

WORKSHOP SUMMARY REPORT

Western Indian Ocean BRUVs Workshop: Building a coordinated regional fish research network

Zanzibar, Tanzania · 27–29 April 2026

Co-Hosted by WCS Tanzania · Convened by NRF-SAIAB/MaRIP · Funded by NRF KIC-Africa Interaction



Executive Summary

The inaugural Western Indian Ocean (WIO) Regional BRUVs Workshop was held in Zanzibar, Tanzania from 27–29 April 2026, convened by the South African Institute for Aquatic Biodiversity (NRF-SAIAB) through its Marine Remote Imagery Platform (MaRIP) and funded by the NRF Knowledge Interchange and Collaboration (KIC) Africa Interaction grant. The workshop was hosted by the Wildlife Conservation Society (WCS) Zanzibar head office.

Twelve representatives from seven institutions across four WIO countries - Tanzania, Kenya, Mozambique and South Africa - gathered over three days to strengthen regional partnerships and collaborations, through the BRUVs research network. Workshop activities included strategic group discussions, an audit of current BRUVs methodologies and capacity across the region; training in BRUVs data management, annotation, and quality control; and collectively establishing the governance foundations of the WIO Fish Video Observation Network (WIO Fish-VON), a regional community of practice for coordinated, non-extractive marine fish monitoring.

The workshop produced six joint outputs: (1) a completed SOP audit across participating institutions; (2) a list of regional research priorities; (3) identification of challenges and solutions across the full data pipeline (4) a knowledge products framework; (5) draft governance plan and a network roadmap; and (6) a concrete next steps action register. The network's name, mandate, membership model, secretariat, and formalisation pathway were agreed by the group on the final day.

NRF-SAIAB/MaRIP was proposed as the founding secretariat; WIOMSA affiliation was identified as a suitable hosting platform, with MBON regional node recognition as a parallel pursuit – to be finalised at a later date.

Background and Rationale

Baited remote underwater video systems (BRUVs) are an internationally recognised, GOOS BioEco-endorsed method for the non-extractive assessment of demersal fish communities and elasmobranchs. Stereo-BRUVs, which use paired cameras to enable accurate length measurements, represent the current methodological gold standard and are increasingly deployed across the WIO region.

Despite growing investment in BRUVs surveys across the region, the WIO lacks a coordinated fish monitoring network equivalent to the Global Coral Reef Monitoring Network (GCRMN) for corals. Over 8,000 BRUV deployments have been made across the region, but surveys have been conducted in isolation using inconsistent methods, and data have rarely been shared, deposited in open repositories, or used for regional synthesis. A large proportion of existing footage has never been fully annotated for fish assemblages - representing a significant reservoir of latent scientific value.

This workshop was convened to address these gaps directly: to build methodological alignment, build annotation and data management capacity, and establish the governance structure of a regional network that can coordinate, standardise, and mobilise WIO fish monitoring data for science, management, and policy.

Participants

The workshop was attended by twelve participants representing seven institutions across five countries. Chumbe Island Coral Park participated outside the workshop time, providing contextual input through informal discussions.

Name	Institution	Country
Abdallah Said Abdulla	WCS Tanzania	Tanzania
Magreth Kasuga	WCS Tanzania	Tanzania
Ben Taylor (Day 1)	WCS Tanzania	Tanzania
David Kabodo	Government representative	Tanzania
Julius	Government representative	Tanzania
Yassir Ali Hajj	DMC-WUBU	Tanzania
Peter Musembi	WCS Kenya	Kenya
Jesse Kosgei	WCS Kenya	Kenya
Diandra Naidoo	Wild Impact	Tanzania
Margot Webster	Blue Alliance	Tanzania
Jack Coupland (remote)	Chumbe Island Coral Park	Tanzania
Isabel da Silva (Day 1)	Universidade Lurio	Mozambique
Kaylee	NRF-SAIAB / MaRIP	South Africa

**DAY 1 ·
Monday 27
April**

Regional context, Methods & SOP audit, research priorities & challenges

Opening and introductions

The workshop opened with introductions from all participants, followed by a framing session that situated the three-day agenda within the broader WIO marine monitoring landscape. Kaylee Smit (NRF-SAIAB/MaRIP) presented an overview of the regional BRUVs dataset, demonstrating the geographic and methodological fragmentation of existing survey effort across the WIO - including the finding that over 8,000 deployments have been made but most remain unanalysed for full fish assemblages and none are deposited in open, interoperable repositories.

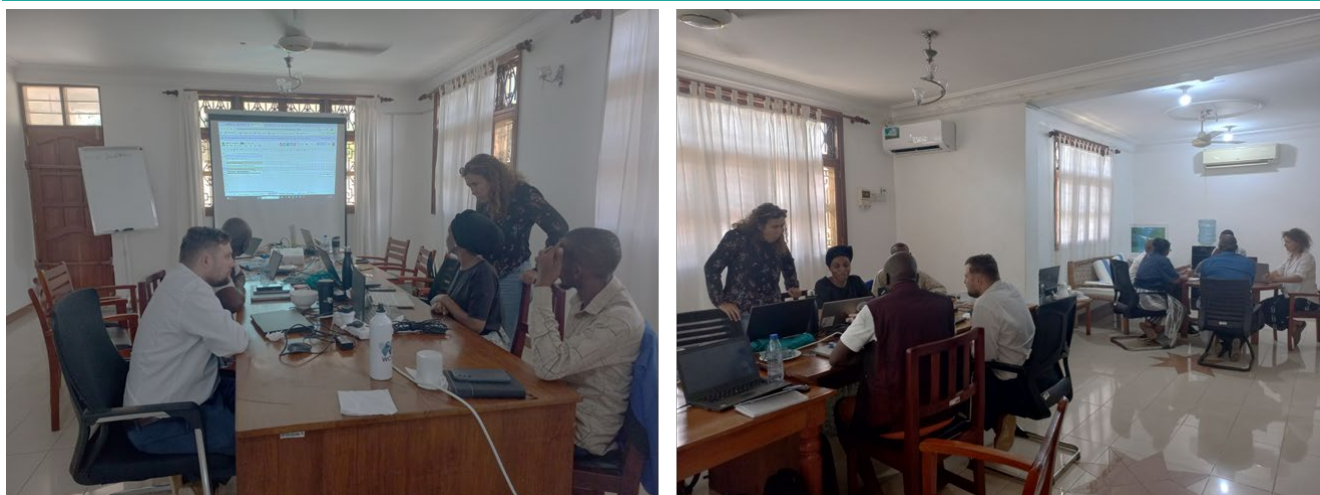
Presentation: Regional and global monitoring frameworks

A presentation on regional and global ocean monitoring frameworks provided essential context for the network-building discussions that followed. Key frameworks covered included:

- The Global Ocean Observing System (GOOS) and Essential Ocean Variables (EOVs), specifically the Fish Abundance and Distribution BioEco EOVS for which stereo-BRUVs is an endorsed method
- Essential Biodiversity Variables (EBVs) and the relationship between EOVS and GEO BON reporting obligations
- MBON (Marine Biodiversity Observation Network) and its regional node structure, with IO Fish-BON as a proposed WIO contribution
- OBIS and GBIF as the primary open-access repositories for marine biodiversity data
- The IUCN Red List of Ecosystems (RLE) for WIO coral reefs (Obura et al. 2021), demonstrating how regional monitoring data feeds into ecosystem-level conservation assessments - and highlighting the absence of an equivalent fish-focused assessment
- Regional reporting obligations: WIOMSA, the Nairobi Convention, IPBES, the World Ocean Assessment, SDG 14, and the Kunming-Montreal Global Biodiversity Framework 30×30 target

Key framing finding:

Coral reef monitoring through GCRMN has produced periodic WIO status reports for over 25 years. Fish monitoring has no equivalent regional coordination structure, no shared data standard, and no published regional status assessment. The WIO fish monitoring gap is not a data gap - it is a coordination and mobilisation gap.



SOP audit exercise

A structured SOP audit was conducted across all participating institutions using a pre-prepared comparison matrix. The audit established the current methodological landscape across the network and identified similarities and critical divergences that would need to be resolved for regional data pooling. Some of findings are summarised below.

Parameter	Current state across network	Agreed minimum / actions
Camera system	All stereo GoPro Hero 12 except Blue Alliance (mono) and MPRU/DMC (no BRUVs yet)	<i>Stereo required for full network participation; mono data flagged separately</i>
Soak time	60 min for most; Blue Alliance 180 min	<i>60 min as network standard; deviations recorded in metadata</i>
Bait	Sardine, bonito, mackerel, Carangidae - 1 kg approx.	<i>Oily fish, always recorded in metadata with species noted</i>
Depth range	Some up to 100 m, but mostly less than 40 m	<i>Standardised depth bins adopted; deep reef (>30 m) identified as key gap</i>
Annotation software	EventMeasure (most); Blue Alliance not annotating for fish. Some manual annotation	<i>EventMeasure as network standard; CheckEM for QC</i>
Taxonomic resolution	Species/genus for some; sharks & rays only for most; UVC to family level	<i>Species level where possible; genus minimum; uncertainty documented</i>
QC process	None for most; Wild Impact double-check; Mozambique YES + Mermaid (some established protocols with UVC methods)	<i>CheckEM validation mandatory before any data deposition</i>
Data repository Data management	None for most; some using Mermaid, company SharePoint, NRF-SAIAB. Some limited data management in	<i>Possibly GlobalArchive + OBIS as network repositories; Darwin Core required. SAIAB/SAEON as good options – don't want to re-invent the wheel and use existing infrastructure</i>
OBIS deposition	All: No	<i>Need to decide if this is needed, and how</i>
Data embargo Data sharing	None currently except Mozambique (oil company obligations) Active data sharing with agreements in place	<i>Embargo & data sharing policy to be agreed in network ToR, if/when needed.</i>

Regional research priorities

Participants identified and discussed their priority research questions, linking each to the management audiences and end-users who would use the resulting data. The table below summarises the priorities recorded in the workshop spreadsheet.

Some of the overarching themes included baseline status assessment, MPA assessment (including LMMAs) and effectiveness, resource status and management, species threat status assessment, MSP, long-trends, impact assessment and management decisions.

Research priority	Key end-users and management links
Status of fish in deep waters (>30 m, beyond SCUBA) - diversity, biomass, abundance	<i>Ministry of Fisheries, development partners, BMUs, conservation organisations, research institutions</i>
Identifying fish spawning aggregation sites	<i>Fisheries managers, MPA managers, Blue Alliance PECCA, marine park authorities</i>
Fish status in MPAs and biodiversity hotspots - diversity, biomass, abundance, length	<i>MPA managers, research institutions, NGOs</i>
Comparative method studies (stereo-BRUVs and UVC) in shallow habitat	<i>Research institutions, KMFRI, TAFIRI</i>
Ecosystem status across management regimes - fished vs unfished comparisons (MPA/LMMA assessment)	<i>MPA managers, government fisheries departments</i>
Diversity and abundance of elasmobranchs and rare species in MPAs	<i>MPA managers, government, tourist operators, NGOs</i>
Threatened species inventory	<i>Government agencies, conservation managers, IUCN</i>
Understanding general ecology & spatial distribution of fish species. And resource status assessment	<i>MPAs, land and spatial planning agencies</i>
Environmental impact assessments	<i>Oil and gas companies, Ministry of Environment, investment funds</i>

Pipeline challenges and solutions

Participants completed a structured assessment of challenges across each stage of the BRUVs data pipeline, identifying current limitations and proposed solutions. The major cross-cutting themes were: limited annotation and analysis capacity; absence of data sharing platforms and protocols; language barriers between Portuguese-speaking Mozambique and English-speaking partners; and the absence of a coordinating network. Key bottlenecks and solutions are summarised below.

Pipeline stage	Primary challenge	Proposed solutions
Sampling design	<i>Limited resources; uncoordinated efforts; duplicated surveys</i>	<i>Coordinated sampling strategies and equipment sharing; collaborative grants; shared SOPs</i>
Annotation	<i>Limited capacity - skills and software access</i>	<i>Shared EventMeasure licences; training workshops; peer mentorship; annotation cohort</i>
Quality control	<i>No/very limited QC process at most institutions (some in place for UVC surveys)</i>	<i>Adopt CheckEM; build capacity through partner collaboration; standardised protocols shared</i>

Pipeline stage	Primary challenge	Proposed solutions
Data sharing	No shared platform; unclear protocols; communication barriers	Develop a network data sharing framework; adopt a chosen repository (e.g., OBIS/GlobalArchive/SAIAB-SAEON); multilingual materials
Synthesis and integration	No network; no coordinating institution. Very little national/regional synthesis	Establish WIO Fish Network with NRF-SAIAB/MaRIP as secretariat; annual reporting cycle
Knowledge mobilisation	Unclear pathways; technical jargon; limited reach so far	Use WIOMSA/GCRMN events; community meetings; policy brief templates; multilingual products
Policy influence	Insufficient policy briefs; institutional mandate misalignment	Develop co-produced policy brief framework; identify named government partners per country



DAY 2 ·
Tuesday 28
April

Capacity building, data management, and field visit

Data management training session

The morning opened with a comprehensive data management training session delivered by Kaylee (NRF-SAIAB/MaRIP), covering the full data management pipeline from project setup to open data deposition. The session included some of the key elements of the MaRIP data management protocols:

- Unique identifiers - opcode structure, anatomy, and rules; the opcode as the primary key linking all data tables
- Template Folder Structure (TFS) - standardised project folder hierarchy; creation before fieldwork; replication across all backup copies
- File naming protocols - footage, EventMeasure, calibration, and export files; no spaces; consistent camera (L/R) and clip numbering
- Backup protocols - (e.g., 3 copies, 2 different media, 1 offsite); backup verified before leaving the vessel
- QAQC and data standards - CheckEM validation; standardised controlled vocabularies; sample status tracking
- MaRIP QC and Data management SOPs and available resources

The FAIR data principles (Findable, Accessible, Interoperable, Reusable) were introduced as the guiding framework for all data management decisions, with explicit connection to the network's requirements for pooled regional datasets.

GlobalArchive, CheckEM, and MaRIP shared resources

Following the data management session, participants were introduced to the primary tools and platforms used in the NRF-SAIAB/MaRIP pipeline, but were also shown the various resources developed by the Australian BRUVs group and the GlobalArchive team:

- Ocean Best Practices repository - the international home for published BRUVs methods, including the GOOS-endorsed stereo-BRUVs field manual (Langlois et al., 2018;2020) and annotation guide
- GlobalArchive - the international BRUVs data repository; structure, submission process, and metadata requirements
- CheckEM – the shinyApp and R-based quality control tool for EventMeasure exports; automated flagging of outliers, taxonomy mismatches, and structural errors, among others
- MaRIP Shared Resources website (nrf-saiab-marip.github.io/SOPs-Resources) - the full SOP framework, template folder system, field metadata sheets, calibration templates, and video annotation guides

Participants worked through the MaRIP SOP decision tree and shared resources folder during a structured practical exercise, testing their ability to navigate from a research question to the correct SOP, field metadata sheet, and template folder structure for a new BRUVs programme.

Participant feedback on MaRIP resources:

- The SOP decision tree was noted as initially confusing - the links do not always navigate to the specific resource, and a final node showing the actual templates would help. You can't neglect the details in the text of the SOP.
- The TFS layout and SOP framework images were identified as particularly useful for new programmes
- Some annotation guidance that was in earlier SOP versions was noted as missing from the current resource hub - flagged for follow-up

EventMeasure video annotation demonstration

A live demonstration of EventMeasure video annotation was delivered, covering the core annotation workflow for stereo-BRUVs footage: loading footage and calibration files (if needed), setting the analysis period, annotating MaxN events with species identification, taking 3D stereo point measurements for fork length, and exporting data to CSV for CheckEM validation. The demonstration used previously collected stereo-BRUVs footage to illustrate both standard annotation and common error types and issues experienced by video analysts.

Fish landing site visit - Malindi (Zanzibar Harbour)

The afternoon of Day 2 included a group excursion to the Malindi fish landing site on the northern part of Stone Town, at the Zanzibar Harbour. Abdalla (WCS Tanzania) delivered a presentation on the WCS catch monitoring programme beforehand, covering monitoring design, key species and gears recorded, preliminary catch trends, and the opportunity for integration of landing site data with BRUVs survey data for fish assessments.

The visit provided important management context for the research priorities and network discussions that followed on Day 3, grounding the scientific and governance conversations in the realities of small-scale artisanal fisheries in the WIO. Participants observed active fish landing, purchasing, and processing, and were able to discuss the ecological significance of the species being landed relative to their BRUVs observations.



DAY 3 ·
Wednesday
29 April

Network governance, strategic planning, and next steps

Morning recap and technical discussion

Day 3 opened with a recap of Days 1 and 2 and a focused initial discussion on outstanding technical questions around BRUVs sampling and boat procedures. Topics included: managing camera systems in challenging conditions, particularly linked to stability in the water; bait standardisation across institutions; managing deployments in high-current environments; and the logistics of camera card management and footage transfer in the field. These discussions directly informed the final SOP minimum standards agreed later in the session.

WIO Network opportunities and knowledge products

Participants completed a structured exercise on network opportunities, documenting what they would want from a regional BRUVs network, what they could contribute, and what commitments they were prepared to make in the next 12–24 months. Key responses are summarised below:

What participants want from the network:

- Shared knowledge (e.g. bathymetry maps, regional datasets)
- Capacity to develop regional and national publications alongside localised outputs
- Coordination to avoid duplicated survey effort and fill geographic gaps
- A collaborative, standardised, and sustainable platform for BRUVs-based marine monitoring
- Training and refresher opportunities for survey, data management, and annotation
- Access to EventMeasure software through a shared licencing arrangement

A knowledge products framework was thereafter developed, identifying the various products the network should produce for each priority audience, the appropriate format and timing, and the data requirements. The full framework is reproduced in Annex B. Key product types agreed include:

- Annual resource status reports with high-level summaries, dashboards, and policy briefs - for fisheries officers and MPA managers
- Shapefiles, KMZ files, and spatial reports - for national spatial planners and MSP processes
- Peer-reviewed papers, conference presentations, and SOP publications - for the research community
- Infographics, videos, and community presentations - for fishing communities and the general public
- Technical reports and metadata packages - for CITES, GOOS, GCRMN, WIOMSA, and other regional/global bodies

WIO Network governance - founding agreement

The final major session of the workshop was a structured governance discussion, working through the key decisions needed to formally establish a regional network. Decisions made by the group are documented below.

Governance item	Decision agreed at Zanzibar workshop
Network name	WIO Fish-VON (Western Indian Ocean Fish Video Observation Network) - proposed and agreed by the Zanzibar participants, with IO Fish-BON remaining as a potential MBON-aligned designation. The final name will need to be agreed by all network members.
Mandate & Scope	The WIO Fish-VON is the coordinating regional mechanism for video-based fish monitoring in the WIO, supporting evidence-based decision-making through coordinated surveys, shared data standards, and capacity building. Geographic scope: coastal and marine ecosystems of participating WIO countries.
Aims & Objectives	To establish a collaborative and sustainable regional network for VON-based marine monitoring in the Western Indian Ocean - coordinated efforts, data sharing, standardized SOPs. Facilitate and build capacity within the WIO for fish observation research
Membership model	Institution-level membership; any institution conducting video-based fish observation in the WIO is eligible; membership requires a minimum 3-year commitment; no limit on individuals per institution.
Leadership structure	Regional node structure modelled on GCRMN/WIO-C; institutional representatives within the regional node; no national nodes at this stage; leadership structure to be further defined in the Terms of Reference. Likely to sit within a Global Network
Secretariat	NRF-SAIAB/MaRIP - to be reviewed after 3 years.
Communication infrastructure	WhatsApp group for updates and coordination (immediate); mailing list; NRF-SAIAB to facilitate shared comms platform; Google Drive as working repository while website is developed.
Formalisation	WIOMSA affiliation is the immediate priority. MBON possibly pursued in parallel. Nairobi Convention and SCOR WG explored as longer-term options. Need to figure out how to become part of WIOMSA / proposals... Are these mutually exclusive ?
Risks	Commitment and staff time availability identified as the primary risks; shared responsibility across institutions is the mitigation strategy.

Next steps and action register

The workshop closed with agreement on a concrete next steps action register. Key actions and responsibilities are summarised in the table below.

Action	Responsible	Deadline
Contact WIOMSA to initiate working group membership process	WCS Tanzania / WCS Kenya	April 2026
Contact MBON and other potential framework homes (GOOS, Ocean Decade)	NRF-SAIAB/MaRIP	April 2026
Institutional equipment and capacity mapping	All institutions	Dec 2026
Create working Google Drive folder for the network	NRF-SAIAB /MaRIP	April 2026
Establish WhatsApp group with community guidelines	Margreth / Group	May 2026
Draft Terms of Reference for WIO Fish-VON	Group (led by NRF-SAIAB)	Dec 2026
Regional network work plan template	Group	Dec 2026
Institutional work plan (surveys, methods, timelines)	Each institution	May 2026
Concept note for the network - for wider WIO outreach	Group	End July 2026
First joint online meeting of all network institutions	Group	October–November 2026



Key Outcomes and Conclusions

The Zanzibar workshop was a founding moment for the WIO BRUVs regional network. Six substantive outcomes were achieved:

1	Regional SOP audit completed - the first systematic documentation of BRUVs methodologies, capacity, and data management practices across WIO partner institutions, identifying both the non-negotiable standards needed for data pooling and the capacity gaps that the network must address.
2	Research priorities agreed - a shortlist of priority research questions for the network, linked to named management audiences and end-user institutions across Tanzania, Kenya, and Mozambique.
3	Data management capacity built - participants from all seven active BRUVs institutions received structured training in the full NRF-SAIAB/MaRIP data management pipeline, including opcode structure, TFS, file naming, backup protocols, CheckEM, and FAIR data principles.
4	Knowledge products framework developed - a structured mapping of what the network should produce, for whom, in what format, and at what frequency - providing a blueprint for knowledge translation across the full range of management and policy audiences.
5	WIO Network draft governance structure developed: the network name (WIO Fish-VON), mandate statement, membership model, secretariat (NRF-SAIAB/MaRIP), and formalisation pathway (WIOMSA + MBON) were agreed by the full group on Day 3.
6	Concrete next steps committed - eight specific actions with named responsible parties and deadlines were agreed before participants departed, ensuring the workshop momentum translates into institutional action.

Looking ahead:

The WIO Fish-VON has the ingredients to become a genuinely transformative regional network - the methodology is proven and internationally endorsed, the field data exist (but need to be unlocked), the institutional relationships are in place, and the governance foundations have been laid. The next 12 months are critical: the network needs to formalise its WIOMSA affiliation, convene its first network online meeting, deliver its first training workshop for members, and demonstrate through a first joint publication that the network can produce science that no individual country programme could generate alone.

Appendix A: Workshop Agenda

Day	Session
Monday 27 April	Welcome and introductions
	Regional and global monitoring frameworks (GOOS, EOVS, MBON, OBIS, IUCN RLE)
	Who is doing what? BRUVs landscape map exercise
	SOP audit exercise - method alignment across institutions
	Regional research priorities
	Data pipeline challenges and solutions
Tuesday 28 April	Day 1 recap
	Data management training - 5 pillars, FAIR principles, TFS, file naming, backup
	GlobalArchive, CheckEM, and MaRIP shared resources - practical exploration
	EventMeasure video annotation demonstration
	WCS catch monitoring programme presentation
	Fish landing site visit
Wednesday 29 April	Day 2 recap and technical Q&A on BRUVs procedures
	WIO Network opportunities - what we want and what we can offer
	Knowledge products framework
	WIO Network governance - founding decisions
	Next steps and action register
	Closing

Appendix B: Knowledge Products Framework

	Audience	Product	Format	Timing Key reporting?	Data needed/ Geographic Scope
1	Fisheries officer/manager	<i>Report with resource status, trends, key recommendations.</i>	<i>High level summaries, dashboards, data, kmz, policy briefs</i>	<i>Annually</i>	<i>Abundance (MaxN) (mean), species diversity, species distribution, lengths across different management regimes. Scope - Local, National, Regional</i>
2	MPA/conservation manager	<i>Report with resource status, trends, key recommendations.</i>	<i>High level summaries, dashboards, data, kmz, policy briefs</i>	<i>Annually</i>	<i>Abundance (MaxN) (mean), species diversity, species distribution, lengths across different management regimes. Scope - Local, National, Regional</i>
3	National Planner (MSP/NBA)	<i>reports and maps</i>	<i>shapefiles, kmz, metadata, report</i>	<i>Annually</i>	<i>Abundance (MaxN) (mean), species diversity, species distribution, lengths across different management regimes. Scope - National, including raw data</i>
4	Research community	<i>peer-reviewed papers, Conferences, SOPs</i>	<i>metadata, data, trends, posters, maps,</i>	<i>6 months - 2 years</i>	<i>Abundance (MaxN) (mean), species diversity, species distribution, lengths across different management regimes. Scope - Local, National, Regional, including raw data</i>
5	Minister/Senior Official	<i>Policy briefs, priority species and areas</i>	<i>report and maps</i>	<i>annually</i>	<i>Abundance (MaxN) (mean), species diversity, species distribution, lengths across different management regimes. Scope - National and counties (devolved/local), including raw data</i>
6	Fishing community	<i>summarised report, map (e.g RBUVs covering, use patterns, species distribution, list of priority species</i>	<i>infographics, presentation, posters, videos</i>	<i>frequent as needed</i>	<i>Abundance (MaxN) (mean), species diversity, species distribution, lengths across different management regimes. Scope - local</i>
7	Regional/Global bodies (CITES/GOOS/GCRMN/WIOMSA)	<i>reports, published papers, data,</i>	<i>metadata, data, presentations, posters</i>	<i>1-2 years</i>	<i>Abundance (MaxN) (mean), species diversity, species distribution, lengths across different management regimes. Scope - Local, National, Regional, including raw data</i>
8	General public	<i>Summarised report, maps,</i>	<i>infographics, presentation, posters, videos</i>	<i>frequent as needed</i>	<i>Abundance (MaxN) (mean), species diversity, species distribution, lengths across different management regimes. Scope - Local, National</i>

Appendix C - Resources and Links

Shared workshop excel spreadsheet and templates:

https://docs.google.com/spreadsheets/d/1wa_ys7Lss1fnR6ysjLT7NGQQhb2GhBTn/edit?usp=sharing&ouid=111113550901236128998&rtpof=true&sd=true

MaRIP Shared Resources and SOPs: <https://nrf-saiab-marip.github.io/SOPs-Resources/>

CheckEM quality control tool: <https://marine-ecology.shinyapps.io/CheckEM/>

GlobalArchive manual and data portal: <https://globalarchive.org/> | <https://globalarchivemanual.github.io/>

Ocean Best Practices - BRUVs resources: <https://repository.oceanbestpractices.org/search?query=BRUVs>

GOOS Essential Ocean Variables: <https://goosocean.org/>

EOV and EBV infographics (MARCO-BOLO): <https://marcobolo-project.eu/eovs-ebvs-infographics/>

OBIS - Ocean Biodiversity Information System: <https://obis.org/>

GBIF - Global Biodiversity Information Facility: <https://www.gbif.org/>

MERMAID coral monitoring platform: <https://datamermaid.org/>

WIO MPA network atlas: <https://mpatlas.org/mpaguide/#42.01892,-8.66065@4.93>

WIO BRUVs network map: https://nrf-saiab-marip.github.io/SOPs-Resources/assets/docs/26-02_sa_bruids_network_map.html

FishNClips annotation exploration tool: <https://marine-ecology.shinyapps.io/FishNClips/>

Report prepared by Kaylee Smit (NRF-SAIAB/MaRIP) · May 2026 ·