

Report of the Standing Working Group on Bycatch – Bycatch Mitigation Initiative

Submitted by the Chair of the Standing Working Group on Bycatch and the Bycatch Coordinator

The Conservation Committee is invited to:

- i) Note and provide comments on the update from the Standing Working Group on Bycatch on the Bycatch Mitigation Initiative during 2018-2020 (this document)*
- ii) Endorse the proposed four-year costed workplan (2021-2024) for the Bycatch Mitigation Initiative ([CC/68A/06.1.2](#)) and the associated budget and discuss the role of the CC in delivering the workplan*
- iii) Note the recommendations from the SC on the Bycatch Mitigation Initiative ([IWC/68/Rep01rev1](#))*
- iv) Endorse the recommendations in the Report of the IWC Workshop on Bycatch Mitigation Opportunities in the Western Indian Ocean and Arabian Sea ([CC/68A/REP/BMI/01](#)) and discuss the role of the CC in implementation,*
- v) Endorse the recommendations in the Review of Regional Fisheries Management Organization Efforts in Addressing Cetacean Bycatch: Report to the International Whaling Commission (CC/68A/06.4.2/01) and discuss the role of the CC in delivering these recommendations.*

Background

At its 66th meeting in 2016, the Commission endorsed the recommendations of the Conservation Committee (CC) and Scientific Committee (SC) to create a dedicated IWC bycatch workstream on cetacean bycatch through the establishment of the Bycatch Mitigation Initiative- with a Standing Working Group (SWG) on Bycatch, a Bycatch Expert Panel and Coordinator position.

At its 67th meeting in 2018, the Commission endorsed the BMI ten-year Strategic Plan (2018-2028) and the Workplan for the intersessional period 2018-2020 covering six high level objectives.

This report updates on progress for each of the strategic high-level objectives during the intersessional period 2018-2020, with key highlights provided on Workplan activities. It also proposes a new four-year costed workplan for 2021-2024 and associated funding allocations and proposals.

1. Progress on 2018-2020 Workplan

Annex 1 provides a report on each activity against the 2018-2020 Workplan. Overall progress is summarised below.

Objective 1 - programme coordination

- Bycatch Coordinator

The Bycatch Coordinator, Marguerite Tarzia has continued in post following appointment in 2017. A 6-month maternity cover was undertaken by Gianna Minton in October 2018-April 2019. To-date this post has been funded through donations to the Voluntary Conservation Fund.

- Standing Working Group on Bycatch

The Standing Working Group on Bycatch was formed in March 2017 and elected Stephanie Langerock, Belgium, as its Chair and Arne Bjørge, Norway, as Vice-Chair. The SWG membership (Annex 2)

currently includes representatives from fifteen contracting governments and seven accredited observer organisations. Membership to the SWG remains open.

- Expert Panel on Bycatch

The Expert Panel on Bycatch was established in 2018. At the time of establishment, twenty-three experts were appointed. Following one expert requesting to stand down in 2019, there are twenty-two experts currently serving on the panel. Membership was reviewed during 2020, with all members still committed to being on the panel.

Geographic representation gaps remain in the Expert Panel and additional suggested experts working on cetacean bycatch in small-scale fisheries in South America and Asia are being reviewed in the remainder of 2020 prior to invitation to serve on the panel.

The main technical gap on the panel is large-scale funding (e.g. green investment funding) and this is currently being sought through Expert Panel members' contacts. Any individuals identified will be asked to provide advice on an *ad-hoc* basis and not be required to serve on the panel.

The Expert Panel has met twice in person, with the first meeting taking place in Nairobi, Kenya in advance of the Indian Ocean workshop and the IWC Scientific Committee SC68A meeting. The second, informal meeting took place in Barcelona, Spain, during the World Marine Mammal Conference.

- Fundraising

The SWG continues to be grateful to all of the contracting governments and observer organisations that have contributed funding to the BMI through the Voluntary Conservation Fund and these are outlined in the Report on the Voluntary Conservation Fund ([CC/68A/17.2/01](#)).

Additional fundraising was undertaken for the 2019 workshop on bycatch in the Indian Ocean and funding was gratefully received from the Government of France, WWF, the Pew Foundation and the Western Indian Ocean Marine Science Association.

Wider fundraising continues to be a priority. The BMI has collaborated with Expert Panel members on external fundraising proposals during this period, and has submitted a costed proposal through the Phase 2 development of the FAO/GEF Common Oceans ABNJ Tuna project. External funding opportunities (private foundations, national development programmes, and national and regional opportunities) are currently being evaluated for pilot project development, in partnership with the prioritised pilot project countries.

- Engagement with the Scientific Committee.

The BMI presented papers to the Scientific Committee in 2020, providing an update on progress of the initiative and suggesting activities in the 2021-2024 workplan which could be led by the SC ([IWC/SC/68b/HIM/12](#)). Papers were presented from Bycatch Expert Panel members, and from researchers working in prioritised Pilot Project countries. A paper on potential collaboration between the IWC and the Bycatch Management Information System was also presented, as was an IWC Secretariat Commissioned report reviewing RFMO management for cetacean bycatch.

During this meeting the Bycatch Coordinator also engaged with the Sub-committee on Small Cetaceans (including the Small Cetacean Task Teams), and the Sub-committee on Conservation Management Plans, in relation to how bycatch activities could be linked to the BMI. In the Scientific

Committee meeting in 2019, the Bycatch Coordinator provided a brief presentation on the BMI Indian Ocean workshop.

At its most recent SC68B meeting ([IWC/68/Rep01rev1](#)) the SC endorsed the work of the BMI and its continuation, made recommendations on how it could support the BMI workplan and on BMI engagement with RFMOs (see pages 69-76 of that report for Recommendations under the HIM sub-committee, and page 51 for Recommendations under CMP sub-committee).

1.2 Progress under Objective 2 – knowledge gathering

- Workshop – Indian Ocean cetacean bycatch

In 2019-2020 the BMI held a successful workshop on Bycatch Mitigation Opportunities in the Western Indian Ocean and Arabian Sea, with a report ([CC/68A/REP/BMI/01](#)) detailing the known or suspected bycatch hotspots across the region and the challenges and opportunities for working on this issue. The workshop helped identify some countries where bycatch in gillnets is likely occurring at high levels, and/or where there are particularly suitable conditions for carrying out experimental approaches to bycatch management and reduction (e.g. India, Kenya).

The workshop made a series of recommendations for the IWC, RFMOs, national governments within the IO region and other potential collaborators.

The Conservation Committee is invited to endorse the recommendations from the BMI workshop on the Indian Ocean and discuss the role of the Conservation Committee.

- Pilot Projects

The BMI is designing a series of ‘Pilot projects’ which are to be locally-led projects, focused particularly on small-scale fisheries (see the [BMI 10-year Strategic Plan](#) for rationale) in both marine and/or freshwater environments. Pilot projects will allow the BMI to apply multi-disciplinary, experimental approaches to bycatch mitigation, monitoring and management. The BMI, including the Expert Panel on Bycatch will provide both remote and on-the-ground expertise and training to inform the projects.

The Bycatch Coordinator and the Expert Panel for Bycatch have carried out an assessment of different countries around the world where gillnet fisheries operate and are known to – or thought likely to – have significant cetacean bycatch levels, and where a pilot project would be feasible to implement. A series of criteria were used to qualitatively assess feasibility. A list of seven priority locations have been identified: Peru, Republic of Congo (Congo-Brazzaville), Kenya, Pakistan, India, Thailand, India, Indonesia/Malaysia Borneo. The list of countries was presented to the IWC Scientific Committee in May 2020 (IWC/SC/68b/HIM/12) and information relevant to some of these countries discussed during the meeting.

The IWC Secretariat has begun discussions with the Governments of Kenya, Peru and India on the potential scope of pilot projects in order to address national needs on bycatch management. Engagement with remaining countries will be prioritised during the remainder of 2020.

- Risk assessments

The BMI is planning to collaborate with the Government of Colombia in relation to a rapid bycatch risk assessment. A training workshop on the use of the [GIS Bycatch Risk Assessment \(ByRA\) Toolbox](#) is planned (see section 1.5 below for more detail), followed by technical assistance to carry out a risk

assessment of bycatch in small-scale fisheries in Colombia. This information will be useful in identifying whether bycatch is a priority issue in these fisheries, and provide the basis for further discussion with the BMI in relation to capacity building for mitigation or management.

1.3 Progress under Objective 3 – Develop and test bycatch mitigation and monitoring solutions

The majority of activities under this objective are pending the establishment of pilot projects (which are still under development). Nevertheless, the BMI has progressed a number of activities including: discussion with sensory ecologists on potential collaboration in relation to future mitigation measures which could be developed; engagement with ongoing (and newly establishing) projects of relevance on bycatch (SPREP, MedBycatch Project); detailed engagement with the FAO on the development of Technical Guidelines To Prevent And Reduce Marine Mammal Bycatch in Capture Fisheries; collaboration with CMS and WWF on the development of [Guidelines for the Safe and Humane Handling and Release of Bycaught Small Cetaceans from Fishing Gear - CMS Technical Series No.43](#); developing a collaboration with the Bycatch Management Information System on reviewing cetacean and bycatch mitigation information ([IWC/SC/68B/HIM/04](#)).

Activities that have not been fully completed, or not yet commenced have been adapted and included in the new workplan (2021-2024).

1.4 Progress under Objective 4 - Bring about a change in attitudes within fishing communities

The activities associated with this objective have not yet commenced as they are all pending the establishment of the pilot projects. The activities have been adapted and included the 2021-2024 workplan.

1.5 Progress under Objective 5 - Raise awareness and capacity within national governments

- Communication strategy

The IWC Secretariat has begun development of a communication strategy for the BMI and is planning to complete this strategy by the end of 2020, and to begin implementing the specific communication activities in early 2021.

- Capacity building

During 2018-2020 the BMI has started establishing its capacity building programme. A 'virtual' training workshop in Colombia is planned on the Bycatch Risk Assessment Toolkit (ByRA), followed by technical assistance to undertake a risk assessment (depending on existing data and the possibility to collect new data with the existing restrictions due to Covid-19).

During SC68B there was interest amongst Small Cetacean Task Teams, and with researchers leading the development of new CMPs to participate in BMI capacity building efforts. The Bycatch Coordinator and the IWC's Human Impact Reduction Officer are exploring opportunities to hold joint bycatch and dis-entanglement training.

Preliminary discussions have also taken place with the FAO, in relation to potential collaboration on capacity building as part of the FAO Technical Guidelines for Preventing and Reducing marine mammal bycatch (pending publication). The BMI has submitted a concept for incorporation in the FAO/GEF Common Oceans ABNJ Phase 2 project, which focuses on capacity building programme for RFMO member countries relating to bycatch assessment, monitoring and mitigation. The Global

Environment Facility will notify the Common Oceans ABNJ team whether it has been successful in securing funds in 2021, and if successful the project would begin implementation in 2022.

1.6 Progress under Objective 6 – Engagement with regional and international fisheries management organisations

The BMI has made significant progress in engaging with Regional Fisheries Management Organisations and the FAO in relation to collaboration on cetacean bycatch.

- FAO

The BMI has continued to engage with the FAO and individual RFMOs during 2018-2020. The Bycatch Coordinator and some Expert Panel members participated in the [2019 FAO Expert Meeting](#) to Develop Technical Guidelines to Reduce Bycatch of Marine Mammals in Capture Fisheries. The BMI provided detailed comments on the draft Technical Guidelines and the IWC Secretariat provided the draft guidelines for comment via Circular. Ongoing discussion will continue during the remainder of 2020 on how the IWC can assist in promoting and raising awareness of the FAO Technical Guidelines and collaborating on capacity building. A representative from FAO, involved in the development of the Technical Guidelines participated in the IWC's Scientific Committee meeting in 2020.

The Coordinator has also actively engaged with the GEF/FAO Common Oceans ABNJ Tuna project team in their discussions of a possible 'Phase 2' project (relating to improvement of tuna fishery sustainability) and the potential involvement of the IWC as a project partner. The IWC has submitted a costed proposal of work, focused on capacity building across the Indian and Pacific regions.

- Regional Fisheries Management Organisations (RFMOs)

The BMI has engaged with prioritised RFMOs on the issue of bycatch. The IWC Secretariat commissioned a Review of Regional Fisheries Management Organization Efforts in Addressing Cetacean Bycatch. This work was commissioned to assist the BMI in its prioritisation of RFMOs for ongoing engagement (see CC/68A/6.4.2/01).

The IWC Secretariat reached out to each of the RFMOs which were featured in the review to ask for comments and any factual corrections, and to follow up on potential collaboration. The review recommended prioritising collaboration with: the Indian Ocean Tuna Commission (IOTC), the International Commission for Conservation of Atlantic Tunas (ICCAT), the South Pacific Regional Fisheries Management Organisation (SPRFMO), and the South Indian Ocean Fisheries Administration (SIOFA).

A near-final version of the review was discussed during the 2020 Scientific Committee meeting, and the Scientific Committee recommended that the BMI prioritise engagement with IOTC, ICCAT, SPRFMO, and SIOFA; continue to with FAO and RFMOs in relation to acquiring baseline cetacean data, build awareness and capacity to implement the FAO Technical Guidelines to reduce and prevent bycatch of marine mammals in capture fisheries.

The Bycatch Coordinator and the IWC Executive Secretary also participated in the Joint Tuna-RFMOs Bycatch Workshop (Kobe Bycatch Working Group) in December 2019 (Porto, Portugal) and held a side event on cetacean bycatch needs for tuna RFMOs.

The BMI has strengthened its engagement with the IOTC during the 2018-2020 period. The Chair of the IOTC Working Party on Ecosystems and Bycatch (WPEB) participated in the 2019 IWC Workshop

on Bycatch Mitigation Opportunities in the Western Indian Ocean and Arabian Sea. The Bycatch Coordinator was then invited to present the workshop report to the 15th session of the IOTC WPEB in 2019. In 2020, the IOTC Secretariat and Chair of the WPEB participated in the IWC Scientific Committee meeting. In September 2020, the IOTC and the IWC Secretariats and associated experts held an informal meeting prior to the IOTC WPEB to discuss potential collaboration and existing gaps in information to address cetacean bycatch in the Indian Ocean (see [CC/68A/INFO/09](#)). The Bycatch Coordinator also participated in the 16th WPEB meeting, and provided a brief presentation on the outcomes of the IOTC-IWC meeting on potential collaborative activities.

- Bycatch Management Information System

The BMI has engaged with the coordinators of the Bycatch Management Information System, an online platform established by the WCPFC under the first phase of the Common Oceans ABNJ project. The platform provides information on bycatch management (mitigation technologies and approaches) in tuna fisheries.

A paper was submitted to the most recent Scientific Committee meeting, requesting that the BMI and the Scientific Committee assist in reviewing information on cetaceans and cetacean bycatch mitigation ([SC/68B/HIM/04](#)). Collaboration with the BMIS was also recommended in the IWC Secretariat Commissioned report reviewing RFMO management measures (see [CC/68A/6.4.2/01](#)). The Scientific Committee recommended that the BMI continue to engage with the BMIS and an inter-sessional group of the SC has been established (led by the Bycatch Coordinator) to define these activities.

2. Development of a four-year workplan for the Bycatch Mitigation Initiative

Document [CC/68A/06.1.2](#) provides the proposed four-year workplan for the BMI. The 10-year [Strategic Plan](#) ([IWC/67/CC/01](#)) provides the overarching vision for the BMI in the period 2018-2028. The BMI is under-taking a phased approach to implementing its ambitious vision. The focus of the initiative in this workplan period (2021-2024) will be on securing funding for implementing pilot projects; evaluation of results from pilot project trials; driving innovation of mitigation measures; promotion of BMI technical advice and capacity building opportunities; promotion of best practice; and improvement and streamlining of bycatch reporting to IWC and other processes. Given the collaborative nature of the BMI, and the collective challenges ahead in addressing cetacean bycatch, the success of this ambitious workplan relies in part on the continued and strengthened engagement from collaborating organisations, governments and experts and fishing communities.

The activities in the workplan are costed (total amounts for the full, 4-year period, or where relevant by activity) where estimates have been possible to calculate. Funds to implement these activities will be sought through IWC voluntary contributions (through VCF), in kind and financial contributions from partners and wider, external fundraising.

The Conservation Committee is invited to endorse the proposed four-year costed workplan (2021-2024) for the Bycatch Mitigation Initiative and the associated budget and discuss the role of the CC in delivering the workplan.

3. Expenditure of existing funding 2018-2020, proposed allocations 2020-21 and VCF funding needs for four-year workplan

The Report on the Voluntary Conservation Fund ([CC/68A/17.2/01](#)) outlines the expenditure of voluntary conservation funds to support the Bycatch Mitigation Initiative (including Bycatch-earmarked and General VCF funds). It also includes the proposed allocation of available earmarked funds for Bycatch for Workplan activities in 2020-21. This is in addition to activities which will be undertaken by the Secretariat and therefore covered by existing Secretariat funds.

There are additional funding needs for the remaining activities in the BMI workplan which will be sought through one or more applications to the VCF and through wider, external fundraising efforts. In particular, the SWG may seek VCF funding for further seed funding or co-funding for pilot projects should projects progress to this point during the coming year.

The Conservation Committee is invited to note the expenditure of VCF funding during the 2018-2020 period; the allocation of available bycatch funds to activities in 2020-2021, and the intention for future application(s) to the VCF.

Annex 1. Itemised progress report on IWC Bycatch Mitigation Initiative Workplan 2018-2020

High level objective and Description of activity	Timeframe			Lead	Priority Core= essential Top High Medium	Progress
	2018	2019	2020			
<p>1.1 Coordination of programme</p> <p>All aspect of programme coordination including liaison with the Bycatch SWG; coordination of expert panel and involvement/coordination/administration of pilot and affiliated projects; coordination with other IWC bodies and initiatives; engagement with other Inter-governmental Organisations (IGOs) and organisations; fundraising; monitoring of progress and communication. Includes Bycatch Coordinator salary costs and travel to IWC SC, and Commission meetings.</p>	x	x	x	Bycatch Coordinator	Core	Ongoing- individual updates provided under the specific workplan activities
<p>1.2 Develop and implement a fundraising strategy for BMI</p> <p>Identify and pursue potential sources of funding for implementing actions- including international funds (World Bank, Global Environment Facility- GEF etc), private foundations, national and regional sources.</p>	x	x	x	Bycatch Coordinator	Top	<p>This activity is now linked to broader IWC efforts to identify and apply for external funding sources. Potential funding sources (private foundations) identified for bycatch work and this list is updated by the Secretariat.</p> <p>Funding proposals submitted: A BMI concept was submitted through the FAO/GEF ABNJ Common Oceans Tuna project Phase 2 development, which focused on capacity building and awareness raising of cetacean bycatch in high seas tuna fleets.</p> <p>A general fundraising concept note was developed for BMI Pilot projects and shared with potential donors. Tailored funding proposals will be developed during 2020-2021 for each of the priority pilot projects, in collaboration with national governments, partners and BMI Expert Panel.</p>
<p>1.3 Progress reports of BMI to the Commission, Conservation Committee (CC) and updates to Scientific Committee (SC).</p>	x		x	Chair of Bycatch SWG	Core	<p>Ongoing.</p> <p>2018 Progress report submitted to IWC67 in 2018</p>

						<p>2019 Brief written and verbal update to SC68A on BMI Indian Ocean workshop Written update on BMI to CCPG 2019</p> <p>2020 Progress update and draft 2021-2024 workplan shared to SC68B Written update to CCPG 2020 Progress report and new workplan submitted to CC in 2020</p>
1.4 Annual review of expert panel membership	x	x	x	Bycatch Coordinator	Core	First review undertaken. Expert Panel members confirmed their commitment and all members continue to serve on the panel. Potential new Expert Panel members working on cetacean bycatch have been suggested from South America and Asia. Increased geographic spread and additional expertise to be added to the panel before the end of 2020.
1.5 Expert panel meetings		x	x	Bycatch Coordinator	High	Meeting in May 2019 (Nairobi) and informal meeting in December 2019 (Barcelona).
<p>2.1 Collaborate with international organisations and experts to identify and review existing data available on cetacean distribution, bycatch and fishing effort</p> <p>Collaborate with international organisations/bodies holding existing bycatch, fisheries and cetacean information; evaluate its utility (see activity 2.2) to assist the BMI (particularly for small-scale/artisanal and Areas Beyond National Jurisdiction fisheries) and identify key gaps and opportunities to fill knowledge gaps. Links to action 5.2; 5.3; 6.1)</p>		x	x	Bycatch Coordinator to stimulate an externally led project	High	<p>Action underway. Discussion is ongoing with the FAO Secretariat in their Statistics Division, with individual RFMOs and other IGOs on what cetacean bycatch is collected and how this could be streamlined and used to identify bycatch hotspots. This activity was also discussed in the joint IOTC-IWC meeting in September 2020 (see CC/68A/INFO/09) in relation to understanding and addressing gaps in the Indian Ocean.</p> <p>The workshop component of this action still not started and has been adapted and moved into 2021-2024 workplan.</p>

<p>2.2. Technical workshop evaluation of existing bycatch and cetacean data and small-scale fisheries bycatch challenges (Regional Focus on Indian Ocean)</p> <p>A 2- day workshop including: Day 1) Technical workshop with invited experts and data owners to evaluate the data available within the Indian Ocean region on cetacean distribution, bycatch and fishing effort, compare sources and brainstorm whether useful products/decisions can be made with existing data or what is needed for the future. Day 2) Technical workshop on small scale fisheries bycatch challenges in Indian Ocean region and options for bycatch risk assessments and low-cost mitigation trials.</p>		X		Bycatch Coordinator	High	<p>Action complete. Workshop on cetacean bycatch in Indian Ocean held, focused on identifying challenges and opportunities for addressing the issue across the region. The workshop was attended by 50 participants working in 17 different countries, with half of the participants coming from within the Indian Ocean region. NB- The workshop did not include an evaluation of all data available within the IO region as described in 2.2. This component is currently being discussed with the Indian Ocean Tuna Commission (see CC/68A/INFO/09).</p>
<p>2.3. Identify pilot projects through expert review - IWC and government consultation.</p> <p>The BMI expert panel, SC (HIM, SM) and CC (CMP) regularly review any new information and make suggestions for the BMI on current priorities and if necessary, to (re)prioritise fisheries or regions with specific bycatch issues for pilot projects (see Objective 3 and 4) or targeted capacity development work (Objective 5).</p>	x	X	x	Bycatch Coordinator	Top	<p>Action complete. 7 priority countries identified by Expert Panel and Coordinator for pilot project development (India, Pakistan, Kenya, Peru, Borneo- Indonesia/Malaysia, Thailand, Republic of Congo) using a variety of information sources, including SC recommendations, EP recommendations, outcomes of Indian Ocean Bycatch Workshop Report. SWG consulted on list and government consultation begun on pilot project development. Local partnerships to be built and project concepts developed. Funding opportunities currently being sought and this will continue for the remainder of 2020 and into 2021.</p>
<p>2.4 Rapid bycatch assessment conducted through pilot project in small scale/artisanal fisheries</p> <p>Implementation of standardised approach to rapidly assess bycatch in very data poor situations, as appropriate and according to gaps identified in Activity 2.3.</p>		X	x	Pilot project lead	High	<p>Action underway. The BMI is collaborating with the Government of Colombia to hold a virtual training workshop on bycatch rapid risk assessment (ByRA toolkit). If there is sufficient data available, a risk assessment will be conducted for small scale fisheries in Colombia. This action will be continued in the 2021-2024 period if necessary. The ByRA manual was translated into Spanish in order to facilitate training in South America and other Spanish speaking countries.</p>
<p>3.1 Sensory ecology review and identify research priorities</p> <p>Review what is known about cetacean sensory biology (vision, hearing, tactile, gustatory) of cetaceans and how these relate to the body of work (where it exists) on</p>		X		Consultant led- or collaboration with external experts	High	<p>Action underway. BMI Coordinator attended and presented at a specialist sensory ecology workshop prior to the World Marine Mammal Conference in December 2019. Planned contribution to a review paper on sensory ecology and implications for bycatch mitigation</p>

responses to different bycatch prevention techniques. Identify research priorities based on outcomes of review for potential innovative mitigation methods.						-Development of brief concept for follow up workshop -Engagement with other taxa experts on multi-taxa sensory ecology needs This action has been adapted into the 2021-2024 workplan
3.2 Collaborate with sensory ecologists, fisheries technologists, economists, scientists to develop prototypes and carry out lab and field trials using innovative gear Undertake experimental trials with multiple species to inform the design and assess the effectiveness of novel bycatch mitigation techniques.		X	x	Pilot project leads	Medium	Action underway. Concept developed for workshop funding proposal but further brainstorming needed with partners and EP. This action has been adapted into 2021-2024 period
3.3 Raise awareness in scientific, engineering and conservation funding community of need for mitigation research Produce material (printed and online) to highlight the need for further research. Promote this material through expert panel and SC community.	x	X	x	Bycatch Coordinator	Medium	Not started – elements of this activity have been adapted into the next workplan 2021-2024
3.4 Scope out potential for incentivising global fisheries engineering community to develop new mitigation measures Explore collaborative ways to fund innovation- linked to 3.1 and 3.2		X		Bycatch Coordinator	Medium	Not started – elements of this activity have been adapted into the next workplan 2021-2024
3.5 Test mitigation measures and strategies with fishermen (small scale and commercial) in pilot projects and regularly evaluate progress Dependent on pilot projects developed/collaborating with BMI-; low cost mitigation device trialling, gear switching, spatial/temporal restrictions and other new innovative mitigation (e.g. as per 3.2). Socio-economic aspects studied alongside to determine economic viability. Information/data regularly presented at IWC SC meetings.		X	x	Pilot project lead	Top	Action pending pilot project commencement. This action will be continued in the 2021-2024 period
3.6 Engagement with ongoing projects of relevance to BMI (creation of BMI affiliated projects) Affiliation of BMI with ongoing, already funded projects (e.g. Bycatch SWG led projects, external collaborators) where				Bycatch Coordinator	Top	Ongoing action – engagement with project teams: -Med Bycatch Project (ACCOBAMS, GFCB, RAC-SPA, BirdLife) http://www.fao.org/gfcm/activities/environment-and-conservation/med-bycatch-project/en/

assessment/mitigation/incentivising approaches are being trialled. Information exchange and collection of technical advice/lessons learnt and provision of BMI expert panel advice where requested/relevant. Presentation of information where possible at SC meetings and to expert panel.						-PEUMP (SPREP) with focused project on bycatch. Joint calls to discuss synergies between SPREP bycatch project and the BMI. -Common Oceans ABNJ – remote attendance at 3x meetings to develop a Phase 2 project proposal. Submission of project concept This action will be continued in 2021-2024 period
3.7 Review of bycatch mitigation strategies in collaboration with experts and existing platforms providing technical guidance Collaboration with FAO and other experts and bodies on the development of technical guidelines on marine mammal bycatch; Collaboration with GEF/FAO ABNJ Common Oceans BMIS platform. Review of current strategies and technical advice for cetacean mitigation measures and input of new information from pilot projects/affiliated projects.		x	x	Bycatch Coordinator (coordinating input from IWC groups)	High	Ongoing action - Discussions still in progress with other organisations and platforms (e.g. FAO and BMIS) on how the BMI and IWC community can assist in reviewing existing and new information on mitigation measures. This is also dependent on next steps with FAO Technical guidelines and potential collaboration on reviewing mitigation measures. Discussion held during SC68B on IWC input into BMIS information on mitigation (see: (IWC/68/Rep01rev1 ; and SC/68B/HIM/04). The BMI (Expert Panel, Coordinator) also reviewed the CMS Guidelines for the Safe and Humane Handling and Release of Bycaught Small Cetaceans from Fishing Gear. This action will be continued in 2021-2024 period
4.1 Engage communities participating in pilot and affiliated projects This will be context specific depending on pilot study locations, but could include port-based outreach, training workshops, engagement with industry representative groups etc. Development of trust with fishing communities participating in pilot projects (including involvement of fishing community in the design and development of pilot projects) and collection of information for deeper understanding of socio-economic conditions related to tackling bycatch.		x	x	Pilot project lead	Top	Action pending pilot project commencement. This action will be continued in 2021-2024 period
4.2 Develop toolbox of socio-economic incentive-based approaches for small-scale fisheries in both developed and developing countries and for commercial fisheries		x	x	Expert panel	High	Not yet started. Further discussion pending pilot project development. This action will be continued in 2021-2024 period

Desk based task to compile toolbox. Once developed these can be trialled in pilot projects depending on local context.						
<p>4.3 Scope out opportunities for outreach and train fishermen beyond pilot projects on how to operate bycatch mitigation gear (proven as effective) and adapt solutions for vessels and raise awareness of effective solutions and approaches</p> <p>Further scoping for collaboration with industry/research groups e.g. ISSF, Sustainable Fisheries Partnership, Too Big to Ignore to reach fishing communities beyond pilot projects.</p>			x	Bycatch Coordinator (coordinating response team)	High	Action pending pilot project commencement. This action will be continued in 2021-2024 period
<p>5.1 Develop and implement a BMI communication strategy for engagement with national governments (contracting and non-contracting) and broader outreach.</p> <p>Includes promotion of BMI technical advice and BMI activities, raising awareness of cetacean bycatch issues, promotion of pilot and affiliated projects and work underway focused on bycatch globally.</p>	x	x	x	Bycatch Coordinator	Top	Action underway. Communication strategy to be finalised by the end of 2020. Implementation activity to be continued in 2021-2024 period
<p>5.2 Identify main barriers and gaps in IWC bycatch data (national progress reports)</p> <p>In the context of activity 2.1 and 2.2. develop a questionnaire to contracting and non-contracting governments on barriers to reporting bycatch and existing monitoring programmes. Explore means to make the IWC national reporting requirements standardised to reduce reporting burden and ensure the most useful data is acquired for identifying significant bycatch.</p>		x	x	IWC Secretariat	High	This action is part of broader IWC engagement on national progress reports and how to improve reporting and utility of data. This action will be continued in 2021-2024 period
<p>5.3 Compilation and review of IWC progress report bycatch meta-data, entanglement and strandings data during IWC Scientific Committee meetings</p> <p>Includes relevant data reported on bycatch, strandings (where bycatch is likely to have occurred) and entanglement (e.g. GWERN database).</p>	x	x	x	SC-HIM (and Bycatch inferences from Strandings Working Group)	Medium	2019 SC-HIM review of submitted bycatch information. This action will be continued in 2021-2024 period

<p>5.4 Scope out, develop and begin to implement capacity building/technical advisory programme. Scope out training and capacity development needs for national governments on bycatch mitigation strategies for IWC and non-IWC countries. Scope opportunities to collaborate with others (including 6.1) such as investigating opportunities to do capacity building with FAO, ICES, PICES, NAMMCO, CMS, CITES, ISSF, GEF/FAO ABNJ Common Oceans Project etc. Scope out opportunities to deliver capacity development/training/promotion of effective mitigation approaches through existing IWC programmes; CMPs, GWERN programme etc.</p>	x	x	x	Bycatch Coordinator	Top	<p>Ongoing action, includes:</p> <p>Collaboration on capacity building Continued discussion with the FAO on potential future collaboration on capacity building on cetacean bycatch mitigation, linked to Technical Guidelines.</p> <p>Submission of capacity building concept to Common Oceans ABNJ (GEF, FAO, t-RFMOs) phase 2 project development team.</p> <p>Workshop training programme on bycatch risk assessment planned with the Government of Colombia and BMI Expert Panel members. Focus in Pacific coast. Workshop to be conducted remotely (~November, 2020).</p> <p>Discussion with CMP SWG Chairs on potential opportunities for joining up BMI capacity building efforts with CMP activities. Potential opportunities explored with river dolphin CMP development.</p> <p>Discussion on collaboration on capacity building efforts on bycatch management in Indian Ocean during joint IOTC-IWC meeting in September 2020.</p> <p>This action will be continued in 2021-2024 period</p>
<p>5.5 Develop recommendations on tackling cetacean bycatch, including technical advice for monitoring and mitigation. Includes promotion of technical information (activity 3.7 and information coming from pilot and affiliated projects).</p>			x	IWC-CC	High	<p>Recommendations in Report of the IWC Workshop on Bycatch Mitigation Opportunities in the Western Indian Ocean and Arabian Sea to be considered (CC/68A/REP/BMI/01). Other recommendations from SC (68a, 68b), and from RFMO review report (CC/68A/6.4.2/01).</p>
<p>6.1 Regional and international outreach activities on bycatch Includes promotion of technical information on effective solutions and strategies for tackling cetacean bycatch (activity 3.7) through existing IWC channels and where</p>	x	x	x	Bycatch Coordinator	High	<p>Ongoing action. Includes:</p> <p>Indian Ocean workshop (CC/68A/REP/BMI/01) – including partnership/collaboration with regional and international</p>

<p>relevant in international fora. Further collective scoping for streamlining and improvement of global fisheries and bycatch data (linked to 2.1 and 5.3); scoping of collaboration on capacity development programmes (e.g. FAO, and national fisheries capacity development programmes); potential collaboration with FAO/GEF ABNJ Common Oceans (and follow up project preparation). Further scope collaboration with CMS and daughter agreements, CITES, World Bank (including environmental safeguards guidance), GEF, UNEP and UN Regional Seas and ICES working groups on bycatch, fisheries and economics work</p>						<p>organisations (WIOMSA, Pew, WWF, IOTC, Government of France). Promotion of workshop report with WIOMSA and IOTC.</p> <p>Outreach to IOTC Working Party on Ecosystems and Bycatch, with presentations by Bycatch Coordinator at IOTC WPEB meetings in 2019 and 2020 on bycatch in the Indian Ocean and opportunities to collaborate with the BMI. Joint IOTC-IWC meeting to discuss potential collaboration (CC/68A/INFO/09)</p> <p>Common Oceans ABNJ Phase 2 project engagement (see previous activities for details).</p> <p>T-RFMOs Kobe Bycatch Working group. Side event held during 2019 Joint t-RFMO bycatch meeting to raise awareness of cetacean bycatch needs.</p> <p>This action will be continued in 2021-2024 period</p>
<p>6.2 Attendance at relevant IGO meetings e.g. FAO COFI meeting, CMS, etc</p>	<p>x</p>	<p>x</p>	<p>x</p>	<p>Bycatch Coordinator</p>	<p>Core</p>	<p>The Bycatch Coordinator (and/or IWC Secretariat representing the BMI) has attended the following meetings:</p> <p>FAO: -COFI meeting in 2018 -Expert workshop in 2018; Workshop in 2019 on development of Technical Guidelines</p> <p>RFMOS – KOBE: -Attendance at Joint t-RFMO Kobe Bycatch Working Group meeting (December 2019) and side event on</p> <p>RFMOS- IOTC -Remote participation in Working Party on Ecosystems and Bycatch (WPEB) in 2019 -Remote participation in WPEB in September 2020 -Participation in joint meeting (IOTC/IWC) on opportunities to collaborate on cetacean bycatch (CC/68A/INFO/09)</p> <p>CMS, ASCOBANS, ACCOBAMS</p>

						<p>-IWC Executive Secretary attended CMS meeting Planned attendance at Joint ASCOBANS/ACCOBAMS bycatch working group (delayed) -IWC Secretariat participation in ASCOBANS Meeting of the Parties</p> <p>This action will be continued in 2021-2024 period</p>
<p>6.3 Identify and engage with priority RFMOs and RFBs on cetacean bycatch and set up and coordinate network of regional leads to participate in relevant meetings</p> <p>Set up a coordinated regional network of individuals acting as IWC representatives (potentially CC governments, scientists/expert panel members) to attend priority RFMO and RFB meetings of relevance to pilot projects/CMPs/priority fisheries (e.g. ABNJ and inshore/coastal/artisanal/small scale). Provide expert advice, where applicable, on cetacean bycatch. Hold regular coordination meetings to discuss upcoming meetings, and available information to share in meetings. Coordination between IWC RFMO network and other international bodies (e.g. CMS, ACAP, CITES, ICES, PICES, NAMMCO) and national governments attending RFMO meetings</p>	x	x		Bycatch Coordinator	High	<p>IWC Secretariat commissioned a Review of Regional Fisheries Management Organization Efforts in Addressing Cetacean Bycatch (CC/68A/6.4.2/01). The RFMOs featured in the review were contacted to ask for feedback and factual checking of the report. Prioritised RFMOs asked for discussion on possible collaboration.</p> <p>Engagement with IOTC and ICCAT and other tuna RFMOs already underway through IWC Secretariat. More discussion needed on how the IWC can assist efforts (see. RFMO review document, and SC HIM discussion). More thought needed on how to structure a network of IWC representatives for different RFMO meetings. This action has been reviewed and adapted and included in 2021-2024 period</p>

Annex 2. Bycatch Standing Working Group Membership

Group Email: BycatchSWG@groups.iwc.int

Chair: Stephanie Langerock (Belgium)

Vice Chair: Arne Bjørge (Norway)

Bycatch coordinator: Marguerite Tarzia (IWC Secretariat)

Australia

Mike Double

Additional representatives tbc

Argentina

Miguel Iniguez

Belgium

Stephanie Langerock

Jan Haelters

France

Clement Payeur

Italy

Giancarlo Lauriano

Kenya

Representative to be confirmed

Luxembourg

Elizabeth Slooten

Mexico

Jorge Urbán Ramírez

Netherlands

Anne-Marie Svobada

New Zealand

Ben Sharp

Dave Lundquist

Norway

Arne Bjørge

Slovenia

Tilen Genov

Spain

Graham Pierce

Elvira García-Bellido Capdevila

USA

Kristin Rusello

Ryan Wulf

Bob Brownell

UK

Catherine Bell

Rosie Carpenter

Chair of Conservation Committee

Lorenzo Rojas-Bracho

Chair of Scientific Committee

Robert Suydam

IWC Secretariat

Marguerite Tarzia

David Mattila

Sarah Smith

Iain Staniland

Rebecca Lent

Cherry Allison

Katie Penfold

ACCOBAMS

Celia Le Ravellec

ASCOBANS

Jenny Renell

CMS

Heidrun Frisch-Nwakanma

EIA

Clare Perry

WWF

Leigh Henry

WDC

Sarah Dolman

Animal Welfare Institute

Kate O'Connell;