

The GGGI is the recognized leading platform for addressing abandoned, lost and discarded fishing gear globally.

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ANNUAL REPORT 2018



“With members from the largest commercial fisheries to community members seeing this problem of ghost gear and wanting to do something about it, GGGI has become the global hub for understanding the problem and then taking action to end it. The value of members coming from a variety of areas enables us to create a multi-pronged approach with a proven track record that is creating real positive change.”

Ben Kneppers – Co-Founder, Bureo



46-70%

OF MACROPLASTIC BY WEIGHT
IS ESTIMATED TO BE

FISHING GEAR*



Photograph: Thanda Ko Gyi/Myanmar Ocean Project

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* http://wedocs.unep.org/bitstream/handle/20.500.11822/7720/-Marine_plastic_debris_and_microplastics_Global_lessons_and_research_to_inspire_action_and_guide_policy_change-2016Marine_Plastic_Debris_and_Micropla.pdf?sequence=3&isAllowed=y (Page 61)

FOREWORD

Over the last few years, the Global Ghost Gear Initiative (GGGI) has established itself as the world's premier global alliance dedicated to solving the problem of abandoned, lost and otherwise discarded fishing gear (ALDFG or "ghost gear") worldwide. Since being launched by World Animal Protection in 2015, the GGGI has grown to 95 participant organisations spanning six continents and has the official support of 14 governments. Recognising the pervasive threat that ghost gear poses to our oceans, the UK Government became a proud member of the Initiative at the Our Ocean Conference in 2017.

Since then, the UK Government has supported two workshops to see the roll out of Best Practises for the Management of Fishing Gear in regions where the need is the greatest and there is a strong appetite for change – including Africa and the Pacific. Recognising that tackling ghost gear needs to be a global effort, the UK Government is also encouraging members of the growing Commonwealth Clean Ocean Alliance (CCOA) to join the Global Ghost Gear Initiative.

2018 was a year of considerable growth and success for the GGGI. We saw the adoption of the Global Voluntary Guidelines for the Marking of Fishing Gear in July 2018 by the United Nations Food and Agriculture Organisation Committee of Fisheries (UN FAO COFI), after an expert and a technical consultation in which the GGGI had an important voice and which will set the scene of a dedicated UN agency taking on the responsibility of addressing ALDFG and developing a global strategy and body of work that GGGI will help deliver.

The GGGI has also worked to inform the practises of large seafood companies, including Thai Union, to tackle ghost gear in their operations and supply chains. Certification schemes such as the Marine Stewardship Council (MSC) are considering taking the recommendations of the Best Practise Framework for the Management of Fishing Gear (BPF) on board in the revision of their standards this year.

The GGGI has also supported some new areas of work in the UK with for example the recreational fishing sector where the GGGI has helped the Anglers National Line Recycling Scheme to develop their initial approach. They are now growing at rapid rate in the UK with other European countries wanting to replicate their scheme.

The GGGI's focus has always been on evidencing the issue, on promoting best practice management of gear, and on scaling up and replicating successful proven and tested solutions around the world. It has done this by drawing on the strengths of its participants and by putting tangible tools in place, by presenting real evidence, and by trialling and scaling up practical solutions. Through building its credibility with a wide range of key stakeholders – from large corporates to local fishers in Indonesia – the GGGI has established itself as the leading platform to tackle ghost gear at global scale.

The narrative has changed from having to raise awareness about the problem to highlighting how people can be part of the solution. We are seeing industry moving to real action proving that ghost gear is an important element to consider if we want to ensure a blue economy. We have achieved a lot over the last year, but more is needed to ensure cleaner, healthier and safer oceans for all. New research this year estimated that 46-70% of surface debris in certain areas in the ocean is made up of fishing gear amplifying the need for dedicated and ongoing action.

We are excited to continue to be part of this important platform and are very proud of the legacy foundation that World Animal Protection has provided for the GGGI to lean on going forward, and to see this momentum continue under the stewardship of Ocean Conservancy.

Building on the considerable successes of 2017, this report summarises the key achievements of the GGGI in 2018 and demonstrates how the GGGI collective continues to spearhead the fight around the world against the most harmful form of marine debris – lost and abandoned fishing gear.

**UK Government, Department of Environment,
Food and Rural Affairs (DEFRA)**



Department
for Environment
Food & Rural Affairs

TRIBUTE

We were absolutely heartbroken and at a loss for words by the tragic passing of GGGI co-founder and ocean champion Joanna (Jo) Toole on Ethiopian Airlines flight 302 that crashed on its way from Addis Ababa to Nairobi on March 10th, 2019. Jo was en route to the United Nations Environment Assembly (UNEA-4) where she was scheduled to speak on a panel co-chaired by the UN Food and Agriculture Organization (FAO) and the GGGI to further engage the international community to address ghost gear and its environmental impacts. We were deeply shocked and saddened by this terrible tragedy. We lost a colleague, a dear friend and the world has lost one of its great ocean and animal welfare champions.

Over the last six years, Joanna was instrumental in driving international action to overcome ghost gear, known officially as abandoned, lost or otherwise discarded fishing gear (ALDFG). Joanna was the co-founder of the GGGI and she was very passionate about putting ghost gear on the global agenda as one of the most harmful forms of marine debris. She worked tirelessly with other stakeholders and sectors to build consensus, raise awareness and formulate effective solutions. More recently she worked at FAO to see the adoption of the gear marking guidelines and led on kick-starting a dedicated umbrella programme to address ALDFG in a holistic way – starting

with 4 regional workshops led jointly by FAO and GGGI this year. As her father Adrian Toole mentioned, for Joanna, her work was not a job, it was a vocation, and her work ethic, diplomacy, professionalism and expertise were an inspiration for many, including us at the GGGI.

Those of us that had the privilege of knowing Jo knew her not only as extraordinarily devoted to her work, but also as a supremely warm and wonderful human being. Her dedication to her work was overshadowed only by her love for her friends, family and colleagues.

Her heart, passion, kindness and dedication to the well-being of life on this planet will be long-remembered by all who had the pleasure of knowing Joanna. She passed away much too soon, but in acknowledging that tragedy, let us remember the words of Special Envoy to the Ocean, Ambassador Peter Thomson: “From out of the unbearable sorrow, may you draw strength from Joanna’s legacy of profound concern for the welfare of others, for overcoming the many troubles facing life in the Ocean, and thereby ultimately our own. Life is indeed short, so let us be fortified by Joanna’s enduring example of doing what’s right by our fellow creatures while we still have time on this wondrous planet. The fight goes on, with Joanna forever serving as our inspiration.”

#BeMoreJo

In memory of Joanna, her family have also established a JustGiving page to raise funding for this award. Please visit www.justgiving.com/fundraising/joanna-toole-foundation



1

GHOST GEAR – A GLOBAL CHALLENGE

As a global community, we all depend on our oceans and the health of the marine life within them.

Oceans drive our climate, supply us with food, provide livelihoods, and play a critical social, environmental and economic role for us. But they are increasingly inundated with marine debris, restricting their ability to perform these crucial functions.

Abandoned, lost or otherwise discarded fishing gear (ALDFG), also known as “ghost gear”, is at least four times more likely to impact marine life through entanglement than all other forms of marine debris combined.¹ It was estimated in 2009 that at least 640,000 tonnes² of fishing gear are lost or abandoned in our oceans each year, but new research has indicated that this number is likely to be much higher today. Recent studies have suggested that between 46% - 70% of floating macroplastic is fishing related when measured by weight.

Ghost gear also compromises yields and income from our fisheries – creating higher costs for companies sourcing fish and threatening global food security. Of all known marine mammal species, over 40 percent have been affected by ghost gear, with many of these species being included on the International Union for Conservation of Nature Red List of Threatened Species.³ It is estimated that over 90% of species caught in ghost gear are of commercial value. For example, it is estimated that up to 10,000 gillnets are lost in the Baltic Sea every year, with

one net impacting on about \$20,000 worth of seafood.

With an estimated 5-30% decline in some fish stocks as a result of lost and abandoned fishing gear⁴, ghost gear is a significant threat to global food security. With over three billion people relying on fish for 20% of their protein (with this number rising to 50% in some developing coastal nations)⁵, ghost gear is a real and present threat to food security, particularly as the world’s population continues to increase. This is true

not only with respect to large scale commercial fisheries, which supply protein from seafood to global markets, but also with respect to small artisanal communities in developing countries, where some locals depend almost entirely on the sea for their survival.

The adverse impacts of ghost gear have been made even worse by the introduction of non-biodegradable or plastic fishing gear, predicted to persist in the marine environment for up to 600 years.⁶ Ghost fishing gear (if measured by weight) accounts for over half of all macroplastics in our oceans today⁷ and will eventually break down into microplastics, be consumed by marine animals and, ultimately, enter the human food chain. The GGGI encourages and supports finding viable circular economic solutions to end-of-life fishing gear and recovered ghost gear. Many of the materials used in modern fishing gear, including

polyamide / nylon6 (PA6), polyethylene (PE) and polypropylene (PP) are highly recyclable materials that several GGGI participants have found ways to recycle and create sustainable business models and lasting social enterprises.⁸ Proving that these business models work, and incorporating circular economic methodologies into GGGI Projects, wherever applicable, encourages the development and expansion of similar projects around the world, helping to build the circular economy and providing alternate sources of income to communities in developing nations.

Recognising the immediate need to address the myriad of problems facing our oceans, the United Nations formulated a dedicated goal (Goal 14) to “*conserve and sustainably use the oceans, seas and marine resources for sustainable development*”, amongst the 17 Sustainable Development Goals (SDGs). The SDGs will drive the global sustainable development agenda until 2030 and beyond – giving countries, institutions, companies and civil society a mandate and a responsibility to deliver on these 17 commitments. SDG target 14.1 commits the global community to “*by 2025, prevent and significantly reduce marine pollution of all kinds, particularly from land-based activities, including marine debris and nutrient pollution*”. As ghost gear is a significant form of marine debris, both in terms of quantity and certainly in terms of its impact on marine ecosystems and marine life, target 14.1 represents a clear and urgent call for action to prevent and significantly reduce ghost gear from our oceans. In addition to goal 14, the body of work of the GGGI as well as its mission areas contribute to the delivery of several other SDGs of the 2030 agenda including: SDG2 focused on food security, SDG12 on responsible consumption and production, SDG3 on food safety and health, and SDG17 encouraging cross-sectoral partnerships. Founded and launched by World Animal Protection in 2015, the Global Ghost Gear

A shark caught in abandoned ghost gear, Brazil.



Photograph: Marcus Davis

Initiative (GGGI) is a cross-sectoral alliance committed to driving solutions to the problem of lost and abandoned fishing gear worldwide. It is the established lead platform for the global community to unite under to improve the health and productivity of marine ecosystems, protect marine life from harm, and safeguard human health and livelihoods. The work of the GGGI is focused on ghost gear, but also directly impacts on the issue of marine plastics and microplastics, and provides tools for effective action against illegal, unreported and unregulated fishing.

2018 has been a landmark year for the GGGI, with many of its ambitious key goals from its inception having been accomplished, not the least of which is the firm establishment of the GGGI as the leading global platform for addressing ALDFG, and ensuring that the GGGI has a firm foundation to continue its vitally important work into 2019 and beyond. The goal of World Animal Protection has always been to launch, support and nurture the GGGI into the successful organisation that it is, and then to find a new organisation to take on the lead partner role at the end of 2018. We are

proud to say that goal has been fulfilled and that, beginning on January 1, 2019, Ocean Conservancy has taken on the stewardship of the GGGI. This change in stewardship of the GGGI will take place over a two-year transition period between January 2019 – December 2020, during which time World Animal Protection will continue to be an active and engaged participant in the GGGI with its staff offering support to Ocean Conservancy in this transition period and maintaining a seat on the GGGI Steering Group to ensure a smooth and successful transition. The aims, strategy, goals and ethos of the GGGI will remain the same and the GGGI Secretariat has transferred to Ocean Conservancy in January, 2019 as well.

The GGGI is now in its fourth operational year and has successfully grown into a global clearinghouse for information on ghost gear, informing relevant policy processes in both the public and private sector, and catalysing practical and replicable solutions for on-the-ground and in-the-water removal and prevention of ghost gear. This annual review showcases some of the highlights of our work over the last year.

Photograph: Athilia Bertocini

1. This statement is based on analysis by World Animal Protection based on figures and evidence found in the following papers: (1) Wilcox, C., Mallos, N.J., Leonard, G.H., Rodriguez, A., and Hardesty, B.D. Using expert elicitation to estimate the impacts of plastic pollution on marine wildlife. *Marine Policy*, No. 65; 107-114; Elsevier Ltd. 2015. Figure 2-110p.; (2) United Nations Environment Programme. *Marine Plastic Debris and Microplastics - Global lessons and research to inspire action and guide policy change*. UNEP. 2016. Nairobi. Table 7.1. and table 7.2. 82-83p. (3) Werner, S., Budziak, A., van Franeker, J., Galgani, F., Hanke, G., Maes, T., Matiddi, M., Nilsson, P., Oosterbaan, L., Priestland, E., Thompson, R., Veiga, J. and Vlachogianni, T. Harm caused by Marine Litter. MSFD GES TG Marine Litter - Thematic Report; JRC Technical report; EUR 28317 EN; doi:10.2788/690366, 2016, 10 – 11p. (4) Moss, E., Eidson, A., and Jambeck, J. *Sea of Opportunity - Supply Chain Investment Opportunities to Address Marine Plastic Pollution*. Encourage Capital on behalf of Vulcan, Inc., New York. February 2017. 22p.

2. Macfadyen, G., Huntington, T., Cappell, R. *Abandoned, lost or otherwise discarded fishing gear*. UNEP Regional Seas Reports and Studies, No. 185; FAO Fisheries and Aquaculture Technical Paper, No. 523. Rome, UNEP/FAO. 2009. 115p.

3. While the effects on different types of fish species may differ dependent on the types of ghost gear most prevalent in certain areas, it is estimated that, on a global level, ghost gear has led to an estimated 5-30 percent decline in some fish stocks and damage to important marine habitats can be attributed to ghost gear. The National Oceanic and Atmospheric Administration (NOAA) have found that ghost gear is directly responsible for a 5 percent reduction in total cod catch in the Baltic Sea and a 30 percent reduction of Greenland halibut off the coast of Norway; NOAA Marine Debris Program. 2015 Report on the impacts of "ghost fishing" via derelict fishing gear. Silver Spring, MD. 25pp. The Virginia Institute of Marine Science recently published the findings of a 6-year study on the economic value of removing ghost gear which showed that removing some of the derelict crab pots in the Chesapeake Bay yielded an additional US\$20 million in harvest for local fishermen. If extended to a global level, the study showed that removing just 10 percent of ghost gear could increase landings by close to 300,000 metric tons: Scheld, A.M., Bilkovic, D.M., and Havens, K.J. (2016) The Dilemma of Derelict Gear. *Scientific Reports* 6, Article Number 19671. <http://www.nature.com/articles/srep19671>

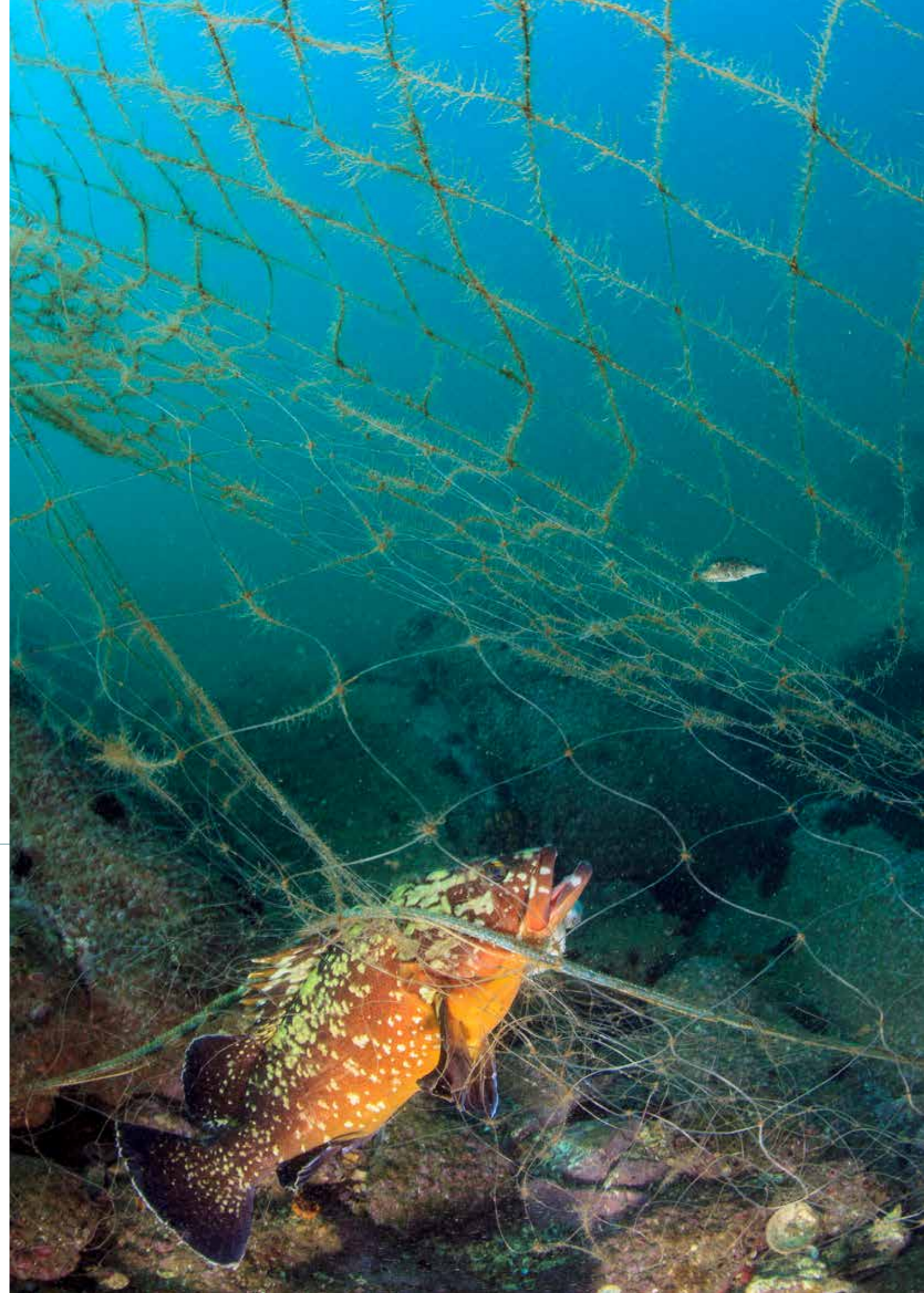
4. While the effects on different types of fish species may differ dependent on the types of ghost gear most prevalent in certain areas, it is estimated that, on a global level, ghost gear has led to an estimated 5-30 percent decline in some fish stocks and damage to important marine habitats can be attributed to ghost gear. The National Oceanic and Atmospheric Administration (NOAA) have found that ghost gear is directly responsible for a 5 percent reduction in total cod catch in the Baltic Sea and a 30 percent reduction of Greenland halibut off the coast of Norway; NOAA Marine Debris Program. 2015 Report on the impacts of "ghost fishing" via derelict fishing gear. Silver Spring, MD. 25pp. The Virginia Institute of Marine Science recently published the findings of a 6-year study on the economic value of removing ghost gear which showed that removing some of the derelict crab pots in the Chesapeake Bay yielded an additional US\$20 million in harvest for local fishermen. If extended to a global level, the study showed that removing just 10 percent of ghost gear could increase landings by close to 300,000 metric tons: Scheld, A.M., Bilkovic, D.M., and Havens, K.J. (2016) The Dilemma of Derelict Gear. *Scientific Reports* 6, Article Number 19671. <http://www.nature.com/articles/srep19671>

5. Béné, C., Barange, M., Subasinghe, R. et al. *Food Sec.* (2015) 7: 261. <https://doi.org/10.1007/s12571-015-0427-z>

6. Reference to this can be found in: *Approximate Time it Takes for Garbage to Decompose in the Environment*: https://www.des.nh.gov/organisation/divisions/water/wmb/coastal/trash/documents/marine_debris.pdf; and Macfadyen, G., Huntington, T., and Cappell, R. *Abandoned, lost or otherwise discarded fishing gear*. UNEP Regional Seas Reports and Studies, No. 185; FAO Fisheries and Aquaculture Technical Paper, No. 523. Rome, UNEP/FAO. 2009. 115p.

7. Moss, E., Eidson, A., and Jambeck, J. *Sea of Opportunity - Supply Chain Investment Opportunities to Address Marine Plastic Pollution*. Encourage Capital on behalf of Vulcan, Inc., New York, New York. February 2017. 22p.

8. Bureo (<https://bureo.co/>), Fourth Element (<https://fourthelement.com/>) and Healthy Seas (<https://healthyseas.org/>).



2

PARTICIPANTS, SUPPORTERS AND AFFILIATES

Participant Organisations: 95 2018 has seen a 44% increase in GGGI participants and supporters from 66 to 95. Participants represent a wide range of stakeholder categories including the fishing industry, corporates, NGOs academia, IGOs and private sector organisations. (2018 additions in bold)

Albion Farms and Fisheries	Fundy North Fishermen's Association	Neptune's Army of Rubbish Cleaners	Seachill
Aquaculture Stewardship Council	Georgia Strait Alliance	Nestlé	SeaDoc Society
Archipelago Marine Research	Ghost Fishing Foundation	Netgain Recycling	Sealcentre Pieterburen
Austral Fisheries	GhostNets Australia	Northern Prawn Fishery	Sea Pact
Axiom Cycling Gear	Gulf of Maine Lobster Foundation	Northwest Straits Foundation	Secretariat of the Pacific Regional Environment Programme
Blue Ocean Gear	GWR Polymers	Ocean Brands	Stand Out For Environmental Restoration
Blue Ventures	Healthy Seas Initiative	Ocean Conservancy	Stand Out For Environmental Restoration
Bumble Bee Seafoods	Humpback Whale Institute	Ocean Legacy Foundation	Steveston Harbour Authority
Bureo	International Pole & Line Foundation	Ocean Outcomes	Surfers Against Sewage
Calao Africa	Italian National Institute for Environmental Protection and Research	Ocean Recovery Alliance	Surfrider Foundation Kaua'i
Centre for Sustainable Design	Italian National Institute for Environmental Protection and Research	Ocean Wise	Tangaroa Blue Foundation
Cet Law	Jealsa Rianxeria Group	Odyssey Innovation Ltd.	T Buck Suzuki Environmental Foundation
Claire Potter Design	KIMO International	Olive Ridley Project	Tengah Island Conservation
Clean Foundation Nova Scotia	Lidl	ORCA	Tesco
Cornwall Seal Group Research Trust	Local Independent Sea Anglers	Pacific Islands Development Forum	Thai Union Group
Dolphin Swim Club	Local Independent Sea Anglers	PADI	TierraMar
EcoTrust Canada	Lost Fishing Gear Project	Parley for the Oceans	TriMarine
Emerald Sea Protection Society	Mare Nostrum	Pelagic Data Systems	TUNACONS
Fatface Foundation	Marine Conservation Society	Pew Charitable Trusts	Waitrose
Fathoms Free	Marine Conservation Society	Planet Love Life	Watamu Marine Association
Fish21	Marks & Spencer	Plastikgoureio	World Animal Protection
Fiskevegen AS	MCB Seafoods	Plastix Global	World Wildlife Fund
Fourth Element	Monterey Bay Diving	Project Aware	Young's Seafood
Friend of the Sea	Morrisons	Project GHOST	
	Natural Resources Consultants	Project Littora	
		Sainsbury's	
		Satlink	

Government Signatories: 14

	Canada		Montserrat
	Dominican Republic		New Zealand
	Independent State of Samoa		Republic of Palau
	Kingdom of Belgium		Republic of Panama
	Kingdom of the Netherlands		Republic of Vanuatu
	Kingdom of Sweden		Tuvalu
	Kingdom of Tonga		United Kingdom of Great Britain and Northern Ireland

High Level Affiliates: 6

- Commonwealth Scientific and Industrial Research Organisation (CSIRO)
- European Commission Directorate General for Maritime Affairs and Fisheries (EC DG MARE)
- NOAA Marine Debris Program (NOAA)
- OSPAR Commission
- United Nations Environment Programme (UNEP)
- United Nations Food and Agriculture Organisation (FAO)

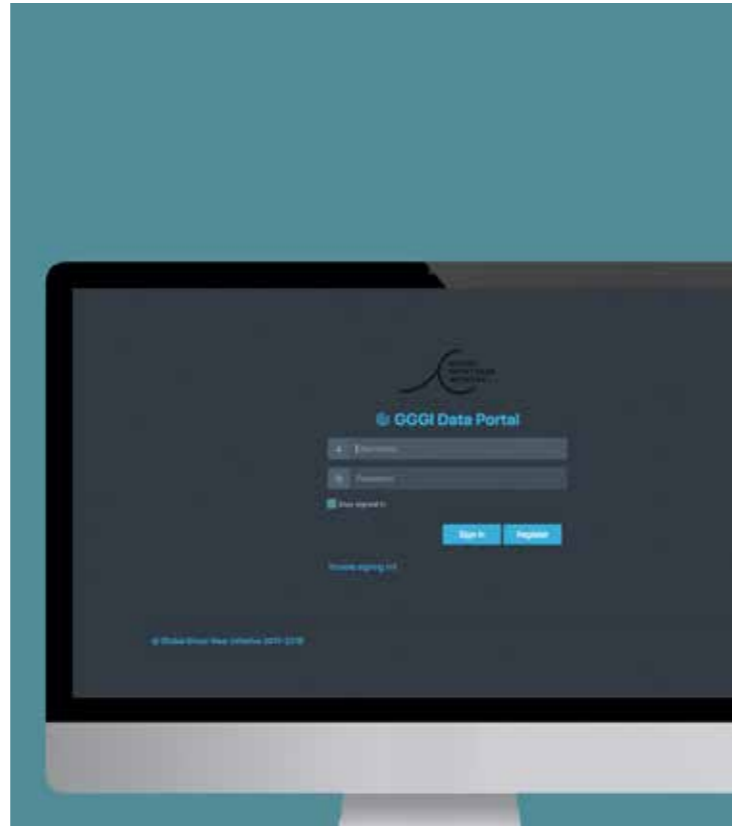
3

GGGI OUTPUTS

Build Evidence Working Group

The GGGI Global Data Portal launched in March 2018, at the Sixth International Marine Debris Conference in San Diego, USA, and is the currently the world's largest collection of ghost gear data with over 300,000 records from numerous contributing data partners, including Commonwealth Scientific and Industrial Research Organisation (CSIRO), Great Canadian Shoreline Cleanup (Ocean Wise / Vancouver Aquarium), Secretariat for the Pacific Regional Environment Programme (SPREP), Northwest Straits Foundation, Ghostnets Australia, CAMLR, World Wide Fund for Nature (WWF Poland), Project GHOST, Cornwall Seal Group Research Trust and the Marine Mammal Centre. This data portal not only provides a repository for numerous data sets on ghost gear from around the world, but also offers a variety of tools to interact with this data, including:

Data Submission Tool: Data can be submitted to the GGGI Global data portal in two different ways. Data can be submitted via bulk upload (spreadsheets) directly through the data portal interface, and the system allows for manual matching of data columns with the data categories present in the data portal itself. This allows for the collection of extremely high-resolution data and efficient categorisation of that data across multiple data sets, irrespective of categorical differences present in the original data sets. For large unique data sets, we also offer customised data mapping services.



Data Cards: Data cards (in the form of Excel spreadsheet templates) are freely available through the portal to encourage the collection of high-resolution data relevant to the GGGI data portal for new and existing projects as well as GGGI projects.

Database Overview: Includes graph breaking down the topline data by gear type, and allows for downloading of the entire set of topline data with creation of an account. Higher resolution data can be requested via the portal, although data submitted by data partners requires permission from the original data set contributor – as GGGI does not own the data sets themselves.

Global Map of Events: The portal also includes a global map of the events logged in the data portal, giving a visual interpretation of the topline data

on a global scale. A heat map view is also being developed and should be ready in 2019.

The GGGI Global Data Portal allows uploads of ghost gear records via the accompanying GGGI Ghost Gear Reporter App, freely available on the Google Play and Apple App stores. This app works on iOS and Android devices, and allows recording of single ghost gear events, automatic geo-tagging of location data, uploading of photos of the gear, and the same level of data resolution present in the data portal itself (though filling out every field is not required and the user can decide what level of data they are able to provide). The app was designed to link directly with the GGGI Global data portal to allow for seamless data gathering from anywhere in the world.

The Build Evidence Working Group organised and led a special session at the 6th International Marine Debris Conference on building evidence for the occurrence and impact of ALDFG, and out of that session we wrote a paper that was recently released in *Marine Pollution Bulletin* on-line. The paper appeared in print early in 2019.

Define Best Practice and Inform Policy Working Group

In 2018, the working group's agenda followed two primary threads: 1) continued leverage of the Best Practice Framework for the Management of Fishing Gear (BPF) in support of the GGGI core mission, and 2) expansion of new efforts to inform international policy and grow the GGGI's

sphere of influence beyond the membership, to governments all around the world that are responsible for managing ocean activities. In the process, the working group nearly doubled in size, as more organisations and enthusiastic people were recruited to help implement this two-pronged approach to completing our work plan. Regarding the first piece of work, we produced new factsheets that summarised the BPF for several different subgroups of stakeholders, including those fishing with or engaging with fishers who use traps/pots, gillnets, fish aggregating devices (FADs), etc. Some of these new factsheets have already been shared widely inside and out of the GGGI membership. Working group members also engaged with certification bodies – including Friends of the Sea (FOS), Marine Stewardship Council (MSC), and Aquaculture Stewardship Council (ASC) – to urge these bodies to broadly incorporate the BPF into their own standards. While updates to the MSC and ASC standards are still pending a long process internal to those organisations, the FOS wholly adopted portions of GGGI's work into their tuna standards, particularly when it comes to sourcing tuna caught using FADs.

Thai Union, the world's largest producer of shelf-stable tuna products, also adopted an official work plan on ghost gear for 2019–2020, using relevant sections of the BPF as a guide (further detail in section 5 below). Furthermore, staff from the ASC joined the working group in 2018, demonstrating an interest by that organisation in staying abreast of the work that the group and the wider GGGI are conducting on issues relevant to them. Group members also attended meetings in Norway, Germany, Canada, the United States,

Australia, and elsewhere in order to share GGGI's best practices.

The expansion of the group's policy work constituted a fairly new step for the group, after previously focusing almost entirely on completing the BPF. Using that document as a guide, group members attended several meetings of international fisheries management bodies in order to advocate for policy changes that reduce the prevalence of ghost gear and the extent of harm that it causes in the marine environment. The group was excited to see the Global Voluntary Guidelines for the marking of Fishing Gear adopted at the FAO Committee of Fisheries Meeting in July which was an important step towards further embedding action on ALDFG within the UN system and promoting the BPF at global scale.

In this regard, a first ever workshop for government and other stakeholders on the BPF was organised in the margins of the Blue Economy Conference in Nairobi in November with support from the UK Government. Further workshops together with FAO will be organised in 2019. At the Western and Central Pacific Fisheries Commission (WCPFC) the GGGI gave a lunchtime presentation on best practises for reducing harmful impacts of FADs in tuna fisheries, which was shared numerous times among WCPFC members; and facilitated the GGGI becoming a formal observer to the WCPFC, a first for the GGGI in its own capacity. At the International Commission for the Conservation of Atlantic Tunas, the working group prepared written and oral statements on behalf of the entire GGGI membership to support proposed measures to combat ghost fishing in the Atlantic Ocean and met bilaterally with government proponents of those proposals. Each of these efforts raised the profile of the GGGI and began the process of

establishing the GGGI as a collection of experts in fisheries policy.

Moving into 2019, the working group will continue to expand the new work on impacting international policy, will investigate how GGGI may also take part in domestic policy reform, and will consider how best practices to avoid gear loss and ghost gear / ghost fishing in aquaculture and recreational fishing industries may be developed.

Catalyse and Replicate Solutions Working Group

GGGI Projects 2018

1. FAO Indonesia Gillnet Marking / Retrieval Phase 2

Since 2017, World Animal Protection has been coordinating a GGGI project with the Centre for Fisheries Research, Indonesia, funded by FAO. The work has focused on testing approaches to marking gillnets in small-scale Indonesian fisheries as a tool for ALDFG and IUU prevention.

With further funding from the Dutch government, in December 2018 the team also started testing the potential application of Fibrecode tags on fishing gear so that the gear can be scanned with a mobile device and provide information about its ownership and history, ultimately meaning that traceability can be provided down to specific nets.

As the project moves into its next phase, the team at Septillion Technologies have developed a tag fixture that can be made from recycled fishing nets, meaning the tags can potentially be recycled along with the nets at end-of-life. The project team is keen to expand the field testing of this technology with industry and government partners on different gear types.



From top: World Animal Protection's gear marking project in Indonesia is helping to mark gear to link it to manufacturers and owners, building a global picture of where it is and who is losing it, in order to find practical solutions; Working with the Vanuatu Fisheries Department, this project is trialling tracking technology on FADs, to evaluate their effectiveness, and recommend disposable recycling systems to prevent further creation of ghost gear.

2. Pacific FAD Project Phase 2

The GGGI, in collaboration with the Kingdom of Belgium, and coordinated by World Animal Protection, has conducted the first phase of this project focused on the management of FADs in the South Pacific. Increased use of FADs, particularly their prominence in commercial tuna fisheries, has led to concerns and is driving an urgent need for improved management measures to ensure future sustainability of the fishery as fishing effort increases.

The focus was on looking at the role of marking and tracking, along with other management measures, to prevent the creation of ALDFG and its related impacts on habitats and wildlife. The project was executed in two complementary strands. The first strand of the project was to audit the FAD policies and operations in the South Pacific of a large commercial tuna company, with a goal to develop recommendations for increased integration with the GGGI's Best Practice Framework for the Management of Fishing Gear. The project also served as a case study focused on the implementation of best practice management methods for FAD marking and tracking for the FAO Technical Consultation on the Marking of Fishing Gear in February 2018.

The second strand of the project involved trialing anchored fish aggregating device (AFAD) position tracking technology in Vanuatu. The objectives



Nets awaiting transport to be recycled and turned into new products.

are to evaluate their effectiveness, recommend protocols for monitoring the positions of the artisanal AFADs to aid in their retrieval, and recommend potential responsible disposal, retrieval and recycling/re-use opportunities for end-of-life AFADs. Methods for marking AFADs to increase visibility and identification, with an aim to reduce risk of damage, loss and interference were also trialed. The interim findings from this work were compiled into a report used at the FAO Technical Consultation.

Phase 2 is based on the overarching project goal of reducing or eliminating habitat damage caused by lost FADs by preventing lost FADs from reaching vulnerable nearshore areas. An ancillary goal is to reduce entanglement of non-target species in FADs through promotion of feasible non-entangling and biodegradable FAD materials.

3. Alaska Net Recycling Phase 2

Dutch Harbor is the biggest seafood port in the United States but there's currently nowhere for end-of-life fishing gear to be disposed of, collected or recycled. After a successful implementation of a pilot net recycling project in Dutch Harbor, Alaska in 2017, Net Your Problem and Plastix Global, with support from World Animal Protection, expanded this project to Kodiak, Alaska in 2018.

This relies on a multi-step logistical chain set up by Net Your Problem and Plastix Global that involves:

- Outreach to various fishing companies and boat captains operating in Dutch Harbor and subsequent agreements to participate;
- Boat captains identify and tag their end-of-life nets in preparation for transport;
- Collection of nets from various net yards which are then transported over land by either Swan Nets or Aleutian Expeditors;

- Nets are loaded by OSI staff or Aleutian Expeditors into Maersk containers for transport to Aarhus, Denmark for recycling;
- Plastix Global then retrieves the containers upon notification that they have arrived in Aarhus and transports them to their facility in Lemvig, Denmark for recycling.

Approximately 80 end-of-life nets totalling 124 tonnes made it to Plastix for recycling in 2017, with a further 71 tonnes in 2018. Solutions have also been found for other end-of-life fishing gear / materials that were identified during the first phase of the project, including things like iron doors, taifun ropes, etc. making the project even more appealing to fishers, and could lead to this project expanding to up to four more fishing ports in Alaska in 2019.

4. Latin America Dive Workshop

The project consisted of a two-day workshop held at the Smithsonian Tropical Research Institute in Panama City and one day of gear removal training. The project aimed to build on successful efforts by the Panamanian government and create a cohesive network to address the problem of ghost fishing gear in the Caribbean and Latin America regions. Partners in this project

included World Animal Protection, Conservation International, Aquatic Resources Authority of Panama (ARAP), NOAA Marine Debris Program, the Professional Association of Diving Instructors (PADI) and Natural Resources Consultants.

The workshop objectives were to:

- Establish communications between partners in the Caribbean and Latin America who are concerned about ghost gear;
- Build greater understanding of the menu of management actions available to reduce harmful impacts from ghost gear;
- Train divers on safe and effective ghost gear location and removal methods;
- Demonstrate systematic recording and reporting of ghost gear data.

The workshop began with a background on the GGGI and the ghost gear problem in general (and as relates to the Caribbean region) followed by an overview of the work of the Panamanian Government to address ghost gear systematically through reporting and diver removal operations. The workshop also included an overview of the GGGI Best Practice Framework for the Management of Fishing Gear, the GGGI Ghost Gear Reporter app and global data portal, and various case studies from around the world. This was followed by dive safety protocol as relates to ghost gear recovery, and training on removal protocols. Finally, there was an active dive removal of two gillnets from local waters. Local divers were successfully trained in dive removal of ghost gear and safety protocols; and garnered practical experience in removing ghost nets from the region, so that further removal work can be done proactively and safely. Local stakeholders and the Panamanian government – a GGGI signatory – were hugely supportive of this work. Multiple partners were connected throughout the region, helping to expand the network of individuals and organisations

80
END-OF-LIFE NETS TOTALLING
124 TONNES
MADE IT TO PLASTIX FROM ALASKA
FOR RECYCLING IN 2017,
WITH A FURTHER
71 TONNES IN 2018.

interested in tackling the ghost gear problem in the region.

5. Zero Impact Campaign (Bureo, WAP, Satlink)

Satlink, one of the GGGI's newest participants, and a leader in satellite communications, has teamed up with fellow GGGI participants World Animal Protection and Bureo to expand Bureo's Net+Positiva program to additional areas in Chile, which will see 100 tonnes of end-of-life fishing nets recycled in 2019 and turned into products such as skateboards, sunglasses, frisbees and more.

As a leading company working in maritime technology, Satlink is making a commitment through its Zero Impact campaign to fund the strengthening and growth of Bureo's extremely successful Net+Positiva program, which provides infrastructure and training to fishing communities in Chile in order to sustainably retrieve and manage fishing gear at the end of its life cycle to avoid it being lost or discarded in the ocean.

This GGGI project will expand Bureo's net collection program to four new artisanal fishing communities in Chile, building on the established successful Net+Positiva model pioneered in other areas and ensure sustainable waste management for end-of-life fishing gear. Additionally, efforts will be scaled to collect larger volumes of end-of-life and discarded nets from existing communities already engaged in the Net+Positiva program. The expansion of this program will reduce the risk of new ghost gear from entering the marine environment, helping to protect the sustainability of fish stocks whilst reducing a significant threat to marine wildlife and ecosystems. Additionally,

by transforming this gear into higher value products, like skateboards and sunglasses, Bureo is able to provide fair wages to local workers in the communities while maintaining a monetary fund for the community by paying for each recovered kilogram of fishing gear. This project will also promote the benefits of fish net recycling from a ghost gear prevention perspective through project participants' own networks, in the media, industry events, etc. and facilitate scaling of this approach to new regions.

6. WWF / Bureo Peru

The focus of this project – a collaboration between GGGI participants Bureo and WWF – is to create a circular economy from ALDFG in Peru by building on the successful model already established by Bureo in Chile. The project will build a relationship with the fishing industry in Peru, helping to develop a path for innovative solutions that involve and benefit communities based on Bureo's Net+Positiva model, creating a circular economy while saving marine life and sustaining the ocean's health.

The project goals are to:

- Reduce the volume of ALDFG entering the Peruvian coastline;
- Remove the existing ALDFG from Peru's ocean;
- Provide the fishing industry an environmentally sound alternative to discarding their nets into the marine environment;
- Recycle the ALDFG that is collected into innovative products, creating sustainable business models for communities.



Photograph: Alfred Jürgen Westermeyer

The first stage of the project will involve conducting an assessment of the specific impacts of ALDFG in Peru. Once this work is complete, the project activities will take place in at least three fishing ports which are important for both gillnet fisheries as well as purse seining for Peruvian anchovy.

Peru has the largest single species fishery in the world – the anchoveta fishery. This fishery uses purse seines, which have the best quality net for recycling into plastic raw material. WWF-Peru already has a good relationship with two of the biggest anchoveta producers in the country, who want to reduce their impacts on the marine environment and to contribute to the sustainability of the artisanal fisheries as well. Bureo is currently working with Patagonia, Jenga, and others to create new products made out of end-of-life and recovered fishing nets. Their goal with this project is to increase the capacity of

The team at Bureo ready end-of-life nets for transportation to be recycled.

collection to more than 1,000 tons of ghost gear per year. If they meet this net collection goal, up to USD \$200,00 could be generated for local communities.

The project will engage with the three main anchoveta fishing companies and ask them to donate their end-of-life purse seine nets to finance engagement with the artisanal gillnet fishing communities who currently have no ecologically beneficial way of disposing of end-of-life nets. WWF and Bureo will work together in the development of a strategy to better understand:

- The challenges fishers face with the disposal of end-of-life fishing gear;
- What would be motivating factors to change improve current disposal / discard practices;

- What are the required capacities / resources needed to create the facilities for a systematic collection and recycling system for ALDFG.
- Scoping for this project is set to begin in 2019, with implementation currently set for 2020.

7. Ghost Fishing UK Project Phase 3

This project, led by Ghost Fishing UK, was phase 3 of a gear scoping and removal project based in Scapa Flow in the Orkney Islands, home to a significant shellfish fishery and also an extremely popular destination for recreational scuba divers.

The project had three goals:

- To train a cohort of scuba divers to survey and remove ALDFG and other debris from the seas around the UK;
- To train six new instructors in the delivery of the Ghost Fishing UK course;
- To develop and assess evaluation metrics to gauge the efficacy of ghost fishing recovery.

Now trained, the divers are capable of surveying, removing and disposing of simple ALDFG back in their home locations in the UK. They now form part of the larger UK team, and are able to join in with the larger more complex projects as they happen.

The training programme, developed between 2016 and 2018, was used to train an additional eight divers.

They conducted their training on real sites, recovering ALDFG from the wrecks in Scapa Flow. Ghost Fishing UK has recently set up an on-line recording system for divers to log any sightings of ALDFG in the marine environment to which trainees will be introduced and learn how to extract information from the database for use in their future work. Dr Joanne Porter has identified a range of important species that might become trapped by ALDFG. These species

were shown to the trainees who then carried out quantitative surveys of the ALDFG prior to any lifts being undertaken. Survey data was recorded and uploaded to the SeCleanMachine database. Trainees with previous experience in marine life surveys conducted more detailed data collection. All collected data is compliant with the GGGI data portal format and will be made available to GGGI for implementation into the global data portal.

The haul of ghost gear collected by Ghost Fishing UK during the 2018 project included creels donated to Sea Life Centres, and local fishermen,

rope to Afrayed Knot, and nets that were sent for recycling into Econyl and used in a variety of products.

The following projects will occur in 2019 (though they were started / approved in 2018)

8. BC Ghost Gear Workshop Project

Evidence of derelict fishing gear off the waters of British Columbia has been documented through past removal projects and local knowledge from fishers and fisheries regulators. Outside of two ongoing removal projects, gear loss reporting

The Myanmar project will result in the collection of data on the quantity, type and location of ghost fishing gear

and removals have been mainly one-off projects in targeted areas that were identified by local stakeholders.

Working with local NGOs and industry stakeholders, the aim of this workshop held on February 6, 2019 in Richmond, BC was to raise awareness, build momentum and capacity, and encourage cooperative, organised efforts to address lost fishing gear in BC. This project engaged a variety of seafood stakeholders, including indigenous groups, fisheries regulators (Department of Fisheries and Oceans Canada), fisheries service providers (Archipelago, Ecotrust), fishing organisations (Area A Crab Association), fishers, NGOs (Emerald Sea Protection Society, T Buck Suzuki Foundation), businesses (Rendezvous Diving), and seafood companies (Albion, Ocean Brands). The workshop was designed to promote open dialogue about the causes and solutions to lost fishing gear in the BC context.

Executing this kind of workshop can serve as a model in other areas to coalesce and form a more coordinated approach to addressing ALDFG where disparate actions are being taken by different stakeholders. Educational materials developed and distributed during this workshop can be used by other fisheries in Canada and elsewhere or serve as templates for developing fisheries-specific materials.

9. Myanmar Project

Lost, abandoned and discarded commercial and artisanal fishing gear is emerging as a critical threat to Myanmar's coastal ocean, where it impacts both ecologically and economically important living marine resources, including threatened and endangered species like dugong, turtles, manta rays, and corals. It also poses a very real threat to Myanmar's budding ocean-based tourism industry as well as artisanal fishers and SCUBA divers.



Photograph: Thanda Ko Gyi/Myanmar Ocean Project



To address the challenge of ghost fishing gear in Myanmar, we will initiate a ghost gear removal pilot effort – the first of its kind in Myanmar.

The project, funded by the National Geographic Society and World Animal Protection, will focus specifically on the Myeik Archipelago, one of the most untouched island groups in the world. Though the islands of the archipelago are largely untouched by humans, ghost nets from artisanal fisheries have been found beneath the surface, threatening key species such as manta rays, and harming the marine ecosystem.

Ms. Thanda Ko Gyi, a Burmese national and highly-skilled SCUBA diver, and the first person in Myanmar to both raise the alarm about lost fishing gear and take the initiative to remove it, will serve as Field Manager for the project.

This project will result in the collection of data on the quantity, type and location of ghost fishing gear in a part of the world for which these data

are currently totally lacking. It would provide evidence (e.g. data, images, maps) for the impact that ghost fishing gear has on keystone species for this coral reef ecosystem, as well as on impacts to the corals themselves.

Furthermore, as a pilot effort, the project will test the application of standard best practices for ghost gear recovery and adapt as necessary to optimise for implementation in Myanmar. It will also allow us to investigate opportunities for gear disposal and recycling, and suggest ways in which artisanal fishers in the area might change how

From left: In May 2018 World Animal Protection organised and sponsored a ghost gear removal operation in Maine, USA with local fishermen and the Gulf of Maine Lobster Foundation. They set out to remove discarded lobster pots and discarded fishing gear that harms marine animals and habitat and pulled up nearly 2 tons of derelict fishing gear; A new ghost gear removal pilot project will be the first of its kind in Myanmar, and will focus on the Myeik Archipelago, one of the most untouched island groups in the world.



they deploy their gear to minimise the risk that gear becomes lost. Ultimately, the project will remove ghost gear from Myanmar’s coastal ocean, thereby reducing the threat that ghost gear poses to marine life and habitats.

Initial field work began in February, 2019 and will continue through the remainder of the year (weather permitting).

10. Red Swimming Crab FIP – China

China is home to 25% of global commercial fishing capacity and the recently launched Fujian Zhangzhou Red Swimming Crab Fishery Improvement Project – which includes 600 pot vessels fishing an estimated 380,000 pots. This fishery provides a unique opportunity to integrate ghost gear solutions with growing fishery improvement efforts to pilot ways to best address ghost gear globally.

In 2017 Ocean Outcomes (O2) assisted GGGI in conducting global outreach and review of the BPF for various stakeholder groups that have a vested interest in finding solutions to the problem of ghost gear with the goal of incorporating key feedback and ensure that the final framework would be practical and effective.

This project has two goals:

- Demonstrate the practical application of ghost gear assessment criteria being developed from the Global Ghost Gear Initiative’s (GGGI) Best Practices Framework for the Management of Fishing Gear, and show they can be used as an integral part of fishery pre-assessments to support FIP design or fishery certification processes; and
- Implement fleet-wide measures for the Fujian red swimming crab fishery to minimise loss of crab gear and mitigate impacts of ghost gear through a management plan that guides and evaluates performance.

ACCORDING TO SCIENTIFIC RESEARCH, THE REMAINING FISHING CAPACITY OF GHOST NETS VARIES FROM

6 - 20%

OF THEIR INITIAL FISHING CAPACITY

By demonstrating the systematic assessment and integration of ghost gear performance metrics into FIPs, which currently are poorly addressed within the MSC standard, this demonstration will provide proof of concept for an approach that has wider application in both FIP and MSC assessment and certification processes, and is expected to lead to the mainstream integration of ghost gear issues in key processes used for sourcing decisions. This is envisioned as a four-year project, where goal 1 is expected to be achieved by the end of 2019, and goal 2 is expected to be achieved by the end of 2022.

11. Cefas / World Bank Caribbean Insurance Project

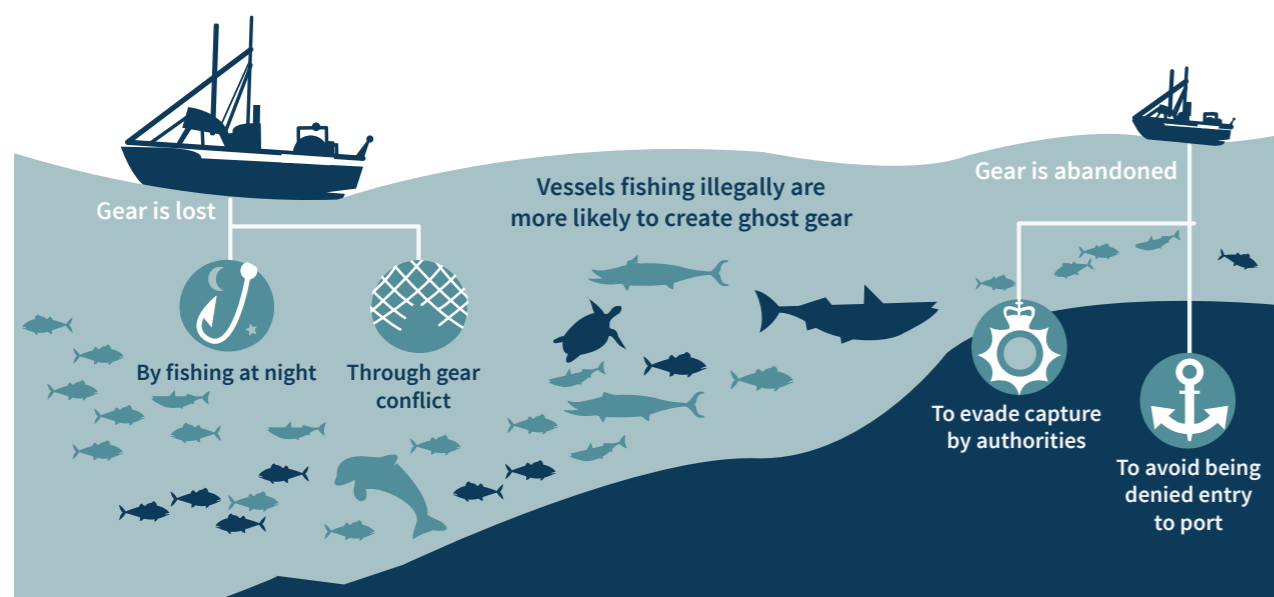
The goal of the project is to provide added incentive to Caribbean Small Island Developing States to minimise the occurrence and impact of abandoned, lost, or otherwise discarded fishing gear (ALDFG) in extreme weather events. The project will implement best practices such as gear marking, as established in the GGGI’s Best Practices Framework; develop processes for fishers to recover deployed gear prior to extreme weather events; and explore innovative gear designs to limit ghost fishing potential when gear is lost. Several countries

Photographs: World Animal Protection / Harrison Kennedy, Thanda Ko Gyi/Myanmar Ocean Project

are being considered for the initial pilot, including Jamaica, Dominica, Grenada, Belize and St. Lucia.

The project efforts will focus on effectively integrating the BPF into the emerging Caribbean Oceans and Aquaculture Sustainability climate risk parametric insurance checklist, and then test those best practices in two countries in the region poised as early adopters of parametric insurance products. The project will pilot trials of innovative fishing gear and gear marking techniques to prevent ALDFG and facilitate gear recovery, identifying which are most practicable in the relevant geography. Workshops will also be conducted with fishers and other stakeholders to share best practices and results and, in the case of gear retrieval, initiate dives to recover upwards of 5,000 lbs of ALDFG. The final aim of the project is to improve data collection efforts about the types and prevalence of ALDFG in key countries, including by encouraging greater use of the GGGI's Gear Reporter app.

How illegal, unregulated and unreported fishing (IUU) contributes to the problem of ghost gear.



The expected outcomes of the project include:

- Increased local capacity to identify and implement best practices around gear marking and retrieval;
- Pilot tests linking implementation of those best practices to insurance incentives;
- New assessments identifying gaps in port reception facilities and collection points, with recommendations for future sites;
- Direct removal of at least 5,000 lbs. of ALDFG and a linked recycling pilot project along with increased understanding of ALDFG recycling potential for Caribbean fisheries; and
- Strengthened data collection efforts chronicling the amounts and types of ALDFG present in the Caribbean region.

GGGI Core / Secretariat

In October, 2018, GGGI launched its revised website, focusing on highlighting solutions projects, showcasing our partnerships and promoting our work and that of GGGI participants in a much more visual way.

The GGGI, with the assistance of GGGI participants World Animal Protection and Natural Resources Consultants, produced several GGGI branded guidance documents, which are freely available on the new revamped GGGI website under the “resources” section. These documents and infographics have been prepared by a global team of experts on ghost gear prevention, recycling and removal and are designed to give sound guidance to organisations wishing to engage on the ghost gear issue. Guidance documents include:

- Best Practice Framework for the Management of Fishing Gear (and numerous accompanying fact sheets targeting specific gear types and industry stakeholders)
- Approaches to the Collection and Recycling of End-of-Life Fishing Gear: An Overview With Contacts and Case Studies
- Methods to Locate Derelict Fishing Gear in Marine Waters
- Gear Marking in Indonesian Small-Scale Fisheries: A Pilot Project Case Study
- Pacific Island FAD Tracking and Marking Project: A Pilot Project Case Study
- Fishing's Plastic Problem (Overview and Infographic)
- IUU and Ghost Gear: A Threat to Sustainable Fisheries (Infographic)

Webinars

The GGGI hosted two webinars – one in December, 2017 and one in April, 2018. These webinars contained updates from the Steering Group, Secretariat and Working Groups, introductions of new GGGI participants Blue Ocean Gear, Ocean Outcomes, and Axiom Cycling Gear, a presentation from Plastix Global on requirements for gear recycling, updates on the GGGI data portal and Ghost Gear Reporter App. Also included, were presentations from Leandro Filippin on the state of ghost gear in Sri Lanka, Professor Martin Charter from the Centre for Sustainable Design, Steven Tapp from Local Independent Sea Anglers (LISA),

and Holly Koehler from International Seafood Sustainability Foundation.

In addition, the GGGI was invited to participate in two Open Communication for the Ocean (OCTO) webinars: one in April, 2018 and the other in September, 2018. The April webinar contained a presentation from Ingrid Giskes (Global Head of Sea Change for World Animal Protection and GGGI Chair), Joel Baziuk (GGGI Secretariat) and Joan Drinkwin (Associate Partner for Natural Resources Consultants) on how the GGGI's three working groups – Build Evidence, Define Best Practice and Inform Policy, and Catalyse and Replicate Solutions – have played a key role in formulating a global approach and strategy to tackling this deadly issue, and working towards ghost gear-free seas.

The September webinar entitled "Tackling Ghost Gear in Hot Spot Areas: How Innovative Partnerships are Helping Developing Countries Address Lost and Abandoned Fishing Gear" featured presentations from Ingrid Giskes (Global Head of Sea Change for World Animal Protection and GGGI Chair), Ben Kneppers, (Co-Founder of Bureo and GGGI Solutions Working Group Chair) and Nicholas Mallos, (Director of Ocean Conservancy's Trash Free Seas Programme). In addition to giving an overview of scaling successful ghost gear solutions projects in developing world contexts via the GGGI, the webinar also gave an overview of the long term future of the GGGI and the partnership between the GGGI founder World Animal Protection and new lead partner moving into 2019, Ocean Conservancy.

4

OUTREACH AND EVENTS

- **World Ocean Summit – Playa del Carmen, Mexico**
- **Seafood Expo North America – Boston, USA**
- **Caribbean Regional Fisheries Meeting – Little Bay, Montserrat**
(PRESENTATION)
- **6th International Marine Debris Conference – San Diego, USA**
(NUMEROUS PANELS / SPEAKING SLOTS)
- **MARELITT Baltic ALDFG Workshop – Stralsund, Germany**
- **Seafood Expo Global – Brussels, Belgium**
- **EU Maritime Day – Burgas, Bulgaria** (PANEL)
- **Infofish 2018 – Bangkok, Thailand** (SPEAKING SLOT / PRESENTATION)
- **Cordage Institute Annual Meeting – San Diego, USA**
(SPEAKING SLOT / PRESENTATION)
- **SeaWeb Summit – Barcelona, Spain** (PANEL)
- **UN Committee on Fisheries Meeting (COFI 33) – Rome, Italy**
(OBSERVER / INTERVENTIONS)
- **Klosters Forum – Klosters, Switzerland**
- **Western and Central Pacific Fisheries Commission Meeting – Marshall Islands** (PRESENTATION)
- **Eurocord Annual Meeting – Brussels, Belgium**
(SPEAKING SLOT / PRESENTATION)
- **G7 Summit – Halifax, Canada**
- **Our Ocean Conference – Bali, Indonesia**
(SPEAKING SLOT / PRESENTATION / PLEDGE(S))
- **Clean Ocean Summit – St. Andrews, Canada**
- **UN Ad-hoc Open-Ended Expert Group on Marine Plastics and Microplastics (OEEG) – Geneva, Switzerland** (OBSERVER / INTERVENTIONS)
- **Sustainable Blue Economy Conference – Nairobi, Kenya**



6th International Marine Debris Conference (6IMDC)

The GGGI had an extremely strong presence at 6IMDC in San Diego in March, 2018, as representatives from the GGGI participated in nine panel discussions over the course of the conference. Thanks to the GGGI and its participants raising the profile of ghost gear on the global stage, an entire track of work / presentations was devoted to the subject, helping to illustrate the urgent need for action on this critical ocean issue. The GGGI also hosted a cocktail event for its members and the Chairs and Coordinators of the GGGI Working Groups, as well as some members of the Steering Group, came together to meet at the mid-year point. The Build Evidence Working Group organised and led a special session at 6IMDC on building evidence for the occurrence and impact of ALDFG, and out of that session wrote a paper that was recently released in Marine Pollution Bulletin on-line. The paper will appear in print early in 2019.

UN COFI 33

World Animal Protection attended the United Nations Committee on Fisheries (COFI) meeting in Rome to encourage the adoption of the gear marking guidelines currently being trialed in the Indonesia GGGI project in collaboration with FAO as well as in Vanuatu in conjunction with the Vanuatu Fisheries Department. Gear marking is an important fisheries management tool and can help trace gear back to its source, improve traceability, transparency and combat IUU. The guidelines will support both the prevention as well as the retrieval of fishing gear from our oceans.



World Animal Protection also hosted a side event at the COFI meeting alongside colleagues from FAO, WWF, IWC and supported by the governments of Vanuatu, Samoa, Fiji, Palau, Belgium, Netherlands, New Zealand, Sweden and Panama. The event highlighted sustainable fisheries management solutions for ghost gear and bycatch, focusing on the need and methods for data collection, available solutions and the role of FAO, Member States and other international bodies in coordinating global action. It aimed to demonstrate the partnership approaches and policy framework needed to effectively tackle the economic, social and environmental impacts of ghost fishing gear and bycatch.

During the side event, the GGGI projects in Indonesia and the Pacific were showcased to Member States, with a particular focus on the role of gear marking as part of a fisheries management approach for addressing ghost gear.

SeaWeb Seafood Summit

GGGI hosted a successful panel discussion on plastics in the seafood supply chain at the SeaWeb Summit in Barcelona in June. The panel was moderated by Christina Dixon of World Animal Protection and the panelists included several GGGI participants, including David Parker of Blue Ventures and GGGI Steering Group Vice Chair; Guy Dean of Albion Farm and Fisheries; and Melissa Garren of Pelagic Data Systems (all of whom were finalists for the 2018 Seafood Champion Awards with Guy Dean and Melissa Garren each winning the coveted award). The panel was rounded out by Dr. Carmen Morales of Ocean Wise and Spain's plastic pollution lab.

The session was structured so the speakers each had five minutes to introduce themselves and their views on the topic, and the rest of the session was audience polling. There was a lot of discussion on several themes:

- Joining the GGGI and how companies can work throughout their supply chain to reduce risk of ghost gear and increase recycling;
- How to serve seafood in packaging not made of plastics and ensure safety;
- Broad discussion about plastics and current work happening to reduce consumption of single use plastics;
- Risks to contamination of seafood;
- Threat to food security and artisanal fishing communities by ghost gear;
- The role of retailers in solutions;
- The session was very well attended and well received by the conference attendees and the discussion carried on long after the session ended.

THE GGGI WILL SUPPORT 30 PROJECTS ADDRESSING GHOST GEAR IN 15 COUNTRIES BY 2025 WHERE THE NEED IS THE GREATEST



Our Ocean 2018

Ingrid Giskes, Chair of the GGGI Steering Group and Global Head Campaign for Sea Change at World Animal Protection spoke during the Marine Pollution session of the plenary on the main stage at the Our Ocean Conference on Tuesday, October 30th 2018. The GGGI's official Our Ocean pledge consisted of the following commitments:

- The GGGI will support 30 projects addressing ghost gear in 15 countries by 2025 where the need is the greatest;
- The GGGI is pledging to double the financial commitment from its members, supporting organisations and governments to USD \$2 million in 2019 to ensure the effective scaling of projects aimed at addressing and preventing the problem of ghost gear, especially in developing countries. The UK Government is

committing over £100,000 for work in Vanuatu and the Solomon Islands and providing training on the best practice management of fishing gear in other Commonwealth countries. The Netherlands Government is committing €100,000 towards continued project work in Indonesia;

- The GGGI will also work with three market leading certifications schemes, all 13 GGGI signatory countries and UN FAO to implement best practice management of fishing gear by 2021 including the uptake of the recently adopted UN FAO Guidelines for the Marking of Fishing Gear. Overall, the GGGI pledges to help establish baselines and contribute to achieve a net reduction of ghost gear in our oceans on an annual basis by 2030.

The GGGI also hosted a very successful Ocean Talk side event as part of the official conference program entitled "Tackling Ghost Gear at Scale" on Tuesday, October 30th from 13:15 - 14:00. H.E. Ambassador Peter Thomson, Special Envoy for the Ocean, gave the opening address for the GGGI Ocean Talk which was followed by a panel discussion with the following presenters:

- Ms. Ingrid Giskes, GGGI Chair and Head of Sea Change, World Animal Protection
- Mr. Nick Mallos, Director Trash Free Seas Programme, Ocean Conservancy
- Dr. Darian McBain, Global Director of Sustainability, Thai Union
- Mr Baihaqi Keren, Fishing Gear Technology Scientist, Research Institute for Marine Fisheries, Indonesia

- Mr. Dominic Pattinson, Deputy Head of Marine Environment, Defra, UK Government
- H.E. Hans Hoogeveen, Ambassador, Permanent Representative of the Kingdom of the Netherlands to the Food and Agriculture Organisation of the United Nations in Rome

The GGGI Ocean Talk was very well attended and well received and generated a lot of great discussion and questions from the audience. It was an honour to have a panel of such illustrious speakers to discuss ghost gear, potential solutions, and its importance on the global stage.

GGGI PARTICIPANT HIGHLIGHTS

Thai Union Ghost Gear Work Plan

Thai Union, the world's largest producer of shelf-stable tuna products and an active GGGI participant and industry champion on ghost gear, has implemented a ghost gear specific work plan for 2019–2020. Thai Union will be working with suppliers and partners to deliver the work plan, which contains four high level objectives:

- Promoting and raising global awareness of ALDFG through new initiatives, webinars, conference attendance, workshops, etc.;
- Ensuring Fisheries Improvement Projects (FIPs) for purse seine tuna in the eastern Atlantic and Indian oceans are in line with the GGGI Best Practice Framework for the Management of Fishing Gear and the FAO Voluntary Guidelines on the Marking of Fishing Gear;
- Increasing the number of vessels involved in the FAD Watch program in the Indian ocean and increasing the capacity to recover / remove lost FADs;
- Improve management practices around ghost gear in Thailand to reduce and prevent pollution into the marine environment.

This dedicated work plan is the first of its kind in the fishing industry and serves as a terrific example of leadership from within the fishing industry to tackle this global issue. GGGI is proud to be working with Thai Union on this issue and to assist with implementing this work plan over the next two years.

Circular Ocean Chem Hack Challenge, Circular Ocean Competition 2018 and webinar series

The award winning transnational European Circular Ocean project launched a global “Innovation Competition” between April and June 2018 designed to engage creative and technical communities to provide radical, inspiring and fresh ideas and solutions related to the re-use and recycling of end-of-life Fishing Nets, Ropes and Components (FNRCs) in the Northern Periphery and Arctic (NPA) region. The competition is designed to act as a catalyst to motivate and empower remote communities to develop sustainable business opportunities utilising plastics from waste fishing gear.

Managed by Circular Ocean's partners at The Centre for Sustainable Design (UK) (an active GGGI participant), the project sought to attract new ideas that enable a circular value chain through innovative material processing, technology, local machinery, systems, business models or completely different solutions that enable the collection, reusing and recycling of discarded and used FNRCs. The Circular Ocean Innovation Competition is aligned to the United Nations Sustainable Development Goals, in particular SDG9 “Industry, Innovation and Infrastructure”, SDG12 on “Responsible Consumption and Production” and SDG14 “Life Below Water.” Submissions were evaluated by a panel of experts from the NPA regions and specialist networks, including the GGGI. Circular Ocean also hosted a series of regular webinars throughout the year on circular economic solutions for FNRCs tailored to small and medium enterprises (SMEs) looking to start businesses based in this space.

Cornwall Seal Group Research Trust

(CSGRT)'s Director, Sue Sayer, first saw an entangled young female grey seal back in 2000 and has collected data on this issue through CSGRT ever since, resulting in a publication in the Marine Pollution Bulletin in 2012 (Allen et al 'Entanglement of grey seals (*Halichoerus grypus*) at a haul-out site in Cornwall, UK'). In 2015, CSGRT updated their findings in a commissioned report for World Animal Protection entitled Entanglement and its effects on grey seals 2000 to 2013 Cornwall and North Devon, UK. CSGRT's dedicated, highly motivated and inspiring volunteers have been systematically and opportunistically gathering lost fishing gear records from around the SW of England for four years from November 2013 onwards. Initially funded in year one by World Animal Protection,

Steven Tapp from Local Independent Sea Anglers (LISA) at the Chatsworth Country Fair.



the group has sourced additional subsequent funding from Patagonia to repeat the systematic boat-based survey transect across a 115km stretch of the north Cornish coast ever since.

Funded by World Animal Protection, Katie Bellman, CSGRT's Seal Research Ranger and Sue Sayer have just drafted a literature review entitled 'Abandoned, lost and otherwise discarded fishing gear (ALDFG): sources, impacts and solutions – a review' (Authors – Katie Bellman (Seal Research Ranger) and Sue Sayer (Director Cornwall Seal Group Research Trust)). The report clarifies the distinction between ALDFG and 'Ghost fishing', and summarises the economic and environmental impacts of ALDFG along with existing solutions from detection to removal and prevention. CSGRT are aiming to publish this literature review followed by a peer-reviewed paper on their analysis of the existing four-year data set that has been generated.

LISA Anglers National Line Recycling Scheme

Looking to address the problem of lost fishing gear in the angling sector, GGGI participant Local Independent Sea Anglers (LISA) created the Anglers National Line Recycling Scheme (ANLRS) in early 2018. After compiling data from a joint LISA / GGGI survey from the angling community, the scheme was implemented in several tackle shops in the UK as a pilot. Rather than dispose of their used line in a landfill, anglers can either return their used line directly to one of over 200 participating tackle shops, or send the line via post if direct drop off is not possible or convenient. The ANLRS shattered their goal of recycling 1 million metres of line in 2018, with over 1.5 million metres of line having successfully been recycled through the program.

Word quickly spread and the scheme has expanded rapidly with discussion occurring now

with anglers and angling associations in Belgium, Czech Republic, Germany, Holland, Norway, Slovakia and Sweden. The Angling Trust are also promoting the project via the European Angling Alliance, and the ANLRS now has tackle show and trade fair appearances booked solidly through to summer, 2019. The potential for positive impact on both marine and freshwater environments across Europe is massive.

Net-worth Project – Clerkenwell (Innovate UK – Claire Potter Design)

The results of Project: Net-Worth – a six month co-funded Innovate UK project led by GGGI Participant Claire Potter Design (CPD) were officially unveiled at Clerkenwell Design Week in May 2018 to around 35,000 visitors. Investigating how polypropylene (PP) and polyethylene (PE) trawl netting could be remanufactured in localised ‘hubs’, the design-based project examined the possibilities for new products by working with both consumers and fishers alike.

Fellow GGGI participants, Professor Martin Charter of the Centre for Sustainable Design and fishery consultant and GGGI Steering Group member Harry Owen contributed to the project, which resulted in the CPD studio creating the first concept product – an injection moulded cabinet handle that looks remarkably like jade. The project was excellently received at Clerkenwell and the CPD studio are now working on the next iteration of designs for production, and discussing exciting collaborations with international brands.

World Animal Protection Gear Removal Project in Brazil

In June, 2018 World Animal Protection Brazil conducted a ghost gear survey and removal project in Santa Catarina State in the Avoredo Marine Biological Reserve in Southern Brazil. The goal of the project was to assess the ghost gear impact on the local marine environment, and



World Animal Protection on a ghost gear clean up in Florianópolis, Brazil.

They also learned what organisations such as the GGGI and its participants are doing about the problem worldwide. This was a wonderful joint effort by GGGI participants World Animal Protection, Bureo and Plastix Global in making this foray into the mobile gaming arena to raise public awareness about ghost gear and demonstrate some of our collaborative solutions.

Fourth Element / Dive Against Debris dive and beach clean in Bali

Between the GGGI Annual Meeting and the Our Ocean Conference in October, 2018, GGGI Participants Project AWARE, Fourth Element and World Animal Protection hosted a Dive Against Debris event on Saturday, October 27th at Semawang Beach with some 30 people participating in the event. Numerous GGGI participants were represented in the event, including World Animal Protection, Ocean Conservancy, Project AWARE, Fourth Element, Aquaculture Stewardship Council, Project Littora, Natural Resources Consultants, Young’s Seafood, Olive Ridley Project, Blue Ventures, Claire Potter Design, fish21, Ecotrust Canada, SOFER Initiative, Archipelago Marine Research, Fundy North Fishermen’s Association, Tierra Mar, Georgia Strait Alliance, Thai Union, CSIRO and Surfrider Kaua’i. Those who were unable to participate in the dive stayed to do a clean of a 100-metre stretch of beach, which had seen accumulation of waste and marine debris, including ghost gear.

It was extremely hot, but the team persevered and, at the end of the day, the dive team had recovered approximately 30 kg of debris, while the shore team had cleaned a significant section of the beach and recovered an additional 28.5 kg of debris. The debris was sorted according to

remove whatever was found. This project involved two vessels – one larger vessel which housed the World Animal Protection team: 10 divers, a film crew, and journalists from SBT (a Brazilian media outlet); while the smaller boat was used by ICMBio (the public environmental institution that is the “owner” of the Arvoredo Reserve), who authorised access to the area and gave technical support throughout the day.

In total, 26 people took part in this removal effort and 50 kg of lost fishing gear, including gill and trawl nets, ropes, lines and hooks, was recovered. Much of this gear had been ghost fishing for some time, causing harm to marine turtles, whales (baleia franca), seabirds, and large fish species (garoupa, badejo, and others). It is hoped that this project will give more visibility to the problem of ghost fishing in Brazil, and support future gear recovery efforts in the area.

Bureo / Plastix / World Animal Protection Supersolid Partnership

In celebration of World Oceans Day, this collaborative effort between Supersolid Games and GGGI participants World Animal Protection, Bureo and Plastix Global saw users of the extremely popular mobile game Home Street, developed by Supersolid Games, get involved and tackle the ghost gear problem on their mobile devices. World Animal Protection Global Campaign Manager Chris Dixon had her very own avatar in the game, and helped players gather lost gear and bring it to Plastix Global, where it was turned into raw materials to make products through Bureo, such as frisbees, skateboards and even Jenga Ocean.

For the month of June, 2018, players learned about ghost gear, its effects on marine life, fish stocks, food security and the global economy.

Project AWARE Dive Against Debris guidelines and recorded into their database. Approximately 10 kg of the total was ghost gear, consisting mainly of nets and rope. The recovered debris was disposed of by a local waste company.

UK Cornwall Sustainability Awards

The Global Ghost Gear Initiative (GGGI) has three key members based in Cornwall in the SW of the UK – Cornwall Seal Group Research Trust, Odyssey Innovation Ltd and Fourth Element. All three GGGI participants were finalists in the countywide Cornwall Sustainability Awards (CSA). The CSA encourage, reward and recognise the excellent work organisations do to improve their own sustainability while positively growing the natural environment in Cornwall and the Isles of Scilly. Sue Sayer from Cornwall Seal Group Research Trust was the ‘Individual’ category winner, whilst Odyssey Innovation and Fourth Element were highly commended in the ‘More Sustainable Tomorrow through Innovation’ and ‘Reducing Plastic Waste in the Environment’ categories (<https://www.cornwallsustainabilityawards.org/2018-winners/>). Representatives from all three organisations posed for a GGGI team photo at the high-profile awards ceremony with a piece of ghost gear removed from a grey seal by Sue from CSGRT along with Dan Jarvis (from British Divers Marine Life Rescue) pictured below.



A scuba diver holds ghost gear on a beach in the UK. World Animal Protection's Sea Change campaign is tackling discarded fishing gear, which can entangle marine animals.



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5TH ANNUAL MEETING BALI

The 5th Annual Meeting of the Global Ghost Gear Initiative took place in Bali, Indonesia on October 25th and 26th, 2018. This was by far the largest GGGI meeting to date, with a large portion of the GGGI participant base present for the meeting. In total, we had 63 attendees, representing nearly 50 individual organisations, come together to discuss the challenges, solutions and success stories of the GGGI since its launch by World Animal Protection in 2015. There was an incredibly rich diversity of stakeholders present, with representation from the fishing industry, private sector, academia, civil society, international organisations and, for the first time, three governments (Indonesia, The Netherlands and the United Kingdom). There was also a healthy mix of both GGGI veterans who have attended the annual meeting since its launch in London in 2015, as well as those who are brand new to the collective – all eager to collaborate on addressing ghost gear globally.

In addition to the requisite initial development of the GGGI Working Group work plans for 2019, member videos and lightning talks, we introduced panel discussions to the annual meeting agenda for the first time. These panel discussions brought together participants from around the world to discuss ghost gear in specific contexts, namely: corporate supply chains and the value that the GGGI presents to corporate partners; developing world perspectives on ghost gear, focusing on Myanmar, Pakistan, Indonesia, Nigeria and Malaysia; and ghost gear in the Indonesian context, touching on the gear marking work the GGGI has been doing over the last year in Indonesia with the Food and Agriculture Organisation of the United Nations. We also had an in-depth discussion on the

importance of collecting sound data and building evidence of the ghost gear problem around the world to better inform our solutions and outreach work.

The GGGI has come a long way from the initial conceptual meeting held in Slovenia back in 2014, and has now definitively emerged as the premier platform to address ghost gear globally. We celebrated the impressive achievements of the GGGI over the last year and the tremendous momentum the GGGI has achieved to date with the completion of the global data portal and Ghost Gear Reporter app, the Best Practice Framework for the Management of Fishing Gear (BPF) and 10 new solutions projects launched around the world. Importantly, we established with certainty that this extremely positive momentum will continue, as the long-term plan for the GGGI is realised in 2019 when Ocean Conservancy steps forward to become the new lead partner. The conversation was lively and the future is definitely bright for the GGGI and the collective impact the platform has had, and will continue to have, on ghost gear into 2019 and beyond.



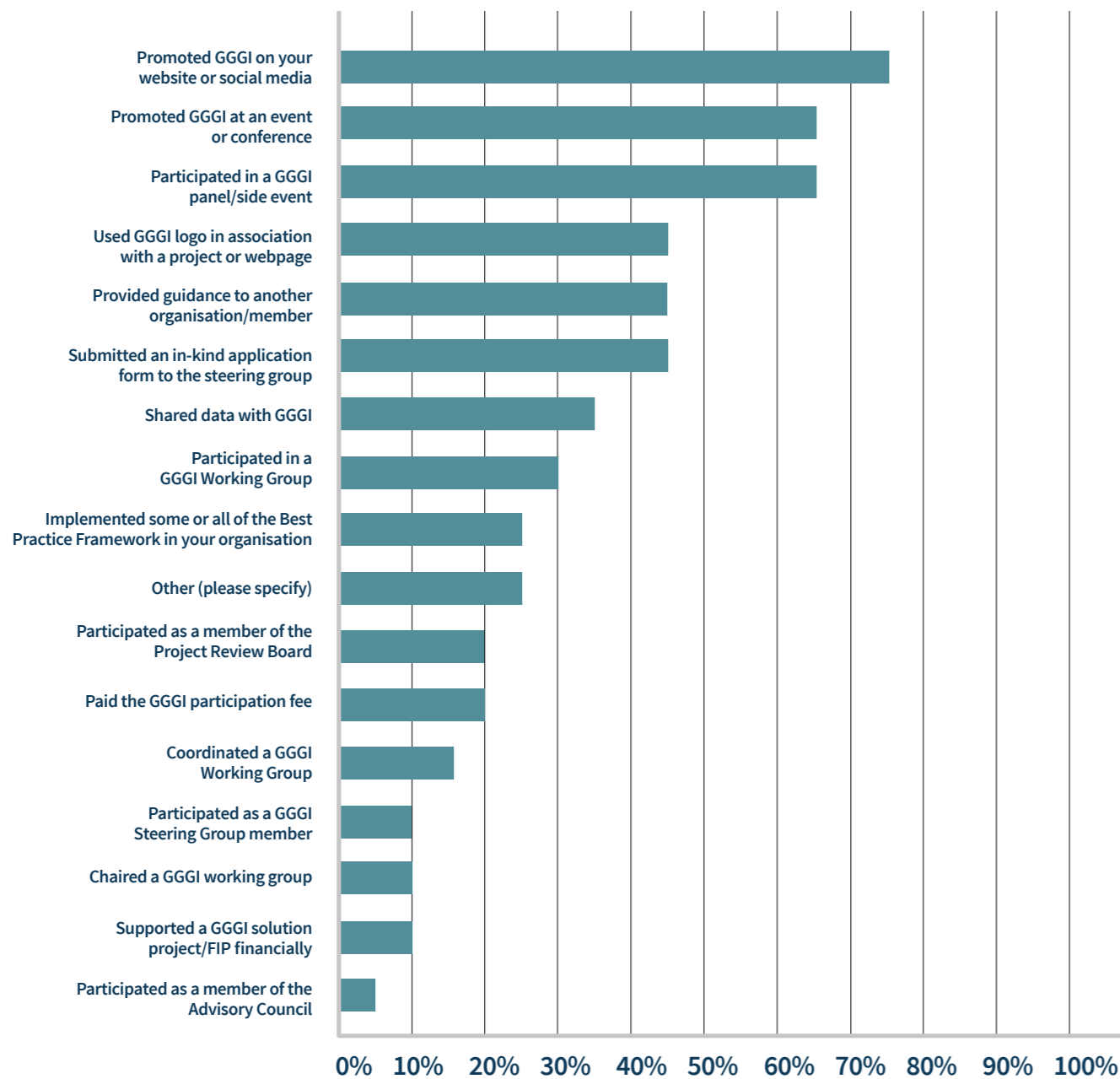
Clockwise from top: The 5th GGGI AGM in Bali, Indonesia; Sunset in Bali, Indonesia; GGGI participants at the 5th AGM in Bali, Indonesia.



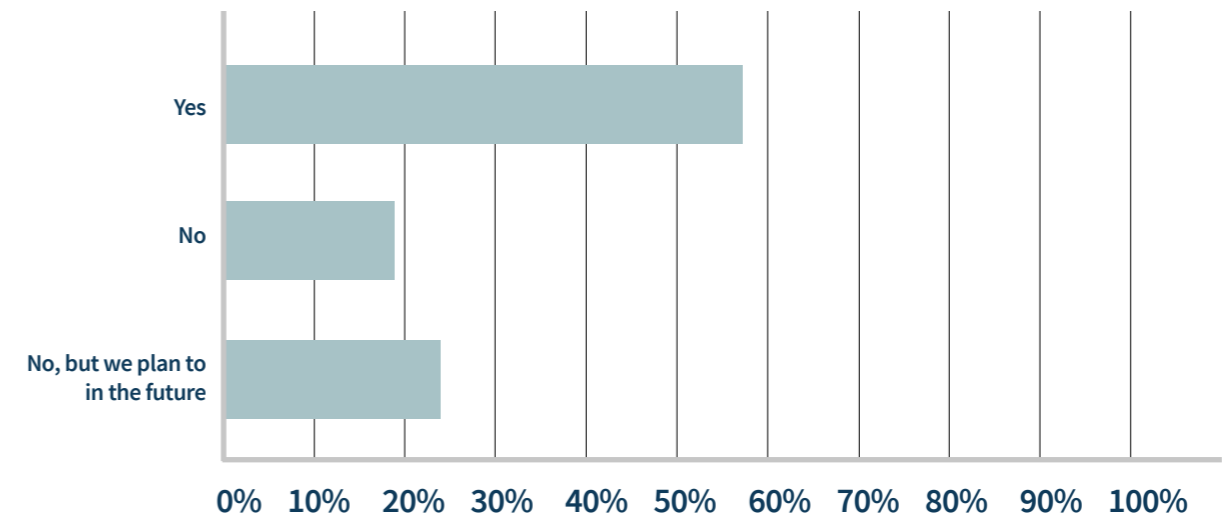
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YEAR END SURVEY SUMMARY

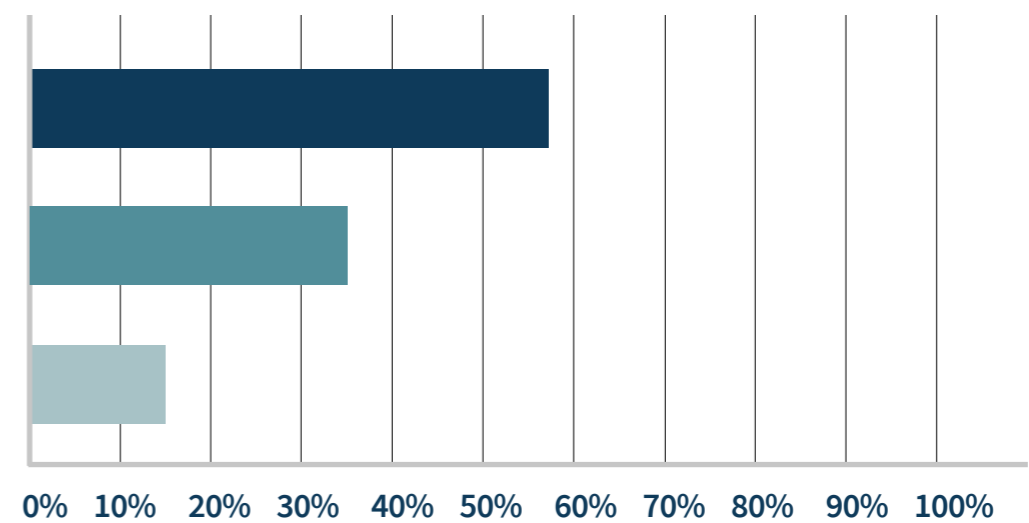
Please indicate in which ways your organisation has contributed to the GGGI over the last year



Is your organisation currently participating in a ghost gear related project?



How valuable is GGGI membership to your organisation?



Extremely valuable Somewhat valuable Neutral Not valuable

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LOOKING AHEAD

GGGI 5-Year Strategy

GGGI Mission:

Champion practical, innovative and replicable solutions to the problem of ghost gear to improve the health of global marine ecosystems, to protect marine animals and to safeguard human health and livelihoods.

GGGI Impact Goal:

By 2030, the global tonnage of gear that is lost or abandoned in the ocean annually is equal to or smaller than the amount of gear that is recovered, recycled and re-used so that we achieve (quite literally) a net reduction in ghost gear in our oceans.

GGGI 5 Year Strategy Objectives:

Objective 1: GGGI Best Practice Framework (BPF) is included in Industry / Corporate Practice and in regional fisheries management as well as in national marine litter plans

Objective 2: Ghost Gear Data and Scientific Information is Continuously Updated, Consolidated and Accessible

Objective 3: GGGI is the Leading Authority and Hub on Ghost Gear Worldwide

Objective 4: GGGI Delivers Successful Solutions Projects at Scale

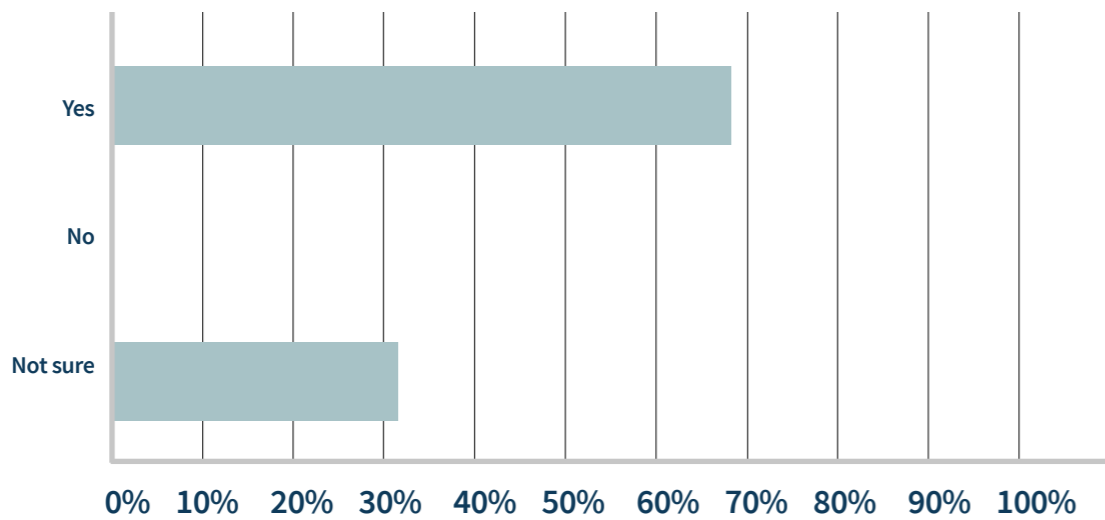
Objective 5: GGGI Has the Capacity and Resources to Deliver Fully on its Goals

Objective 6: GGGI's Governance Structure is Fit for Purpose

Objective 7: Increase Diversity and Geographic Spread of Participant Base

Objective 8: GGGI Ensures Effective Outreach and Awareness on Ghost Gear (Causes, Scale, Solutions)

Do you feel the current GGGI Participation System is working well?



How has your organisation benefitted from GGGI participation?

We've made some good connections, learned some important worldwide ghost gear statistics, and been made aware of efforts going on around the globe beyond just what we are involved in.

Myriad ways! Relationships with new stakeholders, increased knowledge of ghost gear and solutions, ability to integrate that knowledge and solutions into existing workstreams, etc. from a practical standpoint, has opened up new work and funding for our organisation.

Networking **collaboration**
 access to expertise **awareness of the issue**
 attending events **inspiring action**
opportunities increased knowledge
 interaction with other participants

Working Group Work Plans

Build Evidence

Objective 1: Source and Diversify Evidence

Objective 2: Maintain, Update and Refine Tech Tools

Objective 3: Outreach for Evidence Building Implementation

Define Best Practice and Inform Policy

Objective 1: Develop and undertake BPF pilot projects – extending and building capacity for BPF stakeholders

Objective 2: Increase Global Uptake of BPF

Objective 3: Create summary document showing scale and impact of marine debris originating from aquaculture and recreational fishing industries

Objective 4: Integrating with other working groups

Solutions

Objective 1: Support Initiation of 12 Solutions Projects

Objective 2: Outreach and Engagement to Increase Uptake of Solutions Work Globally

Objective 3: Successful Coordination and Leadership on Ghost Gear Solutions





"As a result of our partnership with the GGGI, we're beginning to integrate ghost gear solutions into our sustainable fisheries initiatives. This includes a major project in China, where the GGGI has been integral in providing support and capacity for developing strategies to mitigate pot loss."

Perry Broderick – Communications and Systems Director, Ocean Outcomes (O2)



A wild green sea turtle off the Cayman Islands.

“For a seafood company, the challenges of abandoned, lost, discarded fishing gear and marine plastic pollution are some of the most critical issues of our time, not only for ocean health and sustainability, but also for human health. Joining forces with the Global Ghost Gear Initiative has helped Thai Union focus on the actions we can take to make a tangible positive difference, and work with some amazing partners at the same time.”

Dr. Darian McBain – Global Director, Corporate Affairs & Sustainability, Thai Union