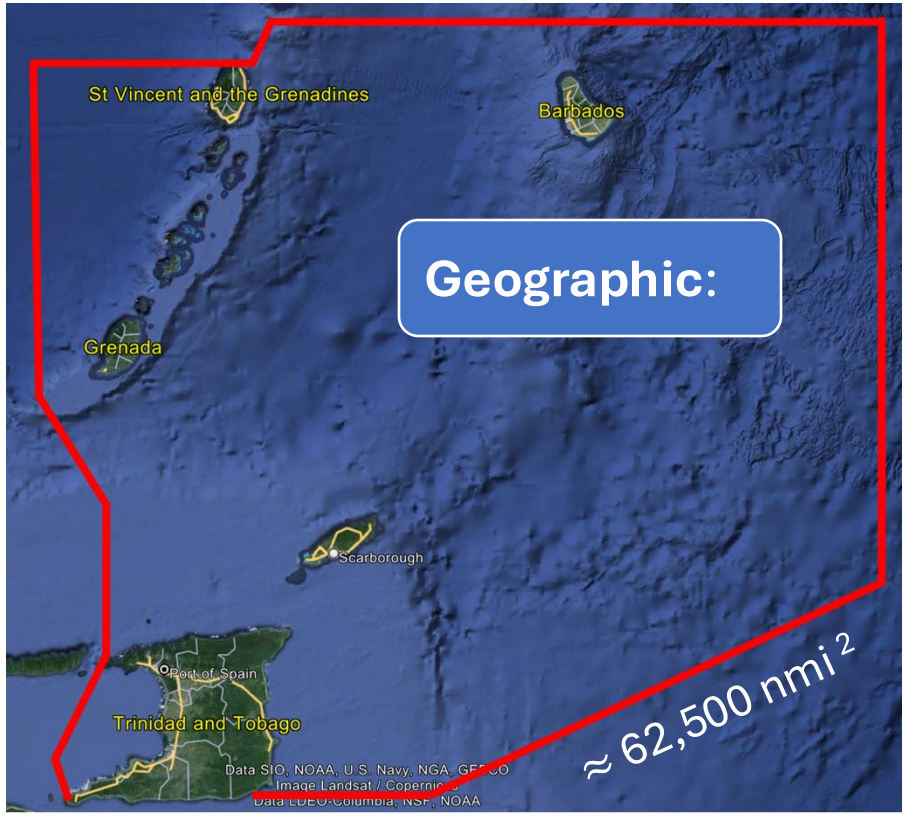
- Smart Seas Toolkit for Disaster Resilience (Smart Seas) Project: joint initiative supported by the Government of Trinidad and Tobago

- Aim: to increase the resilience & preserve the lives of SSF through ICTs with emphasis on the **enabling environment** [1]
- Enabling environment *essential* for affordable & accessible ICTs

[1] the set of actors, policies, regulations, frameworks, capacity, operations and associated engagements among actors and agencies which facilitate maritime communications to increase the resilience of small-scale fishers

Scope & Dimensions

Scope:



Geographic:

Beneficiary Sector: Fisheries

Dimensions:

- Policy & Regulation
- Operations
- Capacity
- Technology

Transferable: other sectors & underserved or vulnerable communities
Extensible: regionally & globally

Lifesaving & Livelihood-Supporting Comms

Essential (emergency comms: lifesaving)

VHF Radio
Source: ICOM

VHF-DSC Radio
Source: Standard Horizon

AIS-SART
Source: SAMYUNG ENC

Satellite EPIRB
Source: Daniamant

GMDSS[2]

Non-essential (regular comms & livelihoods)

Satellite Phone
Source: Inmarsat

PLBs
Source: ACR

Cellular Phone

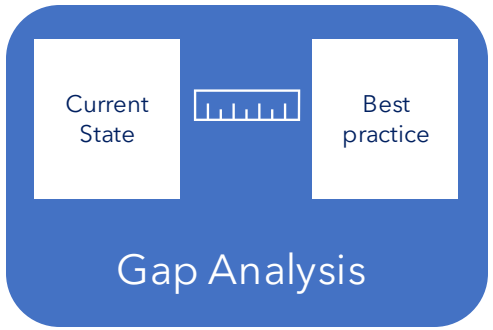
Direct to Device
Source: Thuraya

Non-GMDSS

[2] Global Maritime Distress and Safety System

Smart Seas Outputs, Outcomes & Impacts

OUTPUTS



Gap Analysis

Smart Seas Toolkit

Equipment

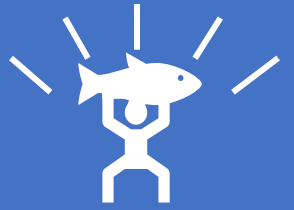
Agenda for Accessible Comms@Sea

OUTCOMES

Capacitated ecosystem

Strengthened enabling environment

IMPACT



Resilient SSF

Gap Analysis: Gaps & Other Findings in…

UN Conventions & Recs

- **Overlap in notification reqs**
  IMO GISIS[4]; ITU MARS[5]/List IV
- **Compliance**
  e.g. notification[3]: 80% of CTU Member States have never notified ITU MARS on their coast stations
- **Country membership**
  IMO: 30% , FAO: 20% , WMO: 15%

Ecosystem

- **Knowledge of process flows**
  What agency is responsible for discharging mandates under UN Conventions & Recs?
- **Roles & responsibilities**
  Gaps & overlaps: notification, registration, …
- **Engagement**
  Room for more collaborations and support across agencies within the ecosystem

Policy Environment

- **Currency of policies & related artefacts**
  Consider maritime areas and SSF as underserved in USF
- Official **agreements**
  e.g. on rescue co-ordination

Regulatory Environment

- **Inclusive regs & related artefacts**
  Maritime area coverage in USF
- **Official documentation**
  e.g. monitoring measures

Operations

- **Data** on national shore-based facility operations
  Channel usage, available times, etc.
- Radio **coverage** within MRCC

Capacity

- **Relevant curricula & certification schemes** for *Caribbean* SSF & coast stations
  Reduced & context-appropriate

[3] of maritime coast stations to ITU's MARS and List IV and IMO's GISIS
[4] Global Integrated Shipping Information System
[5] Maritime mobile Access and Retrieval System
[6] World Meteorological Organization

Opportunity Estimator

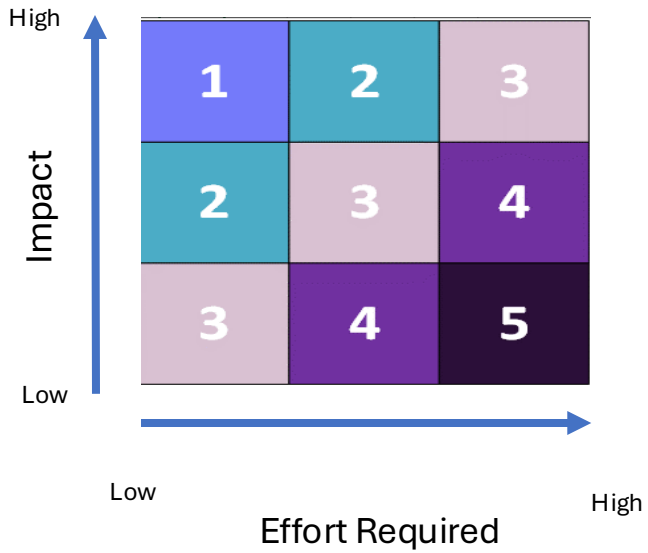
Extract from the Radio Regulations Edition of 2024, Regulation 20.16:

"**Administrations** shall take all appropriate measures to **notify the Radiocommunication Bureau** immediately of any **changes in the operational information** contained in **Lists IV** and V, in view of the importance of this information, particularly with regard to safety. In the case of the data published in List V, which is also made available online through MARS, administrations shall communicate those changes at least once a month. In the case of other publications, administrations shall communicate the changes in the information contained in them as soon as possible"

Example Scenario: SMA Status on *List IV (Coast Stations & Special Service Stations) notifs*

The national SMA has not been notifying on List IV although notification responsibilities are listed in agency policy

High Impact (4 or 5), **Low Effort** (1 or 2) : Complying with notification reqs are straightforward & significantly enhances safety & regulatory compliance.



Impact:
What impact does this have on SSF safety & enabling environment?

Effort required:
- ❑ Agency responsible? ✓
- ❑ Stated in national law/policy? ✓
- ❑ Used in actual practice? X

Online Toolkit

Informational Resources | Checklists | Guidelines | Templates | Guidelines & Templates | Data Collection Resources

REGULATION
Compliance Tracking

UN Compliance:

- Checklists
- Opportunity Estimator

OPERATIONS
Strengthening the Ecosystem

Ecosystem
- Ecosystem Maps 2022
- Agency Role Specification

Info product Dev & Dissemination
- Register of Carib. Coast Stations
- Map of Carib. Coast Stations
- Key Website Messaging Resources

Data Collection
- Register of Incidents at Sea
- MRCC & Coast Station Survey
- UN-Compliant Licensing Form
- RF Measurement Planning & Execution Resources
- TTO Measurement Strategies & Tools
- Guidelines to Specify Sea Area A1
- VHF Channel Usage Specification

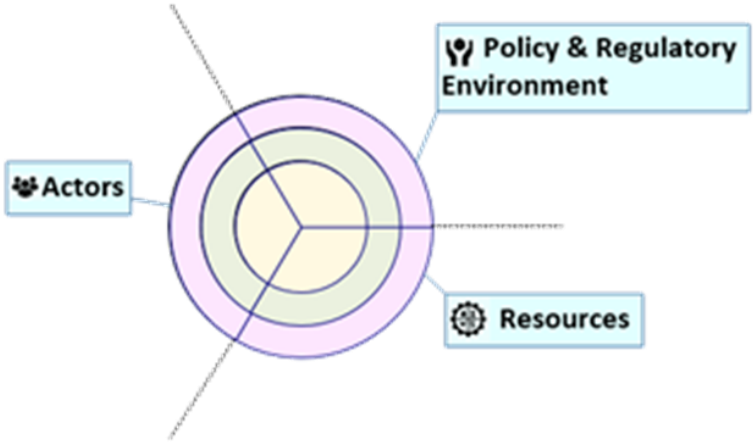
Ltd. Coast Station Ops
- Operationalizing Limited Coast Stations
- Radio Guide for Limited CS Ops

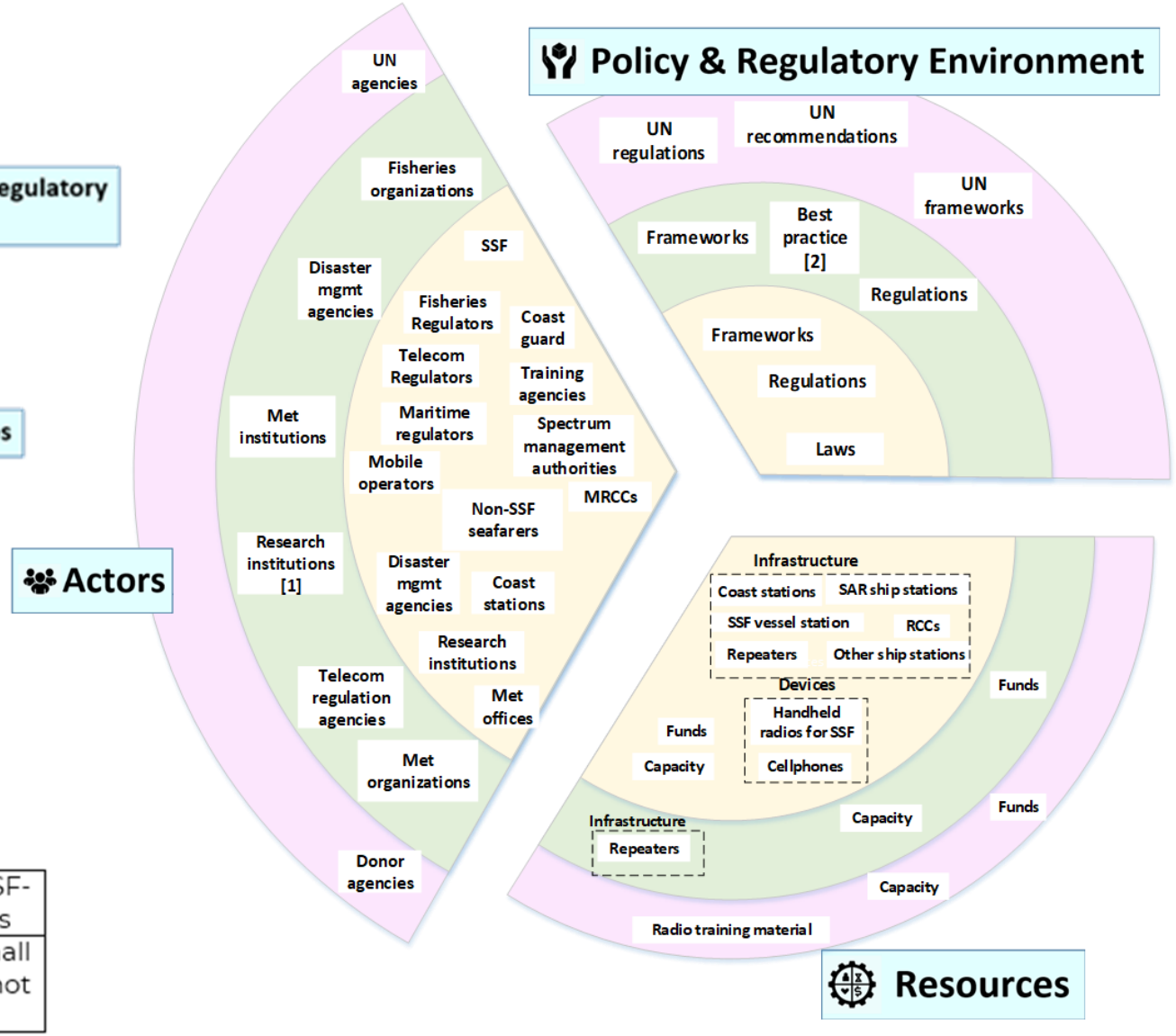
SSF Radio Ops
- Float Plan:
  - Register
  - Checklist
- Radio Guide for SSF

CAPACITY
Knowledge, Skills & Resources

Nominal VHF Radio Curricula for:
- SSF
- CS

Multidimensional Ecosystem Map





KEY

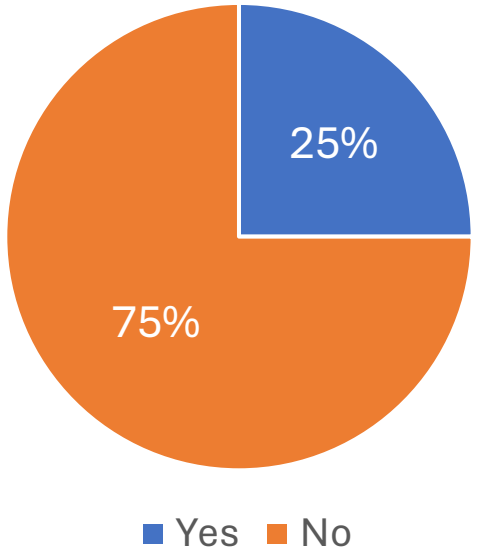
Colour	Meaning
	International
	Regional
	National

FOOTNOTES

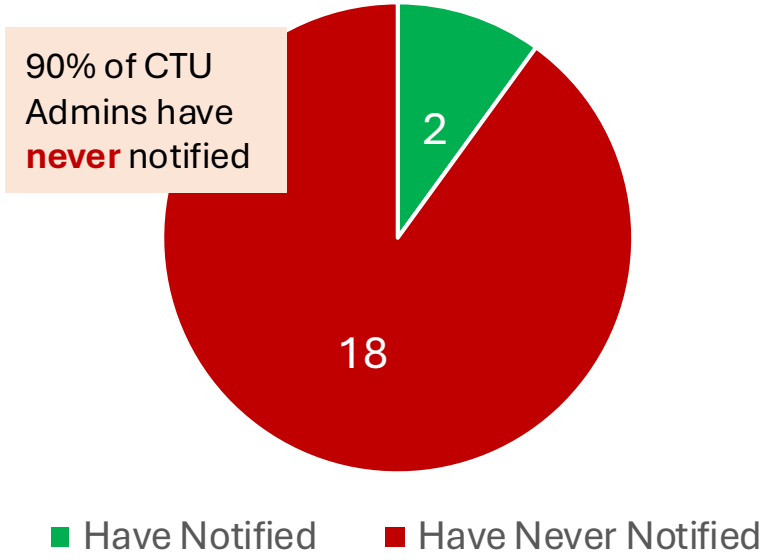
1	Related to data collection for SSF-related maritime communications
2	E.g. Code of Safety for Small Commercial Vessels (though not applicable to SSF)

Sample Data for CTU Member States

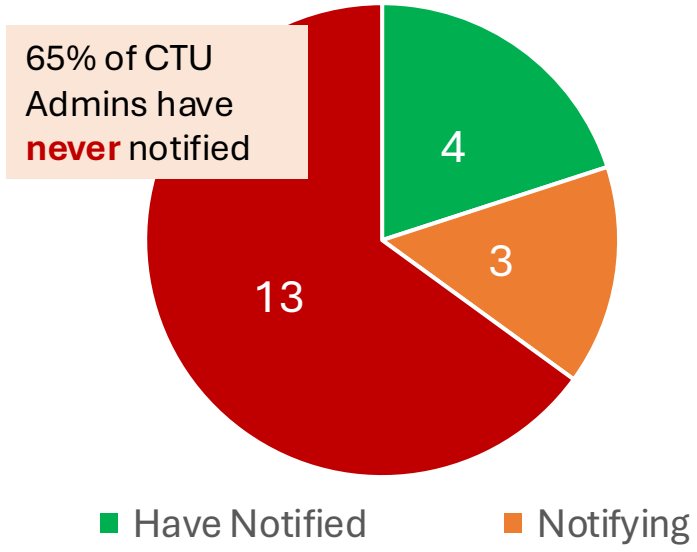
Maritime Coverage in USF Frameworks



List IV Notification Status (**Pre-Smart Seas/Dec 2021**)

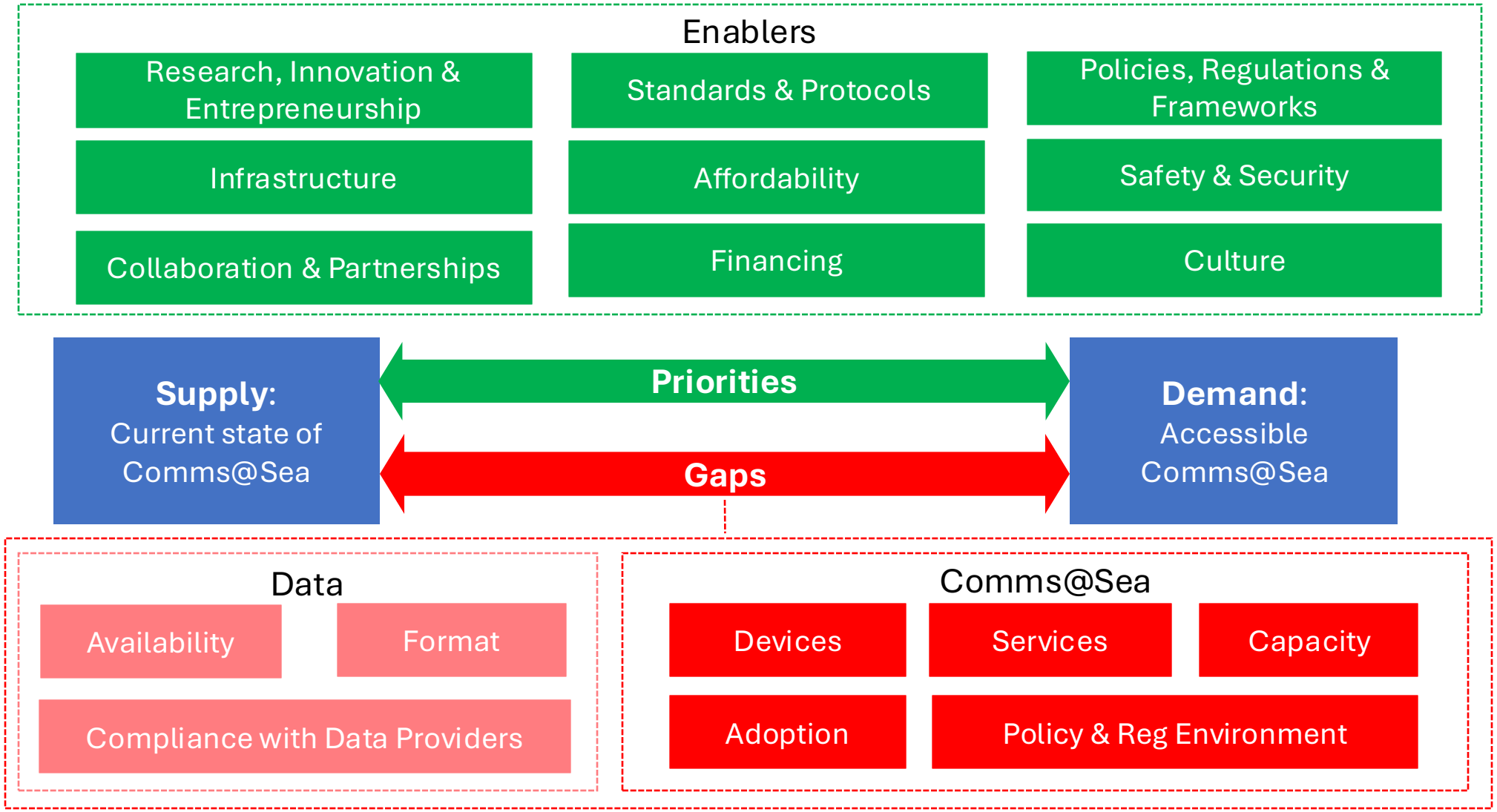


List IV Notification Status (**as of Sep 2024**)



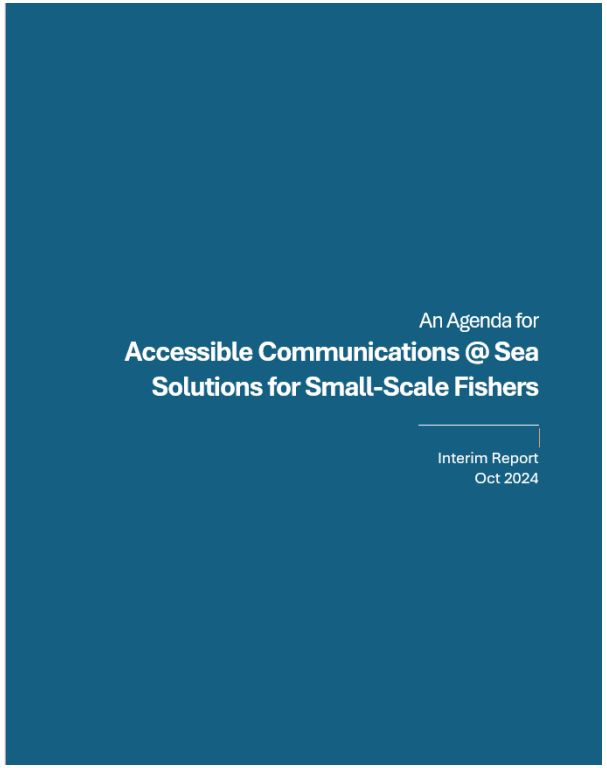
Smart Seas has supported 2 CTU Member States in filling notification gaps, and is currently working with 3 more

Agenda for Accessible Comms@Sea 4 SSF



Setting Priorities Workshop | Mar 2024

COMING SOON:
Agenda Validation Workshop
Online | 2 days | Jan 2025



Recommendations

1. Ongoing review & revision of USF Frameworks, to align with findings of digital inclusion surveys

2. Ongoing review and revise national policies, regs & frameworks, as appropriate, to consider:
   i. maritime environment within universal service scope
   ii. vulnerable populations who earn their living at sea

3. Ongoing engagement among and within sectors and entities with overlapping strategic objectives

4. Collaboration across sectors and focal points is **essential** to achieve accessible, affordable ICTs

Thank You!

MORE INFO!

Smart Seas Toolkit for Disaster Resilience

ITU/CTU/TATT Project

Project Brief
Sep 2024

COMING SOON!

An Agenda for
Accessible Communications @ Sea Solutions for Small-Scale Fishers

Interim Report
Sep 2024

SMART SEAS ON CTU'S WEBSITE:

SCAN ME

Email us at SST@ctu.int

THANK YOU

For more info, email us at SST@ctu.int

Thank You!

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References

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APPENDIX