



# GLOBAL PROJECT TASK FORCE (GPTF) 2ND MEETING

## REPORT



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#### **GloFouling Partnerships project:**

The GEF-UNDP-IMO GloFouling Partnerships is a six and a half year global project aimed at protecting biodiversity by tackling the transfer of harmful aquatic species through biofouling in some of the developing regions of the world. The project encourages the sharing and adoption of technologies and innovative solutions that can improve biofouling management across all maritime industries and the energy efficiency of ships.

[www.glofouling.imo.org](http://www.glofouling.imo.org)

#### **Executing Agency:**

IMO - the International Maritime Organization – is the United Nations specialized agency with responsibility for the safety and security of shipping and the prevention of marine pollution by ships.

[www.imo.org](http://www.imo.org)

#### **Implementing Agency:**

UNDP – the United Nations Development Programme – partners with people at all levels of society to help build nations that can withstand crisis, and drive and sustain the kind of growth that improves the quality of life for everyone. On the ground in 170 countries and territories to eradicate poverty and reduce inequality. We help countries to develop policies, leadership skills, partnering abilities, institutional capabilities, and to build resilience to achieve the Sustainable Development Goals. Our work is concentrated in three focus areas; sustainable development, democratic governance and peace building, and climate and disaster resilience.

[www.undp.org](http://www.undp.org)

#### **Funding Agency:**

The Global Environment Facility (GEF) is a multilateral fund dedicated to confronting biodiversity loss, climate change, pollution, and strains on land and ocean health. Its grants, blended financing, and policy support helps developing countries address their biggest environmental priorities and adhere to international environmental conventions. The GEF connects 185 member governments with sustainability leaders across civil society, Indigenous Peoples, and the private sector, and works closely with other environmental financiers for efficiency and impact. Over the past three decades, the GEF has provided more than \$22 billion in grants and blended finance and mobilized \$120 billion in co-financing for more than 5,000 national and regional projects.

[www.thegef.org](http://www.thegef.org)

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## Abbreviations

<b>ASEAN</b>	Association of South East Asian Nations
<b>ASEZA</b>	Aqaba Special Economic Zone Authority
<b>BFMP</b>	Biofouling Management Plan
<b>BFRB</b>	Biofouling Record Book
<b>BWM</b>	Ballast Water Management
<b>CONABIO</b>	National Commission for the Knowledge and Use of Biodiversity
<b>CPPS</b>	Permanent Commission of the South Pacific
<b>DICAPI</b>	The Directorate General of Captaincies and Coast Guard of Peru
<b>DIRNEA</b>	National Directorate of Aquatic Species of Ecuador
<b>EMARSGA</b>	Emergency Mutual Aid in the Red Sea and Gulf of Aden
<b>GEF</b>	Global Environment Facility
<b>GESAMP WG</b>	the Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection – Working Group
<b>GHG</b>	Greenhouse Gases
<b>GIA</b>	Global Industry Alliance
<b>GPTF</b>	Global Project Task Force
<b>IAS</b>	Invasive Aquatic Species
<b>ICCFRAIMC</b>	Inter-Agency Coordinating Committee to Facilitate the Ratification and Accession to and Implementation of Maritime Conventions
<b>IEAPM</b>	Instituto Estudos Almirante Paulo Moreira
<b>IES</b>	Invasive Exotic Species
<b>IMO</b>	International Maritime Organization
<b>JAMS</b>	Jordan Academy for Maritime Studies
<b>LDCs</b>	Least Developing Countries
<b>LPC</b>	Lead Partnering Country
<b>LPIR</b>	Policy and Institutional Reforms
<b>MARTI</b>	MARINA Training Institute of Philippines
<b>MED</b>	Marine Environment Division
<b>MEPA</b>	Marine Environment Protection Authority
<b>MSAF</b>	Maritime Safety Authority of Fiji
<b>MTCC</b>	Maritime Technology Cooperation Centre
<b>MTR</b>	Mid-Term Review
<b>NEA</b>	National Economic Assessment
<b>NFPs</b>	National Focal Point
<b>Norad</b>	Norwegian Agency for Development Cooperation



## **Abbreviations** *(continued)*

<b>NSA</b>	National Status Assessment
<b>NSAP</b>	National Strategy and Action Plan
<b>NTF</b>	National Task Force
<b>PBBS</b>	Port Biological Baseline Surveys
<b>PC</b>	Partnering Country
<b>PCU</b>	Project Coordinating Unit
<b>PEMSEA</b>	Partnerships in Environmental Management for the Seas of East Asia
<b>PERSGA</b>	Programme for the Environment of the Red Sea and Gulf of Aden
<b>PPR</b>	Sub-Committee for Pollution Prevention and Response
<b>PSC</b>	Port State Control
<b>RCO</b>	Regional Coordinating Organization
<b>REMPEC</b>	Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea
<b>RSGA</b>	Red sea and Gulf of Aden
<b>RTF</b>	Regional Task Force
<b>SACEP</b>	South Asia Cooperative Environment Programme
<b>SEMARNAT</b>	Ministry of Environment and Natural Resources of Mexico
<b>SIDS</b>	Small Island Developing States
<b>SPREP</b>	South Pacific Regional Environment Programme
<b>TEST Biofouling</b>	Transfer of Environmentally Sound Technologies Biofouling project
<b>ToR</b>	Terms of Reference
<b>UNDP</b>	United Nations Development Programme
<b>UNICAPAM</b>	Captaincies and Maritime Affairs Unit of Mexico
<b>WOC</b>	World Ocean Council

# MEETING SUMMARY OF THE 2ND GLOBAL PROJECT TASK FORCE MEETING (GPTF-2) OF THE GEF-UNDP-IMO GLOFOULING PARTNERSHIPS PROJECT 11-13 April 2022

## Introduction

The 2nd Global Project Task Force meeting (GPTF-2) of the GEF-UNDP-IMO GloFouling Partnerships project was held from 11 to 13 April 2022 at the International Maritime Organization (IMO) headquarters in London, United Kingdom. The meeting was held in a hybrid format with 32 participants attending physically and 39 participating virtually via Zoom. The meeting included representatives from IMO, the United Nations Development Programme (UNDP), Lead Partnering Countries (LPCs), Regional Coordinating Organizations (RCOs), Global Industry Alliance (GIA) for Marine Biosafety, IOC- UNESCO and Strategic Partners. The List of Participants is provided in annex 1 of this report. The meeting was co-chaired by IMO and UNDP.

The main objectives of the meeting were to:

1. Review the performance of the Project to date (since the first Global Project Task Force inception meeting, held in April 2019) and discuss challenges faced in the implementation of the project's activities at the global, regional and national levels as well as mitigation measures;
2. Agree on corrective and adaptive actions to ensure the Project achieves the desired results and approve the proposed work plan (2022-2025), designed to redistribute activities until the new end-date of the Project (31st May 2025).
3. Highlight efforts undertaken by all participants in the GloFouling Partnerships project toward improved biofouling management and preventing the transfer of invasive aquatic species (IAS).

Welcoming remarks were provided by Mr. Arsenio Dominguez, Director of the Marine Environment Division, IMO, who highlighted the continuous efforts of IMO in addressing the transfer of invasive species via shipping through the 2004 Ballast Water Management Convention and the IMO

Biofouling Guidelines. Mr. Dominguez expressed sincere appreciation to all countries and regional organizations for the contribution and leadership in the implementation of the IMO Biofouling Guidelines and for tackling this challenging environmental issue.

Co-Chairs Mr. Jose Matheickal of IMO and Mr. Andrew Hudson of UNDP welcomed all GPTF 2 members to the meeting. The Project Coordination Unit (PCU) of the GloFouling Partnerships project acted as Secretary to the meeting.

## Agenda Item 1 Adoption of the Agenda

The provisional agenda of the meeting was provided to participants as document GPTF 2/1/1. Two additional documents were also relevant to Agenda item 1: the annotated agenda (GPTF 2/1/2) and provisional programme (GPTF 2/1/3). It was noted that due to the hybrid nature of the meeting, it was not feasible to accommodate individual presentations from Strategic Partners. However, any salient contributions from these members would be addressed under Agenda item 10 (Other business).

The meeting adopted the proposed Provisional Agenda of the GPTF-2 meeting. The agenda of the meeting, as adopted, is provided in annex 2 of this report. The meeting followed a three-day programme which can be found in annex 3.

## Agenda Item 2 Adoption of the GPTF Terms of Reference and Rules of Procedure

The GPTF-2 reviewed the proposed amendments to the Terms of Reference (ToR) and Rules of Procedures, as adopted by the first meeting of



GPTF. The proposed text was provided in document GPTF 2/2/1 (GPTF Terms of Reference and Rules of Procedure). The purpose of the amendments was to update some meeting dates following the extension of the Project to 31st May 2025 (in paragraphs 5, 6, 24 and 25 of the document). The revised GPTF Terms of Reference and Rules of Procedure were adopted and approved by the meeting (annex 4).

## **Agenda Item 3**

### **Project status report**

The Project status report (document GPTF 2/3/1) provides a detailed summary of the progress made in the implementation of activities, expenditure and co-financing during the reporting period (March 2019 to March 2022) at the global, regional and national levels. Representatives of the GloFouling Partnerships PCU, the GIA Task Force, IOC-UNESCO and the World Ocean Council (WOC), presented the items relevant to their responsibilities.

#### ***Impact of COVID pandemic***

The GloFouling Partnerships PCU highlighted that the period under review (April 2019 – March 2022) was largely marked by the coronavirus pandemic, when all partners had to adapt to the new living and working conditions. The GloFouling Partnerships PCU, together with UNDP, IMO and IOC-UNESCO, demonstrated the importance of adaptive management to mitigate an unexpected turn of events that affected implementation beyond reasonable expectations. In this regard, the PCU conducted a risk assessment to determine the expected impact on activities and identified four key mitigation measures:

- Increased communication and coordination with all project partners (esp. LPCs and RCOs) to maintain engagement (online meetings and webinars);
- Focus on desk work (development of global guides; technical reports; and national activities for Policy and Institutional Reforms (LPIR);
- Adaptation of on-site activities for online/virtual delivery (e.g. awareness workshop package, training course materials; E-learning); and

- On-site activities delivered by the LPC where possible (training course delivery).

It was noted that the participating LPCs and RCOs were a key component in the implementation of mitigation measures and made significant efforts to increase communication and meet their commitments despite the difficult circumstances in their own geographical areas.

However, despite the joint efforts by the PCU and all partners, some notable barriers remained that have had an impact on the progress of some activities:

- Mitigation measures included a greater workload for the PCU, particularly the change of focus from delivery to alternative plans;
- Online activities have a limited scope, both in the type of work, duration and themes that can be discussed (policy being particularly difficult);
- Due to time difference across LPCs and RCOs, the number of meetings was notably increased; and
- Most on-site activities that could not be adapted to online delivery (e.g. demonstration sites) had to be postponed.

Based on this outcome, the PCU presented an assessment of the long-term effect of accumulated delays on the main activities and the potential impact of a project extension, with proposed planning scenarios. This has resulted in the recommendation to revise the Project results framework and an 18-month extension (until 31 May 2025) to ensure the successful delivery of remaining activities (refer to GPTF 2/9/1).

#### ***Key achievements during the reporting period***

The PCU presented the main aspects presented in the Project status report (document GPTF 2/3/1).

At the global level, standing out among the Project's accomplishments is the creation of the Global Industry Alliance (GIA) for Marine Biosafety, the launch of the GESAMP Working Group on Biofouling Management (GESAMP WG 44), the development of the first training

package and two global guides aimed at assisting LPCs in undertaking reforms at the national level and several technical reports. Significant efforts were devoted to communication and knowledge sharing, which resulted in the launch of the Project website and social media communication platforms, webinar series, the publication of a booklet with website design recommendations for LPCs and RCOs, and the production of two audio-visual productions.

At the national level, the PCU has supported the establishment of national task forces (NTF) in all LPCs. To support the process, the PCU developed a workshop package that was used throughout the national workshops to raise awareness on the main aspects related to biofouling and invasive aquatic species and their impact on maritime industries and biodiversity. The PCU also designed several group activities that guided the NTF meetings to understand the policy development process and discuss the key aspects that will be delivered by the project during its five-year existence. The PCU received strong support from the Commonwealth of Australia, the State of California and the International Ocean Institute, who participated in a number of workshops to share their expertise. This process was one of the first to be impacted by the COVID-19 pandemic, which forced the cancellation of raising awareness workshops in Ecuador and Peru, scheduled for March 2020. But the PCU was able to modify its approach to the new circumstances, and adapted its workshop package for online delivery. As a result, the PCU was able to launch the Project in Peru and Ecuador and put in motion the creation of their respective national task forces. As a result of these sustained efforts, all twelve LPCs have set their national task forces.

With regard to Project governance, staff changes occurred in three RCOs. Major changes also took place in Ecuador and in Fiji, with a complete replacement of the project teams in both countries. The new teams have been brought up to speed by the PCU. Nevertheless, there has been a noticeable decrease in the level of activity in many countries in relation to the Project, as some national focal points and national project coordinators have been part of the Covid-19 crisis management teams in their cities/countries.

The PCU also reported on the remarkable level of co-financing which, at mid-term, exceeds the full-term expectations as defined at the Inception and have achieved 86% of what was pledged for the Project Document.

The preliminary results of the second study, *'Analysing the Impact of Biofouling on the Energy Efficiency of Ships and the GHG Abatement Potential of Biofouling Management Measures'* were published in November 2021 during a side event in the official programme of the Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC COP 26).

Representing the GIA, Mr. Yusik Kim reported about the launch of the GIA in June 2020 with four founding members representing in-water cleaning service providers and marine growth preventive systems. He also noted that in 2022 GIA membership consisted of nine members and one observer trade organization. The composition of the group had diversified, with the inclusion of members from the anti-fouling coating industry, the shipping industry, the oil and gas industry; in-water cleaning service providers; and ultrasonic anti-fouling systems.

It was at its first meeting in October 2020 that the GIA elected its first Chair (Sonihull), adopted its Terms of Reference and Rules of Procedure, and agreed on its first year's work plan and budget. The GIA also agreed on guidelines to grant observer status to its meetings. At its 5th meeting and General Assembly, held in October 2021, the GIA members elected a new Chair (Tas Global) for a new term.

The GIA itself had identified four overarching priority areas that guided its work, namely, regulatory aspects of biofouling management, technical aspects of biofouling management, environmental aspects of biofouling management and operational aspects of biofouling management. Mr. Kim provided information on two commissioned GIA reports, one of which was focused on the regulatory aspect for biofouling management *'Compilation and comparative analysis of existing and emerging regulations, standards and practices related to ships' biofouling*



management'. The report was submitted as an information document to the IMO Sub-Committee on Pollution Prevention and Response (PPR) 9th session held from 4 to 8 April 2022. It was projected that this study would significantly contribute to a better understanding of the current and emerging policy landscape within biofouling management.

The second study focused on the operational and environmental aspects of the impacts of biofouling management in terms of fuel efficiency and greenhouse gas emissions (GHG), 'Analysing the Impact of Biofouling on the Energy Efficiency of Ships and the GHG Abatement Potential of Biofouling Management Measures'. The publication provided a scientific demonstration of the magnitude of fuel and greenhouse gas emissions savings that could be achieved by maintaining ships' hulls clean of biofouling. This was expected to support the GHG reduction targets that were set at IMO for the shipping industry to achieve by 2030.

With the support of three global industry associations which were also Strategic Partners to the GloFouling Partnerships project, namely BIMCO, ICS and IOGP, The PCU succeeded in securing a side event in the official programme of UNFCCC COP 26, held in November 2021 in Glasgow, United Kingdom. The side event launched the preliminary results of the study on the impact of biofouling on fuel consumption and was followed by a site visit to the Kelvin Hydrodynamics Laboratory of Strathclyde University in Glasgow.

**Ms. Pia Haecky**, representing IOC-UNESCO, informed of the newly established working group GESAMP WG 44 on Biofouling Management, coordinated by IOC-UNESCO which consists of 17 members with experiences from a wide range of different aspects of biofouling and all contribute to working on a global scientific report on IAS and biofouling.

A recorded video message from **Mr. Paul Holthus**, representing WOC, underlined the coordinated contributions from the private sector to the reports developed by IOC-UNESCO on best management practices in the aquaculture and offshore oil and

gas industries. It is expected that the third report will cover sectors of ocean renewable energy, offshore structures, ocean instrumentation, seabed dredging and coastal infrastructure.

WOC also reported the launch of the first biofouling innovation challenge competition at Nor-Shipping on 6 April. WOC also mentioned facilitating ongoing international, multi-sectoral industry interaction through dialogue and collaboration on addressing biofouling at the World Ocean Council's Sustainable Ocean Summit conferences (WOC SOS).

## Agenda Item 4

### Update on the review of the IMO Biofouling Guidelines

**Mr. Theofanis Karayannis**, Head of Marine Biosafety Section, Marine Environment Division (MED), IMO, presented the main outcome and proposal from the 9th session of the Pollution Prevention and Response (PPR) Correspondence Group (4-7 April 2022) which identified several issues, inter alia, to be considered in the 10th meeting of the PPR Sub-Committee (PPR 10). These included the definitions of microfouling and macrofouling, inspection, proactive and inactive cleaning, cleaning with or without capture, as well as the risk assessment for determination of inspection intervals.

Mr. Karayannis stated that another critical aspect identified are the factors affecting the uptake of the effectiveness of the IMO Biofouling Guidelines being a non-mandatory instrument; the lack of facilities for in-water cleaning around the world; as well as the inconsistency of implementation of the biofouling guidelines in different part of the world. The GPTF-2 was informed that the correspondence group had been re-established to finalize the revised Guidelines for approval at PPR 10 in 2023.

Mr. Karayannis encouraged participating countries of the GloFouling Partnerships project to join the Correspondence Group as an opportunity to follow and contribute to the revision of the biofouling guidelines.

The GPTF-2 participants acknowledged the information and suggested a potential training course on how to implement the IMO Biofouling Guidelines in the countries. Other GPTF-2 members raised questions about any available models and practicalities that can be referred to when implementing these guidelines as well as aspects to be mindful of when developing strategies in regions.

## Agenda Item 5

### Progress Reports from Lead Partnering Countries (LPCs)

LPC representatives were requested to present the status of implementation at the national level in relation to project activities and any other undertaken initiatives related to biofouling management and IAS. Each LPC was provided a format to report on the national achievements including the implementation status of activities, the approach taken, challenges countries experienced as well as positive and negative impacts. Participants were informed that on this occasion, Tonga was unable to deliver the presentation due to the time difference.

**Ms. Miriama Latianara** of **Fiji** presented a brief overview of the goals, vision and mission of the Maritime Safety Authority of Fiji (MSAF) and its organization chart. Ms. Latianara stated that the National Status Assessment (NSA) on biofouling management report was still in its drafting version. She highlighted that Fiji has experienced a delay in circulating the draft report to the relevant stakeholders due to the restriction posed in and around Fiji by the pandemic including internet connections and the lack of key personnel. MSAF intends to appoint the Senior Standard and Compliance officer to overlook Fiji's obligations and responsibilities under the IMO including the GloFouling Partnerships project. This position has been vacant since January 2021, hence the limitation and barriers in meeting timelines of project activities.

Fiji aims to formalize the National Task Force (NTF) in order to devise the National Strategy

and Action Plan (NSAP) which should be followed by delivering the national training course on biofouling management. In its presentation, Fiji elaborated on some of the obstacles that hinder its ability to progress further with the project, such as the lack of data or research that specifically looks at high-risk areas such as port marinas and knowledge of species whether they are indigenous or introduced.

Ms. Latianara expressed her appreciation for the opportunity provided in the GPTF-2 meeting to share her experiences with other LPCs of the GloFouling Partnerships project and thanked partners for their continued support.

**Mr. Stephanus Risdiyanto**, representing **Indonesia**, began his presentation by highlighting the challenges Indonesia faces which include managing the 7.81 million km<sup>2</sup> area of territorial waters, land and economic exclusive zones. Other challenges are the various kinds of sea organisms and numerous sensitive areas as well as the provisions of the three archipelagic sea lanes. Indonesia's 90% of international trade takes place at sea, potentially causing marine pollution including the transfer of IAS in biofouling via its registered 98,195 vessels in 2022 only.

Indonesia has reached some of its project milestones which included the establishment of the NTF and conducting training on biofouling management. As a base of the ballast water management associated with invasive aquatic species, Mr. Risdiyanto mentioned that Port Biological Baseline Surveys (PBBS) of the native and non-native marine biodiversity within the Indonesian shipping ports were conducted in 2019 covering six ports and in 2021 covering eight ports in Malacca Strait. The surveys showed more than 90% of biodata were similar in the western and central region part of Indonesia.

Due to the pandemic, Indonesia adapted to implementing project activities through virtual means including the delivery of a general training course on biofouling management in November 2021. Indonesia has also submitted the NSA report concerning the current situation of IAS in biofouling in the country. Mr. Risdiyanto informed



the GPTF-2 participants that Indonesia continues its efforts in reaching targets related to the development of NSAP and the National Economic Assessment (NEA).

**Mr. Jagath Gunasekara** of **Sri Lanka** stated that the NTF was established in 2019 and already met four times. He reported that the NSA report has been drafted and the feedback from the IMO consultant received with the final submission scheduled for the end of May 2022. The national consultants were selected to undertake the task of developing the NSAP report and will commence the work once the NSA report is finalized.

Sri Lanka has selected its national training institute and initiated steps to deliver the training course proposed for May 2022, by providing the necessary information and training to the lecturers. Sri Lanka contributed to raising awareness of the biofouling issue and was in the process of creating a new webpage with GloFouling Partnerships project-related information, which will be hosted on the Marine Environment Protection Authority (MEPA) website.

**Captain Freddy Espinoza Huaypatin** of **Ecuador** informed the GPTF-2 participants of the initial steps Ecuador has made toward reaching the milestones of the GloFouling Partnerships project by establishing the NTF in 2019 which is formed by national directorates and three ministries of environment, transport and fisheries.

Ecuador presented the main conclusions and gaps contained in the NSA report. The report showed that all regions of Ecuador have a high risk of introduction and spread of IAS, especially the province of Guayas and Manabí being the most susceptible to the primary and secondary transfer of IAS in biofouling. Of all 115 sites visited, only 14 incorporate biofouling into their management systems, through their environmental impact studies, management plans or internal procedures.

Notably, Ecuador has three dry docks for cleaning the hulls and maintenance of the boats which are carried out in unauthorized areas, hindering the future implementation of control mechanisms. Therefore Capt. Espinoza underlined the

significant importance of developing the NSAP report, to support Ecuador in implementing suitable biofouling management, according to the risks identified in the NSA. Ecuador stated that it was expecting to conduct the national training course in the second quarter of 2022.

Capt. Espinoza also highlighted the collaboration between the Charles Darwin Foundation and National Directorate of Aquatic Species of Ecuador (DIRNEA) in developing the Marine Invasive Species Program project focusing on the biofouling community. The project conducted a survey in Santa Cruz, Galapagos, and as a result, the findings showed that more than 50 introduced species were identified in marine habitats, in Galapagos Islands.

**Mr. Ramon Hernandez** of the **Philippines** presented the GPTF-2 participants with some background information on the country's maritime industries. It was highlighted that the Philippines holds top global positions in fisheries and aquaculture outputs; it is the world's largest archipelagic country and the premier source of sea-based manpower with 450,000 seafarers.

Mr. Hernandez also notified the group of the Green Maritime Philippine – Protect and Conserve action plan which the Philippines implements to ensure its full and effective operation of the relevant marine environment protection standards in the country, including biodiversity and IAS from biofouling. Moreover, in 2019 the Philippines ratified several IMO Conventions including the Ballast Water Management (BWM) Convention, the Anti-fouling Systems (AFS) Convention and control measures on the conduct of in-water hull cleaning while the ship is at sea in all areas of the Philippines waters.

Similarly, the Philippines has established an NTF which involves an Inter-agency Coordinating Committee to facilitate the Ratification and Accession to and Implementation of Maritime Conventions (ICCFRAIMC). Under this committee sits a technical working group for the GloFouling Partnerships project.

Mr. Hernandez summarized the relevant training and workshops conducted between 2019 and 2021 such as the seminar on BWM Convention;

training on PBBS; workshop on Legal, Policy and Institutional Reforms (LPIR); and general training on biofouling management which overall provided capacity-building programmes and marine environment protection conventions and instruments for regulators, policymakers, educators and trainers.

Furthermore, launched in February 2021 the operational MARINA Training Institute (MARTI) as part of the national strategic action plan under the capacity building component, is envisioned to provide professional development, management and specialized courses. The virtual training course on biofouling management was hosted at MARTI in October 2021.

Mr. Hernandez reported that the Philippines was aiming at establishing systems that would make the ships and ports more compliant with international standards. In November 2019 a ballast water and biofouling management research programme was awarded funding by the Department of Science and Technology to conduct research on port ecological baseline focusing on the deployment of biofouling collectors in the Philippines' international ports and setting up of standards and assessments of ballast water and biofouling impact of IAS introduced via ships.

The Philippines encountered several challenges such as the need to capacitate technical personnel on biofouling management but also the need to have an integrated data collection system accessible by different agencies to have a better view related to IAS. It was highlighted that there is a lack of studies establishing the extent of IAS in the regions and the economic and ecological impacts on specific sectors.

The Philippines assured its intention to finalize the NSA by 31 May 2022 and complete the NEA and NSAP reports in the upcoming period. Its mission to raise awareness will continue by conducting a series of campaigns on biofouling management and best practices targeting shipowners to understand the need to have the control measures adopted.

The plenary suggested that countries could potentially adopt similar arrangements as the

Philippines to use the established ministerial NTF beyond the project to serve as a committee in the long term for other IMO Conventions.

**Mr. Nedhal Abu-Zeid** of **Jordan** notified the Secretariat and GPTF-2 participants of the formation of the NTF which already conducted two meetings. The NSAP was drafted under the six main components during the NTF meeting and distributed to all NTF representatives for remarks and feedback, the same will be communicated to Programme for the Environment of the Red Sea and Gulf of Aden (PERSGA) and IMO.

Jordan reported it had completed its NSA report which assessed the likelihood of IAS introductions and pathways as well as the potential impacts of IAS introduction and the country's preparedness in managing biofouling.

It was highlighted that a working group was established by the Jordan Maritime Commission and Aqaba Special Economic Zone Authority (ASEZA) to ease and facilitate the NTF to finalize the NSAP and NEA reports, the national training course as per GloFouling Partnerships project deliverable and any other requirements such as assisting with the interview for the project's mid-term and terminal review.

Moreover, Jordan evaluated all available technical and financial resources to contribute to raising awareness about biofouling in the country.

Jordan proposed to implement the biofouling security management software which would be designed to communicate with Jordanian flagged shipowners and operators to reduce aquatic biosecurity risks and improve its management. Additionally, ASEZA intends to dedicate a webpage on their website to source all relevant information about the GloFouling Partnerships project.

**Mr. Ricardo Coutinho** of **Brazil** began his presentation by introducing the Brazilian team dedicated to the GloFouling Partnerships project and stressed the impact the COVID-19 pandemic had on the country, however, Brazil's efforts continued to deliver some activities.

Brazil was able to deliver the final NSA report, which importantly identified the key stakeholders and their interests and ways they can contribute to managing biofouling and the spread of IAS. NSAP has been difficult to accomplish, as there are unclear arrangements in the Brazilian government, therefore different agencies do not share the same views of biofouling. Despite these difficulties, Brazil commits to finalizing the report, hoping for much better collaboration with the new government administration in Brazil.

Mr. Ricardo reported that the training institution and qualified trainers have been selected to deliver the national training course on biofouling management in August 2022. The NTF has been established and met in 2019, however, it is pending full recognition by the Brazilian government.

One of the challenges Brazil faced in implementing the project's activities is the fact that the only species recognized by the country is the orange cup coral, which has a huge impact on the marine environment. Because of this, it has been difficult to convince people that ships can introduce a wide variety of species.

Brazil also published a paper on "Bibliographical survey on national publications on biofouling/bio invasion problems". It was highlighted that the Brazilian navy actively participated in the PPR Correspondence group revising the IMO Biofouling Guidelines. Mr. Coutinho also mentioned that Instituto Estudos Almirante Paulo Moreira (IEAPM) held informative meetings with the Brazilian Environment Agency (IBAMA) and oil and gas companies to discuss ways to implement the IMO Biofouling Guidelines.

Moreover, Mr. Coutinho showed a website dedicated to the GloFouling Partnerships project which also required further improvement. Finally, Brazil informed the meeting that it intended to proceed with further work by identifying a demonstration site on biofouling management to bring scientists and other officials to observe IAS issues.

The GPTF-2 noted the example presented by Brazil of an aquatic invasive species introduced

from the oil and gas sector, keeping in mind that IMO Biofouling Guidelines are applicable to all types of ships including the oil and gas platforms, offshore vessels etc.

**Mr. Reza Ludovic of Madagascar** stated that several initiatives were undertaken toward raising awareness since the start of the project. One of them is constructive meetings with representatives from maritime sectors and the blue economy to share knowledge and data on the issue of biofouling and IAS. Madagascar has also dedicated a webpage to the GloFouling Partnerships project which is regularly updated with news articles. Madagascar also participated at the World Day of the Seafarers showcasing its contribution to the implementation of the biofouling guidelines and mentioning its participation in the project.

Mr. Ludovic confirmed that the NTF has been established, however, it is yet to be approved by the government, noting some changes in the administrations, of the fisheries department. The NTF met for its first time in August 2019 and continued to meet virtually, however, any decisions made require formal approval by the ministries.

Madagascar finalized its final NSA report in November 2021. The report showed the potential risk of IAS introduction to the main international east and west ports of Madagascar. One of the many species identified in Tamatavi port is the 'Perna perna' known as the brown mussel from North America. The NSA report also highlighted the negative impact on the economy, especially on the local fisheries along the coast. The NSA report also determined that there is no Port State Control (PSC) effective in ports; no inspection of the hulls; a lack of scientific data; and lack of awareness of the issue among the stakeholders.

The NSAP report is in development, but due to the pandemic, it was difficult to reach the port operators and stakeholders. The restrictions are easing therefore the consultants recruited to undertake the assignment will resume their work from that perspective. Madagascar has also selected the national training institute and intends to hold the first training course on biofouling management in May/June 2022.



**Mr. Alain Donat** of **Mauritius** described the approach taken related to the NSA report where two national experts with scientific backgrounds were selected through the Ministry of Blue Economy, Marine Resources and Fisheries and Shipping. As per the provided national status assessment guide and standardized self-assessment checklist, a list of stakeholders from both public and private institutions were consulted based on their involvement with marine biofouling and IAS. The report was completed and submitted in November 2021.

Mr. Donat highlighted some of the key factors that enabled the completion of the NSA report. One is the existence of national projects related to IAS with shipping as a vector as well as local stakeholders' previous experience with biofouling issues. The NSA reported challenges such as the COVID-19 sanitary restrictions and retrieval of data from different stakeholders was time-consuming.

Mr. Donat stated that the development of NSAP was ongoing with the national experts nominated and contact with stakeholders already initiated. The first draft of the NSAP is expected to be submitted at the end of April 2022.

The implementation of the national training course on biofouling management was delayed due to unforeseen circumstances. The training center and trainers for delivering the course have been identified and the GloFouling PCU delivered its familiarization sessions to the trainers. It is anticipated that the training course is most likely to be delivered in a hybrid mode.

According to Mr. Donat, a NTF for BWM was established in 2004 and the ToR have been amended to reflect additional responsibilities in light of GloFouling Partnerships which made it practical not to establish a new NTF from scratch. Furthermore, Mauritius made efforts toward raising awareness campaigns through poster presentations, distribution of scientific pamphlets and newsletters, participation in regional workshops on Marine Invasive Species i.e Indian Ocean Commission as well as participation in a dedicated booth at the Rajiv Gandhi Science Centre.

Mauritius also informed the participants of other national projects focusing on biofouling such as the 15 million MUR- Ship's Biofouling in Port Louis Harbour project (completed in 2020) and the Mainstreaming Invasive Alien Species: Prevention, Control and Management project funded by GEF, UNDP and other various stakeholders from Mauritius.

The Chair thanked Mauritius for a very precise overview and appreciated the seriousness of tackling the issue of IAS. The Chair also notified the meeting participants of the recent announcement of the GEF pledging 5.4 billion USD and urged the project and country beneficiaries to think about how GEF resources could be mobilized to take the directions further. The Mid-term review expert and Andrew Hudson of UNDP suggested the countries submit projects towards the end of 2022 referring to the GEF programming directions and strategy which indicates clear entry points for the conservation protection and management work. A variety of focused areas and components such as the blue economy, fisheries, and pollution are available.

**Mr. Gildardo Alarcon** of **Mexico** introduced the Mexican delegation and national institutions involved in the project. He stated that the NTF was established in October 2019 and combines representatives from federal agencies, academic institutions, shipping sector companies and non-governmental organizations. The NTF intends to hold another meeting in two months' time to give an update on the current status of the GloFouling Partnerships project in Mexico.

Mr. Alarcon updated the participants on the status of the NSA report which was submitted to the GloFouling Partnerships PCU in November 2021, however, it is pending a formal presentation to the NTF partners. This task was very valuable as it reported a number of exotic species introduced in ports of Mexico such as 'Luidia magnifica'. In relation to the NSAP, it was reported that Mexico is at its initial stage of development pending the re-establishment of a group of experts to be working on the report.

The national institution as well as the trainers have been identified to deliver the course on

biofouling management. The follow-up actions are to determine the event date, define logistics and internalize training material as well as distribute invitations to all relevant key stakeholders.

Mr. Alarcon confirmed that the website dedicated to biofouling is in production. Once the website is finalized, Captaincies and Maritime Affairs Unit of Mexico (UNICAPAM), Ministry of Environment and Natural Resources of Mexico (SEMARNAT) and National Commission for the Knowledge and Use of Biodiversity (CONABIO) will coordinate to link the site to their institutional web pages.

Mr. Alarcon in his presentation highlighted that the National Maritime Authority in synergy with the Environmental Authority of Mexico is developing guidelines for in-water cleaning of biofouling on ships, taking into account criteria for ship's microfouling and macrofouling, types of antifouling systems and in-water cleaning techniques.

**Captain Jesus Menacho** of **Peru** reported that the final NSA report was delivered in January 2022 and its findings showed the risk of primary transfer of IAS through international transport and secondary transfer through local vessels. Another key finding stated by Capt. Menacho is that the introduction of IAS generates adverse effects on marine diversity however there are no formal studies that identify the presence of IAS currently, but also there is no evidence of potential effects on biodiversity. It has been stated that Peru does not have specific regulations on biofouling management however there are regulations concerning the introduction of Invasive Exotic Species (IES) which could serve as a basis to address the issue of IAS introduced via ships' biofouling.

The national experts to draft the NSAP and NEA report for Peru have been identified and the work will commence in the upcoming period. It was also stated that the national training course will be delivered at the National Merchant Marine Academy and General Directorate of Captaincies and Coast Guard Ports of Peru (DICAPI) will be responsible for the organization of the course.

The NTF connected in July 2020 with the representation of key maritime sectors namely

Permanent Commission of the South Pacific (CPPS), DICAPI and many more. DICAPI is coordinating the formal designation of the representatives with the aim of issuing a legally binding document establishing the NTF.

## **Agenda Item 6**

### **Progress Reports from Regional Coordinating Organization (RCO)**

The Regional Coordinating Organization (RCO) were invited to present information on the state of affairs at the regional level in relation to the project activities and any other initiatives related to biofouling management and invasive aquatic species. Additionally, Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea (REMPEC) presented activities related to biofouling management conducted in the Mediterranean region. GPTF-2 participants were made aware that SPREP was unable to deliver a presentation on this occasion due to the time difference with Samoa.

**Ms. Zuleika Pinzon** of **CPPS** gave a brief overview of the regional awareness-raising seminar that took place virtually in August 2021 with more than 100 participants from 71 government agencies, NGOs, academic institutions and public and private companies working on, or related to biofouling. The objectives of this meeting were to share experience and knowledge from the region on biofouling management with the perspective of establishing a regional strategy and action plan for the Southeast Pacific. Importantly, the meeting discussed and identified challenges and opportunities related to the inclusion of an action plan for biofouling in the Regional Strategy for the management of IAS in the Southeast Pacific, applying the IMO Biofouling Guidelines.

Ms. Pinzon informed the participants that in 2021 the State Parties of the Lima Convention (Chile, Colombia, Ecuador, Panama, and Peru) adopted a Regional Strategy to prevent and reduce risks and impacts from invasive species which also includes a component on biofouling. This in fact will be a step forward in building an action plan under the

umbrella of the regional strategy and used as a management tool to make it viable to implement concrete actions to manage biofouling in the region. It is intended that the regional action plan be finalized and adopted in 2023.

Ms. Pinzon stated that the Regional Task Force (RTF) has been established on overall marine invasive species. Its role as an advisory body on the implementation of the strategy is to support countries in the implementation of the IMO Biofouling Guidelines and other related marine bio invasion agreements. The RTF met in February 2022 and agreed to develop some activities during 2022-2023 such as generating a regional information platform to share research and references related to biological surveys in ports; to promote and exchange best practices on risk management of IAS in the region; to develop academic workshops and meetings to educate on IAS and biofouling management topics; and, to design and develop a database on the biological diagnosis of the port baselines on invasive species.

CPPS dedicated a webpage to the project on its website which includes general information on IAS and GloFouling Partnerships project, the regional and national activities as well as a photo gallery. This enables visitors to see the progress made at the regional and national levels related to biofouling management as well as, the problems countries in the region are encountering, and the solutions being applied.

Ms. Pinzon mentioned that CPPS offered support to Ecuador and Peru in their activities in the drafting of the NSA report and the NEA report which Ecuador has begun preparing.

In another relevant initiative CPPS will commence a new PBBS pilot project to apply a standard methodology using the scientific advisory from Gregory Ruiz, Ph.D from Smithsonian Environmental Research Center. The project will start in May 2022 and be based in the region to determine the biological baseline of biofouling in ports (one port in each of the five countries, namely, Chile, Colombia, Ecuador, Panama and

Peru). The results gathered from different ports will be compared and it is expected that a publication will be released.

The Chair thanked the representative of CPPS for a structured overview of the achievements so far and invited GPTF-2 participants to make any comments. A representative from Brazil commented on the importance of conducting PBBS, comparing and sharing data, however, it is important to have a standardized methodology in order to obtain compatible results. In response to a question from the plenary, the PCU clarified that the methodology advised by the Smithsonian Environmental Research Center is specific for sampling of fouling species through settlement plates, whereas the report published by the GEF-UNDP-IMO GloBallast Partnerships project on port biological baseline surveys<sup>1</sup> has a broader approach that presents the pros and cons of different methods and also includes water sampling.

**Ms. Aimee Gonzales of Partnerships in Environmental Management for the Seas of East Asia (PEMSEA)** informed the participants of the two regional awareness-raising seminars held in 2021. The first introductory hybrid seminar consisted of a brief overview of IAS, biofouling management, IMO Biofouling Guidelines and an exchange of information on what the countries are doing under the legal institutional framework. Suggestions to involve more stakeholders from the technology industry and trading industry lead to holding the second seminar. The seminars were attended by approximately 70 participants from 15 countries and regional organizations and civil societies.

Ms. Gonzales also conveyed key messages from the seminar including biofouling being a pervasive challenge in Southeast Asia due to tropical warm water year-round and high marine biodiversity. Another outcome of the meeting was that ASEAN countries lack policy and legal framework for combatting biofouling at both the national and regional levels. Ms. Gonzales states that PEMSEA countries are investing in R&D for technologies on biofouling removal, prevention, and management

<sup>1</sup> [https://archive.iwlearn.net/globallast.imo.org/wp-content/uploads/2015/11/Mono22\\_English.pdf](https://archive.iwlearn.net/globallast.imo.org/wp-content/uploads/2015/11/Mono22_English.pdf)



as they realized the benefits to industry and the health of a marine ecosystem. She said that countries like Indonesia and the Philippines with support from the GloFouling Partnerships project are also conducting baseline assessments on regulatory, policy, research and economic impacts of biofouling and IAS. The need for an integrated information management system at the country and regional level is essential as well as the need for awareness raising and capacity building development for better understanding and management response to the issue.

Ms. Gonzales showcased the digital communication services provided by PEMSEA on GloFouling Partnerships project. A webpage was developed which contained information and relevant events proceedings. Moreover, information was also featured on the blue economy bulletin issued each month as well as on social media platforms (i.e Facebook, LinkedIn and Twitter).

It was reported that the regional strategy for biofouling management is currently work in progress with the need to address and align with the IMO Biofouling Guidelines but explicitly address the specific conditions of the Association of South East Asian Nations (ASEAN). PEMSEA stated that national policies and strategies for biofouling management are to be coherent.

Ms. Gonzales notified the meeting of the timeline for the development of the regional strategy. The first RTF meeting was scheduled to take place on 28 April 2022, and it was anticipated that the ToR and regional strategy annotated outlines are to be agreed upon. Consultations with countries, regional organizations and civil society were going to take place between May and October 2022. The second RTF meeting was planned to take place in November 2022 where the members of the RTF would be expected to review and potentially endorse the draft regional biofouling strategy to the EAS Partnership Council, ASEAN Working Group on Maritime Transport, Coral Triangle Initiative and APEC Environment Committee. By December 2023 it is expected that the draft would be refined, and advocacy and communication strategy developed to secure country and regional endorsement and ownership of regional guidelines.

In response to the update from PEMSEA, the Chair raised a question. Considering the region does not have a formal ocean legal framework, and the aforementioned multiple entities indicated that, once the regional biofouling strategy is completed, the sub-regional entities would in some formal sense adopt the strategy or would they rather see it as an informal arrangement integrated in broader work planning. Ms. Gonzales responded that the efforts were put towards endorsing it officially, however, the ASEAN working group is currently reviewing the possibilities.

**Mr. Mahmoud Ahmed** of **PERSGA** started his presentation by giving brief information about PERSGA, an intergovernmental organization dedicated to the Conservation of the Coastal and Marine Environment in the region with seven member states, namely, Djibouti, Egypt, Jordan, Saudi Arabia, Somalia, Sudan and Yemen.

Mr. Ahmed continued with informing the GPTF-2 members of the successfully held regional awareness-raising seminar on biofouling management in June 2021, with over 50 participants attending from PERSGA member states. A key takeaway from this meeting was that the virtual meeting format enabled wider participation, however, it was concluded that in order to enhance knowledge on IMO Biofouling Guidelines and its implementation and sustain such seminars would benefit from being conducted in person.

Moreover, PERSGA co-organized a two-day hybrid national training course on biofouling management at Jordan Academy for Maritime Studies (JAMS). It was beneficial for PERSGA to interact with a wider audience through an online platform, although disruptions occurred due to travel restrictions brought by the pandemic, some participants managed to physically take part in the training. The added value is that the course will be mainstreamed in the Academy's programmes and syllabus.

Mr. Ahmed notified that the RTF was established in 2022 with Jordan elected as the Chair for a two-year term. The RTF was held in Hurghada, Egypt in March 2022 at the Emergency Mutual

Aid in the Red Sea and Gulf of Aden (EMARSGA) centre, where the first draft of NSAP on biofouling management was discussed and agreed upon by the delegates. A key component that was included in the strategy is to promote gender balance and women empowerment through Women in Science. It was reported that the next steps are to endorse the NSAP by submitting the strategy for adoption at the next Council of Ministers of Environment.

It was noted that PERSGA coordinated and assisted in the development of the NSA and NSAP reports of Jordan. Mr. Ahmed also highlighted the efforts PESGA initiated in relation to the communication and visibility aspect of the IAS and biofouling management by producing the animated video in Arabic, developing a regional website, actively promoting material through social media platforms as well as supplying brochures.

Mr. Ahmed pointed toward other relevant initiatives being developed in PERSGA, as such, an integrated portfolio for the Sustainable Blue Economy for Red sea and Gulf of Aden (RSGA) Region. In this portfolio, a target component to green ports and shipping is included which consists of antifouling technologies, and greener ports developments in the RSGA region which will focus on building the capacity to address issues related to ships' hull fouling and the transfer of IAS as well as promote sustainable maritime transportation.

**Mr. Zammath Khaleel of South Asia Cooperative Environment Programme (SACEP)** began his presentation by informing the participants of the role SACEP has within its region which acts as the secretariat for the implementation of the South Asian Seas Programme (SASP) and its overall objective is to protect and manage the marine environment and related coastal ecosystems of the region in an environmentally sound and sustainable manner.

Mr. Khaleel specified the responsibilities of SACEP to the project both on the national and regional levels as well as the support and assistance provided to Sri Lanka which is both a member State to SACEP and an LPC beneficiary country of the GloFouling Partnerships project.

SACEP participated and contributed to the first NTF meeting held in February 2020 and facilitated arrangements for the consultancy contract of the NSA report for Sri Lanka in May 2021. Due to the difficulties caused by the pandemic, the country lockdown, travel bans, and the X-Press Pearl incident significant delays in delivering expected outputs were experienced.

**Mr. Franck Lauwers of REMPEC** informed the participants that although REMPEC is not an RCO to the GloFouling Partnerships project, it closely collaborates with IMO, MED and the GloFouling Partnerships PCU on matters related to biofouling management and IAS.

Mr. Lauwers listed a number of past activities of REMPEC related to biofouling management and IAS. REMPEC coordinated the implementation of the GEF-UNDP-IMO GloBallast Partnerships Programme in the Mediterranean region, as Regional Coordinating Organization (RCO), in cooperation with the Regional Activity Centre for Specially Protected Areas (SPA/RAC). An array of activities related to ships' ballast water management (BWM) and invasive species were carried out at the national, regional and global level to support the Project implementation.

REMPEC also coordinated the implementation of the SAFEMED I Project (2006-2009) and SAFEMED II Project (2010-2013). Various activities related to anti-fouling systems were carried out.

An IMO Regional Workshop on both the AFS Convention and the Biofouling Guidelines in November 2019 was organized by REMPEC in close cooperation with IMO.

In 2021, REMPEC provided technical assistance for the development of a draft national BWM Strategy for Morocco. This strategy, though focused on BWM, also makes reference to biofouling.

Mr. Lauwers highlighted the Mediterranean BWM Strategy (2022-2027) adopted by the Contracting Parties to the Barcelona Convention at COP 22. While the focus of this Strategy remains on ballast water, the scope has been expanded to include some preliminary activities on biofouling.

Forthcoming activities based on the material developed by the GloFouling Partnerships project are to support up to 3 countries (to be confirmed following a call for expressions of interest) will be provided with capacity-building and technical support for the implementation of the 2011 Biofouling Guidelines, best practices for biofouling management in other ocean industries to minimize the risk of IAS transferred through biofouling will be shared.

Although no Mediterranean countries are beneficiary countries under the GloFouling Partnerships project, tools and guidance documents developed by the project will be available to all countries. Moreover, there is potential for countries to engage with the PCU as 'second tier' countries.

## **Agenda Item 7**

### **Outcome of the Mid-term review (MTR) of the GloFouling Partnerships project**

The Chair explained that during 2021 the project undertook its mandatory Mid-Term Review (MTR), following the guidance and recommendations of the Global Environment Facility (GEF) for the assessment of International Waters projects and United Nations Development Programme (UNDP) Monitoring and Evaluation guidelines. The Chair invited the evaluator Mr. David Vousden to present the outcome of the Mid-Term review of the Project.

Mr. Vousden explained that the purpose of conducting the review was to determine the progress towards achieving project's objectives and outcomes as specified in the Project Document and to assess early signs of failure with the goal of identifying the necessary changes to set the project on-track to succeed its intended result.

Mr. Vousden stated that the Project's MTR was rated 'Satisfactory' to 'Moderately Satisfactory'. This reflected the major constraints and delays imposed on the Project by the COVID-19 pandemic and does not reflect the high quality of

the management and implementation efforts of the PCU or the successful interactive engagement between various partners and stakeholders. A high degree of adaptive management had been demonstrated by the Project, which had been instrumental in retaining its focus and output during the COVID-19 pandemic.

The Project had leveraged a remarkable level of co-financing which, at mid-term, exceeded the full-term expectations as defined at Project Document approval and Inception. It was clear from the MTR interviews and questionnaires that the national government stakeholders and regional coordinating bodies all fully supported the objectives of the Project and continued to have an active role in project decision-making that helped to support and steer efficient and effective project implementation.

Mr. Vousden highlighted that one of his recommendations had been to extend the Project for 18 months. This was granted by UNDP, with the new project's end date extended to 31 May 2025. With this, a new work plan was developed that responds to a revised Results Framework which included recommendations and suggestions from the MTR. Mr. Vousden stated that the PCU had prepared an updated plan of activities and budget for the period 2022-2025, which reduced the number of demonstration activities to a more realistic expectation.

Additionally, the MTR recommended that the GIA should have a more inclusive representation of ports, the recreational vessel sector, aquaculture, and renewable energy. It was suggested that key stakeholders needed to be approached at the senior management and CEO level to explain the importance of their potential role. Another recommendation was to bring together all IMO GIAs to discuss mechanisms for streamlining the GIA process across these groups as well as to promote cross-collaboration and exchange of information between their members.

Improving communication between WOC, IOC-UNESCO and the project was a good way forward to deliver on activities falling under the responsibility of IOC-UNESCO. Mr. Vousden



also highlighted that a new work plan had been developed and agreed between IOC-UNESCO and WOC but no ToR had been signed as yet.

In addition, the MTR recommended recruiting an additional staff member who would be responsible for engagement, communication and coordination of outreach and awareness and for tracking and reporting on activity implementation. The Department of Partnerships and Projects (DPP) and IMO senior executives should discuss how to streamline the administrative processes within IMO to better support the planning and recruitment of project staff.

Mr. Vousden emphasized the recommendations to continue engagement with REMPEC as well as provide regular input in the GESAMP Working Group 44 on Biofouling which will support the information requirements of the GloFouling Partnerships for understanding the role of biofouling in the transfer of Non-Indigenous Species across all maritime industries.

It was noted that a significant number of new stakeholders and partners have joined the Project since the original list of key stakeholders was adopted into the Project document, however, there is a need to review the list to identify any gaps in terms of valuable partners or stakeholders that are currently missing or not effectively engaged and to define the roles of each within the Project.

Lastly, Mr. Vousden concluded that the Project needed to develop a fully sustainable roadmap for post-project work. Such a roadmap would address such issues as the need to update the national status assessments, revision of management strategies as appropriate, on-going support for and from the GIA, ownership of ongoing implementation at the regional/national level, securing the longer term existence of the website within the appropriate platform, ensuring availability of reference materials, continuity of training delivery, etc.

## Agenda Item 8 TEST Biofouling project

Mr. Matheickal introduced a newly signed project, complementary to the GloFouling Partnerships project, called TEST (Transfer of Environmentally Sound Technologies) Biofouling. TEST Biofouling. The new project will run for four years (2022-2025), following an agreement signed (on 8 December 2021) by IMO and the Norwegian Agency for Development Cooperation (Norad). A summary of the project was presented in document GPTF 2/8/1 (TEST Biofouling project).

Mr. Matheickal stated that the TEST Biofouling project will closely cooperate with and build on the achievements of the GloFouling Partnerships project and maximize its impact in an efficient manner, focusing on the existing beneficiary countries and areas where additional support is most beneficial and can have the highest impact. TEST Biofouling project is expected to enhance global coordination on biofouling management as well as national and regional engagement by demonstrating biofouling solutions that address two major environmental issues: the introduction of invasive aquatic species and GHG emissions from ships' biofouling.

The core of the TEST Biofouling project will be focusing on areas related to testing novel technologies and new sustainable methods of biofouling management through demonstration projects, which can be effective ways to showcase to developing countries available new technology possibilities and the environmental and energy efficiency benefits that could be achieved by these technologies.

This was planned to be achieved through 12 national demonstration projects, which will benefit using the 12 GloFouling Partnerships LPC countries, as well as through three regional demonstration pilots on the most cutting-edge technologies, with the support of knowledge partners which will focus on regional needs of Maritime Technology Cooperation Centres (MTCCs), as such also prioritizing regions with the highest number of Least Developing Countries

(LDCs) and Small Island Developing States (SIDS). It was recalled that each GloFouling LPC was expected to test effective approaches to biofouling management through demonstration projects. However, due to limitations in time and logistics as a result of the COVID pandemic, this has been redesigned to three demonstrations that will be shared by all LPCs at the same location.

In addition, TEST Biofouling will also aim to support the overall capacities of developing countries and complement in this regard the GloFouling Partnerships project by preparing and undertaking 2 global training courses.

To implement these activities TEST Biofouling will build on regional networks from Africa, Pacific and Caribbean MTCCs. IMO will conclude an implementing agreement with respective MTCCs to allocate them funding for the implementation of project activities related to regional capacity building activities and regional demonstration projects and provide support to countries identifying and undertaking national demonstration projects. MTCCs will have a key role in supporting countries on the technical elements, R&D specifics, but other regional organizations will be also consulted and welcomed to contribute.

At the national level, the GloFouling Partnerships project NFPs will be key contact points for TEST Biofouling unless otherwise indicated by the countries during the initial phase of project implementation when all GloFouling Partnerships project beneficiary countries will be asked to indicate their interest and showcase their ownership. All LPCs were requested to send confirmation of their participation in the new project by submitting a letter of support – based on a template circulated by the PCU.

## **Agenda Item 9**

### **Plan of activities and budget 2022-2025**

The PCU stated that based on the progress report (document GPTF 2/3/1) presented by the PCU, the recommendations of the MTR (document GPTF

2/7/1) and the information on the activities planned by the new IMO-NORAD TEST Biofouling project (document GPTF 2/8/1), the PCU had developed documents with a view to defining the work plan and budget for the period 2022-2025. These documents were the amended Results Framework which incorporated the recommendations of the MTR into the activities, targets and outputs of the project; the workplan of remaining activities; the budget allocations for activities to be implemented in the period 2022-25 and the budget revision 'D' approved by UNDP in March 2022 that included the redistribution of GEF funds for the extended 18-month period.

Some activities required to be redesigned (specifically demonstration projects), very limited required reducing its targets such as developing draft NSAs in six PCs rather than developing NSAPs in 10 PCs as previous experience accumulated from previous IMO projects demonstrated that isolated national strategies without previously identifying status assessments of the issue in their country have been rarely implemented or followed up. It was stated that other activities needed to be reconsidered. As such, two outreach regions to include biofouling strategies required deletion due to the need to prioritize PCU efforts in core activities in LPCs and strategic regions, however, the PCU may continue to support the Mediterranean region with REMPEC.

Another activity that needed to be reconsidered was the best practices and training course for inspection methodologies as per the recommendation stated in the MTR. Nonetheless, this activity will be taken on board by the TEST Biofouling project, therefore countries will still benefit from this activity. National demonstration sites activity will be implemented under the TEST Biofouling project where two demonstration sites will be implemented with participation from all LPCs to showcase effective approaches to biofouling.

The PCU informed the participants that as a result of the MTR a new activity, related to developing a road map for post-project work by LPCs and RCOs was added to the revised Results Framework.

The PCU showcased the status of LPCs and RCOs activities to date and planned activities, namely the development of NTF NSA, NSAP, NEA, the delivery of the introductory training course on biofouling management and communication and visibility on the issue. The PCU invited each representative to give an update for each milestone as shown on the screen.

### **Budget revision**

The PCU informed the GPTF-2 members that the budget was revised as a result of the MTR for an 18-month no-cost extension the revised budget was provided in Annex 4 of document GPTF 2/9/1. It was understood that the budget allocated for activities remained the same. PCU salaries including the new position will be sourced mainly through savings and fundraising. The PCU further elaborated the breakdown budget for each component redistributed for the years 2022-2025, noting that the allocation for each component of the Project had not changed.

Furthermore, the LPC and RCO representatives evaluated the various activities for the remaining period of 2022 by giving an estimated date of completion.

### **Forthcoming activities - Planning**

The PCU informed that the development of the report on best practices for biofouling management plans and record books as well as the related training course package was being tendered. Finalization was expected at the end of the year. It was announced that the Project was developing in collaboration with the World Maritime University (WMU) and with funds from IMO's Integrated Technical Cooperation Programme (ITCP) an e-Learning course using the material developed for the first training on biofouling management and its launch was expected in May 2022. Reports on best practices on biofouling management for aquaculture and offshore oil and gas reports are also in progress of development and are anticipated to be finalized in May 2022.

The PCU informed and invited participants to get involved in the upcoming 2nd R&D Forum

and Exhibition on biofouling management which was scheduled from 11-14 October. The 3rd R&D Forum and Exhibition was expected to take place in The Republic of Korea in 2024 which will include a demonstration site focusing on drydock operations.

The PCU notified the GPTF-2 participants that the goal was to deliver training on Biofouling Management Plan (BFMP) and Biofouling Record Book (BFRB) in all countries and regions in 2023 and invited any countries to volunteer to be the first country to receive the mentioned training.

In addition, the PCU highlighted an upcoming activity that entailed a demonstration site on managing biofouling and IAS introduction in marine protected areas in the Galapagos to take place in 2023. It was reported that this demonstration site would bring together global experience on the subject as well as sharing experience and protocol and procedures. This activity could also be used as an opportunity for documentary filming or audio vision production. The latter part of 2023 will include the development of a report on best practices for drydock operations and the application of anti-fouling paint followed by the development of a third training course on the subject.

It was reported that both, the report from GESAMP WG 44 and the best practices report on ocean energy reports were expected to be published under the lead of IOC-UNESCO by the end of 2023.

In 2024, key planned activities were the drydock operations demonstration site as well as the delivery in all LPCs of national training on the same. Moreover, it was expected that a global report on the economic assessment would be issued, based on the information gathered by all LPCs in their national economic assessment reports.

Noting that the end date of the Project was now May 2025, it was expected that all countries should have had the national measures and regional strategies endorsed by December 2024.

The terminal evaluation and third Global Project Task Force meeting were expected to take place in March 2025.



The GPTF approved the plan of activities for the period 2022-25, corresponding budget allocations and the revised results framework. These documents are included in this document as annexes 5, 6 and 7, respectively.

## **Agenda Item 10**

### Other business

Mr. Ashok Srinivasan of BIMCO provided an overview of BIMCO's main goals and progress on biofouling management and its link to GHG emissions. BIMCO produced two documents on industry standard of in-water cleaning with capture and its approval procedure. BIMCO desire to develop a small-scale project to conduct physical test of solutions resulted in delay due to COVID and financial implications. BIMCO has also submitted a full report to PPR9 related to a survey conducted in 2021 on biofouling.

## Annex 1 List of Participants

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## Annex 1 List of Participants (continued)

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## **Annex 2** Agenda

### **ADOPTED AGENDA**

***for the second meeting of the Global Project Task Force (GPTF) to be held from Monday, 11 April to Wednesday, 13 April 2022***

***Session commences at 10 a.m. (UK local time) on Monday, 11 April 2022***

- 1 Adoption of the Agenda
- 2 GPTF Terms of Reference and Rules of Procedure
- 3 Project status report
- 4 Update on the review of the IMO Biofouling Guidelines
- 5 Progress reports from Lead Partnering Countries (LPCs)
- 6 Progress reports from Regional Coordinating Organizations (RCOs)
- 7 Outcome of the Mid-term review (MTR) of the GloFouling Partnerships project
- 8 TEST Biofouling project
- 9 Plan of activities and budget 2022-2025
- 10 Other business

## Annex 3 Provisional programme

Meeting taking place in Committee rooms 3-5 (Delegates' Lounge)

Meeting chaired by **Mr. Andrew Hudson**, UNDP, and **Mr. Jose Matheickal**, IMO

### DAY 1: MONDAY 11 APRIL 2022

09:00 – 09:45	Registration at IMO lobby
10:00 – 10:15	<b>Opening remarks</b> <b>Mr. Arsenio Dominguez</b> , Director, Marine Environment Division (MED), IMO <b>Mr. Andrew Hudson</b> , Head, Water & Ocean Governance Programme, UNDP <b>Mr. Jose Matheickal</b> , Chief, Department of Partnerships and Projects (DPP), IMO
10:15 – 10:20	<b>Adoption of the Agenda</b>
10:20 – 10:30	<b>GPTF Terms of Reference and Rules of Procedure</b>
10:30 – 12:00	<b>Project status report: activities implemented by GloFouling Partnerships Project Coordination Unit (PCU)</b>
12:00 – 13:00	<b>Lunch break</b>
13:00 – 13:30	<b>Project status report: activities implemented by the Global Industry Alliance (GIA) for Marine Biosafety</b> <b>Mr. Yusik Kim</b> , GIA Chair
13:30 – 14:00	<b>Project status report: activities implemented by IOC-UNESCO and WOC</b> <b>Pia Haecky</b> , IOC-UNESCO
14:00 – 14:10	<b>Short break</b>
14:10 – 14:45	<b>Update on the review of the IMO Biofouling Guidelines</b> <b>Theofanis Karayannis</b> , Head, Marine Biosafety Section, MED, IMO
14:45 – 15:00	<b>Summary of discussion</b>
15:00	<b>Group photo</b>
15:30	<b>Photo exhibition inauguration and cocktail reception</b>

### DAY 2: TUESDAY 12 APRIL 2022

09:00 – 09:45	Registration at IMO lobby
10:05 – 11:00	<b>Progress reports from Lead Partnering Countries (LPCs)</b> 4 countries: Tonga, Indonesia, Philippines and Sri Lanka
11:00 – 12:00	<b>Progress reports from Lead Partnering Countries (LPCs)</b> 4 countries: Brazil, Ecuador, Fiji and Jordan
12:00 – 13:00	<b>Lunch break</b>
13:00 – 14:00	<b>Progress reports from Lead Partnering Countries (LPCs)</b> 4 countries: Madagascar, Mauritius, Mexico and Peru
14:00 – 14:10	<b>Short break</b>
14:10 – 15:20	<b>Progress reports from Regional Coordinating Organizations (RCOs)</b> 5 organizations: CPPS, PEMSEA, PERSGA, SACEP, SPREP and REMPEC
15:20 – 15:30	<b>Summary of discussion</b>

**Annex 3** Provisional programme (continued)

**DAY 3: WEDNESDAY 13 APRIL 2022**

10:00 – 10:05	<b>Introduction to Day 3</b>
10:05 – 10:30	<b>Outcome of the mid-term review of the GloFouling Partnerships project</b> Mr. David Vousden, <i>Independent evaluator</i>
10:30 – 10:45	<b>TEST Biofouling project</b> Mrs. Gyorgyi Gurban, <i>Head, Projects Implementation, DPP, IMO</i>
10:45 – 12:00	<b>Plan of activities and budget 2022-2025 of the GloFouling Partnerships project</b>
12:00 – 13:00	<b>Lunch break</b>
13:00 – 14:00	<b>Plan of activities and budget 2022-2025 of the GloFouling Partnerships project</b>
14:00 – 14:10	<b>Short break</b>
14:10 – 14:40	<b>Other business</b>
14:40 – 14:50	<b>Summary of meeting</b>
14:50 – 15:00	<b>Closing remarks</b>

## Annex 4 Revised Terms of Reference and Rules of Procedure for the Global Project Task Force

### Role

- 1 The GPTF will be the highest advisory body of the Project. The GPTF will review the activities of the project and will provide advice to IMO and UNDP on the general directions to be followed. The GPTF will make its final recommendations to IMO and UNDP based on the principle of consensus. An organogram for the GloFouling Partnerships project explaining the functional relationships among the various stakeholders of the project is given further below.

### Membership

- 2 Initial GPTF membership will include a representative from each of the Lead Partnering Countries (LPCs) and Regional Coordinating Organizations (RCOs) as well as one each from GEF/UNDP, the private sector, other donor partners, the NGO community and the IMO. Additional members can be added at the discretion of the IMO and UNDP on the advice of the GPTF. The PCU Project Technical Manager (PTA) will act as Secretary to the GPTF. The GPTF will be chaired jointly by IMO and UNDP.
- 3 A list of LPCs and RCOs is given below:

#### **Lead Partnering Countries (LPCs)**

BRAZIL  
ECUADOR  
FIJI  
INDONESIA  
JORDAN  
MADAGASCAR  
MAURITIUS  
MEXICO  
PERU  
PHILIPPINES  
SRI LANKA  
TONGA

#### **Regional Coordinating Organizations (RCOs)**

Permanent Commission for the South Pacific (CPPS)  
Partnerships in Environmental Management for the Seas of East Asia (PEMSEA)  
Regional Organization for the Conservation of the Environment of the Red Sea & Gulf of Aden (PERSGA)  
South Asia Co-operative Environment Programme (SACEP)  
South Pacific Regional Environment Programme (SPREP)

### Tasks

- 4 The GPTF will advise and assist the IMO and UNDP on the following tasks:
  - Provide overall strategic policy and management direction to the project;
  - Assist in identifying and allocating programme support for activities consistent with project objectives;
  - Biennially review and assess the progress of the Project and its components;
  - Biennially review and approve the work plan and comment on the budgets of the Project and its activities, and provide strategic direction on the work plan;
  - Provide guidance to the PCU in coordinating and managing the programme of activities;
  - Create mechanisms for interaction with the private sector (shipping, ports, non shipping), NGOs and other stakeholders (e.g. public health); and
  - Seek additional funding to support the outputs and activities of the project.

### Meetings

- 5 The GPTF will meet on a biennial basis (e.g. 3 times, during 2019, 2021, 2025). These three



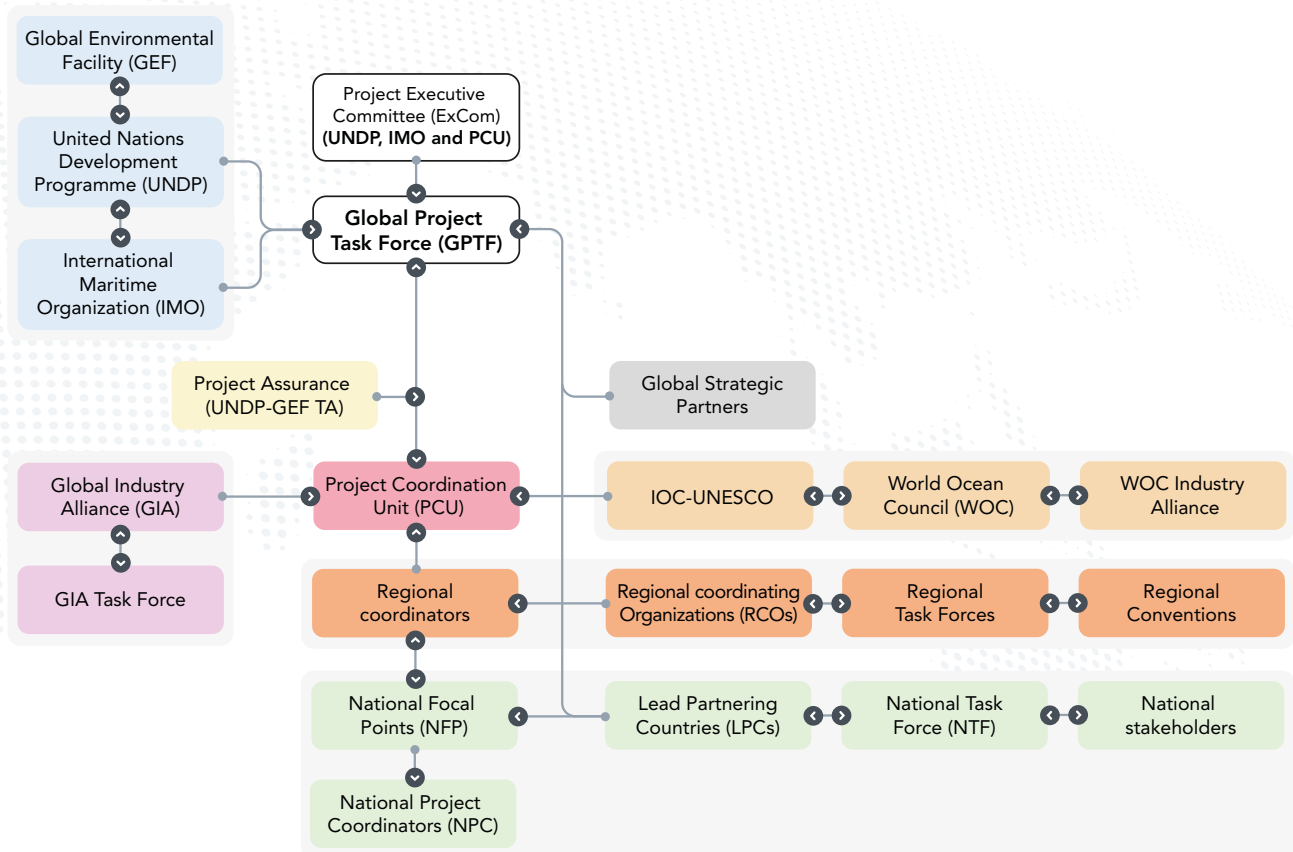
**Annex 4** Revised Terms of Reference and Rules of Procedure for the Global Project Task Force (continued)

meetings will be built around the three key operational events:

- Inception meeting: agreeing on a detailed work plan and preparation of an inception report;
- mid-term meeting: providing implementation status and an external mid-term evaluation; and
- final meeting: discussing achievements, lessons learned, next steps and sustainability.

6 As much as possible, the GPTF meetings will be held back-to-back with major Project events. During the project years 2020, 2021, 2023 and 2024, an Executive Committee, composed of UNDP/GEF, IMO and the PCU will convene to discuss project implementation, focusing on feedback from issues raised in the annual APR/PIR reports.

**GloFouling Partnership – Organogram**



## Rules of Procedure of the GPTF (Adopted by the 1st GPTF meeting)

### Introduction

- 8 The purpose of these Rules of Procedure (ROP) is to provide a uniform basis for the Global Project Task Force (GPTF) of the GEF-UNDP-IMO GloFouling Partnerships (the Project) and its subsidiary bodies, to conduct their work in an efficient and effective manner having regard to the available resources of the Project.
- 9 The ROP are applicable to the work of the GPTF and any subsidiary bodies that it may establish. The Chairs of the GPTF and any subsidiary bodies should make all efforts to ensure strict compliance with the ROP.
- 10 The ROP and the appendices thereto was approved and adopted by the 1st Meeting of the GPTF and will be kept under review and updated as necessary by the GPTF in the light of experience gained in their application.

### Role of the GPTF

- 11 The role of the GPTF is to provide strategic advice and guidance on the activities of the Project and ensure the achievement of its development objectives, as outlined in the Project Document, in a coordinated, efficient and cost-effective manner, and to provide a forum for regular and ongoing review and approval of the Project's Implementation Plan.

### GPTF Tasks

- 12 The GPTF will advise and assist the IMO and UNDP on the following tasks:
  - Provide overall strategic policy and management direction to the Project;
  - Assist in identifying and allocating programme support for activities consistent with Project objectives;

- Biennially review and assess the progress of the programme and its components;
- Biennially review and approve the work plan and comment on the budgets of the Project and its activities, and provide strategic direction on the work plan;
- Provide guidance to the PCU in coordinating and managing the Project and its activities;
- Create mechanisms for interaction with the private sector (shipping, ports, non shipping), NGOs and other stakeholders (e.g. public health); and
- Seek additional funding to support the outputs and activities of the Project.

### Membership

- 13 Membership of the GPTF is open to:
  - a) the Global Environment Facility (GEF);
  - b) the United Nations Development Programme (UNDP);
  - c) the International Maritime Organization (IMO);
  - d) the Intergovernmental Oceanographic Commission of the United Nations Educational, Scientific and Cultural Organization (IOC-UNESCO);
  - e) the National Focal Point (NFP) or National Project Coordinator (NPC) or a nominated representative from each of the Lead Partnering Countries (LPCs);
  - f) the Project Focal Point from each of the Regional Coordinating Organizations (RCOs);
  - g) one representative from each donor Financial Institution (FI);
  - h) one representative from the World Ocean Council (WOC);
  - i) one representative from the Global Industry Alliance (GIA) for Marine Biosafety; and
  - j) the following Observers:
    - one representative from each Strategic Partner of the Project; and
    - any other party approved by a meeting of the GPTF in accordance with these ROP.

## Observer Members

- 14 The GPTF may grant Observer status to any organization that is able to make a substantial contribution to the Project, including, but not restricted to, the Observers listed under membership above.
- 15 Decisions by the GPTF to grant Observer status to any organization shall be based on the following principles of purpose:
  - for the purpose of enabling the GPTF to obtain information and/or expertise from an organization with special knowledge, experience and/or interest in any particular subject relating to the Project; and
  - for the purpose of enabling an organization which represents a large group whose activities have a direct bearing on the Project, and vice-versa, to express their points of view to the GPTF.
- 16 Observer status may not be granted to an organization unless it undertakes to support and promote the activities of the Project. The granting of Observer status shall confer the following privileges on an organization:
  - the right to receive all documents relating to GPTF meetings;
  - the right to submit written statements on items of the agenda of GPTF meetings; and
  - the right to attend GPTF meetings and to make representations at such meetings, in accordance with these ROP and the Chair's prerogative.
- 17 While, as a rule, the GPTF will make decisions based on the principle of consensus, including consensus of Observer members, in accordance with paragraphs 33 and 34, when voting is deemed necessary, the Observer members do not have voting rights.
- 18 All Observer members shall keep the GPTF fully informed of those aspects of their own activities which are likely to be of interest and relevance to the Project.

- 19 The GPTF shall review on a regular basis the list of Observer members and decide any necessary changes.

## Chair & Secretariat

- 20 The GPTF will be chaired jointly by IMO and UNDP.
- 21 Any subsidiary groups which might be established shall elect from among their members a Chair and Vice-Chair.
- 22 The Project Technical Manager (PTA) of the Project Coordination Unit (PCU) based at the International Maritime Organization (IMO) shall act as the Secretary of the GPTF and any subsidiary groups which may be established. The PTA may delegate these functions to staff of the PCU and will be assisted in these functions by an IMO Officer back-stopping to the Project. In carrying out these functions, the PTA will have access to the resources and facilities of IMO.
- 23 It is the duty of the Project Secretariat to receive, process and circulate to Members all reports, resolutions, recommendations and other documents of the GPTF and its subsidiary bodies.

## Meetings

- 24 Throughout the project, the GPTF will meet on a biennial basis (e.g. three times, in 2019, 2021 and 2025). These three meetings are built around the three key operational events:
  - Inception meeting (2019): agreeing on a detailed work plan and preparation of an inception report
  - Mid-term meeting (2021): providing implementation status, reviewing an external mid-term evaluation and confirming an Implementation Plan for the period 2022-2025
  - Final meeting (2025): discussing achievements, lessons learned, next steps and sustainability.

- 25 As much as possible, the GPTF meetings will be held back to back with major Project events. During the project years 2020, 2021, 2023 and 2024, an Executive Committee, composed of UNDP/GEF, IMO and the PCU will convene to discuss project implementation, focusing on feedback from issues raised in the annual APR/PIR reports.
- 26 The PCU, acting on the direction of the Chair, shall notify Members at least two months in advance of the holding of a meeting.

## Agenda

- 27 The provisional, annotated agenda and supporting documents for each meeting shall be prepared by the Secretary and shall normally be communicated to the Members at least two weeks before the opening of the meeting.
- 28 The first item on the provisional agenda for each meeting shall be the adoption of the agenda.
- 29 The provisional agenda for each meeting shall include:
  - a) any item proposed by a Member;
  - b) any item proposed by the Secretariat;
  - c) all items the inclusion of which has been requested by the GPTF at a previous meeting; and
  - d) any item of the agenda of a previous meeting, consideration of which has not been completed, unless otherwise decided by the GPTF.
- 30 In circumstances of urgency, the Secretary, with approval from the Chair, may include any item suitable for the agenda which may arise between the dispatch of the provisional agenda and the opening of the meeting, in a supplementary provisional agenda which the GPTF shall examine together with the provisional agenda.

## Languages

- 31 The official language of the GPTF is English.

## Decision-making and voting

- 32 In general, the GPTF will arrive at decisions by consensus of all Members, including Observers.
- 33 In exceptional situations where consensus may not be possible, the GPTF will arrive at decisions by voting. The GPTF should normally vote by show of hands. Each Member organization shall have one vote, except Observers, who shall not have the right of vote.

## Subsidiary bodies

- 34 The GPTF may establish and dis-establish such subsidiary bodies as and when it considers necessary. Such subsidiary bodies shall follow these ROP so far as they are applicable.
- 35 The subsidiary bodies should, as necessary, operate under the instructions of, and report to, the GPTF.

## Conduct of business

- 36 Twelve Members shall constitute a quorum.
- 37 The Chair shall declare the opening and closing of each meeting. The Chair shall direct the discussions and ensure observance of these ROP, accord the right to speak, put questions to the vote and announce decisions resulting from the vote.



## Coordination and review of work plans

38 The GPTF should periodically examine the Project's Implementation Plan, establish priorities, allocate work to subsidiary bodies and review the allocation of meeting dates to each body and their future work plans and provisional agendas, taking into account any recommendations made by meetings of the GPTF and subsidiary bodies.

39 The GPTF Chair should, at the end of every two years, submit to the GPTF a joint plan covering the activities, priorities and meetings of the subsidiary bodies over the following two years.

40 The GPTF should:

- decide on items to be included in the work plans of their subsidiary bodies with clear and detailed instructions for the work to be undertaken;
- establish priorities and target dates or the number of sessions needed for the completion of the consideration of such items; and
- assign work on such new items to appropriate subsidiary bodies.

41 The following should apply when the GPTF is invited to consider proposals for the inclusion of new items in its Work Plan:

- specific indication of the action required;
- the need for the work proposed and its relation to the objectives of the Project;
- the scope and issues involved;
- the costs to the Project, the maritime industry, the legislative and administrative burdens involved and benefits which would accrue therefrom; and
- its degree of priority and a target completion date.

## Preparation and introduction of documents and reports

42 For each meeting, the Secretariat shall prepare the following documents:

- the provisional, annotated agenda;
- official invitations to all Members; and
- the meeting report.

43 Documents should be prepared in single spacing and be as concise as possible to facilitate their timely processing. In order to enhance the clear understanding of documents, the following should be observed:

- all documents should include a brief summary prepared in accordance with the form given in appendix 1;
- substantive documents should conclude with a summary of the action the relevant body is invited to take; and
- information documents should conclude with a summary of the information contained therein.

44 All documents should be made available to GPTF Members by the Secretariat 4 weeks or more before a session and should be introduced in the plenary for the proper consideration of the matter concerned.

45 Reports of the GPTF and their subsidiary bodies should, in general, contain, under each section, only:

- a summary of key documents and listing of other documents submitted by GPTF Members and the Secretariat;
- a summary of views expressed, during consideration of an item, which may have influenced the decision taken by the reporting body (thus not allowing the reports to turn into summary records, Statements by delegations should be included therein only at their express request during the session); and
- a record of the decisions taken.

46 Whenever possible, each subsidiary body should indicate in its report the progress made towards the target completion date set by the GPTF(s) for each major item.

47 Chairs of subsidiary bodies should not introduce their reports to the GPTF, as these should be taken as read.

## Observance of the Rules of Procedure

48 These ROP should be observed strictly. This will assist Members in preparing adequately for each meeting and enhance their participation in the debate and decision-making process during meetings. It will also avoid delegations experiencing difficulties when developing positions on subjects on the agenda of the GPTF or its subsidiary bodies. Members should ensure that their experts attending meetings of subsidiary bodies are adequately informed and instructed on any action necessary to give effect to decisions made by the GPTF.

## Appendix 1 Standard format for documents

The text of all the documents should be preceded by a brief summary prepared in the form, and containing the information, as set out hereunder.

### SUMMARY

**Executive summary:**

This description should be brief, outlining the proposed objective and if this is a new proposal/activity then it should include information on whether a proposal will have any financial implications for the Project budget.

**Action to be taken:**

A reference should be made to the paragraph of the document, which states the action to be taken by the GPTF, subsidiary body, etc.

**Related documents:**

Other Key documents should be listed to the extent they are known to the originator of the document.

## Annex 5 Plan of Activities 2022-25

Comp.	Action name	2022				2023				2024				2025	
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
	<b>National level policy</b>														
1	Finalise National status assessment reports in LPCs														
1	Develop national strategy and action plan in LPCs														
1	Online seminars for using the Guide on economic assessments														
1	Develop national economic assessment reports in LPCs														
1	Implement dissemination/communication campaign in LPCs to promote biofouling management for recreational boating														
1	Develop national status assessment reports in PCs														
	<b>National training</b>														
2	LPCs to deliver "Introductory training course to biofouling management" through national training institutions														
	<b>Regional level policy</b>														
1	Regional awareness seminars/workshop (1 in the Pacific)														
1	Regional Task Force Meetings														
1	Development of regional strategies and action plans														
	<b>Training</b>														
2	Development of elearning course on biofouling management														
2	Development of training modules on non-shipping industries (aquaculture and offshore oil and gas) <sup>1</sup>														
2	Development of new training course on Biofouling management plans and record books														
2	Delivery of National training in LPCs on biofouling management plans and record books in LPCs														
2	Development of training course on dry dock operations and application of anti-fouling paints														
2	Delivery of National training in LPCs on dry dock operations and application of anti-fouling paints														

<sup>1</sup> Implemented by IOC-UNESCO

**Annex 5** Plan of Activities 2022-25 (continued)

Comp.	Action name	2022				2023				2024				2025	
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
	<b>Development of global reports and publications</b>														
2	Publication of report on biofouling and GHG emissions														
2	Publication of Guide for Rapid economic assessments														
2	Publication of Best practices for recreational boating														
2	Publication of Best practices for aquaculture														
2	Publication of Best practices for offshore oil and gas <sup>1</sup>														
2	Best practices for ocean renewable energy industry <sup>1</sup>														
2	Best practices for Biofouling Management Plans and Record Books														
2	Best practices for drydock operations and application of anti-fouling paints														
2	Global summary of economic impact of biofouling														
2	Develop and publish GESAMP report on biofouling and invasive species														
4	Proceedings of 2nd R&D Forum														
4	Proceedings of 3rd R&D Forum														
	<b>Awareness raising</b>														
2	Develop video 1														
2	Develop video 2														
2	Draft news items, articles and social media														
2	New design for website														
2	Develop other awareness materials														
	<b>Knowledge and demonstration pilots</b>														
4	GloFouling webinars														
3	WOC Innovation Challenge														
4	R&D Forum and Exhibition on Biofouling Management														
2	Demonstration pilot on in-water cleaning														
2	Demonstration on biofouling management in high value marine ecosystems														
2	Demonstration pilot on drydock operations														
3	Workshop on biofouling for Arab women														
4	Knowledge hub updated														

<sup>1</sup> Implemented by IOC-UNESCO



**Annex 5** Plan of Activities 2022-25 (continued)

Comp.	Action name	2022				2023				2024				2025	
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
	<b>Other activities</b>														
3	Global Industry Alliance meetings and activities														
3	WOC webinars														
3	WOC Sustainable Ocean Summit														
5	Annual project report 2022														
5	Annual project report 2023														
5	Final project report														
5	Project sustainability analysis														
5	Terminal evaluation of the project														
5	GPTF-3														
5	Project closure														

## Annex 6 Budget allocations for the period 2022-25

Comp.	Action name	Budget
<b>National level policy</b>		
1	Finalise National status assessment reports in LPCs	
1	Develop national strategy and action plan in LPCs	192,000
1	Online seminars for using the Guide on economic assessments	0
1	Develop national economic assessment reports in LPCs	120,000
1	Implement dissemination/communication campaign in LPCs to promote biofouling management for recreational boating	17,000
1	Develop national status assessment reports in PCs	60,000
<b>National training</b>		
2	LPCs to deliver "Introductory training course to biofouling management" through national training institutions	118,294
<b>Regional level policy</b>		
1	Regional awareness seminars/workshop (1 in the Pacific)	0
1	Regional Task Force Meetings	202,734
1	Development of regional strategies and action plans	0
<b>Training</b>		
2	Development of elearning course on biofouling management	0
2	Development of training modules on non-shipping industries (aquaculture and offshore oil and gas) <sup>1</sup>	32,400
2	Development of new training course on Biofouling management plans and record books	18,000
2	Delivery of National training in LPCs on biofouling management plans and record books in LPCs	170,061
2	Development of training course on dry dock operations and application of anti-fouling paints	20,000
2	Delivery of National training in LPCs on dry dock operations and application of anti-fouling paints	170,061
<b>Development of global reports and publications</b>		
2	Publication of report on biofouling and GHG emissions	50,000
2	Publication of Guide for Rapid economic assessments	27,500
2	Publication of Best practices for recreational boating	20,000
2	Publication of Best practices for aquaculture	20,000
2	Publication of Best practices for offshore oil and gas <sup>1</sup>	20,000
2	Best practices for ocean renewable energy industry <sup>1</sup>	20,700
2	Best practices for Biofouling Management Plans and Record Books	55,000
2	Best practices for drydock operations and application of anti-fouling paints	55,000
2	Global summary of economic impact of biofouling	27,500
2	Develop and publish GESAMP report on biofouling and invasive species	156,116
4	Proceedings of 2nd R&D Forum	0
4	Proceedings of 3rd R&D Forum	0

<sup>1</sup> Included in the development of the national strategy and action plan.

<sup>2</sup> Part of the co-financing commitments made by IMO. To be confirmed on an annual basis.

<sup>3</sup> No funding. Part of the in-kind commitments pledged by LPCs.

## Annex 6 Budget allocations for the period 2022-25 (continued)

Comp.	Action name	Budget
<b>Awareness raising</b>		
2	Develop video 1	50,000
2	Develop video 2	151,555
2	Draft news items, articles and social media	0
2	New design for website	15,000
2	Develop other awareness materials	51,044
2	Translation of materials	70,000
<b>Knowledge and demonstration pilots</b>		
4	GloFouling webinars	0
3	WOC Innovation Challenge	43,303
4	R&D Forum and Exhibition on Biofouling Management	315,726
2	Demonstration pilot on in-water cleaning	20,776
2	Demonstration on biofouling management in high value marine ecosystems	155,885
2	Demonstration pilot on drydock operations	54,578
3	Workshop on biofouling for Arab women	64,739
4	Knowledge hub updated	5,000
<b>Other activities</b>		
3	Global Industry Alliance meetings and activities	22,010
3	WOC webinars	0
3	WOC Sustainable Ocean Summit	40,918
5	Annual project report 2022	0
5	Annual project report 2023	0
5	Final project report	0
5	Project sustainability analysis	20,000
5	Terminal evaluation of the project	54,597
5	GPTF-3	167,093
5	Project closure	0
	Coordination with GEF International Waters	34,474
	Project management	295,360
	Project technical and admin support	960,297
	Other activities (Represent and promote the project in international and regional conventions and forums)	477,102

<sup>1</sup> Included in the development of the national strategy and action plan.

<sup>2</sup> Part of the co-financing commitments made by IMO. To be confirmed on an annual basis.

<sup>3</sup> No funding. Part of the in-kind commitments pledged by LPCs.

## Annex 7 Amended results framework<sup>1</sup>

### Project objective<sup>2</sup>

Project objective	Outcome	Baseline	Mid-term target	End of project target	Indicators	Sources of verification	Risks, assumptions & mitigation
Build capacity in developing countries for implementing the IMO and other relevant guidelines for biofouling management and to catalyse overall reductions in the transboundary introduction of biofouling-mediated invasive aquatic species with additional benefits in the reduction of GHG emissions from global shipping.	<p>Increased awareness and understanding of the impacts of IAS introduced through biofouling, the impact of biofouling on GHG emissions, and existing management and control options.</p> <p>Increased capacity in developing countries for implementing the IMO and other relevant guidelines for biofouling management to minimise the risk of IAS transferred through biofouling.</p>	<p>Lack of awareness about the contribution of biofouling to IAS introductions and GHG emissions from ships.</p> <p>Limited implementation at the national and regional levels of the IMO Biofouling Guidelines.</p> <p>Developing countries have limited resources and expertise to train national stakeholders and authorities and to showcase best available technologies and management methods.</p>	<p>National Task Forces in place in 10 out of 12 LPCs.</p> <p>National assessment reports developed in 6 out of 12 LPCs.</p> <p>At least 3 guidance documents and reports developed and published to assist in the technical aspects of biofouling management in all sectors. At least 2 training packages developed and used for training at least 100 (50 male; 50 female) people in developing countries.</p>	<p>Sustainable strategies in place to prevent the transfer of IAS through ships' biofouling in at least 10 LPCs that include a policy on biofouling.</p> <p>Sustainable strategies in 3 target regions with incorporation of biofouling management measures.</p> <p>At least 3 training packages used to train satisfactorily at least 400 (200 female; 200 male) people in developing countries on different aspects of biofouling management.</p>	<p>Number of LPCs that have developed national status and economic assessments.</p> <p>Number of LPCs that have developed national strategies, including policy addressing biofouling management.</p> <p>Number of strategic regions incorporating biofouling management measures in their strategies.</p> <p>Number of training packages developed and delivered.</p>	<p>LPCs' NTF documents and/or reports from NTF meetings.</p> <p>Reports from GPTF.</p> <p>Reports from RCOs.</p> <p>LPCs' national status assessment reports.</p> <p>LPCs' national economic assessment reports.</p> <p>Regional strategies and action plans documents and meeting reports (LPCs and RCOs).</p> <p>Reports and surveys from national and regional training workshops and activities.</p>	<p>Risk 1: The project is not primarily associated with a mandatory international regulatory framework, as the IMO Biofouling Guidelines are voluntary and there are no similar global guidelines for other sectors. Thus, the GloFouling Project may not have the investment or commitment by States and industry stakeholders. As such, there may be a lower level of political commitment to the project itself and to sustained action beyond the project.</p> <p>Mitigation: This risk, in relation to the shipping industry, is mitigated by the fact that the management of biofouling provides a substantial benefit with regard to fuel consumption and GHG emissions. On the one hand, therefore, there are benefits to ship operators through reduced fuel consumption (and thus cost) and it is envisioned that the "win-win" nature of the project will facilitate the support of the maritime industry sector in light of cost reductions, which will provide positive momentum.</p>

<sup>1</sup> New text will appear inserted in red. Deletions to the original text will appear with strikethrough and yellow highlight

<sup>2</sup> ProDoc did not include targets at the project objective level (ProDoc defines them at the Component level). Drafted as after suggestion of the mid-term review.



## Annex 7 Amended results framework (continued)

Project objective	Outcome	Baseline	Mid-term target	End of project target	Indicators	Sources of verification	Risks, assumptions & mitigation
		There is no identified pool of expertise within strategic regions.	At least 25 communication and awareness-raising materials developed in different formats (e.g. printed, audiovisual, etc.) and distributed effectively to all stakeholders through traditional and new media platforms.	<p>Showcasing new technologies and practices/ methods related to biofouling management to LPCs through 2 demonstration sites</p> <p>At least 3 guidance documents and 5 technical reports published to assist in the technical aspects of biofouling management in all sectors.</p> <p>At least 100 communication and awareness raising materials developed in diverse formats, including 2 documentaries, and distributed effectively to all stakeholders through traditional and new media platforms contributing to noticeable increase of awareness about the IMO Biofouling Guidelines and the environmental issues related to biofouling.</p>	<p>Attendance rates and satisfaction levels in national and regional training workshops.</p> <p>Number and impact of technical publications.</p> <p>Awareness resources developed and published by the project. and the LPCs and RCOs.</p>	<p>APR reports.</p> <p>End of project reports on awareness (through website and social media user reports and end-of-project survey).</p>	<p>On the other hand, a similar rationale can also be applied to non-shipping sectors, where the project outputs will deliver commercial benefit, i.e. reduction in biofouling and, thereby, in direct costs associated with removing and disposing of biofouling. Moreover, the global political pressure to address climate change, including the contribution of shipping, is expected to boost political commitment to the project, despite that lack of mandatory international instruments to manage biofouling.</p> <p>Risk 2: The two distinct environmental benefits achievable through the management of biofouling, namely the reduction of the transfer of IAS and the reduction of GHG emissions, require different goals (levels) for biofouling management. For example, a ship that has 90% of its external hull free of biofouling may have very low hull resistance and thus may be operating at high fuel efficiency with low relative emission of GHGs. However, the remaining 10% of the hull may have biofouling, e.g. restricted to niche areas such as sea chests, which, while not contributing to drag (and fuel consumption), can still harbour IAS that represent a risk to coastal biodiversity.</p>

**Annex 7** Amended results framework (continued)

Project objective	Outcome	Baseline	Mid-term target	End of project target	Indicators	Sources of verification	Risks, assumptions & mitigation
							<p>Mitigation: Notwithstanding the different levels of hygiene required to address hull resistance versus IAS transfer, the goal of the GloFouling project is to provide overall better management. It is broadly accepted that, by moving towards better biofouling management practices in general, the overall risk of IAS introductions as well as GHGs emissions from ships will be diminished.</p> <p>Risk 3: The ultimate contribution of biofouling management to reducing the transfer of IAS will be difficult to quantify, due to the high level of complexity of the relevant processes, entailing a host of biological and environmental variables. Some limitations, though to a much lesser extent, may also exist in the quantification of contribution to reducing GHG emissions.</p> <p>Mitigation: The implementation of the IMO Biofouling Guidelines will undoubtedly result in some risk reduction. While it may not be possible to accurately quantify the risk reduction, a measure of the actual implementation of the IMO Biofouling Guidelines across the various ship types/sectors will provide some basis for evaluation. In addition, reductions in hull resistance, which equate to reductions in GHG emissions, are expected to be possible to quantify with significant confidence.</p>

## Annex 7 Amended results framework (continued)

### Project components

Component	Outcome	Baseline	Mid-term target	End of project target	Indicators	Sources of verification	Risks, assumptions & mitigation
1. Assessing relevant national and regional policies, legislation and institutions to identify gaps, inconsistencies and conflicts, and, as appropriate, adopt Legal, Policy and Institutional Reforms (LPIR) to minimise the risk of Invasive Aquatic Species (IAS) transferred through biofouling.	1.1 Relevant national and regional policies, legislation and institutions assessed and Legal, Policy and Institutional Reforms (LPIR) developed and implemented to minimise the risk of Invasive Aquatic Species (IAS) transferred through biofouling.	Poor understanding in LPCs and strategic regions of biofouling management practices and limited national policies or regulations focused on preventing the transfer of IAS through biofouling.	National Task Forces in place in 10 out of 12 LPCs.  National biofouling management strategies and action plans developed in 6 out of 12 LPCs.	Appropriate and Sustainable strategies in place to prevent the transfer of IAS through ships' biofouling in at least 10 LPCs that include a policy on biofouling.  Sustainable strategies in 3 target regions and 2 outreach regions with incorporation of biofouling management measures.  National status assessments strategies drafted in at least 6 10 PCs.	Number of LPIR documents or reports drafted in LPCs and PCs.  Number of LPCs that have developed national strategies, including policy addressing biofouling management.  Number of strategic regions incorporating biofouling managements measures in their strategies.	Reports and documents from NTF meetings.  Reports from GPTF.  National assessments conducted by LPCs and PCs.  Reports from RCOs, Regional strategies and Action plans.	It is assumed that baseline information and strategic planning will be completed by the mid-term of the Project to enable progress towards implementing and achieving the goals of the National Biofouling Management Strategies and Action Plans.  Mitigation: Strong support from the IMO Secretariat will be gathered to ensure National Lead Agencies in LPCs receive in-country political support to achieve the Project goals.

## Annex 7 Amended results framework (continued)

Component	Outcome	Baseline	Mid-term target	End of project target	Indicators	Sources of verification	Risks, assumptions & mitigation
2. Developing capacity for the implementation of the IMO Biofouling Guidelines through national capacity building, training and technical support, undertaking focused and sustained communications and awareness-raising and executing Pilot/ Demonstration Projects in selected ports and marine protected areas.	2.1 Developed capacity for biofouling management through national capacity-building, training and technical support.	LPCs have limited resources to train national stakeholders and authorities. Existence of global knowledge gaps and limited technical resources to assist in the implementation of sound biofouling management. No identified pool of expertise within strategic regions.	At least 3 guidance documents and reports developed and published to assist in the technical aspects of biofouling management in all sectors. At least 2 training packages developed and used for training at least 100 (50 male; 50 female) participants.	At least 400 (200 female; 200 male) participants trained <b>satisfactorily</b> in different aspects of biofouling management using at least <b>3 5</b> training packages developed based on at least 3 guidance documents and/or 5 technical reports developed and published to assist in the technical aspects of biofouling management in all sectors.  Centres of excellence/ <b>training institutions</b> established in at least 4 strategic regions <b>and LPCs</b> .	Attendance rates and impact level of national and regional training workshops.  Number of training packages developed.  Number of Centres of excellence/ <b>training institutions</b> habitated by the project.  <b>Number of reports/ guides developed and published with confirmed satisfactory use by LPCs and other relevant stakeholders.</b>	Reports and surveys from national and regional training workshops and activities.  Training packages and presentations  Reports from pilot courses in Centres of excellence/ <b>training institutions</b> .  Monograph series/ <b>publications and results from end-of-project survey on usage/ readership</b> .	Risk 1: It is assumed that LPCs will require practical tools to assist the implementation of the IMO Biofouling Guidelines and other best practices. The development of these reports will require the support from world leading experts and global institutions.  Mitigation 1: Outreach to scientific and research community was initiated during the project preparation phase to secure participation in the development of materials required for this outcome.  Risk 2: It is assumed that providing training to appropriate agencies and personnel will result in broad dissemination of learnings. However there is also a risk that newly acquired knowledge and skills may not be sustained.  Mitigation 2: Sustainability of learning and new skills relies on continued engagement and knowledge update. NFPs and the PCU will maintain communication with all participants in training activities with a view to guarantee sustainability of efforts.

## Annex 7 Amended results framework (continued)

Component	Outcome	Baseline	Mid-term target	End of project target	Indicators	Sources of verification	Risks, assumptions & mitigation
	2.2. Increased awareness and understanding of the impacts of IAS introduced through biofouling, the impact of biofouling on GHG emissions, and existing management and control options.	Limited awareness of biofouling issues, the impact of IAS and available solutions in LPCs and, more broadly, the international shipping community and other ocean industries.	Project website in place and at least 25 communication and awareness-raising materials developed in different formats (e.g. printed, audiovisual, etc.) and distributed effectively to relevant stakeholders through traditional and new media platforms.	Project website in place and hosting guaranteed after project closure.  At least 100 communication and awareness raising materials developed in diverse formats, including 2 documentaries, contributing to increased awareness on the issue of biofouling, impacts and solutions.	Number of communication and awareness materials developed and disseminated by the project and increased awareness on the project and the IMO Guidelines.	Awareness measured through project website traffic, distribution of communication resources and via project surveys and feedback from strategic partners and general public.	It is assumed that communication materials developed by the Project will percolate to various stakeholders via the Project website and through targeted communication actions in LPCs and strategic regions. There is a risk that these communication actions do not capture the attention of identified target audiences.  Mitigation: To ensure a broad reception, communication materials will target a range of levels from the general public to governance officers, technical experts and ocean industries, and will also make use of well-established channels through IMO, UNDP, IOC-UNESCO and WOC media teams.
	2.3. Effective approaches to biofouling management and the mitigation of risks associated with the transfer of IAS through biofouling are showcased through demonstration projects in each Lead Partnering Country.	LPCs with limited experience in implementing biofouling management measures.	LPCs identify demonstration projects to showcase strategic biofouling management strategies.	At least 2 Demonstration projects completed in at least 10 provided to LPCs, to showcase effective approaches to biofouling management and the mitigation of risks associated with the transfer of IAS through biofouling and contributing to stress reduction from invasive species in 150,000 ha (marine);	Number of implemented demonstration projects, and level of uptake in LPCs (dissemination of knowledge/experience gained).  Number of marine hectares under improved management effectiveness.	Demonstration Project Reports and project activity assessment surveys.	Demonstration projects could be costly and drain project resources. Due to the broad aspects of biofouling management and the different priorities in LPCs, there is a risk that participating countries will not agree on a common goal for the demonstration sites.  Mitigation: Demonstration projects should be scaled according to available resources and strategic objectives of LPCs. LPCs will be offered a pool of options to guarantee adjustment to national priorities and achieve support.  Co-financing from the private sector will be explored.



## Annex 7 Amended results framework (continued)

Component	Outcome	Baseline	Mid-term target	End of project target	Indicators	Sources of verification	Risks, assumptions & mitigation
3. Building on the existing partnership concepts and mechanisms, established through GEF's GloBallast partnerships, and expanding the existing Global Industry Alliance framework (GIA) to bring active private sector participation at global, regional, national and local levels, to ensure the development of innovative technological and other solutions and financial sustainability for the control and management of biofouling and for the effective involvement of the relevant stakeholders.	3.1. Public-private partnerships developed to bring active private sector participation at global, regional, national and local levels, to support the development of innovative technological and other solutions and financial sustainability for the control and management of biofouling and for the effective involvement of relevant stakeholders.	Limited public-private cooperation to identify needs and develop technological solutions to better manage biofouling.  Limited awareness of business opportunities related to biofouling management solutions and technologies within the investment community.	Industry task forces and funds set up, with contributions from at least 5 private sector companies and producing work plans.  At least 2 platforms set up to facilitate participation of industry in R&D discussions and to catalyse investment in biofouling management solutions and technologies.	Industry task forces playing ongoing role to develop private sector-led solutions.  At least USD 300,000 contributed by private sector partners to fund activities of the Global Industry Alliance.  At least 6 international meetings organised through 2 platforms to facilitate participation from shipping and non-shipping private sector companies in R&D discussions and to catalyse investment in biofouling management solutions and technologies.	Number of industry players joining Industry task forces and total contributions in USD.  Number of international R&D conferences.  Number of investment discussions/ meetings and volume or number of catalysed investments or agreements.	Reports from meetings; conference proceedings and Industry task force minutes.	Assumes significant buy-in from key industry representatives and the identification of appropriate avenues for private sector participation.  Mitigation: Outreach to private sector has already been initiated during the project preparation phase to secure engagement and participation.

## Annex 7 Amended results framework (continued)

Component	Outcome	Baseline	Mid-term target	End of project target	Indicators	Sources of verification	Risks, assumptions & mitigation
4. Knowledge management and developing an institutional and procedural approach for monitoring and evaluation of biofouling management and control measures.	4.1. Knowledge management systems developed and stakeholder and institutional cooperation enhanced for monitoring and evaluation of biofouling management and control measures.	Biofouling management information and knowledge is globally disjunct and difficult to access, with limited forums for discussion of biofouling issues at the global level with the inclusion of developing countries.	Knowledge hub created and one R&D Forum organised, facilitating the participation of voices from developing countries and facilitating North-South technology transfer.	Global Knowledge hub achieves at least 500 average sessions per month.  3 R&D Forums organised, facilitating the participation of voices from developing countries and facilitating North-South technology transfer.	Average number of sessions per month of web-based Global Knowledge hub.  Number of R&D Forums organised by the project.	Global Knowledge hub website traffic reports.  Published proceedings and reports from R&D Forums.	Assumes cooperation from LPCs, research community, technology developers, industry and key environmental organizations for participation and information-sharing.  Mitigation: The stakeholder review during the project design phase included outreach to key strategic partner to secure participation and support.
5. Adaptive project management and coordination for implementation, monitoring and evaluation.	5.1. Adaptive project management and coordination for implementation, monitoring and evaluation in place throughout project lifetime.	No existing project staff or structure in place.  M&E plan included in Project document.	All project management structures in place by end of 1st year and M&E plan fully implemented for first two years of project.  Mid-term evaluation.	End of project sustainability strategy addresses legacy structure and Project achieves overall Satisfactory ratings from terminal evaluation.	Outcome from terminal evaluation and other M&E reports.	Mid-term and Terminal evaluation reports; Report from last GPTF; Sustainability strategy.	Successful project implementation will require prompt appointment of PCU staff, and national and regional project coordination. M&E will need to provide timely feedback throughout project implementation, contributing to continuous review and adaptive management.  Mitigation: Engagement with IMO HR, LPCs and RCOs initiated during project preparation phase. The design of the M&E plan includes cross-reference roles for all the main stakeholders to ensure the need for any corrective action is identified and implemented in a timely manner.

## Results framework

Outputs and Activities	Baseline	Mid-term target	End of project target	Indicators	Sources of verification	Risks, assumptions & mitigation
<b>Component 1: Assessing relevant national and regional policies, legislation and institutions to identify gaps, inconsistencies and conflicts, and, as appropriate, adopt Legal, Policy and Institutional Reforms (LPIR) to minimise the risk of Invasive Aquatic Species (IAS) transferred through biofouling</b>						
<b>Outcome 1.1: Relevant national and regional policies, legislation and institutions assessed and Legal, Policy and Institutional Reforms (LPIR) developed and implemented to minimise the risk of Invasive Aquatic Species (IAS) transferred through biofouling</b>						
Output 1.1.1: Identified and agreed management strategies and action plans to address the threats posed by biofouling for ships and other transportable marine infrastructure.	LPCs have poor understanding of the baseline status of biofouling management at the national level, including the costs and benefits of managing biofouling and have not developed a strategy to implement the IMO Biofouling Guidelines and other best practices.	Development of National Status Assessments and National Biofouling Management Strategies and Action Plans in at least 6 LPCs.	National strategies and action plans endorsed in at least 10 LPCs, <b>conductive to the development of a policy on biofouling</b> and with NTFs providing continued oversight of biofouling management issues.  National <b>strategies status assessments</b> drafted in at least <b>6 10</b> PCs.	Number of <b>and level of implementation of strategies and/ or action plans documents published</b> developed by the LPCs.  Number of status assessments drafted in PCs.	National Status Assessments. National Biofouling Management Strategy and Action Plans. National Economic Assessments. LPC reports to GPTF.	It is assumed that baseline information and strategic planning will be completed by the mid-term of the Project to enable progress towards implementing and achieving the goals of the National Biofouling Management Strategies and Action Plans.  Mitigation: Strong support from the IMO Secretariat will be gathered to ensure National Lead Agencies in LPCs receive in-country political support to achieve the Project goals.
Activity 1.1.1.1: Conduct national status assessments for biofouling management and national economic assessments of the impacts of biofouling and the cost of appropriate control and management in LPCs.	Biofouling management in the majority of LPCs is limited or poorly understood and inconstantly applied between maritime sectors. The economic cost associated with the impacts of IAS introduced through biofouling and the cost of implementing the IMO Biofouling Guidelines in the LPCs are unknown.	6/12 Draft national assessments developed. 6/12 Draft national strategies and action plans include need to develop national economic assessments.	10/12 National Status Assessments and 10/12 National economic assessments <b>published drafted</b> and endorsed by NTF.	Number of national status assessment reports and number of economic assessment reports.	National status assessments.  National economic assessments.  LPC reports to GPTF.	It is assumed NTFs will have the resources to deliver National Baselines within project timeframes. The development of the Guidance document (activity 2.1.3.1) will mitigate this risk by providing appropriate advice to NTFs.  Accurate and appropriate empirical research documenting the economic impacts of biofouling is limited and may be difficult to apply in the context of LPCs. To ensure that the use of a consistent methodology, the development of economic assessments will be based on the Guidance document (activity 2.1.3.1) to ensure comparability of results.

## Annex 7 Amended results framework (continued)

Outputs and Activities	Baseline	Mid-term target	End of project target	Indicators	Sources of verification	Risks, assumptions & mitigation
Activity 1.1.1.2: Develop national biofouling management strategies and action plans in LPCs and PCs.	The LPCs and PCs have no formal process in place to implement the IMO Biofouling Guidelines, nor any target timeframe for implementation.	6/12 Draft national strategies developed.	10/12 National strategies and action plans endorsed by NTF.  National <b>Biofouling Management Strategies and action plans status assessments</b> drafted in 6 <b>10</b> PCs.	Number of endorsed National biofouling strategies and action plans in LPCs.  Number of <b>Biofouling Management Strategies and action plans status assessments</b> drafted in PCs.	National biofouling strategies and action plans from LPCs.  Draft <b>Biofouling Management Strategies and action plans status assessments</b> from PCs. Reports to GPTF.	It is assumed NTFs will have the resources to deliver the Biofouling Management Strategy and Action Plans in a timely manner. The development of the Guidance document (activity 2.1.3.1) will mitigate this risk by providing appropriate advice to NTFs.  It is assumed that PCs will have the resources to follow-up and deliver the Biofouling Management Strategy and Action Plans. The development of the Guidance document (activity 2.1.3.1) and outreach and twinning arrangements will assist this work.
Activity 1.1.1.3: LPCs and RCOs contribute to the evaluation of the IMO Biofouling Guidelines.	No contributions from the LPCs to the evaluation of the IMO Biofouling Guidelines.	At least one document submitted to PPR and/or MEPC reporting on the experience of LPCs in the implementation of the IMO Biofouling Guidelines.	At least three documents submitted to PPR and/or MEPC reporting on the experience of LPCs <b>or RCOs</b> in the implementation of the IMO Biofouling Guidelines.	Number of reports submitted by LPCs <b>or RCOs</b> to PPR and/or MEPC meetings.	MEPC and PPR documents.	The evaluation of the IMO Biofouling Guidelines may need to consider issues outside of the LPCs and RCOs interests and needs to be cognisant of any other review and/or evaluation processes over the project timeframe.
Output 1.1.2: Established policy and institutional environments in all participating countries, conducive to cross-sectoral management of IAS transferred through biofouling.	Policy and institutional environments are not conducive to cross-sectoral biofouling management.	NTFs established in at least 10 LPCs and met at least once, playing effective role in steering activities listed under Outputs 1.1.1 to 1.1.3.	NTF (or lead agency) appropriately funded to sustain and oversee further development of biofouling <b>strategy and action plan</b> in at least 10 LPCs.	Number of NTF meetings in LPCs.	Reports from NTF and GPTF meetings.  Reports from national outreach campaigns.	It is assumed that the private sector and relevant ocean industries are interested in participating in the dialogue and will benefit in the application of better biofouling management.  Mitigation: Awareness-raising materials and leadership from global industry partners are expected to result in the involvement of national industry representatives.

## Annex 7 Amended results framework (continued)

Outputs and Activities	Baseline	Mid-term target	End of project target	Indicators	Sources of verification	Risks, assumptions & mitigation
Activity 1.1.2.1: Set up a National Task Force (NTF) in LPCs.	The majority of LPCs have limited coordination of biofouling management issues across sectors.	NTFs established in at least 10 LPCs and met at least once, playing effective role in steering activities listed under outputs 1.1.1 to 1.1.3.	NTF (or lead agency) appropriately funded to sustain and oversee further development of biofouling strategy and action plan in at least 10 LPCs.	Number of NTF meetings in LPCs.	Reports from NTF and GPTF meetings.	It is assumed that key ministries and/or lead agencies within each LPC will be engaged with GloFouling processes and appropriately resourced to contribute to NTFs.
Activity 1.1.2.2: Develop a National cross sectoral outreach plan in LPCs.	Maritime sectors are poorly engaged and informed about the problems of biofouling and approaches to biofouling mitigation are not shared or coordinated between sectors. Biofouling management status for recreational craft in the LPCs is unknown or poorly implemented.	Key focal points for participating sectors identified and participating in ongoing dialogue with NTF.  Outreach strategy drafted in at least 6 LPCs.	Sectoral outreach strategies developed and endorsed by NTFs in 10 LPCs.  Cross sectoral dialogue on biofouling management is facilitated through established and ongoing processes in all LPCs.  <u>Outreach strategies for recreational craft drafted and implemented in at least 10 LPCs</u>	Number of National cross-sectoral outreach plans, and including (when relevant for the LPC) the recreational craft community.	Reports from NTF and GPTF meetings. Reports from national outreach campaigns.	It is assumed that the private sector will be interested in participating in this process. The development of appropriate outreach materials (outcome 2.2) will assist in engaging with stakeholders and will outline the benefits to participation in the GloFouling process.  It is assumed that outreach activities will provide the basis to facilitate a high level of cooperation and a willingness to engage with this process within the recreational boating community. Due to the international element of recreational boating, engagement at the local or national level may not encompass some high risk recreational vessel operators entering LPC waters. Mitigation: Engagement will be sought within ports of origin of major recreational routes into LPCs.



## Annex 7 Amended results framework (continued)

Outputs and Activities	Baseline	Mid-term target	End of project target	Indicators	Sources of verification	Risks, assumptions & mitigation
Output 1.1.3: Strengthened national frameworks for biofouling management.	Limited national policy or regulations focused on preventing the transfer of IAS through ships' biofouling.	Legal experts in at least 6 LPCs trained to enable effective screening of potential LPIR.	Appropriate and sustainable national biofouling management measures strategies are in place in at least 10 LPCs and include a policy on biofouling.	Number of endorsed national biofouling strategies and action plans including national policies, regulations or guidelines related to addressing biofouling management.	Endorsed Legal Assessment reports.  Regulations, national policies or legislation, guidelines  National strategies and policies or guidelines on biofouling management.  Reports from NTF and GPTF meetings.	It is assumed that national decision-makers will support the need to define suitable national instruments for the implementation of the IMO Biofouling Guidelines.  Mitigation: Legal Assessments and National Status Assessments conducted in LPCs will help raise awareness of national decision-makers and highlight the positive outcome of developing national measures for effective implementation of the IMO Biofouling Guidelines.
Activity 1.1.3.1: Conduct national legal assessments and draft appropriate national biofouling management measures in LPCs.	The current national legal framework needs to be assessed in all LPCs. Limited national policy or regulations focused on preventing the transfer of IAS through ships' biofouling.	6/12 Draft national legal assessments.  Potential LPIR measures are outlined in the national biofouling management strategies in at least 4 LPCs.	10/12 National legal assessments, leading to appropriate and sustainable national biofouling management measures in at least 10 LPCs.	Number of national legal assessment reports.  Number of drafted national policies regulations and/or guidelines related to biofouling management.	LPCs national policies  LPCs national legal assessment reports.  Reports from NTF and GPTF meetings.	The requirements for legal assessment will vary between LPCs depending on the LPIR strategies advocated in their respective National Biofouling Management Strategies and Action Plans. Guidance prepared through activity 2.1.3.1 should aid LPCs to undertake appropriate assessments.  It is assumed that the Legal Assessment conducted by each LPC will identify the appropriate regulatory tools to be developed.  Support to lawyers, legal drafters and maritime administrations will be provided where deemed necessary to ensure a successful outcome.

## Annex 7 Amended results framework (continued)

Outputs and Activities	Baseline	Mid-term target	End of project target	Indicators	Sources of verification	Risks, assumptions & mitigation
Output 1.1.4: Regional partnerships and cooperation agreements developed to address marine biofouling issues.	Limited consideration of biofouling management within regions.	All Regional Task Forces (RTFs) in strategic regions are aware of the impact of biofouling in the transfer of IAS.	IMO Biofouling Guidelines and biofouling management options are included in strategies of at least 3 strategic regions <del>and 2 outreach regions</del> .	Number of strategic <del>and outreach regions</del> that include biofouling management measures in their strategic plans.	Reports from Regional Coordinating Organizations (RCOs). Regional strategies and Action plans.	It is assumed that all countries in the region will be open to discuss the need to include biofouling management in the regional strategies and action plans.  Mitigation: the broad regional engagement facilitated by RCOs, with the help of materials developed by the Project, and the lead of LPCs, will present a viable model to engage with countries not presently participating in the project.
Activity 1.1.4.1: Set up Regional Task Forces (RTFs) in strategic regions.	Limited consideration of biofouling management within strategic regions.	All RTFs in strategic regions are aware of the impact of biofouling in the transfer of IAS.	RTFs are working to implement strategic plans in at least 3 strategic regions.	Number of regions with RTF in place <del>and active</del> .	Reports from RCOs and RTF meetings.	There is a risk that regional efforts at better biofouling management will be hampered by States.  Mitigation through RCOs and LPCs leadership with support from materials developed by project.
Activity 1.1.4.2: Draft regional strategies in strategic and outreach regions.	The majority of the strategic and outreach regions lack consideration of biofouling and its role in the transfer of IAS.	All RTFs in strategic regions are aware of the role of biofouling in the transfer of IAS.  2 outreach regions are aware of the role of biofouling in the transfer of IAS.	3 strategic regions have included biofouling management approaches in their strategies and/or action plans.  <del>2 outreach regions have included biofouling management approaches in their strategies and/or action plans</del> .	Number of strategic <del>and outreach</del> regions that include biofouling management measures in their strategic plans.	Reports from RCOs.  Regional strategic plans.	There is a risk that regional efforts at better biofouling management will be hampered by States.  Mitigation through RCO and LPC leadership with support from materials developed by project.

## Annex 7 Amended results framework (continued)

Outputs and Activities	Baseline	Mid-term target	End of project target	Indicators	Sources of verification	Risks, assumptions & mitigation
<b>Component 2: Developing capacity for the implementation of the 2011 Biofouling Guidelines through national capacity building, training and technical support, undertaking focused and sustained communications and awareness-raising and executing Pilot/ Demonstration Projects in selected ports and marine protected areas</b>						
<b>Outcome 2.1: Developed capacity for biofouling management through national capacity-building, training and technical support</b>						
Output 2.1.1: Sustained national and regional capacity in place for reducing the introduction of IAS through biofouling.	LPCs with limited resources to train national agencies and management authorities in biofouling management.	At least 100 (50 female; 50 male) participants trained in different aspects of biofouling management.  At least 2 training packages developed.	At least 400 (200 female; 200 male) participants trained <b>satisfactorily</b> in different aspects of biofouling management.  At least <b>35</b> training packages developed.	Attendance and feedback survey reports of national and regional training workshops.  Number of training packages developed.	Reports and surveys from national and regional training workshops and activities.  Training packages (manuals and presentations).	It is assumed that providing training to appropriate agencies and personnel will result in broad dissemination of learnings (i.e. train-the-trainer model). There is also a risk that newly acquired knowledge and skills may not be sustained.  Mitigation: Sustainability of learning and new skills relies on continued engagement and knowledge update. NFPs and the PCU will maintain communication with all participants in training activities with a view to guarantee sustainability of efforts.
Activity 2.1.1.1: Design and deliver national training in LPCs on the transfer of IAS through biofouling and biofouling management for shipping and non-shipping pathways.	Training needs are presently undefined and LPCs do not have access to training material or subject matter experts for developing such material.	PCU have engaged appropriate technical experts and/or consultants to develop training material.  IOC have engaged appropriate technical experts and/or consultants to develop training material.	At least 200 (100 male, 100 female) participants have received training.  Training material published on the GloFouling website and freely available.	Number of participants.	Training course materials.  Reports from trainings.	It is assumed that appropriate technical experts and/or international consultants can be identified to develop training resources and that this material can be developed within appropriate timeframes and budgets. The modules for non-shipping industries should be based on best practices published through activity 2.1.3.4. Consideration should be given for delivery combined or back-to-back with activity 2.2.1.2.

## Annex 7 Amended results framework (continued)

Outputs and Activities	Baseline	Mid-term target	End of project target	Indicators	Sources of verification	Risks, assumptions & mitigation
Activity 2.1.1.2: Design and deliver national training on inspection methodologies in LPCs.	Training needs are presently undefined and LPCs do not have access to training material or subject matter experts for developing such material.	PCU have engaged appropriate technical experts and/or consultants to develop training material.	Training course developed and at least 50 (25 male, 25 female) participants from LPCs trained.	Number of participants.  Training materials.	Training course materials.  Reports from trainings.	It is assumed that appropriate technical experts and/or international consultants can be identified to develop training resources and that this material can be developed within appropriate timeframes and budgets. The training course should be based on the overview published through activity 2.1.3.5.
Activity 2.1.1.3: Design and deliver national training on biofouling management plans and record book in LPCs.	Training needs are presently undefined and LPCs do not have access to training material or subject matter experts for developing such material.	PCU have engaged appropriate technical experts and/or consultants to develop training material.	Training course developed and at least 50 (25 male, 25 female) participants from LPCs trained.	Number of participants.  Training materials.	Training course materials.  Reports from trainings.	It is assumed that appropriate technical experts and/or international consultants can be identified to develop training resources and that this material can be developed within appropriate timeframes and budgets. The training course should be based on the overview published through activity 2.1.3.10.
Activity 2.1.1.4: Design and deliver national training on in-water cleaning in LPCs.	Training needs are presently undefined and LPCs do not have access to training material or subject matter experts for developing such material.	PCU have engaged appropriate technical experts and/or consultants to develop training material.	Training course developed and at least 50 (25 male, 25 female) participants from LPCs trained.	Number of participants.  Training materials.	Training course materials.  Reports from trainings.	It is assumed that appropriate technical experts and/or international consultants can be identified to develop training resources and that this material can be developed within appropriate timeframes and budgets. The training course should be based on best practices published through activity 2.1.3.7.
Activity 2.1.1.5: Design and deliver national training on dry dock operations and application of AF coatings in LPCs.	Training needs are presently undefined and LPCs do not have access to training material or subject matter experts for developing such material.	PCU have engaged appropriate technical experts and/or consultants to develop training material.	Training course developed and at least 50 (25 male, 25 female) participants from LPCs trained.	Number of participants.  Training materials.	Training course materials.  Reports from trainings.	It is assumed that appropriate technical experts and/or international consultants can be identified to develop training resources and that this material can be developed within appropriate timeframes and budgets. The training course should be based on best practices published through activity 2.1.3.5.

## Annex 7 Amended results framework (continued)

Outputs and Activities	Baseline	Mid-term target	End of project target	Indicators	Sources of verification	Risks, assumptions & mitigation
Activity 2.1.1.6: Design and deliver technical workshop for female marine scientists in strategic regions.	Training needs are presently undefined and LPCs do not have access to training material or subject matter experts for developing such material.	PCU have engaged appropriate technical experts and/or consultants to develop workshop.	Workshop materials developed and at least 50 participants from all strategic regions.	Number of participants.  Workshop materials.	Workshop materials.  Reports from workshops.	It is assumed that appropriate technical experts and/or international consultants can be identified to develop resources and that this material can be developed within appropriate timeframes and budgets.
Output 2.1.2: Centres of excellence in biofouling management established through training of selected experts.	No identified pool of expertise to play ongoing role in biofouling management.	At least 4 hosting institutions identified.	At least 4 centres of excellence / <b>training institutions established identified</b> and playing a key role in the dissemination of sound biofouling management advice and support.	Number of Centres of excellence or <b>training institutions</b> habilitated by the project.	Reports from pilot courses.	The idea of “centres of excellence” to facilitate training on sound biofouling management relies upon a sustained demand and financing of their services.  Mitigation: Centres of excellence will be placed in existing academic institutions already delivering education and training on marine issues. It is expected that this will facilitate inclusion of new courses into the curricula of the institution and provide regular demand. All teaching materials will be provided free of charge and experts will be selected from a pool of staff from the institution.
Activity 2.1.2.1: Design and deliver regional train-the-trainer workshops on key aspects of biofouling management.	No institutes or academies equipped or identified to deliver biofouling management courses.	At least 4 hosting institutions identified.	Staff from at least 4 academic institutions capacitated to deliver training courses on biofouling management issues.	Number of experts capacitated to deliver training courses on biofouling management issues.	Reports and surveys from workshops.	It is assumed that appropriate institutions can be identified and that resources are available to sustain the role of the Centres of Excellence.



## Annex 7 Amended results framework (continued)

Outputs and Activities	Baseline	Mid-term target	End of project target	Indicators	Sources of verification	Risks, assumptions & mitigation
Activity 2.1.2.2: Capacitate training institutes or academies for delivery of courses on biofouling management.	No institutes or academies equipped or identified to deliver biofouling management courses.	At least 4 hosting institutions identified.	At least 4 centres of excellence <b>or training institutions</b> established <b>or capacitated to deliver courses on biofouling management.</b>	Number of Centres of excellence <b>or training institutions</b> habilitated by the project.	Reports from pilot courses.	It is assumed that appropriate agencies can be identified and that personnel within agencies have appropriate backgrounds to deliver biofouling management courses.
Output 2.1.3: Best practice guidance documents and tools developed to showcase the practical implementation of biofouling management.	Global knowledge gaps and limited technical resources to assist in the implementation of sound biofouling management.	At least 3 guidance documents and reports developed and published to assist in the technical aspects of biofouling management in all sectors.	At least <b>3 8</b> guidance documents and <b>5 technical</b> reports developed and published to assist in the technical aspects of biofouling management in all sectors.	Number of resources developed and published, with confirmed satisfactory use by LPCs and other relevant stakeholders.	Monographs/ <b>publications and end-of-project survey on usage/readership.</b>	It is assumed that LPCs will require practical tools to assist them in implementing elements of the IMO Biofouling Guidelines and other best practices. The development of these reports will require the support from world leading experts and global institutions.  Mitigation: Outreach to scientific and research community was initiated during the project preparation phase to secure participation in the development of materials for this output.
Activity 2.1.3.1: Develop and publish guidance for the main aspects informing a Legal, Policy and Institutional reform process in LPCs and PCs.	No agreed approach to assessing baseline status of biofouling management or developing appropriate LPIR strategies and considerations in developing effective biofouling policy.	At least 3 guidance documents developed and distributed to LPCs.	4 Guidance documents published and freely available after project closure.	Number of published guidance documents.	Guidance documents; project website.	It is assumed that a consistent approach will be applied by all LPCs in developing the different national LPIR reports. National Focal Points (NFPs) and global experts will be consulted in the development of the guidance documents.

## Annex 7 Amended results framework (continued)

Outputs and Activities	Baseline	Mid-term target	End of project target	Indicators	Sources of verification	Risks, assumptions & mitigation
Activity 2.1.3.2: Develop and publish a global summary based on the outcome of the national economic impact assessments conducted in LPCs.	The economic cost associated with the impacts of IAS introduced through biofouling and the cost of implementing the IMO Biofouling Guidelines is unknown at the global level.	4/12 National economic assessments initiated.	Report published and freely available after project closure.	Report published.	Report; project website.	Global summary requires that standardised approaches are possible between LPCs and that sufficient data is available to accurately identify economic costs of both IAS impacts and the cost of proposed management measures.
Activity 2.1.3.3: Develop and publish a review of existing biofouling management practices across all maritime sectors, the impacts of biofouling for specific industries and how it contributes to the transfer of IAS.	Approaches to managing biofouling are typically developed for specific commercial needs and there is limited synergy of approaches between sectors or transfer between sectors.	IOC has outlined scope of review and identified appropriate subject matter experts for contributing and drafting document.	Report published and freely available after project closure.	Report published.	Report; project website.	The focus of biofouling management in many maritime sectors is maintaining functional efficiency. As such the goal of this review is to focus specifically on IAS transfer and its relation to biofouling.
Activity 2.1.3.4: Develop and publish best practices for the implementation of biofouling management for non-shipping pathways .	Biofouling management in the non-shipping sector poorly coordinated with limited advice for management in the context of IAS transfer.	IOC has outlined scope of review and identified appropriate subject matter experts for contributing and drafting document.	Report published and freely available after project closure.	Report published.	Report; project website.	This review requires input from diverse industry sectors often with limited experience in managing IAS, and where biofouling management may be a commercially sensitive issue. Some approaches may be proprietary.
Activity 2.1.3.5: Develop and publish best practices for cleaning vessels in dry-dock and the selection and application of antifouling coatings to enhance immunity to biofouling.	Cleaning and anti-fouling coatings application are typically driven by commercial considerations with no consistent standards applied to ensure best practice in the context of IAS and biofouling management.	Appropriate subject matter experts identified and engaged to develop report.	Report published and freely available after project closure.	Report published.	Report; project website.	There is limited coordination in dry-dock practice around the world and standards are typically driven by competition based on costs. Best practice has cost implications that may not be saleable to a market trying to operate cost-effectively. Best practice standards might be a contractual requirement based on a vessel's BMP/BRB.

## Annex 7 Amended results framework (continued)

Outputs and Activities	Baseline	Mid-term target	End of project target	Indicators	Sources of verification	Risks, assumptions & mitigation
Activity 2.1.3.6: Develop and publish best practices for inspection methodologies.	The continuous development of new technologies is providing new tools for performing inspections. However, there are still challenges to access some commonly overlooked areas of the hull, such as niche areas.	Appropriate subject matter experts identified and engaged to develop report.	Report published and freely available after project closure.	Report published.	Report; project website.	The report should give special attention to niche areas, identified as particular risk in relation to harbouring IAS, and assessing coating condition in practical and cost effective ways.
Activity 2.1.3.7: Develop and publish best practices for in-water cleaning and maintenance.	In-water cleaning considerations are discussed in the IMO Biofouling Guidelines but only a few nations have developed in-water cleaning guidelines.	Appropriate subject matter experts identified and engaged to develop report.	Report published and freely available after project closure.	Report published.	Report; project website.	In-water cleaning practices require consideration of impacts from both IAS and biocides leaching from paints, as well as the impact of cleaning on AFS performance. Some capture and containment methodologies are available to retain IAS during cleaning.
Activity 2.1.3.8: Development of biofouling management approaches and best practices for recreational craft and marinas.	Limited information available to assist marinas to manage biofouling.	Appropriate subject matter experts identified and engaged to develop report.	Report published and freely available after project closure.	Report published.	Report; project website.	Biofouling management approaches will need to consider management on resident vessels, visiting vessels and submerged and floating marina structures, especially those which are moved between locations.

## Annex 7 Amended results framework (continued)

Outputs and Activities	Baseline	Mid-term target	End of project target	Indicators	Sources of verification	Risks, assumptions & mitigation
Activity 2.1.3.9: Develop and publish a report on the impact of biofouling management on GHG emissions.	While the relationship between biofouling and GHG emissions has been assessed, there is limited information available to assist vessel owners and operators in understanding or quantifying the relationship between biofouling management and GHG emissions.	Appropriate subject matter experts identified and engaged to develop report.	Report published and freely available after project closure.	Report published.	Report; project website.	The relationship between GHG emissions and biofouling management is complex and affected by a vessel's operating parameters, area of operation and a range of environmental considerations. Impacts need to be considered both in general and in the context of increasing emissions over a vessel's dry-docking interval. In some cases, acceptable management in the context of GHG emissions may still encompass some residual risk of IAS transfer.
Activity 2.1.3.10: Develop and publish an overview of the application and use of Biofouling Management Plans (BMPs) and Biofouling Record Books (BRBs).	The IMO Biofouling Guidelines provide guidance on the content of BMPs and BRBs. The application of these guidelines and the effect on IAS transfer has not been examined in the context of real-world examples.	Outline Terms of Reference for project and contract appropriate technical experts to undertake a scientific study using a large number of vessels and biofouling management approaches.	GloFouling monograph published examining the application of BMPs and BRBs.	Report published.	GloFouling monograph.	This is a necessary step to validating approaches encompassed by the GloFouling Partnerships and is necessary to ensure that investment in these practices is cost-effective and providing the best protection from IAS transfer.

## Annex 7 Amended results framework (continued)

Outputs and Activities	Baseline	Mid-term target	End of project target	Indicators	Sources of verification	Risks, assumptions & mitigation
<b>Outcome 2.2: Increased awareness and understanding of the impacts of IAS introduced through biofouling, the impact of biofouling on GHG emissions, and existing management and control options.</b>						
<p>Output 2.2.1: Awareness-raising and outreach materials designed and <b>implemented used</b> in LPCs, strategic regions and ocean industries through traditional and new media platforms <b>conducting to increased awareness and understanding of biofouling and related environmental issues.</b></p>	<p>Limited awareness of biofouling issues, the impact of IAS and available solutions in LPCs and, more broadly, international shipping and other ocean industries.</p>	<p>Project website in place and at least 25 communication and awareness-raising materials developed in different formats (e.g. printed, audiovisual, etc.) and distributed effectively to all stakeholders through traditional and new media platforms.</p>	<p>Project website in place and hosting guaranteed after project closure. Average number of sessions per month at least 500.</p> <p>At least 100 communication and awareness raising materials developed in diverse formats, including at least 2 audiovisual productions, <b>all targeting specifically relevant sectors and stakeholders and contributing to increased awareness on the issue of biofouling, impacts, solutions and project tools/outputs.</b></p>	<p>Number of communication and awareness materials developed and disseminated by the project.</p> <p>Level of engagement for each platform.</p> <p><b>Level of awareness about the IMO Biofouling guidelines and the impact of biofouling in relation to IAS and GHG emissions.</b></p>	<p>Awareness measured through project website traffic, distribution of communication resources and via <b>feedback and survey conducted among relevant stakeholders. strategic partners and general public.</b></p>	<p>It is assumed that communication materials developed by the Project will percolate to various stakeholders via the GloFouling website and through targeted communication actions in LPCs and strategic regions. There is a risk that these communication actions do not capture the attention of its target audience.</p> <p>Mitigation: To ensure a broad reception, communication materials will target a range of levels from the general public to governance officers, technical experts and ocean industries, and will also make use of channels already established by IMO, GEF, UNDP, IOC-UNESCO and WOC media teams. M&amp;E plan includes impact measurement to confirm effectiveness of materials</p>



## Annex 7 Amended results framework (continued)

Outputs and Activities	Baseline	Mid-term target	End of project target	Indicators	Sources of verification	Risks, assumptions & mitigation
Activity 2.2.1.1: Design Project branding and visual identity, maintain a project website, and publish news items and other outreach materials to showcase project activities and achievements.	Project branding does not exist and concept needs to be developed. No public platform has been nominated to report on Project news items.	<p>Project logo selected. Visual branding for all Project materials developed.</p> <p>Project website is launched and providing appropriate resources and material to support the GloFouling Partnerships Project.</p> <p>Social media accounts created and Project website launched. At least 15 news items published.</p>	<p>Logo and branding used consistently throughout implementation phase in all Project materials.</p> <p>Combined average number of website sessions per month at least 500.</p> <p>At least 50 news items published on the Project website and through social media.</p>	<p>Use of Project logo and branding.</p> <p>Number of website sessions per month.</p> <p>Number of news items published through Project website and social media.</p>	<p>Project website, publications and other outreach materials.</p> <p>Statistics from Project website and social media platforms.</p>	<p>Target audience may change throughout the Project cycle and could require review of project branding.</p> <p>M&amp;E plan includes impact measurement to confirm effectiveness of project branding.</p> <p>Risks: Project website insufficiently publicised. Website hosting not secured after project termination.</p> <p>Appropriate resources need to be allocated for the support, upkeep and maintenance of the GloFouling website after project closure.</p> <p>Social media outreach requires maintained investment of personnel to manage accounts and feedback.</p>
Activity 2.2.1.2: Design and deliver national and regional awareness-raising workshops on biofouling management.	Awareness of biofouling management issues low in the LPCs and selected regions.	<p>Workshop content and materials prepared.</p> <p>At least 8 national workshops conducted.</p> <p>At least 1 regional workshop conducted.</p>	<p>At least 12 national workshops conducted. Attendance: at least 150 participants.</p> <p>At least 3 regional workshops conducted. Attendance: at least 50 participants.</p>	Number of national and regional workshops and participants.	<p>Workshop reports.</p> <p>Records of attendance.</p>	The goals of awareness-raising workshops and the content of workshops may evolve over the Project cycle as outputs are developed and there is a transition from awareness of the issues to awareness of solutions.

## Annex 7 Amended results framework (continued)

Outputs and Activities	Baseline	Mid-term target	End of project target	Indicators	Sources of verification	Risks, assumptions & mitigation
Activity 2.2.1.3: Design and distribute information materials for awareness-raising on biofouling issues and the impact of IAS.	Biofouling issues and the role of GloFouling Partnerships in addressing this problem poorly understood. There is limited audiovisual material available to assist in developing awareness of biofouling management issues in all marine industries and recreation vessel operators in LPCs are poorly informed on biofouling issues or best practices.	A broad range of information materials for awareness-raising available on the Project website and distributed within LPCs and strategic regions.  Key biofouling issues in non-shipping sector researched to inform the design and focus of awareness raising material.	A broad range of information materials and policy briefs for awareness-raising available on the Project website and distributed within LPCs and strategic regions.  At least 2 audiovisual products completed and distributed through the Project website and other media platforms, with at least 10,000 views.  At least 10 LPCs have conducted awareness campaigns for recreational craft.  At least 4 awareness raising resources developed for non-shipping ocean industries identified as biofouling pathways.	Number <b>and impact</b> of awareness materials, including audiovisuals, developed by the project.  Number <b>and impact</b> of outreach campaigns conducted in LPCs.  Outcome of impact surveys conducted in LPCs.  Number <b>and impact</b> of resources developed for non-shipping ocean industries.	Awareness materials available through Project website and in other formats.  Project website and other media platforms. Impact surveys and reports.	The central approach to communications campaign relies on the development of the Project website and the effective distribution of materials.  It assumed that high impact filmmakers can be engaged to produce high quality audiovisual materials that are engaging and informative.  Selection criteria should include access to effective distribution channels.  While educating local recreational vessel operators is important, ongoing awareness campaigns and outreach for arriving foreign vessels may need to be considered. Identify and distribute outreach materials in main departure points of foreign recreational vessels transiting through LPCs.
Activity 2.2.1.4: Translate appropriate project publications and outreach materials into key languages.	Biofouling management literature is not available in key languages used in the LPCs or strategic regions.	Selected material produced by the Project is translated into 4 key languages	All relevant material produced by the Project is <b>translated</b> <b>produced</b> in at least 4 key languages.	Number of <b>languages used for translating relevant</b> outreach materials and project publications <b>translated into relevant languages</b>	Selected translated materials developed by the Project.	Some strategic regions and LPCs encompass multiple languages. Key languages will be selected to maximise the awareness raising outcomes.

## Annex 7 Amended results framework (continued)

Outputs and Activities	Baseline	Mid-term target	End of project target	Indicators	Sources of verification	Risks, assumptions & mitigation
Activity 2.2.1.5: Represent and promote the project in international and regional conventions and forums.	No existence of project prior to implementation.	Project objective, awareness and stature is raised in international and regional forums through participation of PCU, RCO and/or LPCs in at least 3 events.	Project objective, awareness and stature is raised in international and regional forums through participation of PCU, RCO and/or LPCs in at least 6 events.	Number of meetings attended and level of awareness about the project and its activities.	IMO mission reports and end-of-project survey/reports.	Presence in regional or international conferences and other relevant meetings to be considered during project implementation.
<b>Outcome 2.3: Effective approaches to biofouling management and the mitigation of risks associated with the transfer of IAS through biofouling are showcased through demonstration projects in each Lead Partnering Country</b>						
Output 2.3.1: Demonstration projects undertaken to showcase the implementation of improved biofouling management practices.	LPCs with limited experience in implementing biofouling management measures and in awareness of new tools, technologies and their applicability to best practices.	At least 5 LPCs have confirmed the scope of in-country demonstration projects and defined the goals and approach.	At least 2 Demonstration projects completed in at least 10 provided to LPCs, to showcase effective approaches to biofouling management and the mitigation of risks associated with the transfer of IAS through biofouling and contributing to stress-reduction from invasive species in 150,000 ha (marine).	Number of implemented demonstration projects, and level of uptake in LPCs (dissemination of knowledge/experience gained).  Number of marine hectares under improved management effectiveness.	Demonstration Project Reports and feedback surveys.  Associated outreach and awareness material.	Demonstration project activities could be costly and drain project resources. Due to the broad aspects of biofouling management and the different priorities in LPCs, there is a risk that participating countries will not agree on a common goal for the demonstration sites.  Mitigation: Demonstration projects should be scaled according to available resources and strategic objectives of LPCs. LPCs will be offered a pool of options to guarantee adjustment to national priorities. Co-financing from the private sector will be explored to support the activities.
Activity 2.3.1.1: Implement demonstration sites in with participation from all LPCs.	LPCs authorities with limited appreciation of the existing and novel technologies and current approaches to managing biofouling on vessels.	LPCs have confirmed with PCU the scope of in-country demonstration projects and defined the goals and approach.	At least 8 LPCs have delivered participated in the intended demonstration projects and documented the outcomes.  Improved management practices in place in ports and/or protected areas in LPCs contributing to stress-reduction from invasive species in 150,000 ha (marine).	Number of demonstration projects and level of uptake from participants.  Number of marine hectares under improved management effectiveness in ports and protected areas.	Demonstration project reports and feedback surveys.	There is a risk that demonstration project activities will require significant resources and due to the large scope of potential biofouling issues, could grow in scale. Focal areas have been defined to assist LPCs in developing demonstration projects with clear outcomes and where resources are available to assist in implementation.

**Annex 7** Amended results framework (continued)

Outputs and Activities	Baseline	Mid-term target	End of project target	Indicators	Sources of verification	Risks, assumptions & mitigation
<p><b>Component 3: Building on the existing partnership concepts and mechanisms, established through GEF’s GloBallast partnerships, and expanding the existing Global Industry Alliance framework (GIA) to bring active private sector participation at global, regional, national and local levels, to ensure the development of innovative technological and other solutions and financial sustainability for the control and management of biofouling and for the effective involvement of the relevant stakeholders</b></p>						
<p><b>Outcome 3.1: Public-private partnerships developed to bring active private sector participation at global, regional, national and local levels, to support the development of innovative technological and other solutions and financial sustainability for the control and management of biofouling and for the effective involvement of relevant stakeholders</b></p>						
<p>Output 3.1.1: Public-private partnerships developed to incentivize the development of cost-effective management and technological solutions to prevent the transfer of IAS through biofouling.</p>	<p>Limited public-private cooperation or collaboration to identify needs and develop technological solutions to better manage biofouling.</p>	<p>Industry task force and fund set up, with contributions from shipping and non-shipping private sector companies and producing work plans.</p>	<p>Industry task force participates in at least 2 GPTFs and oversees implementation of at least 4 activities devised in its work plans.</p> <p>Private sector partners contribute at least USD 300,000 to finance activities of the GIA.</p>	<p>Financial contribution from private sector partners.</p> <p>GIA playing key role to support the development of innovative technological and other solutions and financial sustainability for the control and management of biofouling and for the effective involvement of relevant stakeholders.</p>	<p>GIA task force meetings, work plans and outputs.</p>	<p>Assumes significant buy-in from key industry representatives and the identification of appropriate avenues for private sector participation.</p> <p>Mitigation: Outreach to private sector has already been initiated during the project preparation phase to secure participation. Further engagement and awareness-raising efforts will be made at IMO, IOC and WOC meetings.</p>
<p>Activity 3.1.1.1: Set up a Global task force for the shipping and non-shipping industries with private sector financial contributions.</p>	<p>No dedicated industry voices to assist in developing better biofouling management solutions.</p>	<p><del>Two</del> <b>One</b> industry task force set up with at least 5 companies each and producing work plans of activities.</p>	<p><del>Both</del> <b>One</b> industry task force funds and oversees implementation of at least 4 activities (<del>2 each</del>) agreed in its work plans.</p> <p>Private sector partners contribute USD 300,000 to finance activities of the GIA.</p>	<p>Financial contribution from private sector partners.</p> <p>Number and outcome of activities funded by industry task forces.</p>	<p>Minutes from task force meetings; activity reports.</p>	<p>Sufficient engagement of industry and financial contributions to fund activities.</p>

## Annex 7 Amended results framework (continued)

Outputs and Activities	Baseline	Mid-term target	End of project target	Indicators	Sources of verification	Risks, assumptions & mitigation
Activity 3.1.1.2: Hold biennial industry dialogues between industry task forces and the GloFouling GPTF	Limited communication between global industry representatives, LPCs and RCOs.	Industry task force representative(s) participate in at least 1 GPTF to provide advice on biofouling management.	Industry task force representative(s) participate in at least 2 GPTF to provide advice on biofouling management.	Number of participations of industry task force representatives in GPTF meetings.	Reports from GPTF meetings.	Industry task force representatives available to participate.
Output 3.1.2: Increased investment catalysed for biofouling management innovation, solutions and technologies.	Limited awareness of business opportunities related to biofouling solutions and technologies within the investment community.	At least 2 platforms set up to catalyse investment in biofouling management solutions and technologies.	At least 2-4 platforms organised to catalyse investment in biofouling management solutions and technologies, and included in sustainability plan.	Number of investment discussions/meetings.	Reports from meetings; conference proceedings.	Assumes engagement of the investment community, industry associations and R&D community, and the identification of appropriate avenues for investment.  Mitigation: Outreach to private sector and industry associations has already been initiated during the project preparation phase to secure their participation. WOC has already established an Ocean investment platform.
Activity 3.1.2.1: Hold WOC Ocean Investment Platform sessions to catalyse investment in biofouling solutions and technologies.	No dedicated fund to provide financial incentive for the development of better biofouling management tools	Investment platform set up and with at least 1 meeting taking place.	Three At least 1 sessions of the Biofouling Innovation challenge Ocean Investment Platform organised at the global level contributing to increased investment in biofouling management and technologies.	Number of investment discussions or conferences and quantitative impact (companies, start-ups, technologies or investments catalysed).	Reports from meetings; conference proceedings.	Successful launch of the WOC Ocean Investment Platform sessions.
Activity 3.1.2.2: Hold global conference for female entrepreneurs in the maritime industry.	Limited awareness of business opportunities related biofouling and IAS issues within female maritime associations.	1 business conference.	2 business conferences, with 50% increased awareness from female stakeholders on biofouling issues.	Number of conferences. Impact on awareness levels (% increase).	Conference proceedings.  Participant surveys.	Assumes proper engagement of proper associations and representatives.  Mitigation: outreach to associations of women entrepreneurs in the maritime sector has already been initiated during the project preparation phase.

## Annex 7 Amended results framework (continued)

Outputs and Activities	Baseline	Mid-term target	End of project target	Indicators	Sources of verification	Risks, assumptions & mitigation
international meeting Output 3.1.3: Established international, cross-sectoral private sector leadership and collaboration to address IAS and biofouling management.	Limited participation from private sector in discussions related to biofouling and IAS, particularly from non-shipping industries.	At least 2 platforms set up to facilitate participation from shipping and non-shipping private sector companies in discussions on biofouling management.	At least 6 international meetings organised through 2 platforms to facilitate participation from shipping and non-shipping private sector companies in discussions on biofouling management, leading to contribution to the evaluation of the IMO Biofouling Guidelines. Continuity of meetings included in sustainability plan.	Number of international and national meetings or conferences.	Reports from meetings; conference proceedings.	Assumes engagement and participation of the private sector.  Mitigation: Outreach to private sector has already been made during the project preparation phase to secure their participation.
Activity 3.1.3.1: Hold industry forums to identify research and development priorities relevant to biofouling management in all industries.	Limited forums for discussion of biofouling issues at the global level with the inclusion of private sector stakeholders.	One industry forum organised, facilitating the participation of voices from the private sector and facilitating North-South technology transfer.	Three industry forums organised, facilitating the participation of voices from the private sector and North-South technology transfer.	Number of industry forums organised by the project.	Published proceedings and reports from industry forums.	Assumes participation from the private sector.  Outreach to private sector has already been made during the project preparation phase to secure their participation.
Activity 3.1.3.2: Hold annual meetings to discuss biofouling management issues and the impact of marine invasive species transferred through non-shipping pathways.	Sustainable Ocean Summit (SOS) holds annual parallel session on biofouling, but with limited participation from non-shipping industries.	Two SOS conferences include session on biofouling, with contributions from developing countries and non-shipping industry representatives.	Four SOS conferences include session on biofouling, with contributions from developing countries and non-shipping industry representatives. Continuity of biofouling sessions is secured after project closure.	Number of SOS conferences with session on biofouling.	Published proceedings and reports from SOS conference.	Assumes participation from the private sector.  Outreach to private sector has already been made during the project preparation phase to secure their participation.



## Annex 7 Amended results framework (continued)

Outputs and Activities	Baseline	Mid-term target	End of project target	Indicators	Sources of verification	Risks, assumptions & mitigation
Activity 3.1.3.3: Contribute to the evaluation of IMO's Biofouling Guidelines with input from the private sector.	No contributions from industry to the evaluation of the Biofouling Guidelines.	At least one document submitted to PPR and/or MEPC reporting on the output from activities developed by industry stakeholders.	At least three documents submitted to PPR and/or MEPC reporting on the output from activities developed by industry stakeholders.	Number of reports submitted by industry stakeholders to PPR and/or MEPC meetings.	MEPC and/or PPR documents.	Assumes participation of private sector representatives.  Outreach to private sector has already been made during the project preparation phase to secure their participation.
<b>Component 4: Knowledge management and developing an institutional and procedural approach for monitoring and evaluation of biofouling management and control measures</b>						
<b>Outcome 4.1: Knowledge management systems developed and stakeholder and institutional cooperation enhanced for monitoring and evaluation of biofouling management and control measures</b>						
Output 4.1.1: Improved information base available to countries to develop appropriate national strategies and advocacy.	Information on biofouling and IAS issues is scattered and difficult to access at the global, regional and national levels.	Knowledge hub created and already including at least 100 reviewed entries and/or resources. All project outputs disseminated.	Combined average number of sessions per month at least 500. Sustainability secured after project closure.	Average number of sessions per month of web-based knowledge hubs.	Project website reports.  Sustainability strategy.	Assumes cooperation from LPCs, research community and key environmental organizations for information-sharing.  Mitigation: The stakeholder review during the project design phase included outreach to secure participation in development of knowledge management systems.
Activity 4.1.1.1: Create global knowledge hub on biofouling management.	Information on biofouling issues is highly scattered and difficult to access.  No LPC database exists at the start of the project.	Knowledge hub created and already including at least 100 reviewed entries and/or resources.  Web-based database created and supporting dissemination of project outputs.  Draft design of country database reviewed by LPCs.	Knowledge hub created and including updated entries and resources. Hub sustainability secured after project closure. Combined average number of sessions per month at least 500.	Average number of sessions per month.  Materials included.  Number of LPCs included in country database.	Knowledge hub activity reports.  Project website reports.	Assumes cooperation from research community and key environmental organizations.  Stakeholder review during project design phase included outreach to strategic partners to secure their participation and contributions to the development of knowledge management systems.  Assumes cooperation and information-sharing from LPCs. Mitigation: During the project design phase, LPCs have included this activity as part of their deliverables.

## Annex 7 Amended results framework (continued)

Outputs and Activities	Baseline	Mid-term target	End of project target	Indicators	Sources of verification	Risks, assumptions & mitigation
Activity 4.1.1.2: Create national and regional websites for dissemination of information in LPCs.	No websites exist at the national and regional levels collecting information on biofouling.	At least 4/12 national and 2/6 regional websites created.	10/12 national and 5/6 regional websites created and sustained with updated information.	Number of national and regional websites created.	National and regional websites.	Assumes cooperation from LPCs.  During the project design phase, LPCs have included this activity as part of their deliverables and allocated appropriate funding.
Output 4.1.2: Enhanced stakeholder and institutional cooperation .	Limited forums for discussion of biofouling issues at the global level with the inclusion of developing countries.	1 R&D Forum organised, facilitating the participation of voices from developing countries and North-South technology transfer.	3 R&D Forums organised, facilitating the participation of voices from developing countries and North-South technology transfer.	Number of R&D Forums organised by the project.	Published proceedings and reports from R&D Forums.	Assumes participation of research community, technology developers, country representatives, industry associations, port representatives, etc.  Mitigation: Outreach to main stakeholder associations has already been made during the project preparation phase to secure their participation.
Activity 4.1.2.1: Hold biennial Research and Development Forums or specialised conferences.	Limited forums for discussion of biofouling issues at the global level with the inclusion of developing countries.	1 R&D Forum organised, facilitating the participation of voices from developing countries and North-South technology transfer.	3 R&D Forums organised, facilitating the participation of voices from developing countries and North-South technology transfer.	Number of R&D Forums organised by the project.	Published proceedings and reports from R&D Forums .	Assumes participation of research community, technology developers, country representatives, industry associations, port representatives, etc.  Outreach to main stakeholder associations has already been made during the project preparation phase to secure their participation.
<b>Component 5: Adaptive project management and coordination for implementation, monitoring and evaluation</b>						
<b>Outcome 5.1: Adaptive project management and coordination for implementation, monitoring and evaluation in place throughout project lifetime</b>						
Output 5.1.1: Project management and coordination structures in place at global, regional and national levels.	No existing project staff or structure in place.	All project management structures in place by end of 1st year.	All project management structures in place until project termination. End of project sustainability strategy addresses legacy structure.	PCU, RCOs and LPCs appointed and implementing project .	GPTF, APR/PIR reports; Financial reporting; Sustainability strategy.	To secure prompt project initiation, PCU staff, national and regional project coordination recruited at an early stage.  Mitigation: Engagement with IMO HR, LPCs and RCOs initiated during project preparation phase.

## Annex 7 Amended results framework (continued)

Outputs and Activities	Baseline	Mid-term target	End of project target	Indicators	Sources of verification	Risks, assumptions & mitigation
Activity 5.1.1.1: Hire and equip the project coordination unit (PCU) staff at IMO headquarters.	No existing project staff or structure in place.	All PCU staff recruited and have personal development plan included into performance appraisal.	PCU adequately staffed until the project closure.	Number of positions covered in the PCU.  Satisfactory performance appraisals for PCU.	Vacancy notices published by IMO GPTF, APR/PIR reports and annual performance appraisals.	To secure prompt project initiation, PCU staff should be recruited at an early stage.  Engagement with IMO HR initiated during project preparation phase.  Appropriate training options are identified for each PCU staff.
Activity 5.1.1.2: Establish and support the governing bodies of the Project: Global Project Task Force (GPTF) and Executive Committee (ExCom).	No existing GPTF or ExCom structure.	2 GPTF meetings (inception workshop and 1 GPTF).  1 ExCom meeting held (alternate years to GPTF).	3 biennial GPTF meetings held. 2 ExCom meetings .held on alternate years of GPTF.	Number of GPTF meetings.  Number of ExCom meetings.	Reports from Inception Workshop, GPTF and ExCom meetings.	All project stakeholders are ready and available to participate in GPTF and ExCom meetings.  During the project design phase, LPCs have included this activity as part of their deliverables.
Activity 5.1.1.3: Facilitate project coordination at the regional and national levels.	No existing network in LPCs and RCOs	Effective structure of country coordination is established in each of the 12 LPCs within first 4 months or project implementation.  RCOs in place and Agreements established by end of 1st year for all target regions.	Effective structure in place in the 12 LPCs, with strategy in place for sustainability after project termination.  RCOs in place providing support to project legacy in all target regions.	Number of LPCs with national project coordination structure in place.  Number of RCO agreements in place.	Documents of appointment from LPCs, RCO agreements, GPTF reports, Sustainability strategy (project termination).	To secure prompt project initiation, NFPs, NPCs and RCOs should be appointed at an early stage to secure prompt project initiation.  Engagement with LPCs and RCOs initiated during project preparation phase.
Activity 5.1.1.4: Coordinate project implementation with the GEF-UNDP International Waters (IW) portfolio.	Limited project links with other projects in the IW portfolio.	Participation in at least 1 IW conference.  Links established with at least two projects or LMEs.	Participation in at least 3 IW conferences  IW: Learn reflects interlinkage with other projects in the IW portfolio	Number of participations in IW conferences.  Number of twinning links with other members of IW portfolio.	Reports from IW conferences.  IW: Learn website and news items.	To secure project coordination and collaboration, PCU staff should engage at an early stage with IW portfolio.

## Annex 7 Amended results framework (continued)

Outputs and Activities	Baseline	Mid-term target	End of project target	Indicators	Sources of verification	Risks, assumptions & mitigation
Activity 5.1.1.5 Develop a sustainability road map for post-project work by LPCs and RCOs.	Need to ensure sustainability and continuation of project outputs.	Not applicable (new activity).	Sustainability road-map defined and approved by LPCs and RCOs.	Sustainability road-map endorsed by LPCs and RCOs.	Sustainability road-map.  Report from GPTF 3.	Risk: Limited resources to ensure continuation of strategy implementation.  Mitigation: NTFs in LPCs, and RCOs, should identify resources for updating national status assessments, continued implementation and revision as needed of strategies and action plans, continuity of training, support from the private sector etc. PCU to identify partners to maintain information and knowledge resources developed by the Project.
Output 5.1.2: Project monitoring, evaluation and reporting systems established and implemented.	M&E plan included in Project document.	M&E plan fully implemented for first two years of project.	Overall Satisfactory ratings from terminal evaluation.	Report from terminal evaluation.	Terminal evaluation report; Report from last GPTF; Sustainability strategy.	M&E support provides timely assistance and feedback throughout project implementation, contributing to continuous review and adaptive management.
Activity 5.1.2.1: Develop and submit APR/PIR and other required project monitoring reports as per the M&E plan.	M&E plan included in Project document.	4 QPRs submitted per year; 1 APR/PIR submitted per year; Annual Project PID and work plan submitted every year.	4 QPRs submitted per year; 1 APR/PIR submitted per year; Annual Project PID and work plan submitted every year.	Number of QPRs, APRs/PIRs and annual work plans.	QPR, APR/PIR, PID and Annual work plans. GPTF report from PCU.	All reporting requirements for GEF, UNDP and IMO are observed and GPTF receives timely updates enabling proper management of the Project.
Activity 5.1.2.2: Conduct mid-term review and terminal evaluation.	Activity 5.1.2.2: Conduct mid-term review and terminal evaluation.  M&E plan included in Project document.	Mid-term review conducted prior to 3rd GPTF meeting.	Recommendations from mid-term review reviewed by GPTF and implemented by PCU. Terminal evaluation conducted prior to last GPTF to assess project implementation.	Report from terminal evaluation.	Mid-term review report. GPTF reports, Terminal evaluation report; Sustainability strategy.	No delays in identification of mid-term reviewer.  GPTF accepts input from report.  All project achievements, shortcomings, lessons learned and legacy identified and assessed.



**Annex 8** Presentations – Day 1 (continued)

**Project status report: activities implemented by GloFouling Partnerships Project Coordination Unit (PCU) (continued)**

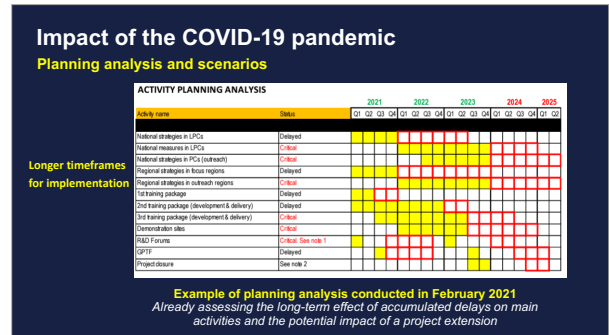
### Impact of the COVID-19 pandemic

Major coordination and update meetings conducted by the PCU

Meeting type (coordination)	Number	Year
ExCom-1 (2020)	1	Apr 2020
LPCs and RCOs COVID-19 response	2 meetings	May an2020
COVID meeting with GIA candidates	1 meeting	May 2020
Status update meeting with LPCs and RCOs	2 meetings	Nov 2020
Coordination meeting with RCOs	5 meetings	Jan 2021
ExCom (Extraordinary)	1	Feb 2021

Meeting type (online delivery)	Number	Year
Webinars for National status assessments	5 meetings	Dec 2020
Webinars for National strategy	4 meetings	April 2021
Familiarisation sessions (training course)	3 meetings	June 2021



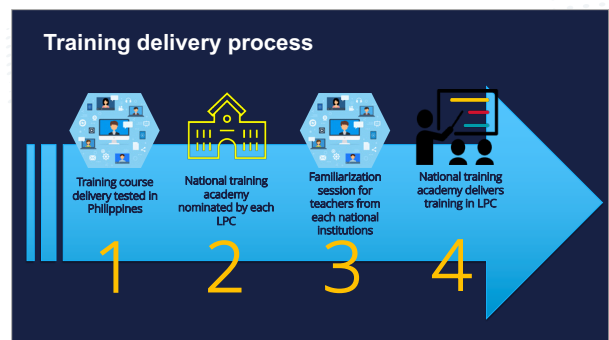
### Training and workshop packages

**Awareness raising workshop package**  
 25-26 February 2020

**Introduction to marine biofouling: Impacts and management risks**

**637 PARTICIPANTS (to date)**

**In preparation... eLearning course on biofouling management (to be released in May)**



### On-line delivery in the Philippines

**Introductory course materials had to be adapted for online delivery**

With support and collaboration from MARINA, the Philippines hosted the trial delivery of training course (Dec 2020)

### Training delivery in LPCs by national institutions

Training delivered by 3 LPCs to date:

Indonesia      Philippines      Jordan

**9 LPCs to confirm dates for delivery in 2022**

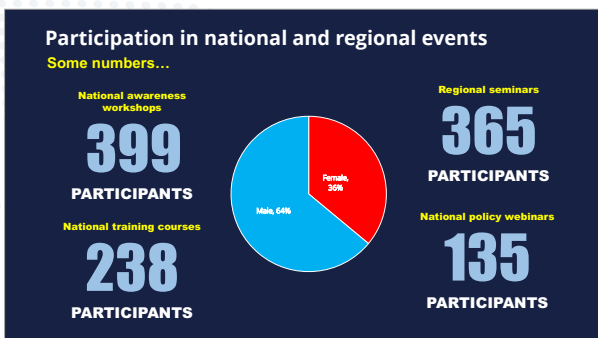
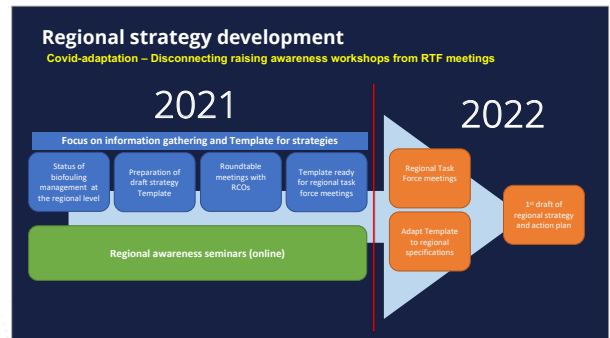


**Project status report: activities implemented by GloFouling Partnerships Project Coordination Unit (PCU) (continued)**

# National Task Forces



# Regional strategies



# Reports & Publications

**Project status report: activities implemented by GloFouling Partnerships Project Coordination Unit (PCU) (continued)**

### National policy development process in LPCs

Supporting guides developed by the project

**National Status Assessment (2020)**

Guide on the Development of National Status Assessments on Biofouling Management

**National Strategy and Action Plan (2021)**

Guide on Developing a National Biofouling Strategy

**Rapid Economic Assessment (2022)**

Guide for the development of Rapid Economic Assessments on Biofouling Management

### Report - Impact of biofouling on fuel consumption and GHG emissions

Commissioned by the GIA

Activity planned for the Project, but taken on board by the GIA – to be detailed by the GIA Chair

### Launch of the study on Impact of biofouling on fuel consumption and GHG emissions

Official side event at UNFCCC COP 26 (Glasgow -Nov. 2021)

Site visit to Kelvin Hydrodynamics Laboratory of University of Glasgow

### Report - Analysis of existing and emerging regulations, standards and practices related to ships' biofouling management

Commissioned by the GIA

Activity of the GIA Explained in more detail by the GIA Chair

### Report - Biofouling Management for Recreational Boating

- Survey: main approaches to biofouling prevention
- Guide for marinas and users
- Specific recommendations

Cleaning before long distance travel

Distance	Always	Usually	Sometimes	Rarely	Never	I don't know - someone else should do it for me	I don't know - other reason
>200 miles	High	Low	Low	Low	Low	Low	Low
up to 200 miles	Low	High	Low	Low	Low	Low	Low
up to 50 miles	Low	Low	High	Low	Low	Low	Low

Logos: GloFouling, World Sailing, ICOMIA, IUCN

### Best Practices on Biofouling Management: Offshore Oil and Gas Industry

**To be issued this year after peer review**

Guide to develop and implement effective processes to prevent the spread of Invasive Aquatic Species (IAS) in association with biofouling.

Logos: UNESCO, GloFouling

### Best Practices on Biofouling Management: Aquaculture Industry

**To be issued this year after peer-review**

Report compiling best practices to manage the spread of Invasive Aquatic Species (IAS) in association with biofouling.

Logos: UNESCO, GloFouling

### Filling the scientific information gap: Scientific report on IAS and biofouling

**New scientific working group (GESAMP WG 44)**

- The WG is currently developing a report on the scientific aspects of biofouling and aquatic invasive species introduced via biofouling.
- Funds for meetings provided by GloFouling Partnerships

Logos: UNESCO, GloFouling

Project status report: activities implemented by GloFouling Partnerships Project  
 Coordination Unit (PCU) (continued)



• Launched in June 2020  
 • 6 GIA Task Force meetings conducted to date

9 members + 1 observer



Awareness raising  
Website

<https://www.glofouling.imo.org/>

Visitor engagement

Returning visitors: 23%  
 New visitors: 77%

105,692 PAGE VIEWS

Sessions per continent

Awareness raising  
Social media

Instagram: 396 FOLLOWERS  
 Twitter: 315 FOLLOWERS  
 LinkedIn: 1,234 FOLLOWERS

Followers by company size

Engagement rates

Engagement growth ratio

Awareness raising  
News and articles

5 Newsletters  
 4 Photo stories  
 36 News items

Awareness raising  
Audio-visual productions

GloFouling Partnerships: Biofouling & Invasive Aquatic Species

GloFouling Partnerships and gender equality

Ocean Aware: The role of recreational boating in the spread of invasive aquatic species

Awareness raising  
Promotional posters



**Annex 8** Presentations – Day 1 (continued)

**Project status report: activities implemented by GloFouling Partnerships Project Coordination Unit (PCU) (continued)**

**Awareness raising**  
Infographics developed by the project

The biofouling process: Illustrates the stages from settlement to mature biofouling on a substrate.

Niche areas subject to biofouling: Shows various parts of a ship's hull and equipment where biofouling commonly occurs.

Biofouling growth sequence: Shows the progression from microscopic organisms to a thick, multi-layered biofouling mat.



**Knowledge sharing**  
Knowledge hub

Website: <https://www.glofouling.imo.org/knowledge>

**Knowledge sharing**  
Website design resources

Guide developed by the Project to support the creation of national and regional websites

**Knowledge sharing**  
Webinar series

**23** WEBINARS  
**6,699** PEOPLE REGISTERED

Participation, by webinar theme

TECHNOLOGIES	184
OCEAN RENEWABLE ENERGIES	147
DISPERSED	137
RECREATIONAL SWIMMING	113
OFFSHORE	103
OCEAN RENEWABLE ENERGY	103
ENERGY EFFICIENCY	103
AQUACULTURE	103



**Monitoring and evaluation of the project**  
Annual project reports

**Annex 8** Presentations – Day 1 (continued)

**Project status report: activities implemented by GloFouling Partnerships Project Coordination Unit (PCU) (continued)**

### Monitoring and evaluation of the project

#### Executive Committee (ExCom) Meetings

- ExCom meeting 1 - April 2020  
COVID-19 impact, risk assessment and mitigation measures discussed
- ExCom meeting 2 (Extraordinary) - February 2021  
Results of mitigation measures, lessons learnt and project's extension scenarios and financial analysis discussed

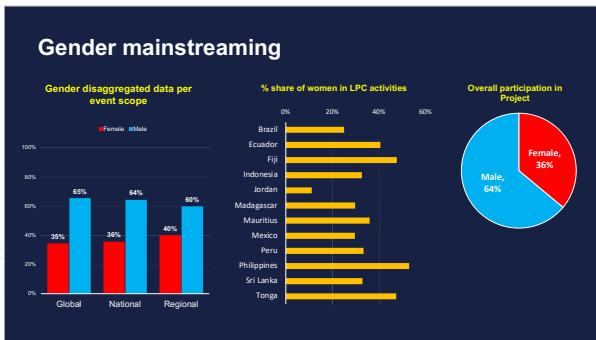
### Monitoring and evaluation of the project

#### Mid-term review of the project

Mid-term review conducted in Q4 2021

**Main recommendation: extend the duration of the project**

*To be discussed in detail under Agenda item 8*

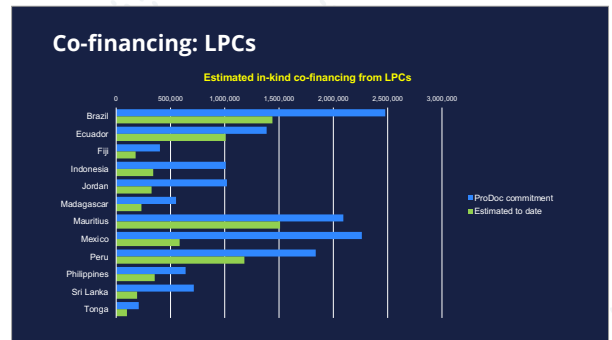
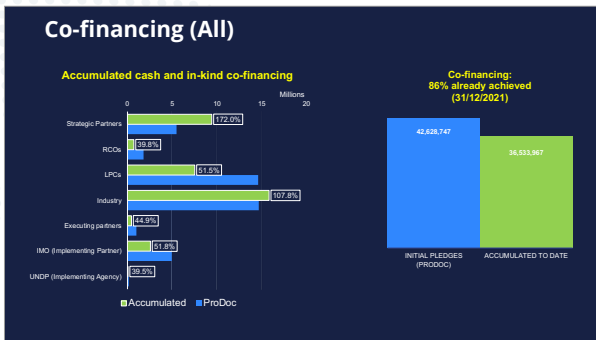
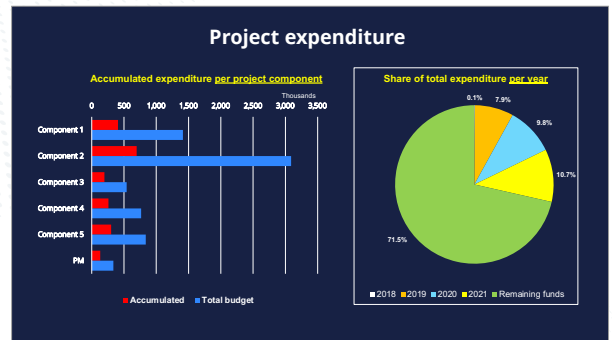


### Status of LPCs

Country name	National Task Force	National Communication	National status (incl. legal assessment)	National strategy (incl. national outreach plan)	National economic assessment	National measures drafted	Introductory training course
Brazil	Green	Green	Green	Green	Green	Green	Green
Ecuador	Green	Green	Green	Green	Green	Green	Green
Fiji	Green	Green	Green	Green	Green	Green	Green
Indonesia	Green	Green	Green	Green	Green	Green	Green
Jordan	Green	Green	Green	Green	Green	Green	Green
Madagascar	Green	Green	Green	Green	Green	Green	Green
Mauritius	Green	Green	Green	Green	Green	Green	Green
Mexico	Green	Green	Green	Green	Green	Green	Green
Peru	Green	Green	Green	Green	Green	Green	Green
Philippines	Green	Green	Green	Green	Green	Green	Green
Sri Lanka	Green	Green	Green	Green	Green	Green	Green
Tonga	Green	Green	Green	Green	Green	Green	Green
Target(s):	NTFs established and meeting	National website or pages on biofouling and IAS	Report finalised	National strategy and action plan endorsed	Report finalised		National measures drafted.

### Status of RCOs

Region	Regional organization name	Regional Task Force	Regional strategy/ action plan	Regional Communication	Support to national and regional activities
Southeast Pacific	CPPS	Green	Green	Green	Green
Southeast Asian Seas	PEMSEA	Green	Green	Green	Green
Red Sea & Gulf of Aden	PERSGA	Green	Green	Green	Green
South Asian Seas	SACEP	Green	Green	Green	Green
Pacific	SPREP	Green	Green	Green	Green
Target(s):	NTFs established and meet at least once, playing effective role in operational activities related to GloFouling Partnerships Project	Developed regional strategy/action plan	Regional website or pages on biofouling and IAS	Support national activities or develop regional activities to support legal and technical capacity building	



**Annex 8** Presentations – Day 1 (continued)




**Project status report: activities implemented by GloFouling Partnerships Project Coordination Unit (PCU) (continued)**

### Funds raising by the PCU

**The PCU secures other sources of funds**

- IMO's Integrated Technical Cooperation (ITCP) Fund - 460 000 USD
- Other donors for specific activities (Countries, Charities, international financial institutions and Development Banks) – 48 500 USD
- Membership and funding of GIA - 236 000 USD

### Summary conclusions

-  Much slower implementation of some activities
-  Activities postponed: regional task force meetings; R&D Forum; GPTF2
-  Activities not delivered at all: demonstration sites

### Summary conclusions

-  Project still on track
-  Extension approved
-  Covid situation stabilizing




## Question time

For more information  
 website: [www.glofouling.lmo.org](http://www.glofouling.lmo.org)  
 Email: [glofouling@lmo.org](mailto:glofouling@lmo.org)

For our latest news, follow us on: 




2<sup>nd</sup> Global Project Task Force meeting  
 London, 11-13 April 2022



## 2<sup>nd</sup> meeting Global Project Task Force

London, 11-13 April 2022

### Committee rooms 3-5 (1<sup>st</sup> floor)





**Lunch breaks:** 4<sup>th</sup> floor – IMO Canteen


**Coffee breaks:** Coffee, tea and water available outside of the meeting room

**Restrooms/WC:** Available at both sides of the 1<sup>st</sup> floor

**Fire alarm:** Follow the indications of IMO Staff and Fire wardens




2<sup>nd</sup> Global Project Task Force meeting  
 London, 11-13 April 2022



### Preparatory work conducted by the PCU

- Concept note for the GIA
- Promotional materials for GIA membership
- Terms of reference for the GIA
- Terms of reference for the GIA Trust Fund
- Terms of reference for Observer status
- Due diligence questionnaire
- 2 Promotional webinars

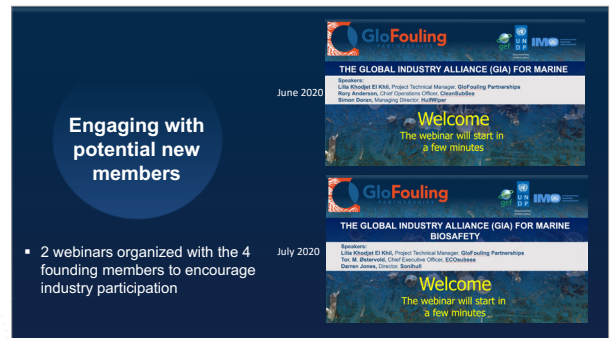
**79**  
 COMPANIES CONTACTED





**Annex 8** Presentations – Day 1 (continued)

**Project status report: activities implemented by the Global Industry Alliance (GIA) for Marine Biosafety – Mr. Yusik Kim, GIA Chair**



**Membership (4 founding members)**

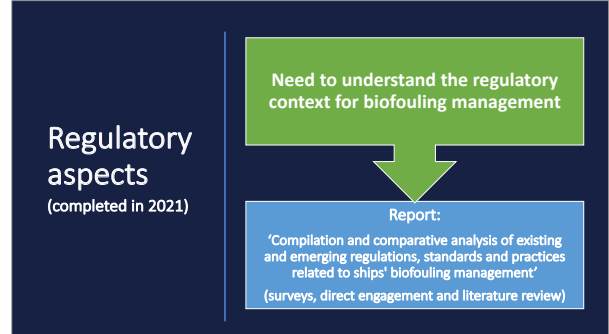
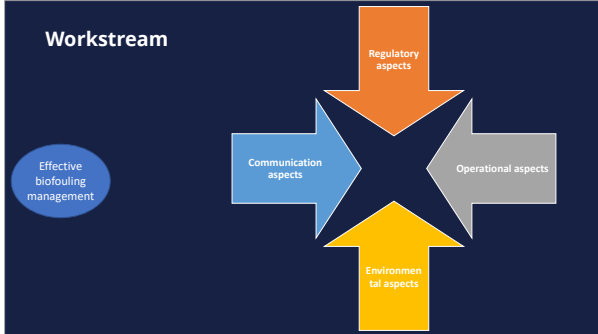
In-water cleaning service providers	Marine Growth Preventive Systems

**Membership 2022**

AF coatings and paints	In-water cleaning service providers	Marine Growth Preventive Systems	Shipowners/ship operators
 	    		  Observers 



**Project status report: activities implemented by the Global Industry Alliance (GIA) for Marine Biosafety – Mr. Yusik Kim, GIA Chair (continued)**

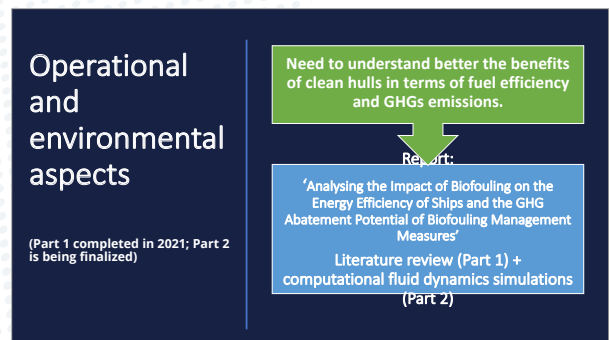
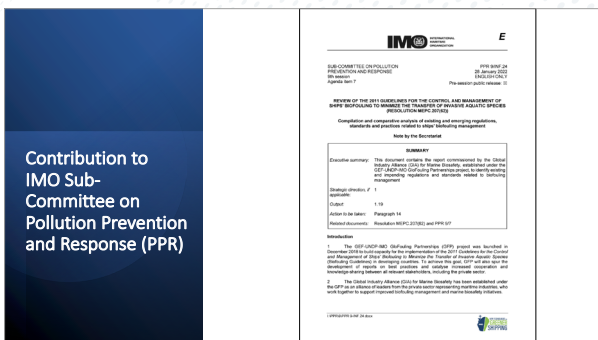


**KEY FINDINGS: Compliance barriers**

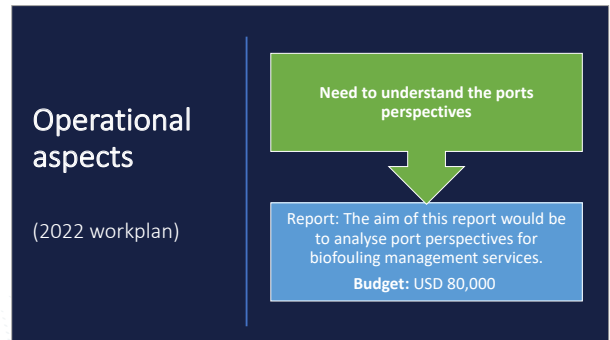
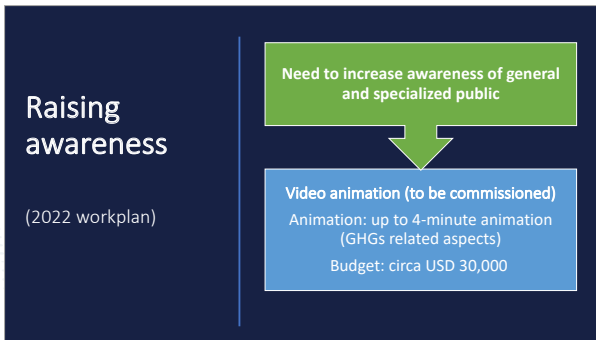
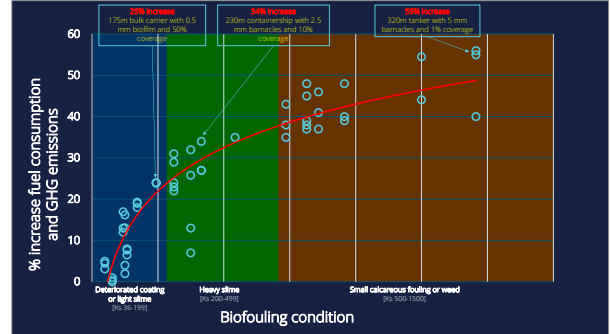
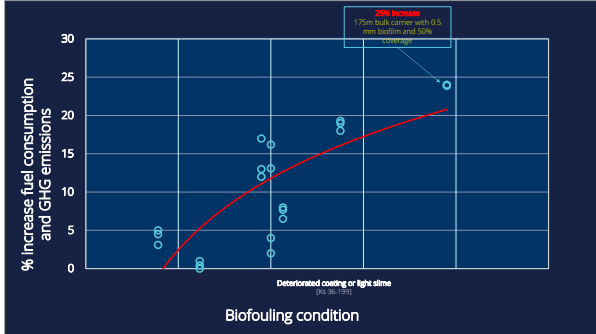
Comprehensive biofouling management policies are not widespread and those that do implement comprehensive policies are not consistent. There is a high degree of variation in IWC policies. Uncertainty surrounding IWC policy can result in inconsistent conditions being applied by authorities. The performance of anti-fouling systems can be variable. Inconsistency in biofouling and IWC policies creates a major challenge for the shipping industry

**KEY FINDINGS: Policy needs**

The review of the Biofouling Guidelines is critical to minimize variation in implementation of biofouling management and in-water cleaning policy. There are barriers to the implementation of consistent and effective biofouling management policy that cannot necessarily be solved by the review of the Biofouling Guidelines. Without an overarching international regulation or convention on biofouling management, inconsistencies will continue to occur.



**Project status report: activities implemented by the Global Industry Alliance (GIA) for Marine Biosafety – Mr. Yusik Kim, GIA Chair (continued)**



**GloFouling PARTNERSHIP**

**Thank you**

For more information  
website: [www.glofouling IMO.org](http://www.glofouling IMO.org)  
Email: [glofouling@imo.org](mailto:glofouling@imo.org)

For our latest news, follow us on: [in](#) [t](#)

get UN 0.5

GPTF-2



**Project status report: activities implemented by IOC-UNESCO and WOC – Pia Haecky, IOC-UNESCO**

**Project status report: Activities implemented by IOC-UNESCO and WOC**

unesco  
Intergovernmental Oceanographic Commission

Pia Haecky – IOC Consultant – 11 April 2022

**The role of IOC-UNESCO**

The role of IOC-UNESCO is to take the lead in delivering activities on the following aspects of the GloFouling project:

- o Aquaculture,
- o Offshore Oil and Gas,
- o Ocean energy,
- o Offshore structures,
- o Fisheries,
- o Ocean instrumentation,
- o Dredging,
- o Coastal infrastructure

**The role of WOC (World Ocean Council)**

WOC is an IOC-UNESCO implementation partner and a sub-contractor

WOC is a cross-sectoral ocean industry alliance with contacts to leading industries related to non-shipping pathways.

The role of WOC is to coordinate contributions and participation from private sector companies outside the shipping industry (non-shipping pathways).

**IOC/UNESCO and WOC outputs and activities:**

Output	Activity	Who	Budget
2.1.3 Best practice guidance docs & tools	Review of the impacts of biofouling	IOC/UNESCO	144.552
	Review best practices for biofouling mgt.	IOC/Unesco & WOC	165.000
2.2.1 Outreach materials designed & distributed	Design & distribute materials	IOC/UNESCO	18.000
3.1.2 Increased investment catalysed	Sessions at the Ocean Investment Platform	WOC	5.000
3.1.3 Cross-sectoral private sector leadership	Annual meetings, Sustainable Ocean Summit (SOS),	WOC	5.000

**2.1.3.3 Review of existing biofouling management practices GESAMP WG 44**

- Activity 2.1.3.3: Develop and publish review of existing biofouling management practices across all maritime sectors, the impacts of biofouling for specific industries and how it contributes to the transfer of IAS.
- In order to develop a global scientific report on IAS/biofouling a new working group of the Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection (GESAMP) was established.

**2.1.3.3 Review of existing biofouling management practices GESAMP WG 44**

- A competent working group was established with a good gender balance and geographic representation with help from the GloFouling PCU expert network, literature / Researchgate searches
- The overall process was somewhat delayed due to challenges identifying the Chair of the WG.
- The working group currently consists of 17 members with experiences from a wide range of different aspects of biofouling.
- The WG has been working on a global scientific report on IAS/biofouling, which is now at an advanced draft stage.
- The composition of the WG may be adjusted/complemented for the final phase of its work

**2.1.3.3 Review of existing biofouling management practices GESAMP WG 44**

The review covers the Environmental and economic impacts of biofouling from:

- o Recreational Boats and Small Localized Vessels
- o Ocean monitoring, Sensors and Devices, Instrument platforms
- o Aquaculture
- o Fishing
- o Marine debris
- o Marine offshore operations
- o Ocean renewable energy generation (incl. wind)
- o Coastal industry infrastructure


**2.1.3.4: Best practices IOC/UNESCO & WOC**

The aim is to produce report's of current best practices for biofouling management for non-shipping pathways including the views and experience from the private sector.

Furthermore, the report should assess current practices and seek to identify where examples of best practice can be shared between sectors, and also where biofouling management approaches can be shared between shipping and non-shipping sectors.

**Project status report: activities implemented by IOC-UNESCO and WOC – Pia Haecky, IOC-UNESCO (continued)**


**2.1.3.4: Best practices**  
**Aquaculture and Offshore Oil and Gas**




WOC coordinated the contributions from the private sector within **Aquaculture and Offshore Oil and Gas**, and delivered 2 draft reports in August 2021.

These reports have been reviewed and rewritten by experts in the field and will be peer reviewed during the coming months.

Originally 5 best practice reports were planned, which meanwhile has been reduced to 3 reports in all.




**2.1.3.4: Best practices**  
**Other non-shipping pathways**




The 3rd report will cover the following sectors, which will be described in one report:

- (I) Ocean energy,
- (II) Offshore structures,
- (III) Ocean instrumentation,
- (IV) Dredging and
- (V) Coastal infrastructure.

WOC is currently gathering data from its network through a survey and the data will be analyzed and synthesized by a consultant in a similar process as for the Aquaculture and Offshore Oil and Gas sectors.




**Awareness raising and outreach activities**  
**2.2.1.3 Materials distributed in LPCs and ocean regions**



Design and distribute information materials for awareness-raising on biofouling issues and the impact of IAS, using traditional and new media platforms.

This activity has not been started yet, and the outreach material will be based on the best practices reports and on the GESAMP report.



**WOC GloFouling Partnership Program of Activities**  
**Industry information and awareness, Investment platform**



- 3.1.1.1. Develop industry information and awareness raising materials on invasive species, biofouling management and solutions. Completed.
- 3.1.2.1. Organize Ocean Investment Platform innovation challenges on biofouling to:
  - Identify biofouling issues needing innovation and investment
  - Engage the innovation community and organize innovation challenge competitions
  - Engage the investment community and organize pitchfest events
  - - Launch of the 1<sup>st</sup> innovation challenge competition at Nor-Shipping on 6 April
- 




**WOC GloFouling Partnership Program of Activities**  
**Industry roundtables, SOS conference**




- 3.1.3.2. Organize quarterly biofouling/GloFouling industry roundtables to:
  - Review and comment on the emerging outputs from the project, including regarding policy, legislation and institution developments
  - Foster and facilitate ongoing international, multi-sectoral industry interaction, dialogue, collaboration and action on addressing biofouling through the GloFouling project and over the long term
  - - Planned for next World Ocean Council's Sustainable Ocean Summit conference (WOC SOS)
- 3.1.3.2. Organize conference sessions on biofouling at the annual WOC Sustainable Ocean Summit
  - 1<sup>st</sup> session was held in December 2020



**Other activities**



A mailing list was set up in the IOC mailing system SYMPA for people working with different aspects of biofouling. This list is used for invitations to GloFouling webinars throughout the project.



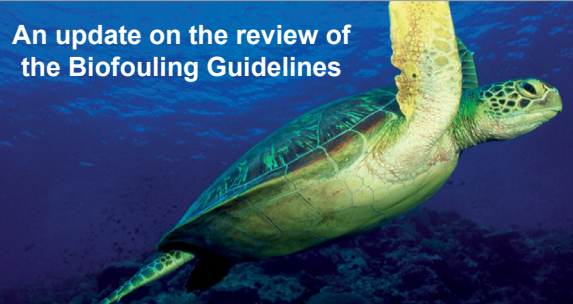

**THANK YOU**







**Update on the review of the IMO Biofouling Guidelines – Theofanis Karayannis, Head, Marine Biosafety Section, MED, IMO**

### An update on the review of the Biofouling Guidelines





Dr Teo Karayannis  
Head, Marine Biosafety | Marine Environment Division | International Maritime Organization (IMO)


GloFouling Partnerships Project 2nd Global Project Task Force meeting | 11-13 April 2022

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### Outcome of PPR 8 Consideration of first report of Correspondence Group


- Continue work by revising the Guidelines based on the draft skeleton prepared by CG
  - Correspondence group re-established
  - Output extended to 2023 (by MEPC 76)
- Discussions on whether macrofouling cleaning should only be carried out in dry dock (as proposed by Finland, Germany and Poland) vs in-water cleaning with best practices
- Further consideration of difficulties in checking presence of remaining biofouling, especially microfouling, following hull cleaning

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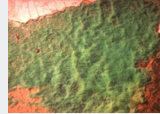
### Correspondence group Participating delegations


- Member States**

- Intergovernmental organization**

- Non-governmental organizations**


MARINE ENVIRONMENT DIVISION 

### Correspondence group report to PPR 9 Main considerations and findings


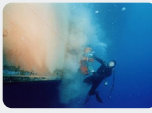
- Definitions**
  - Microfouling and macrofouling
  - Cleaning, including proactive and reactive
  - Niche areas
  - Inspection and testing organizations
- Risk assessment for determination of inspection intervals**
  - Ship-specific
  - Operating profile and anti-fouling system
  - Flow chart
  - High-risk organisms
  - Reporting mechanism





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### Correspondence group report to PPR 9 Main considerations and findings

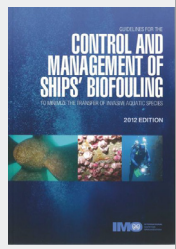
- Inspection**
  - Inspection intervals and frequencies
  - Inspection results rating scale
  - Recommended cleaning actions
- Cleaning and maintenance**
  - Proactive / reactive
  - In-water / dry-dock
  - With / without capture
  - Capture rates
  - Outcome of reactive cleaning (rating scale)
- Best practices**
  - Target areas; biofouling inspection; proactive cleaning (proposals in CG)
  - Cleaning systems testing and approval; AFS efficacy testing (to consider)





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### Correspondence group report to PPR 9 Main considerations and findings

- Increased uptake and effectiveness of Guidelines**
  - Clear and practical guidance
  - Information dissemination activities and sharing
  - Regulatory basis (non-mandatory nature)
  - Consistent implementation
  - Access to in-water cleaning facilities
  - Benefits on ships' energy efficiency
  - Information on ecological risks of IAS
  - Economic incentives
- Other matters**
  - Possible reporting module
  - Possible update of Guidance for recreational craft



MARINE ENVIRONMENT DIVISION 



## Annex 8 Presentations – Day 1 (continued)

### Update on the review of the IMO Biofouling Guidelines – Theofanis Karayannis, Head, Marine Biosafety Section, MED, IMO (continued)


**Correspondence group report to PPR 9  
Outcome and proposals**

➤ **Draft revised Biofouling Guidelines**

- Correspondence group should be re-established to finalize the revised Guidelines for approval at PPR 10


• **Further specific consideration and conclusion needed**

- Flow chart and table for determination of biofouling risk profile
- Appropriate inspection intervals based on risk assessment
- Biofouling ratings and recommended actions
- Outcome of reactive cleaning activities
- Appropriate capture rate for cleaning activities
- Information dissemination activities
- Information gathering on implementation and uptake
- Update of Guidance for recreational craft?

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**PPR 9  
Commenting and information submissions**

- **Commenting documents (proposals for further consideration)**
  - China: interval between inspections
  - Bahamas, India, Japan, Panama, ICS and BIMCO: implications of cleaning in dry dock; recommended actions for cleaning of niche areas
- **Information documents (may be considered by CG)**
  - Chile: national measures for prevention of biofouling
  - ICS, BIMCO and INTERTANKO: in-water cleaning standard
  - Belgium: hull cleaning procedure in Belgian ports
  - Argentina: national actions to address biofouling
  - GloFouling: existing and emerging regulations, standards and practices

MARINE ENVIRONMENT DIVISION 

**International Maritime Organization**

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SE1 7SR  
United Kingdom

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# Annex 8 Presentations – Day 2

## Progress reports from Lead Partnering Countries (LPCs) – Indonesia

**MINISTRY OF TRANSPORTATION  
DIRECTORATE GENERAL OF SEA TRANSPORTATION**

**LEAD PARTNERING COUNTRY (LPC)  
INDONESIA STATUS REPORT**  
2nd Global Project Task Force (GPTF-2) Meeting

Hybrid, 11 – 13 April 2022

**H. AHMAD WAHID, S.T., M.T., M.Mar.E**  
Director of Marine Safety and Seafarers

**THE CHALLENGES FOR GLOFOULING IMPLEMENTATION**

**NUMBER OF VESSELS REGISTERED INDONESIA**

Year	2017	2018	2019	2020
PASSENGER	170,717	16,900	162,724	126,299
FISHERY	175,000	18,000	157,000	152,000
TOTAL	345,717	34,900	319,724	278,299

4.79%

**TOTAL 96,185**

49,221

46,964

**ARCHIPELAGIC SEA LANES**

Indonesia is located on strategic world trade routes. As 90% of international trade through the sea, 40% of it pass the Indonesian waters that brings potential issues with regard to operation, safety and marine environment.

**CURRENT STATUS**

**THE CHANGE OF NATIONAL FOCAL POINT**  
DIRECTOR OF MARINE SAFETY AND SEAFARERS

**National Consultants**

1. Prof. Ir. Ketut Aria Prita Utama, MSc, PhD, CEng, FRINA, FAIP Head, Research Centre of Marine-Earth Science & Technology Institut Teknologi Sepuluh Nopember
2. Dr. Mochammad Riyanto Department of Fisheries Resources Utilization Faculty of Fisheries and Marine Sciences Bogor Agricultural University

**BP3IP as National Institute for National Training in Indonesia**

**Project Coordinator Murni Sitinjak, International Cooperation Sub-Division DGST**

**AGENCIES THAT INVOLVED IN GLOFOULING PROJECT IN INDONESIA**

**GOVERNMENT**

- Ministry of Foreign Affairs
- Ministry of Energy and Mineral Resources
- Coordinating Ministry for Maritime and Investment Affairs
- Ministry of Marine Affairs and Fisheries
- Ministry of Transportation
- Ministry of Environment and Forestry
- Hydrographic and Oceanographic Centre
- Indonesian National Shipowners Association
- 1984 Indonesian Classification Bureau
- LIPi Indonesian Institute of Sciences

**Timeline of Glofouling Project**

**DONE**

1. Establishment of National Task Force (NTF), 15 Oct 2019
2. National Workshop on Biofouling, 28 - 29 Oct 2019
3. Port Biological Baseline Survey (PBBS), 2019
4. 1st R&B Forum, Melbourne, 1-4 Oct 2019
5. Familiarization session for Trainers, 20 May 2021
6. General Training Course on Management of Biofouling, 1-2 Nov 2021
7. National Status Assessment, 2021
8. Port Biological Baseline Study in Malacca Strait, 2021

**PLAN FOR NEAR FUTURE**

1. National strategy and action plan;
2. National economic assessment;
3. Guidance for National Policy Development (inspection methodologies, dry dock operations, biofouling management plans)

**DOCUMENTATION**

1st Global Project Task Force meeting London, 19-20 March 2019

National Workshop NTF Glofouling Partnership Project Indonesia Jakarta, 28-29 Oct 2019

1st IMO Glofouling Research & Development Forum on Biofouling Management and 4th ANZPAC workshop on Management for Sustainable Shipping, 1-4 Oct 2019, Melbourne, Australia

Lecture Seminar on Biofouling Surabaya, 7 Nov 2019

**GENERAL TRAINING COURSE ON BIOFOULING MANAGEMENT** Jakarta, 1 – 2 Nov 2021

**PORT BASELINE BIOLOGICAL SURVEY in Indonesian Ports in 2019 & 2021**

**PBBS 2019**

**PBBS 2021**

KSOP BATAM, KSU TANJUNG PRIK, KSU TANJUNG PERAK, KSOP SAMANG, KSOP LOROKELAMBAE, KSOP KELUA TANJUNG, KSOP TANJUNG PRANG, KSU MAKASSAR, KSU BELAWAN, KSOP BITUNG, KSOP 15 BAKAR WARRIOR, KSOP PULAU SAMBU, KSOP KELUA TUNJAL, KSOP 15

**PLAN FOR NEAR FUTURE**

**Guides for national policy development**

National status assessment, National strategy and action plan, National economic assessment.

• Countries are currently working on developing their national status assessment

**Annex 8** Presentations – Day 2 (continued)

**Progress reports from Lead Partnering Countries (LPCs) – Indonesia (continued)**



**Annex 8** Presentations – Day 2 (continued)

**Progress reports from Lead Partnering Countries (LPCs) – Philippines**

**PH PROGRESS REPORT:**  
**GEF-UNDP-IMO GloFouling Partnerships**

**2nd Global Project Task Force (GPTF) Meeting**

11 - 13 April 2022  
 IMO, London, UK

Engr. Ramon C. Hernandez  
 Director II  
 Shipyards Regulation Service  
 As Glofouling Alternate Project Coordinator

**SUSTAINING TOP GLOBAL POSITION**

- ONE OF THE WORLD'S LARGEST ARCHIPELAGIC COUNTRY**  
 ISLANDS: 7,641  
 COASTLINE: 18,289 KM  
SOURCE: World Atlas, May 23, 2018
- PREMIER SOURCE OF SEA-BASED MANPOWER**  
 NUMBER: 450,000 seafarers  
SOURCE: SWOCC Business Link, May 23, 2018
- TOP PRODUCING COUNTRIES IN TERMS OF FISHERIES & AQUACULTURE OUTPUTS**  
 PRODUCTION: 4.87 M metric tons  
SOURCE: World Atlas, May 23, 2018
- AMONG THE TOP LEADING REST OF THE WORLD (ROW) SHIPBUILDING GROUP**  
 ORDERS: 41.4% of the total 2019 orderbook  
SOURCE: ABS-Navis, 2019

**MARITIME INDUSTRY DEVELOPMENT PLAN 2019-2028 (MIDP)**

**MDP Program 10: Implementation of the Philippine Strategy on the Marine Environment Protection**

**Ten Point Strategic Action Plan: Green Maritime Philippines – Protect & Conserve**

**“Ensuring full and effective implementation of relevant marine environment protection conventions and instruments.”**

**LEGISLATION**

- MARINA Memorandum Circular No. SR 2020-04** on the Application of Anti-fouling Paints and Systems in Ships per AFS Convention
- MARINA Memorandum Circular No. SR-2020-05** on the Control and Management of Ships' Ballast Water and Sediments per BWM Convention
- MARINA Advisory No. 2020-92** on control measures on the conduct of In-water Hull Cleaning while the Ship is at Sea in all areas within the Philippine Waters

**“Mobilizing a whole of nation approach cooperation in protecting, conserving and managing the marine environment and natural resources for the present and future generations.”**

**INSTITUTIONAL ARRANGEMENT**

**NATIONAL TASK FORCE**

Inter-agency Coordinating Committee to Facilitate the Ratification and Accession to and Implementation of Maritime Conventions (ICCFRAIMC) pursuant to Executive Order No. 159 issued on 28 December 2021

- ICCFRAIMC utilized as the Inter-agency coordinating mechanism for the ratification and implementation of other IMO Conventions since 2015
- ICCFRAIMC meets regularly (every 3 months) including its Technical Working Groups
- ICCFRAIMC Web portal developed
- ICCFRAIMC-Technical Working Group on GLOFOULING**

**“Providing deeper understanding and learning of the related marine environment protection conventions and instruments for regulators, policy makers, educators, and trainers.”**

**CAPACITY DEVELOPMENT AND STAKEHOLDERS ENGAGEMENT**

- Conducted the Seminar-Workshop on BWM Convention on September 18-20, 2019
- Training on Port Biological Baseline Survey on December 2-4, 2019
- National Training Workshop on Legal, Policy & Institutional Reforms (LPRI) focused on BWM & AFS Implementation (a Train-Implement Course) on October 7-11, 2019
- General Training Course on Biofouling Management on December 14-17, 2020

**EDUCATION AND TRAINING**

**MARINA Training Institute (MARTI)**

A training facility of the Maritime Industry Authority operationalized to provide professional development, management courses and specialized courses such as:

- Virtual Awareness Seminar on BWM conducted by MARTI on February 8-10, 2021
- Virtual National Training Course on Biofouling Management on October 25-28, 2021

A Training calendar is being developed to cover all relevant IMO conventions and codes.



**Annex 8** Presentations – Day 2 (continued)

**Progress reports from Lead Partnering Countries (LPCs) – Philippines (continued)**

**“Establishing systems that would make Philippine ships and ports compliant with international marine environment protection standards.”**

RESEARCH AND DEVELOPMENT



**RESEARCH, TECHNOLOGY, AND INFRASTRUCTURE DEVELOPMENT**

**BALLAST WATER AND BIOFOULING MANAGEMENT RESEARCH PROGRAM (SAILS)**

PROJECT PROFILE	
Implementing Agency	University of the Philippines - Institute of Environmental Science and Meteorology
Project Cost	12 Million Pesos
Funding Source	Department of Science and Technology
Project Components	a. Port Ecological Baseline b. Ballast Water Management Technology



**CHALLENGES**

- Political support
- Capacity building
- National database information system
- Scientific studies on invasive aquatic species in the marine & coastal environment
- Industry participation



**TIMELINE**



**2018**

- JUNE, PH accession to AFS, BWM and MARPOL Annex 6
- MARCH, 1st Global Project Task Force Meeting – GTF-LINDP, IMO GloFouling Partnership
- SEPTEMBER-OCTOBER, 1st R&D Forum & 4th ANZPAC Workshop on Biofouling Management for Sustainable Shipping
- IMO-NORAD ME/SEAS Project (2018-2021)

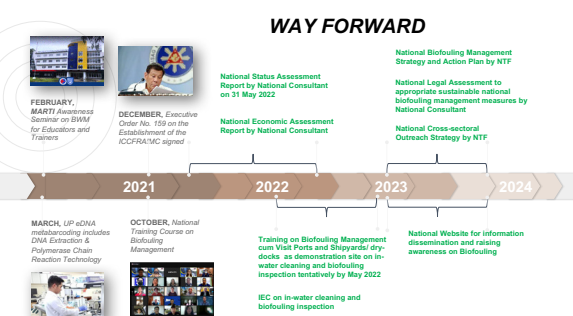
**2019**

- OCTOBER, National LPW Training on Train-Implement on BWM & AFS for policy law makers
- SEPTEMBER, National Workshop & Task Force Meeting on GloFouling Partnership-Project in Manila
- SEMINAR-Workshop on Ballast Water Management (BWM) Convention for regulators

**2020**

- NOVEMBER, Training on Port Ecological Baseline Survey (PORT-EC) Project – Part 2
- DECEMBER, Training on Port Ecological Baseline Survey (Part 1) for regulators
- DECEMBER, General Training Course on Biofouling Management
- OCTOBER, MARINA Memorandum Circular No. SR-2020-04 on the implementation of AFS Convention
- MARINA Memorandum Circular No. SR-2020-05 on the implementation of BWM Convention
- DECEMBER, MARINA Advisory No. 2020-02: Control Measures on Conducting In-water Hull Cleaning while the Ship is at Sea in all Areas within the Philippine Waters

**WAY FORWARD**



**2021**

- FEBRUARY, MARTI Awareness Seminar on BWM for Educators and Trainers
- MARCH, LP & DNA matabarcoding includes DNA Extraction & Polymerase Chain Reaction Technology
- DECEMBER, Executive Order No. 159 on the Establishment of the ICCFRM/AC signed
- OCTOBER, National Training Course on Biofouling Management

**2022**

- National Status Assessment Report by National Consultant on 31 May 2022
- National Economic Assessment Report by National Consultant
- Training on Biofouling Management cum Visit Ports and Shipyards/ dry-docks as demonstration site on In-water cleaning and biofouling inspection tentatively by May 2022
- IEC on In-water cleaning and biofouling inspection

**2023**

- National Biofouling Management Strategy and Action Plan by NTF
- National Legal Assessment to appropriate sustainable national biofouling management measures by National Consultant
- National Cross-sectoral Outreach Strategy by NTF
- National Websites for information dissemination and raising awareness on Biofouling

**2024**

**THANK YOU**

<https://marina.gov.ph>



Progress reports from Lead Partnering Countries (LPCs) – Sri Lanka



GEF-UNDP-IMO GloFouling Partnerships  
2<sup>nd</sup> Global Project Task Force (GPTF)  
Meeting  
11-13 April 2022

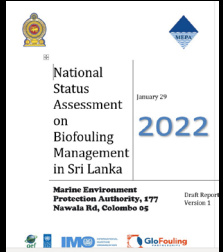
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Progress Report Lead Partner Countries  
Sri Lanka  
Jagath Gunasekara

**Status of National Status Assessment (NSA) report**

- ✓ First draft submitted to IMO consultant
- ✓ Comments received from IMO Consultants

**A final draft will be submitted within this month**  
**final report submission – before end of May**



**National Strategy and Action Plan (NSAP) report**

- ✓ Local Consultants were selected
- ✓ When finalized National Status Assessment Report
- ✓ Agreement will be signed and preparation of National strategy and action plan will be initiated


**National Training course**



- ✓ National training institute selected (Ocean University of Sri Lanka)
- ✓ Basic training has been given to selected lectures
- ✓ Necessary information provided


**First classroom training will be conducted in May 2022**

**National Task Force (NTF) establishment and meetings**



- ✓ National Task Force (NTF) was established in 2019
- ✓ 2 face to face meeting and 2 virtual meeting conducted

**Communication material/raising awareness initiatives**



**New web site is under construction**  
**Will be hosted soon with GloFouling Partnership project related information**

**MV Xpress Pearl Ship Accident**  
World Largest Plastic Nurdles spill incident  
Incident dates- 20 May 2020



- Covid 19 epidemic condition
- Economic crisis



Progress reports from Lead Partnering Countries (LPCs) – Brazil




**2nd Global Project Task Force (GPTF-2) meeting  
London, UK, 11-13 April 2022  
Progress Report from Brazil**

Ricardo Coutinho (National Coordinator)-IEAPM/Brazilian Navy  
Robson Calixto – Focal Point - ME  
Flavio Fernandes – PPR – IEAPM/Brazilian Navy

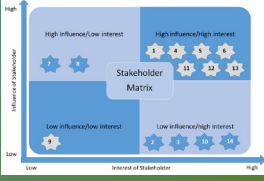
**COVID-19 Restrictions –Status**

Brazil has been one of the countries most affected by the Covid-19 in the world with 30 million cases and 660 thousand deaths. All universities were closed for two years, with remote classes only. The situation has been improved now with 80% of population with at least two doses of vaccine. The number of deaths and cases has dropped dramatically in 2022. However, despite of all the problems caused by covid, we were able to work in several aspects of the implementation of Glofouling Project in Brazil.



**Glofouling Brazil - Progress Report Activities**

**1-NATIONAL STATUS ASSESSMENT ON BIOFOULING MANAGEMENT (NSA)  
FINAL REPORT  
April/2022  
Consulting : Dr. Luciana Altwater and Dr. Luciana Vicente R. de Messano . 224 pages.**



**2- NATIONAL STRATEGY AND ACTION PLAN (NSAP)  
July-September / 2021 – First report  
Consultants : Dr. Silvio Jablonski and Dr. Alexandre Leal**

**PREPARATORY WORK**

- Establish strategy development team and plan
- Understand the biofouling issue and national status
- Develop governance arrangements
- DEVELOP THE PROPOSED HIGH-LEVEL BIOFOULING POLICY**
- Determine the overarching policy goals
- Prioritise transfer pathways

Problems related with the difficulty of governance arrangements, and obtain agreement from relevant government agencies to develop the strategy and high level commitment in national biofouling policy .

**3- NATIONAL TRAINING COURSE**

**SPECIFICATONS FOR THE NATIONAL TRAINING INSTITUTION**  
It was selected based on its experience in the delivery of training courses on aspects related to marine environment, for students and stakeholders in general.

**PROFILE OF TEACHING STAFF**  
Nominated staff familiar with environmental issues, in particular invasive aquatic species, marine biofouling or ballast water management.

The INSTITUTO DE ESTUDOS DO MAR ALMIRANTE PAULO MOREIRA (IEAPM) WAS NOMINATED AS NATIONAL TRAINING INSTITUTE.



**Teaching staff -Selected**  
Drs. Ricardo Coutinho, Flavio Fernandes, Maria Cecilia Trindade de Castro and Lohengrin Fernandes .

The teaching staff have been trained for the first course by IMO consultant.

**4- NATIONAL TASK FORCE MEETING  
Arraiál do Cabo, Rio de Janeiro - 2019**





Progress reports from Lead Partnering Countries (LPCs) – Brazil (continued)

Some other activities of Glofouling Brazil



**Risk of dissemination of the nonindigenous Orange cup coral from ship hulls and oil/gas platforms in the South West Atlantic**

Dr. Ricardo Coutinho / Senior Scientist  
Instituto de Estudos do Mar Almirante Paulo Moreira (IEAPM)



Webinar Glofouling Project Partnership - 11.09.2020

- ✓ Submission of the paper : “Bibliographical survey on national publications on biofouling/Bioinvasion problems”
- ✓ Participation on the Correspondence Group to the 2011 Biofouling Guidelines Review
- ✓ Meeting with the Brazilian Environment Agency (IBAMA) and others stakeholders (mainly gas and oil companies ) about the implementation of the Guidelines of Biofouling Control

Development of National Website  
<https://www.ccaimo.mar.mil.br/glofouling/>



- Challenges and Needs for Support
- ✓ Establish NTF formally;
  - ✓ Training course;
  - ✓ Elaborate communication strategies on the activities of the GloFouling Partnerships Project in Brazil;
  - ✓ Identify location for a demonstration site (pilot project) on biofouling problems in Brazil (dispersion of invasive aquatic species, risk analysis, control and mitigation measures, need for cleaning and disposal of waste).
- Contact : Ricardo Coutinho - [rcoutinhosa@yahoo.com](mailto:rcoutinhosa@yahoo.com)



Annex 8 Presentations – Day 2 (continued)

Progress reports from Lead Partnering Countries (LPCs) – Ecuador

NATIONAL DIRECTORATE OF AQUATIC SPACES

## ECUADOR NAVY

NATIONAL DIRECTORATE OF AQUATIC SPACES  
ENVIRONMENTAL MANAGEMENT DEPARTMENT

GloFouling  
PARTNERSHIPS  
GloFouling Partnerships Project  
England, April 2022

NATIONAL DIRECTORATE OF AQUATIC SPACES

### NATIONAL STATE ASSESSMENT REPORT

Report developed participatively since April 2021 as of March 2022

**TECHNICAL VISITS IN COASTAL MARINE PROVINCES**

PROVINCES	VISITS TECHNIC	
Galapagos	19	Aquaculture and Mariculture
Esmeraldas	11	Oil Terminals
Manabi	20	Military Naval Ports
Santa Elena	19	Sport ports
Guayas	29	Ports and port facilities
El Oro	17	Protected areas areas/tourist
<b>TOTAL</b>	<b>115</b>	

NATIONAL DIRECTORATE OF AQUATIC SPACES

### NATIONAL STATE ASSESSMENT REPORT MAIN CONCLUSIONS

- Agency for the Regulation and Control of Biosafety and Quarantine for Galapagos (ABG) with protected areas of Galapagos and the Charles Darwin Foundation execute the management for the control, monitoring and identification of biofouling in Galapagos
- High risk of introduction and spread of invasive aquatic species biofouling in continental Ecuador.
- The province of Guayas and Manabi are the most susceptible to the primary and secondary transfer of biofouling.
- Need to develop/execute Strategy and Action Plan for the management of biofouling in Ecuador. Development of applicable regulations.
- Institutions visited declare willing to participate in pilot programs to install biofouling monitoring plaques on their docks and ports.

NATIONAL DIRECTORATE OF AQUATIC SPACES

### NATIONAL STATE ASSESSMENT REPORT MAIN GAPS IDENTIFIED

- Of the 21 AMCP in Ecuador, only 4 have a current management plan. It is an opportunity to incorporate fouling IAS monitoring/management issues into their new management plans and management annual plans.
- From all 115 sites visited, only 14 incorporate biofouling into their management systems, through their Environmental Impact Studies, management plans or internal procedures.
- Ecuador just have 3 dry docks for cleaning the hulls and maintenance of the boats. Cleaning/maintenance is carried out in unauthorized areas, promoting disorder and hindering the future implementation of control mechanisms.
- Ecuador is not part of the AFS Convention, nor does it implement the IMO Biofouling Guidelines.

*The report Biofouling Management Assessment is a tool of diagnosis, to subsequently promote the Strategy and National Action Plan for apply the IMO Biofouling Guidelines.*

NATIONAL DIRECTORATE OF AQUATIC SPACES

### DEVELOPMENT PENDING:

- National Economic Assessment (IMO Guide not yet available).
- Strategy and National Action Plan (IMO guide available).

The National State Assessment Report was approved by CPPS and OMI in March 2022. It was developed according to the guidelines of the guides provided by the IMO

*The report Biofouling Management Assessment is a tool of diagnosis, to subsequently promote the Strategy and National Action Plan for apply the IMO Biofouling Guidelines.*

NATIONAL DIRECTORATE OF AQUATIC SPACES

### NATIONAL STRATEGY AND ACTION PLAN REPORT

The National Economic Assessment and the National Strategy and Action Plan for Biofouling management are pending development:

NATIONAL DIRECTORATE OF AQUATIC SPACES

### NATIONAL TRAINING COURSE

On April 2021, members of the Ecuadorian Working Group for the GloFouling Partnerships Project received training from the IMO to train as biofouling inspectors:  
"IMO 6.09 Instructor Training Course"  
It is planned for the 2nd semester of 2022 to hold the course for the National Working Group of the GloFouling Partnerships Project.

MEMBER OF THE GLOFOULING PARTNERSHIPS WORK GROUP	INSTITUTION
CPCB – IG Freddy Espinoza	National Directorate of Aquatic Spaces
Mr. Fernando Rodriguez	Ministry of the Environment, Water and Ecological Transition
Bulgaria: Caroline Icaza	Ministry of the Environment, Water and Ecological Transition

NATIONAL DIRECTORATE OF AQUATIC SPACES

### ESTABLISHMENT AND MEETINGS OF THE NATIONAL WORKING GROUP

DECEMBER 2019 CONFORMATION ON Ecuador Working Group Project "GloFouling Partnerships"

VIRTUAL COURSE 08 AND 09 JULY 2020 Ecuador Working Group for the Project "GloFouling Partnerships"

**FORMED BY:**

- National Directorate of Aquatic Spaces
- Ministry of the Environment, Water and Ecological Transition.
- Ministry of Production, Foreign Trade, Investments and Fisheries;
- Ministry of Transport and Public Works.
- Galapagos National Park.

**TECHNICAL ADVICE:**

- Oceanographic and Antarctic Institute of the Ecuadorian Navy.
- National Institute of Fishing.
- National Institute of Biodiversity
- Directorate of Maritime Development of the DIGEIM.
- The academy.

**Annex 8** Presentations – Day 2 (continued)

**Progress reports from Lead Partnering Countries (LPCs) – Ecuador (continued)**

NATIONAL DIRECTORATE OF AQUATIC SPACES

**STRATEGIC PARTNERS**

SEMPER IN SEMITA 9

NATIONAL DIRECTORATE OF AQUATIC SPACES

**COMMUNICATION MATERIAL/AWARENESS INITIATIVES**

SEMPER IN SEMITA 10

NATIONAL DIRECTORATE OF AQUATIC SPACES

**CHARLES DARWIN FOUNDATION**  
Report on the results of the survey of non-native marine species identified in the settlement places located in Santa Cruz, Galapagos.

More than 50 introduced species have been identified in marine habitats of the Galapagos islands.

Charles Darwin Foundation, DPNG, ABG, INOCAR, DIRNEA develop the Marine Invasive Species Program project, with a main focus on the biobulging community. (CURRENTLY ACTIVE PROJECT)

SEMPER IN SEMITA 11

NATIONAL DIRECTORATE OF AQUATIC SPACES

**DEPARTMENT OF ENVIRONMENTAL MANAGEMENT**

CONTACTS:  
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ENVIRONMENTAL TECHNICIAN  
[frdrigueza@armada.mil.ec](mailto:frdrigueza@armada.mil.ec)  
CELL PHONE: +593 959402867

SEMPER IN SEMITA 12

NATIONAL DIRECTORATE OF AQUATIC SPACES

**THANK YOU**

SEMPER IN SEMITA 13

NATIONAL DIRECTORATE OF AQUATIC SPACES

**END OF THE PRESENTATION**

SEMPER IN SEMITA 14




**Annex 8** Presentations – Day 2 (continued)

**Progress reports from Lead Partnering Countries (LPCs) – Fiji**




**FIJI'S PRESENTATION AT THE 2<sup>ND</sup> GLO-FOULING PARTNERSHIP MEETING**  
**12<sup>TH</sup> APRIL 2022**  
**LONDON**

**AGENDA**

- Maritime Safety Authority of Fiji (MSAF) Background
- MSAF Organisational Structure
- National Status Assessment (NSA) Report
- Way Forward for MSAF
- Obstacles Faced by MSAF
- What Fiji Hopes to Gain from this Meeting




**MARITIME SAFETY AUTHORITY OF FIJI (MSAF) BACKGROUND**

- Goals in the National Development Plan**
  - Safe, efficient, reliable and affordable shipping services; and
  - Enhancing Fiji's status as a vibrant and modern regional and international hub for movement of people and cargo.
- Vision**
  - Safe, secure and clean seas for all
- Mission**
  - Enhancing maritime safety and security, and protecting the marine environment.



**MSAF ORGANISATION CHART**



**NATIONAL STATUS ASSESSMENT (NSA) REPORT:**

- Fiji's National Biofouling Status Report is still at its drafted version.
- MSAF is working to:
  - ❑ Circulating the draft report to the relevant Stakeholders;
  - ❑ Appoint the Senior Standard & Compliance Officer;




**WAY FORWARD FOR MSAF**


- Formalize a National Task Force;
- Devise a National Strategy and Action Plan (NSAP) Report;
- Establish a training course;
- Institute the Training Course to relevant stakeholders.




**OBSTACLES FACED BY MSAF**

MSAF currently has some major draw backs that hinders its ability to progress this Project. This includes a:


- Lack of personnel;
- Lack of information;
- Lack of knowledge;
- Lack of finances.



**WHAT FIJI HOPES TO GAIN FROM THIS MEETING**

At this meeting, MSAF hopes to:

- Learn from the experience of other LPC's;
- Seek assistance from its Partners in this Project





**Annex 8** Presentations – Day 2 (continued)

**Progress reports from Lead Partnering Countries (LPCs) – Fiji (continued)**



Progress reports from Lead Partnering Countries (LPCs) – Jordan

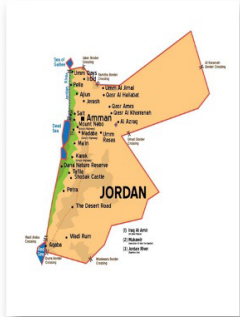


**Jordan’s Marine Biofouling Progress Report**

Eng. Nedhal Abu – Zeid  
JMC- Flag State Head Division

**Jordan Profile**

- ▶ Region : Middle East
- ▶ Capital : Amman
- ▶ Population : 9.78 Million
- ▶ Coastline : 26 Km
- ▶ Import : 20.30 Billion \$
- ▶ Export : 7.75 Billion \$
- ▶ GDP: 101 Billion \$



**Impact of Biofouling in Jordan**

- ▶ The impacts of biofouling can be addressed under three categories:
  - (1) Impacts on biodiversity (species, habitats, ecosystems and ecological processes),
  - (2) Economic impacts,
  - (3) Impacts on health (human, plant and animal).

**NSA report**

- ▶ A virtual meeting was held on April 29th, 2021 using zoom .The national task force adopted NSA report and communicated to Regional PERSGA the Regional organization for the conservation of the environment in the Red Sea and Gulf of Aden and IMO. Which investigate the following major dimensions:
  1. Assessing the Likelihood of IAS Introduction: this step was conducted to identify and assess the potential biofouling pathways.
  2. Assessing the Likelihood of IAS Spreading: this step has dealt with assessing the subsequent spreading and distribution of an organism if conditions are favorable, or through the presence of secondary transfer pathways.
  3. Assessing the Potential Impacts of IAS Introduction: this step has investigated relevant background information relating to the potential impacts of IAS once established in a new region.
  4. Assessing the Country’s Level of Preparedness to Manage Biofouling: assessing the country preparedness toward potential high-risk pathways and the measures developed to inspect ships and structures.

**Jordan’s NSAP**

- ▶ A virtual kick off meeting for NSAP was held with national task force.
- ▶ The semi-final draft report of NSAP was designed under six main components as follows:
  - Component One: Legal and Institutional framework setup
  - Component Two: Biofouling Management
  - Component Three: Biofouling Research, Monitoring and Risks Management.
  - Component Four: Enforcement and Control
  - Component Five: Awareness and Capacity Building
  - Component Six: National, Regional and International Cooperation
- ▶ This NSAP report was dispatched to all NTF entities for remarks and feedback .
- ▶ The final report will be adopted after national task force meeting, same will be communicated to PERSGA and IMO.

**National Task Force outputs**

- ✓ National Task Force team were formed with all stakeholders, Two meetings were held and their outputs:
  - ▶ Draft Biofouling National Policy
  - ▶ Draft Biofouling management national regulations
  - ▶ National report on “Assessment of Biofouling and Impacts to the marine Environment in the Gulf of Aqaba”
- ✓ National Academic Institution was selected to carry on the training programs
- ✓ Nominated National Experts worked on the preparation of the National Reports
- ✓ National IT Capabilities were analyzed

Progress reports from Lead Partnering Countries (LPCs) – Jordan (continued)

National Task Force (NTF) establishment and meetings

- A working group established by Jordan Maritime Commission and Aqaba Special Economic Zone Authority to ease and facilitate the national task force mission regarding nominating and picking up the expertise as well as the national entities to draft and finalize the following:
  - National Status Assessment (NSA) report
  - National Strategy and Action Plan (NSAP) report
  - National Training Course module as per IMO module course .
  - National economic assessment on biofouling regulation implementation.
  - PERSGA and IMO were communicated regarding the list of nominated experts list along with their CVs.
  - We fill of the Glofouling questioner and Mid Term Review Audit was conducted by Mr. David Vousden.

Raising Awareness Initiatives

- JMC-ASEZA working group discussed all available resources (technically and financially) to be able to achieve the followings:
  - Development platform
  - Database
  - Domain Name System (DNS)
  - Hosting
  - Administration
  - Training
- Jordan Maritime Commission studying a proposal to implement biofouling security management software which is designed to communicate with Jordanian flagged ships owner/ operators and foreign vessels calling Aqaba to reduce aquatic biosecurity risk presented by biofouling and improve management of biofouling risks by boat and vessel operator.
- Aqaba Special Economic Zone Authority will add a window to their website in order to raise awareness of biofouling and AIS.

Thanks for having your attention !

Progress reports from Lead Partnering Countries (LPCs) – Madagascar

**PROGRESS REPORT  
2019-2021**

**GLOFOULING PARTNERSHIP PROJECT  
MADAGASCAR**

**GPTF-2 meeting  
London, UK, 11-13 April 2022**

Reza Ludovic, National Focal point  
Miora Rabemifara, National project coordinator

**AGENDA**

- > Communication materials /awareness raising initiatives
- > National status Assessment (NSA) report
- > National Task Force (NTF) establishment and meetings
- > National strategy and action plan (NSAP) report
- > Training course

**Communication material /awareness raising initiatives**

**METHOD**  
Meetings between departments on maritime sectors website for Glofouling Partnership Project Madagascar Conference about the project during special events (world day of seafarers)

**TOOLS**  
Roll-up  
Articles in periodical paper

**National Task Force (NTF) establishment and meetings**

**Meetings**

- In person: 1st meeting: 19-20 August 2019
- Virtual meeting

**National Status Assessment report**

Period of research : april to october 2021  
Report submitted to IMO

**Results**

- Potential risk of introduction of IAS to main international ports (east and west)
- risk of propagation to the secondary ports and coastal zones
- Negative impact on economy : local fisheries along the coast, marine resources, protected area at risk
- Species identified

*Perna perna* (known as brown mussel)

**international ports**

**7**

**Gaps**

- PSC not effective yet
- Lack of coordination between stakeholders on marine
- Lack of Awareness raising
- Lack of scientific data

**Recommendations**

- Strong collaboration between Research institutes and Protected area organisation
- PSCO capacity building

Toamasina  
Majunga  
Nosy Be  
Vohemar  
Fort Dauphin  
Toliara

**National Strategy and Action Plan report**

Consultants recruited since october 2021

Study in progress

**Training course**

National Institute selected:  
IHSM Institute Halieutique et des Sciences Marines Toliara (south west of Madagascar)

Agreement between APMF and IHSM

Course in May- june





Progress reports from Lead Partnering Countries (LPCs) – Mauritius



**GEF-IMO-UNDP GloFouling Partnerships Project Progress Report (Republic of Mauritius)**

2<sup>nd</sup> Global Project Task Force Meeting  
IMO headquarters, London  
11-13 April 2022








**NATIONAL STATUS ASSESSMENT(NSA)REPORT**

**Implementation Status:** The NSA report has been completed and submitted to Project Coordination Unit in November 2021

**Approach taken:**

- Two national experts (with scientific background) were nominated by the GFP Project through the Ministry of Blue Economy, Marine Resources, Fisheries and Shipping (Shipping Division)
- The nominated experts were tasked to develop the NSA report as per the provided Guide and Standardised Self-Assessment Checklist
- A list of stakeholders from both public and private institution were consulted based on their putative relation with shipping, marine biofouling and invasive aquatic species

**NATIONAL STATUS ASSESSMENT(NSA)REPORT**



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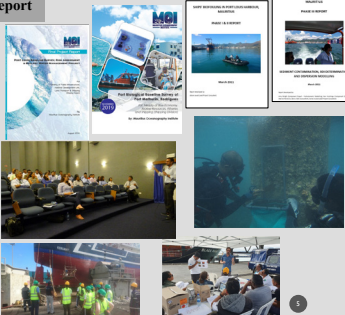
- To facilitate the process of consultation and data collection, the following steps were undertaken:
  - The National Focal Point and Project Coordinator acted as intermediary between key stakeholders and the nominated national experts
  - Each stakeholder was contacted officially through the Ministry and provided with a project brief along with a set of questions as per the Self-Assessment Survey
  - Due to the COVID-19 related sanitary restrictions each stakeholder were consulted via email and all were responsive towards the self-assessment questionnaire
  - Technical meetings were held to take stock of progress made and to address any bottlenecks towards the timely completion of the assignment
  - The views and comments of Dr. Julian Roberts (Technical Reviewer for the NSA) were sought prior to finalizing the draft final report

**NATIONAL STATUS ASSESSMENT(NSA)REPORT**

**National Status Assessment (NSA) Report**

- Some of the key factors that enabled the completion of the NSA report:
  - Existence of national projects related to invasive aquatic species (IAS) with shipping as vector
  - Some of the local stakeholders were already involved in past national projects and hence were aware of biofouling issues
  - Scientific personnel with background in IAS
- Benefits of the NSA report
  - provide a detailed appreciation of the current status and existing national arrangements for addressing biofouling risks in the country
  - facilitate the development and completion of other GFP-related initiatives
  - contribute to other national IAS-related project (e.g. GEF-UNDP funded project - Mainstreaming IAS prevention, control & management project)
- Challenges
  - Covid-19 related sanitary restrictions
  - Limited time since retrieval of data from different stakeholders is time consuming



**National Strategy & Action Plan (NSAP) report**


**Implementation Status:** On-going

**Approach taken:** National expert has been nominated and contact with stakeholders has been initiated. A first draft of the Preliminary High-Level Biofouling Policy is expected at the end of April 2022

**National Training Course**

**Implementation Status:** Delayed/ re-scheduled

**Approach taken:** Training center and trainers for delivering the course have been identified. Online GloFouling familiarisation session was delivered to the trainers by the IMO resource person in May 2021. The training course however has been delayed due to unforeseen circumstances. The contemplated training course most probably will be of hybrid mode



**NATIONAL TASK FORCE (NTF) ESTABLISHMENT AND MEETINGS**

- A National Task Force for Ballast Water Management was established in 2004 at the level of then parent Ministry of the Shipping Division the Ministry of Public Infrastructure, Land Transport and Shipping, with the aim of identifying sources of ballast water, compiling information, evaluating volume of such water, advising on national policy for awareness, control and surveillance of ballast water
- In line with GloFouling Partnerships Project, the Terms of Reference of the Ballast Water National Task Force have been amended to cater for additional responsibilities
- A meeting was held with the stakeholders whereby a walk through of the National Status Assessment report was presented

**AWARENESS INITIATIVES**

Awareness campaigns through:

- Poster presentation, distribution of scientific pamphlets and newsletters
- In the context of World Ocean Day, public awareness regarding importance of a healthy marine ecosystem
- Participation in Regional workshop on Marine Invasive Species (e.g. Indian Ocean commission)

Dedicated corner at the Rajiv Gandhi Science Centre for awareness raising on Ballast Water Management and IAS





## Annex 8 Presentations – Day 2 (continued)

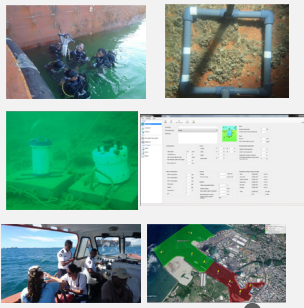
### Progress reports from Lead Partnering Countries (LPCs) – Mauritius (continued)

**National Level Initiatives i.c.w IAS**

Ship's Biofouling in Port Louis Harbour Project  
 Project value: 15 Million MUR (335904.42 USD)  
 Project time frame: 3 years (2017-2020)  
 Status: Completed

**Outputs:**

- A vessel sampling protocol and methodology for the survey of ship's fouling flora and fauna has been developed and subsequently tested on two commercial vessels (fishing & bulk carrier)
- The industry and IMO recognised exposure assessment model MAMPEC has been customized with the hydrodynamic condition of Port-Louis harbor and used to estimate marine pollutant dispersion from antifouling emissions and hull cleaning procedures
- Data concerning the level of commonly used antifouling biocides, namely butyltin compounds (tributyltin, dibutyltin & monobutyltin) and heavy metals (Zn, Cu, Pb, Cr & Sn) in port sediments have been captured
- Personnel from National Coast Guard, Mauritius Ports Authority and Mauritius Oceanography Institute have been trained on hull fouling surveys



**National Level Initiatives i.c.w IAS**

Mainstreaming Invasive Alien Species (IAS): Prevention, Control and Management Project

Project value: 28,417,793 USD (Co-financed by GEF, UNDP and various stakeholders from Mauritius)

Project time frame: 6 years (2019-2025)

Status: On-going


The GEF-UNDP Mainstreaming Invasive Alien Species (IAS) Prevention, Control, and Management project aims to safeguard globally significant biodiversity in vulnerable ecosystems through the prevention, control, and management of IAS in the Republic of Mauritius.

**Main objectives are to:**

- build capacities to prevent, control, eradicate or effectively manage IAS;
- strengthen legislative policy and institutional frameworks to fight IAS; and
- improve knowledge and increase awareness on the risks posed by IAS and the need for biosecurity

Findings from completed projects (e.g., Port-Louis Port Biological Baseline survey; Port-Mathurin Port Biological Baseline Survey & Ships' Biofouling in Port-Louis harbor) will be used in this national project

Within the project, fund has been earmarked for awareness raising components




**THANK YOU**

For more information:  
 Mr. A. Donat  
 Director of Shipping  
 (National Focal Point GloFouling Partnerships Project)  
 shippingdivision@govmu.org

Progress reports from Lead Partnering Countries (LPCs) – Mexico




**2nd Global Project Task Force (GPTF-2) Meeting**  
**London, UK, 11-13 April 2022**

**Mexico's Progress Report**



**Mexico's status in the GloFouling Project**

- Mexico participates as Lead Partnering Country (LPC).
- National Institutions involved:**
  - Marine Secretariat (SEMAR) through the Unit of Port Captaincies and Maritime Affairs (UNICAPAM).
  - Secretariat of the Environment and Natural Resources (SEMARNAT) through the General Direction for the Primary Sector and Renewable Natural Resources (DGSPRNR).
- National Focal Point:** Vicealm. Ubaldo Gómez Rodríguez, Head of UNICAPAM.
- National Coordination:** Dra. Adelita San Vicente Tello, Head of DGSPRNR.



**National Status Assessment (NSA) report**

- Progress:**
  - National Group of Experts integrated with scientists from Mexican universities, as well from National Commission for the Knowledge and Use of Biodiversity, Secretariat of the Environment and Natural Resources, and Marine Secretariat.
  - National Biofouling Status Assessment (NSA) was coordinated by a National Autonomous University of Mexico's (UNAM) scientist with the Partnerships Project support.
  - The completed report was submitted to IMO-GloFouling PCU in November 2021 (a Summary of Chapter 1 from the NSA-report is attached at Annex 1 of the "GPTF-2, Report of Mexico").
- Pending tasks:**
  - NSA-Report formal presentation to the National Task Force partners.

**National Strategy and Action Plan (NSAP) report**

- Progress:**
  - Not started yet.
- Pending tasks:**
  - National Group of Experts reestablishment, while increasing members number which includes experts from other universities and shipping industry.
  - Work group coordinator designation, in order to prepare National Strategy and Action Plan.



**National Training Course on Biofouling Management**

- Progress:**
  - The University of the Navy (UNINAV) was the academical institution selected to provide the course.
  - The course will be in person (tentatively), at this regard a space for conferences is already been designated.
  - Instructors have been already designated. Training materials are available in Spanish.
  - A list of multiple stakeholders have been identified in order to be invited to the course, which includes representatives of government agencies, academic institutions, non-governmental organizations, companies and consultants from the maritime and service sectors.
- Pending tasks:**
  - Schedule event date.
  - In coordination with instructors, define logistics and internalize training materials.
  - Call process, invitations and course development.




**National Task Force (NTF) establishment and meetings**

- Progress:**
  - The National Task Force (NTF) was established during the First Meeting/Workshop of the Glofouling Project in Mexico in October 2019, and includes federal agencies representatives, academic institutions, shipping sector's companies and non-governmental organizations.
  - National Group of Experts was created to address the National Assessment of Biofouling Management, integrating members of the National Task Force, and researchers from Universities and Scientific institutions.
  - Members of the NTF and from the Group of Experts participated in the Virtual Regional Workshop on Management of Biofouling and Invasive Aquatic Species, organized by the Permanent Commission for the South Pacific (CPPS) in August 2021.
- Pending tasks:**
  - Request the organisms represented in the NTF to confirm designated personnel pre-Covid pandemic.
  - Hold a NTF meeting to update current status of the Glofouling Project in Mexico and forward actions.


**Communication material/raising awareness initiatives**

- Progress:**
  - Biofouling section housed at the National Maritime Authority (UNICAPAM) website is under construction and will include biofouling impacts and the relevance of a proper biofouling management.
- Pending tasks:**
  - Once the Biofouling website concludes, UNICAPAM-SEMARNAT-CONABIO will coordinate to link this site into their institutional pages.



**Other Issues**

- Provisional guidelines for in-water cleaning of biofouling on ships.**
  - Under coordination of National Maritime Authority in synergy with Environmental Authority.
  - To be applied by Port Captaincies when receiving in-water cleaning permits Applications.
  - Guidelines consider criteria for micro/macrofouling on the ship's hull, type of navigation (national or international), type of antifouling system on the ship (with or without biocide), and in-water cleaning techniques (with or without retention and collection of debris detached from the hull), among others.



**Annex 8** Presentations – Day 2 (continued)

**Progress reports from Lead Partnering Countries (LPCs) – Mexico (continued)**



Progress reports from Lead Partnering Countries (LPCs) – Peru

**2<sup>nd</sup> Global Project Task Force (GPTF-2) meeting**  
 London, UK, 11-13 April 2022

Captain Jesus Menacho (NFP)  
 LPC Peru Progress Report

**Agenda**

1. National Status Assessment (NSA) report
2. National Strategy and Action Plan (NSAP) report
3. National Training Course
4. National Task Force (NTF) establishment and meetings

**1. National Status Assessment (NSA) report**

- Consulting contract CPPS/PDA/01-2021 dated February 1, 2021 with the Consultant Mr. Fidel REYES Meléndez.
- Addendum N° 1 to the CPPS/PDA/01-2021 consulting contract, establishing a new duration of the contract until September 30, 2021.
- On January 24, 2022, the Document of Conformity is signed by CPPS, as the corrected final draft has been delivered by the Consultant.

**NSA Results: Evaluation Process**

The Evaluation was developed by the Consultant with the support of the General Directorate of Captaincies and Coastguards (DICAPI), and information compiled from entities of the public and private sector and having as reference the Guide on the development of NSA:

Guide on the Development of National Status Assessments on Biofouling Management

**NSA Results: Evaluation Process**

- Policies, related legislation, national action plans, national environmental assessment reports, research reports, as well as statistics of the sectors involved.
- Mechanisms for the transfer of Invasive Aquatic Species (IAS): Ship Movement, Port Facilities, Aquaculture Infrastructure, Offshore Hydrocarbon Exploitation Infrastructure.
- Resources and socioeconomic activities at risk.
- Legal aspects and institutional arrangements.

**Key Findings (1)**

- The risk of primary transfer of IAS through international maritime transport and secondary transfer through local vessel traffic is high.
- Large movement of oil tankers and bulk carriers on the one hand and of fishing vessels in the national scope.

Region	Cantidad	%
América del Norte	291	2.6%
América Central	409	2.7%
América del Sur	2,261	16.1%
Europa	65	0.4%
Asia	194	1.3%
Oceania	10	0.1%
África	12	0.1%
Mar Caribe	0	0.1%
Altamar	273	1.9%

**Key Findings (1)**

- Although the risk rises due to the frequency of arrivals and the particular profile of the types of vessels, there are still not enough studies related to the introduction and establishment of IAS, and the determination of potential negative effects, which would define the level of real existing risk.

**Key Findings (2)**

- Peru has a great marine diversity that includes marine birds and mammals, fish, coastal marine invertebrates, benthic invertebrates, macroalgae and microalgae.
- They are vulnerable to the introduction of IAS that generate adverse effects. However, there are no formal studies to identify not only the presence of IAS in our marine ecosystem, but also evidence of potential adverse effects on our biodiversity is needed.

Nota: Imágenes obtenidas de: World Wildlife Fund Per: Programa Marino WWF Fact Sheet Peru 2015, página web: [http://dfo.wa.gov/wwf/wwf\\_peru](http://dfo.wa.gov/wwf/wwf_peru), página web: [http://dfo.wa.gov/wwf/wwf\\_peru](http://dfo.wa.gov/wwf/wwf_peru), mar\_2013.pdf




Progress reports from Lead Partnering Countries (LPCs) – Peru (continued)

PERU Ministerio de Defensa Marina de Guerra del Perú Dirección General de Capitanías y Guardacostas

### Key Findings (3)


- There is no specific regulation that deals with the management of biofouling and the potential introduction of IAS, however, there are regulations and broader plans concerning the introduction of Invasive Exotic Species (IES), which can serve as a basis to address the issue of IAS.
- Likewise, from an institutional point of view, the existence of the Ministry of the Environment, the National Maritime Authority, and IMARPE at the scientific level; would guarantee the implementation of adequate measures for management of biofouling in Peru.



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### Summary of Reforms to be Implemented

- Consider the problem of biofouling management and the introduction of IES in the national environmental regulations.
- The National Action Plan on IES, which is currently pre-published, should be observed in order to include more specifically what concerns the introduction of IAS, assigning responsibilities to IMARPE, and including DICAPI to incorporate biofouling management aspects in order to prevent the introduction of IAS.
- DICAPI should incorporate IMO standards and recommendations regarding biofouling management in order to prevent the introduction of IAS, while the national measures for biofouling management and the introduction of IAS is established.



Plan de Acción Nacional sobre las Especies Exóticas Invasoras en Perú 2021-2025

PERU Ministerio de Defensa Marina de Guerra del Perú Dirección General de Capitanías y Guardacostas

### 2. National Strategy and Action Plan (NSAP) report

#### Nomination of National Experts to Develop National Reports

The nomination of National Experts to develop National Reports was already in done, having identified qualified professionals to be nominated to develop the **National Status Assessment**, **National Economic Assessment** and **National Strategy**, taking into account the Guidance for National Experts Profiles provided by the GloFouling Team.

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### 3. National Training Course

#### Nomination of National Academies and Training Institutions

The National Merchant Marine Academy "Almirante Miguel Grau" (ENAMM), maritime training institution, was asked to deliver the general training course on biofouling management.

DICAPI is going to be the responsible for the general training course organization.

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### 4. National Task Force (NTF) establishment and meetings

Over thirty participants connected to the meeting (14 July 2020), representing all key maritime sectors: Regional Technical Coordinator of the *Comision Permanente del Pacifico Sur* (CPPS); the General Directorate of Capitancies and Coastguards (Maritime Authority); the Port Authority of Peru; shipyard representatives; aquaculture and environmental authorities; academia; classification society; and the private sector.

Currently DICAPI as focal point is coordinating the formal designation of the representatives of the different stakeholders on the public and private sector with the aim to issue a legally binding document establishing the National Task Force.

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**Always vigilants, always with honour!**



Progress reports from Regional Coordinating Organizations (RCOs) – CPPS

**2nd Global Project Task Force (GPTF-2) Meeting**  
London, UK, 11-13 April 2022

**CPPS RCO Progress Report**

M.Sc. Zuleika Pinzón  
Regional Coordinator of the Action Plan for the Southeast Pacific  
Permanent Commission for the South Pacific  
zpinzon@cpps-int.org

Regional awareness raising seminars

Regional Workshop on Biofouling Management – August 17, 2021

- More than 100 participants from 71 government agencies, NGO, academic institutions, and public and private companies working or related to biofouling
- Countries: Brazil, Chile, Colombia, Ecuador, Guatemala, Panama, Peru, and Mexico

Objectives:

- To share experiences and knowledge from the region about biofouling, with the perspectives of establishing a regional strategy or action plan for the Southeast Pacific; and
- To identify challenges and opportunities related with the inclusion of an action plan for biofouling in the Regional Strategy for the management of invasive species in the Southeast Pacific, applying IMO Guidelines.

**Biofouling Regional Action Plan – Southeast Pacific**

- In initial status.
- It would be part of the **Regional Strategy to prevent and reduce risks and impacts from invasive species in the Southeast Pacific**, adopted in 2021 by the State Parties of the Lima Convention: Chile, Colombia, Ecuador, Panama, and Peru.
- It will allow to have a management tool which specific objective would be to make it viable to implement concrete actions to manage biofouling from a regional perspective in the Southeast Pacific.
- It should be finished and adopted in 2023.

**Regional Task Force**

**Regional Action Plan for Marine and Coastal Zones Protection in the Southeast Pacific**

**Regional Strategy to prevent and reduce risks and impacts from invasive species in the Southeast Pacific**

**Regional Task Force on Marine Invasive Species (GTR – EEM)**

Technical advisory body for the implementation of the Regional Strategy

Function:

- Communication and consultation resource in the region to strengthen regional cooperation, and exchange of knowledge and experience
- Coordination among countries in the region to implement IMO Guidelines and other international agreements related to marine bioinvasion.

Adopted VI Extraordinary Meeting of the General Authority of the Regional Action Plan (April 2021)

Objective: to support countries in the implementations of IMO Guidelines and other international agreements related to marine bioinvasion

**Regional Task Force on Marine Invasive Species (GTR – EEM)**

Established in 2021. It is made up of two representatives from each country. First meeting on Feb 24, 2022. Some activities to be developed during 2022-2023:

- Generate a regional information platform to share research references related to biological surveys in ports.
- Promote exchange of good practices and successful cases on risk management of invasive marine species in the region.
- Develop academic meetings to generate knowledge, experiences, synergies and lessons learned, for proper invasive species management.
- Workshops/trainings to socialize IMO guidelines, prioritization of IMO monographs on integrated risk management models and IMO regulatory instruments.
- Design and develop a database on the biological diagnosis of the port baselines on invasive species.
- Start processes to develop and implement a regional communication plan, identifying target groups to be sensitized and messages alluding to the damage caused by invasive marine species and actions taken to reduce risks.

Communication material/raising awareness initiatives

Web site: <http://cpps-int.org/index.php/glofouling-inicio>

It has:

- General information on invasive species
- Information about the GloFouling Partnerships Project
- Regional and national activities
- Project Results
- Photo gallery

Since it is within the CPPS web site, it should remain for long term.

- It shows progress at regional and national levels
- It shows the problem and solutions on biofouling at regional and national levels
- Promote exchange of information in the region

Support provided to Lead Partnering countries and any update on initiatives undertaken by Partnering countries

- Funding management and review of national products:**
  - National Status Assessments on Biofouling Management–Perú: ended in December 2021 / Ecuador – ended in March 2022
  - National Economic Assessment of Biofouling Management–Ecuador: information raised during national assessment.
- Participation and follow up on national activities**
  - Virtual national workshops in Peru and Ecuador, July 2021, and national task force meetings in Ecuador in 2021.

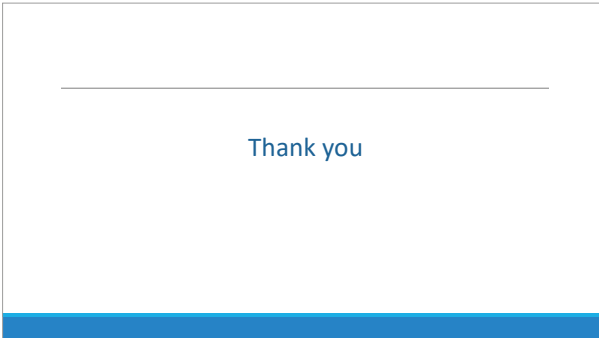
Other relevant initiatives

**Port Biological Baseline Surveys (PBBS) Pilot Projects**

- Objective: to apply a standard methodology in the region to determine the biological baseline of biofouling in ports – one port in each country, for a total of 5 ports in the region
- Methodology – Smithsonian Environmental Research Center
- Scientific advisory – Gregory Ruiz, Ph.D
- Starts: May 2022

**Annex 8** Presentations – Day 2 (continued)

**Progress reports from Regional Coordinating Organizations (RCOs) – CPPS (continued)**



Progress reports from Regional Coordinating Organizations (RCOs) – PEMSEA



### East Asian Seas Regional GloFouling Project Progress and Plans



Aimee T. Gonzales  
PEMSEA (EAS Regional Coordination Organization)  
GEF-UNDP-IMO GloFouling Partnerships Project  
Second Global Project Task Force Meeting  
London 11-13 April 2022

### Regional Awareness Raising Seminars



Regional Seminar on Biofouling Management and Invasive Aquatic Species

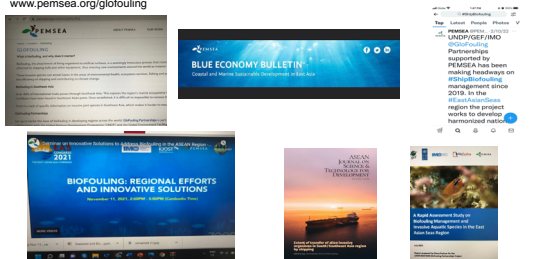



- June 23, 2021 (introductory seminar)
- Nov. 11, 2021 (innovative solutions)

Participated by 15 countries, regional organizations and civil society approx. 70 pax per seminar

### Digital communication material/services

www.pemsea.org/glofouling



### Key messages from seminars

- Biofouling is a pervasive challenge in Southeast Asia due to tropical warm water year around and high marine biodiversity.
- ASEAN countries lack policy and legal framework for combating biofouling at both the national and regional level
- Some PEMSEA countries are investing in R&D for technologies on biofouling removal, prevention, and management as they realize the benefits to industry and health of marine ecosystem.
- Countries like Indonesia and the Philippines with support from the GloFouling Partnerships Project are also conducting baseline assessment on regulatory, policy, research and economic impacts of biofouling and IAS.
- R&D efforts in identifying invasive aquatic species are globally ongoing, but more work needs to be done in understanding their life cycle, preventing, and managing their spread and addressing their impacts.
- Need for an integrated information management system at country and regional level;
- Need for a national inter- agency coordinating mechanism specifically addressing IAS/biofouling risks;
- Need awareness building and capacity development for better understanding and management response to the issue;
- Positive response to having common guidelines

### Regional Strategy for Biofouling Management

A WORK IN PROGRESS

- aligned with and based on the IMO Guidelines and Guidance but explicitly addressing the specific conditions of the ASEAN and aspects relevant for its implementation in the region.
- harmonize and ensure that national policies and strategies for biofouling management are coherent;
- promote access to the necessary information, technical and financial support to effectively implement the biofouling guidelines ; and
- facilitate dissemination and exchange of IAS experiences and lessons learnt

### Regional Task Force and Strategy Development

April 28, 2022 First Regional Task Force Meeting (agree on TOR and regional strategy annotated outline

May- Oct 2022 Consultations with countries, regional organizations and civil society

Mid Nov 2022 Second Regional Meeting (to review/ endorse) the draft Regional Biofouling Strategy to EAS Partnership Council, ASEAN WG on Maritime Transport, Coral Triangle Initiative and APEC Environment Committee

Nov- Dec 2023 Refine draft

Develop advocacy and communication strategy to secure country/regional endorsement and ownership of regional guidelines, beginning with LPCS

Training and capacity building (tbc)

## THANK YOU!



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Progress reports from Regional Coordinating Organizations (RCOs) – PERSGA



**THE REGIONAL STATUS REPORT REGARDING BIOFOULING MANAGEMENT**

PERSGA (RCO) Presentation at the 2nd Global Project Task Force meeting GEF-UNDP-IMO GloFouling Partnerships

Dr. Mahmoud Ahmed  
Coordinator of Marine Pollution Programs  
Email: Mahmoud.ahmed@persga.org



01 Regional awareness raising seminar

02 Regional Task Force establishment

03 Regional strategies development

04 Communication material/raising awareness initiatives

05 Other initiatives

2nd Global Project Task Force meeting GEF-UNDP-IMO GloFouling Partnership, London, 11-13 April 2022



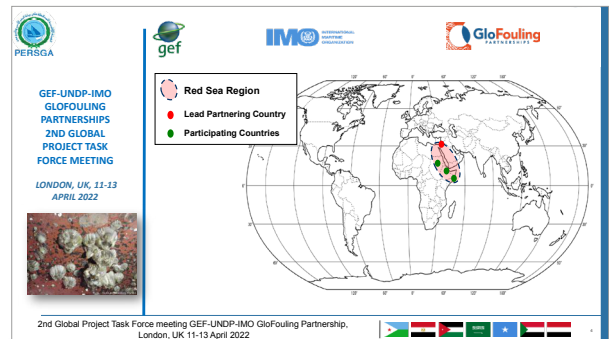
**What is PERSGA?**

The Regional Organization for the Conservation of the Environment of the Red Sea and Gulf of Aden is:

An intergovernmental Organization Dedicated to the Conservation of the Coastal and Marine Environment in the Region

Member States: Djibouti, Egypt, Jordan, Saudi Arabia, Somalia, Sudan, Yemen.

2nd Global Project Task Force meeting GEF-UNDP-IMO GloFouling Partnership, London, 11-13 April 2022



GEF-UNDP-IMO GLOFOULING PARTNERSHIPS 2ND GLOBAL PROJECT TASK FORCE MEETING

LONDON, UK, 11-13 APRIL 2022

Red Sea Region

Lead Partnering Country

Participating Countries

2nd Global Project Task Force meeting GEF-UNDP-IMO GloFouling Partnership, London, UK 11-13 April 2022



**Regional awareness raising seminar on biofouling management**

- **Successfully held online-** Teleconferencing organized and hosted by PERSGA, 17<sup>th</sup> June 2021
- 50+ participants from PERSGA countries attended.
- **Impact:** Positive with wider participations.
- **Challenges:** difficult to guarantee and maintain good IT connectivity from the attendees.
- **Main conclusion:** sustain such regional raise-awareness activity (in person) in order to enhance knowledge on the IMO Biofouling Guidelines and apply them

Overall evaluation: Excellent (95%)

2nd Global Project Task Force meeting GEF-UNDP-IMO GloFouling Partnership, London, 11-13 April 2022



**National Training course at JAMS (Jordan Academy for Maritimes studies)**

- **Successful two-days Hybrid event co-organised and held in the premises of JAMS in Amman (Jordan), 26-27 September 2021**
- pilot training course on biofouling management
- **Impact:** Positive, allowing online delivery with wider participations.
- **Challenges:** COVID-related disruptions (stringent regulation and other requirements for travel)
- **added value/benefit:** the training course package will be mainstreamed in the Academy's programs and syllabus

2nd Global Project Task Force meeting GEF-UNDP-IMO GloFouling Partnership, London, 11-13 April 2022



**Regional Task Force establishment**

successfully held in Hurghada (Egypt) at EMARSGA center, 22-23 March 2022

- RTF established and the draft regional strategy on Biofouling management were discussed and agreed by the delegates.
- RTF chair (Jordan) elected for two year term



**Regional strategies development**

- First draft of the regional strategy on Biofouling management completed.
- **Next steps:** the endorsement of the draft strategy and its action plan, and the implementation of the first activities identified, followed by another meeting of the regional task force in 2023

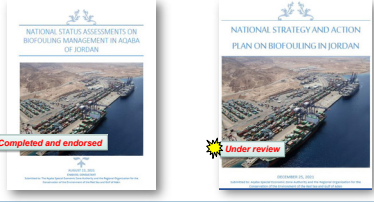


**Annex 8** Presentations – Day 2 (continued)

**Progress reports from Regional Coordinating Organizations (RCOs) – PERSGA (continued)**

**Support provided to Lead Partnering countries (LPCs) and any update on initiatives undertaken by Partnering countries (PCs)**

PERSGA is managing the development of national reports for Biofouling management in LPC (Jordan)



**Coming soon:**

- National Rapid Economic Assessment on biofouling management and invasive aquatic species

2nd Global Project Task Force meeting GEF-UNDP-IMO GloFouling Partnership, London, 11-13 April 2022

**Communication material/raising awareness initiatives**

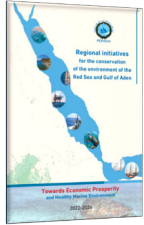
**Animated video** <https://www.glofouling.persga.org>

**Publication (brochures/leaflets)**

**News items in website and YouTube channels**

2nd Global Project Task Force meeting GEF-UNDP-IMO GloFouling Partnership, London, 11-13 April 2022

**Other relevant initiatives (Portfolio's of PERSGA regional initiatives)**



- Based on the PERSGA's Council of Ministers request: Development of 10 Integrated initiatives for Sustainable Blue economy (SBE) for RSGA region.
- Includes one target component to Green ports and shipping (Antifouling technologies, greener ports development in RSGA region..)

**objectives:**

- To build the capacity to address issues related to ships' hull fouling and the transfer of invasive aquatic species.
- To promote sustainable maritime transportation

- The meeting (PERSGA HQ - April 14, 2022) to discuss and agree on the Implementation/Action and Finance Plan.

2nd Global Project Task Force meeting GEF-UNDP-IMO GloFouling Partnership, London, 11-13 April 2022

**Other relevant initiatives (e.g. translation, IMO/KSA new partnership)**



**IMO/KSA : Raising awareness of biofouling for women in Arab States**

Completed the Arabic translation of the training course packages on the introduction of Biofouling management, and the global guides

2nd Global Project Task Force meeting GEF-UNDP-IMO GloFouling Partnership, London, 11-13 April 2022

**THANK YOU**





[www.persga.org](http://www.persga.org)

13








Progress reports from Regional Coordinating Organizations (RCOs) – SACEP






### Glofouling Partnership Project Regional Status Report


By:  
**Mr. Zammath Khaleel**  
Senior Programme Officer - Regional  
South Asian Seas Programme-SACEP

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2nd meeting of the Global Project Task Force  
11-13 April 2022






### SACEP and South Asian Seas Programme (SASP)



- SACEP registered with the Secretariat of the United Nation as Multilateral Organization in accordance with under the Article102 of the Charter of the United Nations.
- SACEP act as the secretariat for the implementation of the SASP.
- SASP is one of the 18 Regional Seas Programme of the United Nations Environment Programme (UNEP).
- Action Plan for SASP (sub-regional agreement) was formally adopted at a Meeting of Plenipotentiaries of the concerned countries held in New Delhi, on 24<sup>th</sup> March 1995.
- The overall objective of the SASP is to protect and manage the marine environment and related coastal ecosystems of the region in an environmentally sound and sustainable manner.











### Role of SACEP-SAS ; Regional Coordinator

- SACEP joins GloFouling partnerships as a Regional Coordinating Organization in 2018.
- Responsibility of RCO includes;
  - Convene and coordinate a **Regional Task Force** to discuss biofouling management and invasive species and include in Action Plan
  - Coordinate **logistics** for GloFouling Project at the national and regional level
  - Coordinate development regional strategies and action plan
  - Raise awareness and capacity building
  - promote **legal, technical and scientific cooperation** on subjects related to biofouling management






### Support to Lead Partner Country (Sri Lanka)

- Participated and contributed in the First National Task Force meeting held in February 2020
- Signed contract to complete the National Status Assessment of Sri Lanka in May 2021
- Facilitated the NSA kick off meeting in July 2021
- Facilitated meeting with IMO experts on NSA for comments and improvement of Draft Report in February 2022



### Regional Activities

- Conducted the Regional Seminar on Biofouling Management And Invasive Aquatic Species on 16 June 2021 (online)
  - all South Asia Seas Programme members actively participated
  - Highlighted the importance of a practical Regional Strategy that is implementable
  - Contributed to the development of general guidance for Regional Strategy on Biofouling
- First Regional Task Forced planned for Q3 2022
- Draft webpage on Glofouling developed

### Challenges

- Significant delays due to pandemic
  - Lockdown in Sri Lanka delayed national consultants work
  - Travel bans limited meeting options
- X-Press Pearl Incident
  - took time from key national stakeholders
- Lack of technical capacity

Thank You

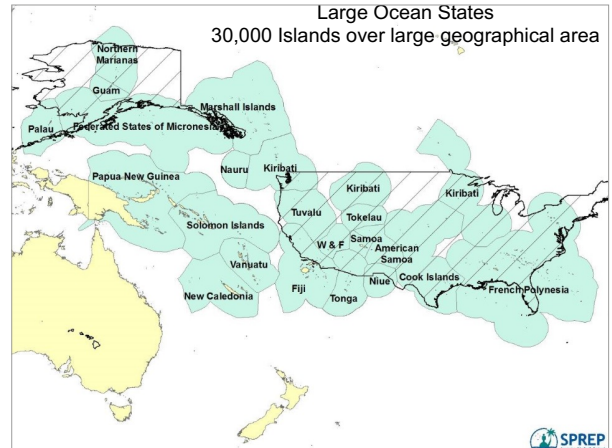
Progress reports from Regional Coordinating Organizations (RCOs) – SPREP



GEF-UNDP-IMO GloFouling Partnerships 2nd Global Project Task Force (GPTF) Meeting, 11-13 April 2022

### SPREP Update - RCO

Anthony Talouli, Director, WMPC Programme, SPREP




### Pacific Leader's Decisions




50th Pacific Islands Forum Leaders Meeting  
15 August 2019, Funafuti, Tuvalu

- Climate Change is the single biggest critical issue facing the Pacific
- Recognise importance of waste and Pollution management for the Blue Pacific




### Current Work

- Invasive Species is a key component of SPREP's work
- Leadership of invasives shared by SPC/SPREP
- Planning & Strategies – GISMP, SRIMP-Pac
- Operations – PILN, PRISMSS
- Funding – GEF6, GloFouling
- Other related projects - PacMAN
- Other Projects - Pacific MTCC, EDF11 PacWaste Plus/PEUMP, POLP, AFD-SWAP, JPRISM2, INFORM, GEF7 ISLANDS



Year	Activity
2019	<ul style="list-style-type: none"> <li>• SPREP attended Global Project Task Force 1<sup>st</sup> Meeting (Mar 2019)</li> <li>• SPREP participated in NTF meetings in Fiji (June 2019) and Tonga (June 2019)</li> <li>• SPREP organised regional workshop on the "Guidelines For The Control and Management of Ships BioFouling To Minimize The Transfer of Invasive Aquatic Species (June 2019)</li> </ul>
2020	<ul style="list-style-type: none"> <li>• No regional activity</li> </ul>
2021	<ul style="list-style-type: none"> <li>• Q1: Contract the development of national status assessment for Fiji and Tonga</li> <li>• Q3: Virtual training for Fiji and Tonga (TBC)</li> </ul>
2022	<ul style="list-style-type: none"> <li>• Set up regional task forces, review regional strategy</li> <li>• Start developing national strategies for Fiji and Tonga</li> </ul>
2023	<ul style="list-style-type: none"> <li>• Start implementing regional strategy</li> <li>• Start implementing national strategies</li> </ul>



Progress reports from Regional Coordinating Organizations (RCOs) – REMPEC

**REMPEC progress report for the 2nd Global Project Task Force (GPTF-2) meeting of the GEF-UNDP-IMO GloFouling Partnerships Project**

UN environment programme | Mediterranean Action Plan Barcelona Convention | IMO INTERNATIONAL MARITIME ORGANIZATION

GPTF-2 meeting  
11-13 April 2022

**REMPEC**

Established in Malta in 1976  
Staff from the Mediterranean region

The Mediterranean Action Plan (MAP) – Barcelona Convention System works with Contracting Parties and partners to fulfill the vision of a healthy Mediterranean Sea and Coast that underpin sustainable development in the region.

United Nations specialized agency with responsibility for the safety and security of shipping and the prevention of marine and atmospheric pollution by ships.

The Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea (REMPEC) assists the Mediterranean coastal States in refuelling, transporting, implementing and enforcing international maritime conventions related to the prevention, preparedness and response to pollution from ships.

GPTF-2 meeting  
11-13 April 2022

Past activities

GPTF-2 meeting  
11-13 April 2022

**Past activities related to biofouling management and invasive aquatic species**

- REMPEC coordinated the implementation of the GEF-UNDP-IMO GloBallast Partnerships Programme in the Mediterranean region, as Regional Coordinating Organization (RCO), in cooperation with the Regional Activity Centre for Specially Protected Areas (SPA/RAC). An array of activities related to ship ballast water management (BWM) and invasive species were carried out at the national, regional and global level to support the Project implementation.
- REMPEC also coordinated the implementation of the SAFEMED I Project (2006-2009) and SAFEMED II Project (2010-2015). Various activities related to anti-fouling systems were carried out.
- Report on the Environmentally Sound and Safe Removal of Harmful Anti-Fouling Systems and of Cleaning of Ship's Hells (2007);
- Seminar on the International Convention on the Control of Harmful Anti-Fouling Systems on Ships, 2001 (AFS Convention), Cairo, Egypt, 24-26 April 2007; and
- Regional Workshop on Surveys and Inspections relating to the AFS Convention, Lameca, Cyprus, 7-8 June 2011.

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GPTF-2 meeting  
11-13 April 2022

**Past activities related to biofouling management and invasive aquatic species**

- The Contracting Parties to the Barcelona Convention adopted:
  - the Guidelines concerning Pressure Craft Activities and the Protection of the Marine Environment in the Mediterranean in 2006; and
  - the Mediterranean Strategy on Ship's Ballast Water Management in 2012.
- IMO Regional Workshop on the AFS Convention and the Biofouling Guidelines (Malta, 12-14 November 2019):
  - organized by REMPEC, in close co-operation with the IMO;
  - financed by the IMO's ITCF as co-financing commitment to the GEF-UNDP-IMO GloFouling Partnerships Project; and
  - contributed to the project's goal to establish regional partnerships and cooperation agreements to address marine biofouling issues.
- In 2021, REMPEC provided technical assistance for the development of a draft national BWM Strategy for Morocco (activity financed through IMO's ITCF). This strategy, though focused on BWM, also makes reference to biofouling.

UN environment programme | Mediterranean Action Plan Barcelona Convention | IMO INTERNATIONAL MARITIME ORGANIZATION

GPTF-2 meeting  
11-13 April 2022

Mediterranean BWM Strategy (2022-2027)

GPTF-2 meeting  
11-13 April 2022

**Ballast Water Management Strategy for the Mediterranean Sea (2022-2027)**

- Mediterranean BWM Strategy (2022-2027) adopted by the Contracting Parties to the Barcelona Convention at COP 22 (Antalya, Turkey, 7-10 December 2021).
- COP 22 noted that achieving Good Environmental Status (GES) in the Mediterranean region cannot be done solely by the management of ship's ballast water, but also the management of all pathways and vectors – including ship's biofouling.
- While the focus of this Strategy remains on ballast water, the scope has been expanded to include some preliminary activities on biofouling.
- Action 7: Initiation of preliminary activities to address the threat of biofouling on ships
  - Organize a regional workshop to initiate biofouling-related activities in the region;
  - Undertake National Status Assessments of Biofouling; and
  - Develop National Strategies and Action Plans to manage biofouling.
- Action 10: Enhancement of awareness of NIS amongst decision-makers and the general public
  - Organize a high-level seminar on ballast water and biofouling for decision-makers in the region.

UN environment programme | Mediterranean Action Plan Barcelona Convention | IMO INTERNATIONAL MARITIME ORGANIZATION

GPTF-2 meeting  
11-13 April 2022

Mediterranean Strategy (2022-2031)


GPTF-2 meeting  
11-13 April 2022



Progress reports from Regional Coordinating Organizations (RCOs) – REMPEC (continued)

### Mediterranean Strategy for the Prevention, Preparedness, and Response to Marine Pollution from Ships (2022-2031)

- Mediterranean Strategy (2022-2031) adopted by the Contracting Parties to the Barcelona Convention at COP 22 (Antalya, Turkey, 7-10 December 2021).
- This Strategy includes a Common Strategic Objective (CSO) related to non-indigenous species, namely CSO 5 (Eliminate the introduction of non-indigenous species by shipping activities).
- The associated Action Plan includes numerous activities under CSO 5, which complements the Mediterranean BWM Strategy (2022-2027), amongst which:
  - To contribute to the work of United Nations bodies and agencies, as well as international fora, which are active in the matter of biosecurity (e.g. IMO, SPA/RAC, EMSA);
  - To implement targeted technical cooperation and capacity-building activities, in the Mediterranean to address implementation issues related to biosecurity (BWM Convention, AFS Convention, 2011 Biofouling Guidelines, etc.); and
  - To contribute to the implementation of the GEF-UNDP-IMO GloFouling Partnership Project in the Mediterranean, as appropriate.




GPTF-2 meeting  
11-13 April 2022



### Forthcoming activities related to biofouling management and invasive aquatic species



- PoW 2022-2023 - Outcome 2.A. Non-Indigenous species introductions minimized and introduction pathways under control:
  - Share best practices and lessons learnt among Contracting Parties through regional meeting;
  - Measures to control and manage ships' ballast water and biofouling to minimize the transfer of invasive aquatic species implemented; assistance provided and resource mobilization strategy developed; and
  - Targeted technical support provided to CPs for the ratification and implementation of the BWM Convention as well as for the implementation of the 2011 Biofouling Guidelines.
- BWM:
  - Harmonised procedures for exemptions under Regulation A-4 of the BWM Convention, including regional protocols for port surveys and risk assessment (IMO's ITCP);
  - Resources mobilisation strategy to implement Med BWM Strategy (2022-2027) (MTF);
  - Regional Workshop on the BWM Convention and Regional Expert Meeting on the harmonisation of procedures in the Mediterranean pursuant to the BWM Convention (MTF / IMO's ITCP, TBC).



GPTF-2 meeting  
11-13 April 2022

### Forthcoming activities related to biofouling management and invasive aquatic species

- Biofouling:
  - Based on the material developed by the GEF-UNDP-IMO GloFouling Partnership Project, up to 3 countries (to be confirmed following a call for expressions of interest) will be provided with capacity-building and technical support for the implementation of the 2011 Biofouling Guidelines, best practices for biofouling management in other ocean industries to minimise the risk of Invasive Aquatic Species (IAS) transferred through biofouling will be shared.
- Deliverables:
  - a. preparation of National Status Assessment reports;
  - b. development of National Strategies and Action Plans and relevant legislations; and
  - c. delivery of National Trainings on Biofouling Management.
- Mezzag (funds from MoU between UNEP and the Italian Ministry of Ecological Transition (MITE)):
  - ✓ a national consultant will support countries to deliver a) and b), with the assistance of an international consultant to review the draft legal instrument; and
  - ✓ a national lecture will be trained by an expert to deliver the GEF-UNDP-IMO GloFouling Partnership Project Training Package under c).

GPTF-2 meeting  
11-13 April 2022



Thank you!

Frank Lauwers  
Programme Officer (Prevention)

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GPTF-2 meeting  
11-13 April 2022

## Annex 8 Presentations – Day 3

### Outcome of the mid-term review of the GloFouling Partnerships project – Mr. David Vousden, Independent evaluator



**The Mid-Term Review**

**David Vousden- Reviewer**



**Summary of Findings and Rating**

Progress towards results has been rated **Satisfactory to Moderately Satisfactory**

This is a reflection of the major constraints and delays imposed on the project by the COVID-19 pandemic

This does **NOT** reflect the high quality of the management and implementation efforts of the Project Coordination Unit or the successful interactive engagement between the various partners and stakeholders

The Project has shown a high degree of effective adaptive management, particularly during the COVID-19 pandemic. This has been instrumental in the Project managing to maintain much of its focus and output during this difficult period for all GEF Projects around the world

Like many other projects, this will now require an Extension in order to deliver on its Objective

The Project has leveraged an exceptional level of co-financing already at Mid-Term

All stakeholders are fully supportive of the objectives and take an active role

One very important contribution to the issue of biofouling has been the Project's achievements in Outreach and Awareness Raising

Recommendation 1	
Recommendation	Way Forward
<p>The Project to request UNDP to approve an extension of 18 months.</p> <p>Once approved the PCU to develop a detailed work-plan and associated budget revision that aims to deliver on the objectives, outcomes and outputs by the new end-of-project date of 31 May 2025</p>	<p>A budget revision to support a Project extension was approved by UNDP and IMO in March 2022.</p> <p>UNDP has granted the Project an 18-month extension, with a new deadline for completion on 31 May 2025</p> <p>A new work-plan has been developed that responds to a revised Results Framework which this current GPTF will review</p>

Recommendation 2	
Recommendation	Way Forward
<p>The Project should review its Results Framework depending on whether it gets an extension or not and on the length of the extension approved.</p> <p>Without a formal extension, the RF would need some radical re-organisation and reduction in activities as well as associated indicators and targets in the Results Framework if these targets are to be achieved within the existing timeframe left</p>	<p>Based on the approved extension and the revised project timeline, the Results Framework has been updated by the PCU taking into consideration the recommendations and suggestions included in the MTR</p> <p>The amended Results Framework will be discussed under Agenda Item 9</p>

Recommendation 3	
Recommendation	Way Forward
<p>In consideration of the constraints posed by the pandemic, a revised work-plan for the next stage of the project, following the MTR, will need to be prepared based on a revised Result Framework.</p> <p>This would need to take into account the MTR findings and recommendations related to training activities, demonstration sites, national activities for LPCs and PCs</p>	<p>Based on the project extension, the PCU has prepared an updated plan of activities and budget for the period 2022-2025</p> <p>The MTR noted that the number of demonstrations written into the original RF and work-plan was extremely optimistic in view of time and resources and effectively unachievable in view of the pandemic. These have been reduced in the new work-plan to a more realistic expectation</p> <p>DPP has undertaken resource mobilisation through a new IMO-NORAD project (The TEST Biofouling Project). This new project will address some of the activities which may not now be feasible for the GFP Project to undertake or complete</p> <p>This will be discussed under Agenda Item 9</p>

Recommendation 4	
Recommendation	Way Forward
<p>The Global Industry Alliance has been established. However, it needs to become more inclusive and to involve representation from ports, the recreational vessels industry, the aquaculture sector and the renewable energy industry.</p> <p>Both IMO and WOC can be instrumental in reaching out to senior management and CEOs within these private sector bodies through a policy-level briefing and awareness raising exercise.</p>	<p>Since the Mid-Term Review, two major 'coating' and 'paints' representative companies have joined the GIA... Akzo Nobel and KCC Marine Coatings</p> <p>World Sailing is already heavily involved in the recreational boating aspects of the projects as is ICOMIA (boat building and recreational marine industry)</p> <p>Representation from ports and the cruise-ship industry would still be valuable partners</p> <p>Major players need to be approached at the higher Board/CEO level to explain importance of their potential role</p> <p>The Department of Partnerships and Projects may be able to assist with making these connections as could the new project position for Communications and Awareness</p> <p>So far WOC has not been responsible for bringing any industry members into the GIA. The Project considers it inappropriate now to rely on WOC for this function</p>

Recommendation 5	
Recommendation	Way Forward
<p>The Project Global Industry Alliance to open a dialogue with the other IMO GIAs to discuss mechanisms for streamlining the GIA process across all three.</p> <p>This should be initiated by the Department of Partnerships and Projects through a discussion on how to rationalise the situation of having three IMO GIAs (e.g. possibly through one single membership for all three GIAs, a two-tier fee structure, or the possibility of amalgamating the three bodies).</p> <p>Meanwhile, the Project GIA can focus on promoting cross collaboration and exchange of information between GIAs.</p>	<p>It would be useful to bring all GIAs together for an interactive discussion on whether they feel that some form of annual cross-GIA meeting (or similar) would be of value</p> <p>Department of Partnerships and Projects could most logically act to initiate this discussion and to ensure continued exchange of information between the GIAs</p>

Recommendation 6	
Recommendation	Way Forward
<p>The Project to open a dialogue regarding the long-term vision for biofouling management and regulations with a view to creating a 'level playing field'.</p> <p>The purpose of this dialogue would be to consider how individual national management and regulatory processes might function fairly and whether a new global treaty/agreement may be required in the future.</p> <p>This is part of the function of the R&amp;D Forum and the Industry forum. Both have proved to be an ideal venue to bring together stakeholders representing all points of view without the constraints of IMO discussions.</p> <p>It is hoped that these valuable meetings can be reintiated in the near future.</p>	<p>Key Recommendation from a report commissioned by the GIA to the IMO Sub-Committee on Pollution, Prevention &amp; Response in 'Compilation and comparative analysis of existing and emerging regulations, standards and practices related to ships' biofouling management' was to consider the development of a mandatory international instrument for biofouling, based on the revised Biofouling Guidelines</p> <p>It would be inappropriate for either IMO or possibly even the Project to be proposing any form of global regulatory process</p> <p>It is up to the countries to decide how they want to ensure a 'level playing field' is adopted for Biofouling regulations</p> <p>However, if requested through the appropriate channels, the Project could assist with arranging an appropriate forum for discussion between the countries</p>



Outcome of the mid-term review of the GloFouling Partnerships project – Mr. David Vousden, Independent evaluator (continued)

Recommendation 7	
Recommendation	Way Forward
IOC-UNESCO and WOC to review and finalise a new ToR and workplan and to agree this with the GEF agency and implementing Partner (UNDP and IMO) as a matter of priority	<p>A new Work-plan was developed and agreed between IOC-UNESCO and WOC but no actual Terms of Reference have been signed</p> <p>Communication between WOC and the Project would need improvement in order for WOC to deliver on its expected activities</p> <p>This was recently highlighted when WOC went ahead and launched a global competition for innovative solutions to biofouling without engaging with the GloFouling Project as to how this would be carried out</p> <p>The MTR understands that IOC is working with WOC to try to improve interaction and communications</p>

Recommendation 8	
Recommendation	Way Forward
The Project to continue its dialogue and engagement with the Mediterranean through REMPEC (The Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea) so as to ensure that Mediterranean region has every opportunity to be involved in the biofouling issue and better control of Invasive Alien Species in relation to Project activities	The PCU has shared its guides and other materials with REMPEC so that they may replicate some of the national activities, as implemented under the GloFouling Project, within the Mediterranean region.

Recommendation 9	
Recommendation	Way Forward
An early priority in revising the workplan and budget should be the contracting of an additional staff member with responsibility for communication and coordination of outreach and awareness and for tracking and reporting on activities and implementation	<p>This position is still not filled</p> <p>It would seem appropriate if the project steering and management bodies (GPTF and Executive Committee) confirm the Terms of Reference and the budget source for this post as soon as possible and requests IMO to move rapidly to advertise, select and recruit</p>

Recommendation 10	
Recommendation	Way Forward
The Department for Partnerships and Projects to discuss with IMO senior executives how to streamline the administrative processes within IMO so as to better support Projects such as the GloFouling Partnerships project	<p>This constraint to Project delivery has been raised in previous Glo-X MTRs and Evaluations. This is not a major problem with other UN Executing Partners so it should not really be a consistent problem for IMO</p> <p>It has also been raised as a concern by donors/co-financers</p> <p>This may now be the responsibility of DPP to liaise with IMO Senior Administration as to how this can be resolved or it will undoubtedly arise as a criticism in the Terminal Evaluation</p> <p>The findings of the TEs are now reviewed and taken very seriously by both UNDP and GEF</p> <p>It is understood that IMO is undertaking monthly HR planning and follow-up meetings, to support timely planning and recruitment.</p>

Recommendation 11	
Recommendation	Way Forward
The Project to be directly involved with the GESAMP Working Group 44 on Biofouling and particularly in the context of its comprehensive report on biofouling, which will almost certainly be of considerable value to the GFP Project. It is also worth observing that the overall functioning of the WG could be very supportive within a revised Project workplan	<p>The Objective of this Working Group is to support the mandates and programmes of work within IMO and its GloFouling Partnerships</p> <p>The Project should have actual representation on the Working Group as it has to provide regular input to the Working Group report, particularly in the context of the GFP Project needs and requirements</p> <p>This Report aims to provide a global overview of the impact of biofouling across all maritime industries and structures and support the initial information requirements of the GloFouling Partnerships for understanding the role of biofouling in the transfer of Non-Indigenous Species</p> <p>This report could be of some value to the PPR Correspondence Group reviewing the Biofouling Guidelines</p>

Recommendation 12	
Recommendation	Way Forward
The Project should consider collaborating with the World Resources Institute to develop a Blue Paper and Summary for Decision-Makers for the High-Level Panel for a Sustainable Ocean Economy. IMO may be able to initiate these discussions through contacts at WRI.	<p>The Project will analyse its existing/potential input to the work of the High-Level Panel for Sustainable Ocean Economy</p> <p>IMO has an Ocean Cross-Divisional Working Group which provides input to blue papers and the HLP at a organisational level (i.e. not at a project level)</p> <p>The Project, though the lead of the IMO Oceans Cross-Divisional WG, will undertake outreach to WRI in regard to biofouling issues</p>

Recommendation 13	
Recommendation	Way Forward
The project to review the stakeholders and strategic partners currently associated with the project and its activities to: A. identify any gaps in terms of valuable partners or appropriate stakeholders that are currently missing or not effectively engaged and, B. to define the roles of each of those partners and stakeholders within the project.	<p>A significant number of new stakeholders and partners have joined the project since the original list of Key Stakeholders was adopted into the Project Document and since Project Inception</p> <p>The original Key Stakeholder list did not identify the roles of the Stakeholders which is now an essential requirement in Project Documents</p> <p>The Project now aims to go ahead and analyse the current partner and stakeholder involvement and any gaps and develop a strategy on how to engage any further appropriate stakeholders so as to address any gaps</p>

Recommendation 14	
Recommendation	Way Forward
Some concerns have been raised about content and navigation on the website (these concerns are raised in the section on Communication and Knowledge Management) The PCU is advised to review the site for potential improvements	<p>The website has been updated and improved but is probably in need of further professional attention</p> <p>Part of the function of the Communications and Awareness post (which is still in the administrative pipeline) is to have responsibility to manage the updating of the website</p>

**Annex 8** Presentations – Day 3 (continued)

**Outcome of the mid-term review of the GloFouling Partnerships project – Mr. David Vousden, Independent evaluator (continued)**

Recommendation 15	
Recommendation	Way Forward
<p>The Project should undertake an activity for drafting and adopting a full <b>Sustainability Road-Map</b> for post project work.</p> <p>Such a Road-Map should address such issues as the need to update the national status assessments, revision of management strategies as appropriate, on-going support for and from the GIA, ownership of ongoing implementation at the regional/national level, securing the long-term existence of the website within the appropriate platform, ensuring availability of reference materials, continuity of training delivery, etc.</p>	<p>The Project confirms that the development of this will begin in 2023, with involvement of appropriate international financial institutions and potential interested donors, with the aim to finalise a Road-Map, which could provide the basis for future project(s) addressing gaps and novel needs</p> <p>The aim is to have the Road-Map adopted and function by April 2024 so as to transfer many of the activities into a permanent sustainable status prior to the end of the Project in May 2025</p>

Summary of Current Status following MTR
<p>The MTR rated the Project's Progress towards results as <b>Satisfactory to Moderately Satisfactory</b></p> <p>Under the circumstances this is highly commendable and the PCU and its GPTF and Countries are to be congratulated on adapting to the dire situation presented by the pandemic when many other Projects were not able to</p> <p>The PCU had to be highly proactive to respond to the additional work and preparation required to adapt and deliver the project activities 'on-line' instead of 'on-site', including dealing with time differences and the consequent need for multiple activities</p> <p>In particular, the PCU responded quickly and efficiently to the situation through an Adaptive Management process which kept the Project functioning and now leaves it in a good position to deliver on its overall objective</p> <p>There is now a formal adoption of an extension and a revised work-plan and results framework that realistically captures the potential delivery and achievements</p>



**The Mid-Term Review**

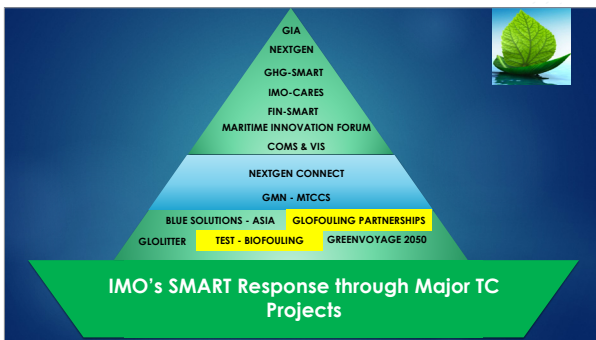
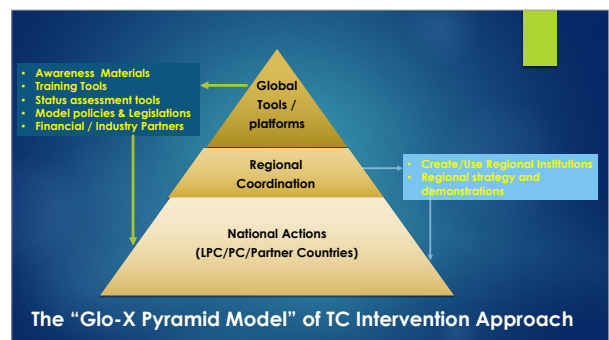
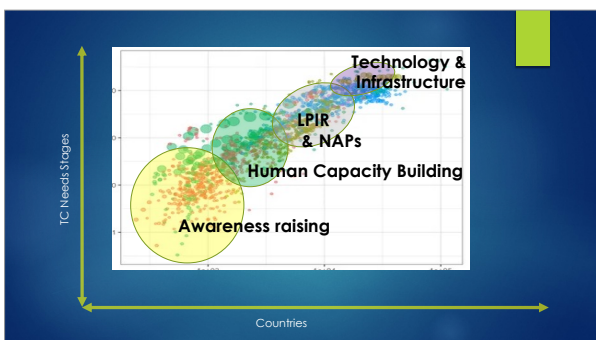
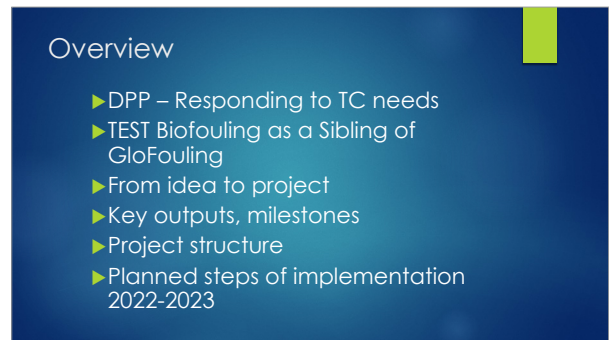
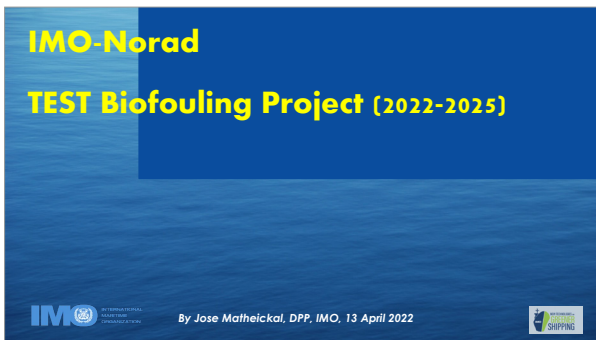
With this GPTF, the Project should now be back on track toward a successful conclusion and hopefully an excellent Terminal rating

**Many Thanks!**

To all of you who gave up your time to engage in the review process with enthusiasm and support




TEST Biofouling project – Mrs. Gyorgyi Gurban, Head, Projects Implementation, DPP, IMO



GloFouling + TEST BIOFOULING: a new sibling is born

- ▶ Promotes implementation of IMO's Biofouling Guidelines and the use of best practices
- ▶ Complements UNDP-GEF GloFouling Partnerships Project
- ▶ Demonstration sites, showcase technology through pilots both country, regional level
- ▶ Same member states who participate in GloFouling (12 LPCs+13 PCs)
- ▶ Focusing on technology demonstration activities related to biofouling management
- ▶ Funded by Norad/Norway (4 million USD for 4 years)

Test Biofouling and Glofouling

- ▶ TEST Biofouling to complement GloFouling by:
  - 12 small-scale national demonstration projects (Lead Countries);
  - 3 large-scale Regional Demonstration Pilots (most cutting-edge technologies/in-water cleaning);
  - Regional perspectives, coordination supporting also specific needs of LDCs/SIDS (focus regions Africa, Pacific and Caribbean)
  - 2 additional global training packages (together with regional demos, available to both LPCs/PCs)
  - Additional trainings in PCs, building on GloFouling Partnerships/GIA trainings, capacity building material

TEST Biofouling: from idea to project

IMO-Norad project to demonstrate solutions for GHG and biosafety

TEST Biofouling Project will demonstrate technical solutions to stop invasive species and reduce GHG emissions from ships

**TEST Biofouling project – Mrs. Gyorgyi Gurban, Head, Projects Implementation, DPP, IMO**  
(continued)

TEST Biofouling: key outputs, milestones

- ▶ demonstrating viable technological solutions and business models
- ▶ strengthened knowledge on potential financial resources;
- ▶ addressing biosafety/biodiversity loss and GHG
- ▶ additional capacity built among developing countries especially in SIDS and LDCs

Test Biofouling: Structure

- ▶ Side, but separate project/own governance structure (noting specific scope)
- ▶ Regional technical/R&D support: MTCCs
- ▶ GPTF- IMO, MTCCs, LPCs, PCs (same as GloFouling) and knowledge partners;
- ▶ All GloFouling Partnership Countries and Partners encouraged to showcase interest in cooperation /participation.

Test Biofouling: 2022-2023 Plan

- ▶ Set up governance structure/PCU;
- ▶ Implementing arrangements regional level/national level;
- ▶ Analysis of country and regional potential pilots and capacity building needs;
- ▶ Close cooperation with GloFouling Partnership operationalized



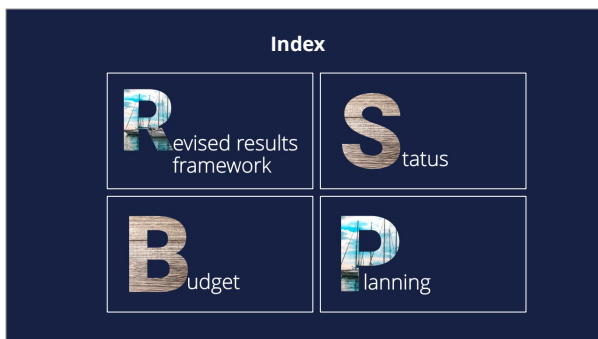
Thank  
you very  
much!

Contact: GloFouling PCU and/or  
Gyorgyi Gurban (Head, Projects)



**Annex 8** Presentations – Day 3 (continued)

**Plan of activities and budget 2022-2025 of the GloFouling Partnerships project**



**Mid-term review: Next stages of the project**

<b>Recommendation 1:</b> Request project extension (18 months)	✓
<b>Recommendation 2:</b> Review Results Framework	Proposal to be reviewed now
<b>Recommendation 3:</b> Revise work plan for the 2nd part of the project	Proposal to be reviewed now
<b>Recommendation 5:</b> GloFouling GIA to open a dialogue with the other IMO GIAs	Scheduled for 2022
<b>Recommendation 7:</b> IOC-UNESCO and WOC to finalise next workplan	✓
<b>Recommendation 9:</b> Additional staff member	Initiated
<b>Recommendation 11:</b> PCU directly involved with GESAMP	✓
<b>Recommendation 14:</b> Enhanced website	Initiated
<b>Recommendation 15:</b> New activity: sustainability Road-Map for post-project work	Included in work plan 2024-5

**Review of Results Framework**  
GPTF 2/3/1 page 41

The Mid-term review concluded that even with a 18-month extension, the project's Results Framework had to be revised to make it more feasible and achievable.

As a result, some activities were:

- Redesigned (delivered, but differently)
- Downsized (target reduced)
- Deleted

**Review of Results Framework**  
GPTF 2/3/1 page 41

Activity	Amendments
1.1.1.2	National Biofouling Management Strategies and action plans status assessments drafted in 6 <del>10</del> PCs
1.1.4.2	2 outreach regions have included biofouling management approaches in their strategies and/or action plans.
2.1.1.2	Design and deliver national training on inspection methodologies in LPCs.
2.1.1.4	Design and deliver national training on in-water cleaning in LPCs.
2.1.3.6	Develop and publish best practices for inspection methodologies.
2.1.3.7	Develop and publish best practices for in-water cleaning and maintenance.
2.3.1.1	Implement demonstration sites <del>in</del> with participation from all LPCs. At least 2 Demonstration projects <del>completed in at least 10</del> provided to LPCs, to showcase effective approaches to biofouling
3.1.2.1	<del>Three</del> At least 1 session of the Biofouling Innovation challenge Ocean Investment Platform organised at the global level contributing to increased investment in biofouling management and technologies.

**Review of Results Framework**  
GPTF 2/3/1 page 41

Activity	Amendments
5.1.1.5	New activity: Develop a sustainability road map for post-project work by LPCs and RCOs.



**Annex 8** Presentations – Day 3 (continued)

**Plan of activities and budget 2022-2025 of the GloFouling Partnerships project (continued)**

### Review of Results Framework

GPTF 2/3/1 page 41

#### National strategies and action plans

Activity	Previous	Amendments
1.1.1.2	National Biofouling Management Strategies and action plans drafted in 10 PCs	National Biofouling Management Strategies and action plans status assessments drafted in 6 PCs

**Comments:**

- The experience accumulated from previous IMO projects has demonstrated that "isolated" national strategies, without previous assessments, have been rarely implemented or followed up.
- Developing a national status assessment report as a first step in the LPIR process is a more effective use of resources.

### Review of Results Framework

GPTF 2/3/1 page 41

#### Outreach regions

Activity	Previous	Amendments
1.1.4.2	2 outreach regions have included biofouling management approaches in their strategies and/or action plans.	2 outreach regions have included biofouling management approaches in their strategies and/or action plans.

**Comments:**

- Activity cancelled due to need to prioritise PCU efforts in core activities in LCPs and strategic regions.
- Nonetheless, when the opportunity arises, the PCU may still supporting the process in regions that have a strong implementing partner. This is the case of the Mediterranean, with REMPEC.

### Review of Results Framework

GPTF 2/3/1 page 41

#### Best practices and training course for inspection methodologies

Activity	Previous	Amendments	TEST Biofouling
2.1.1.2	Design and deliver national training on inspection methodologies in LPCs.	Design and deliver national training on inspection methodologies in LPCs.	TEST Biofouling will develop best practices report and design and deliver a training package
2.1.3.6	Develop and publish best practices for inspection methodologies.	Develop and publish best practices for inspection methodologies.	

**Comments:**

- Activity cancelled as per recommendation from Mid-term review

### Review of Results Framework

GPTF 2/3/1 page 41

#### Best practices and training course for in-water cleaning

Activity	Previous	Amendments	TEST Biofouling
2.1.1.4	Design and deliver national training on in-water cleaning in LPCs.	Design and deliver national training on in-water cleaning in LPCs.	TEST Biofouling will develop best practices report and design and deliver a training package
2.1.3.7	Develop and publish best practices for in-water cleaning and maintenance.	Develop and publish best practices for in-water cleaning and maintenance.	

**Comments:**

- Activity cancelled as per recommendation from Mid-term review

### Review of Results Framework

GPTF 2/3/1 page 41

#### Demonstration sites

Activity	Previous	Amendments	TEST Biofouling
2.3.1.1	Implement demonstration sites in all LPCs. Demonstration projects completed in at least 10 LPCs, to showcase effective approaches to biofouling	Implement demonstration sites in with participation from all LPCs. At least 2 Demonstration projects completed in at least 10 provided to LPCs, to showcase effective approaches to biofouling	TEST Biofouling will implement demonstration sites

**Comments:**  
Demonstration sites undertaken by TEST Biofouling will be national and regional

### Review of Results Framework

GPTF 2/3/1 page 41

#### Ocean investment platforms (World Ocean Council)

Activity	Previous	Amendments
3.1.2.1	Three sessions of the Ocean Investment Platform organised at the global level contributing to increased investment in biofouling management and technologies.	three At least 1 session of the Biofouling Innovation challenge Ocean Investment Platform organised at the global level contributing to increased investment in biofouling management and technologies.

### Review of Results Framework

GPTF 2/3/1 page 41

#### New activity

Activity	Previous	Amendments
5.1.1.5	No previous text (new activity)	Develop a sustainability road map for post-project work by LPCs and RCOs.

**Comments:**  
As recommended by the Mid-term review (recommendation number 15)



**Annex 8** Presentations – Day 3 (continued)

**Plan of activities and budget 2022-2025 of the GloFouling Partnerships project (continued)**

**Status of LPCs (updated)**

Country name	National Task Force	National Communication	National status (incl. legal assessment)	National strategy (incl. national outreach plan)	National economic assessment	National measures drafted	Introductory training course
Brazil							
Ecuador							
Fiji							
Indonesia							
Jordan							
Madagascar							
Mauritius							
Mexico							
Peru							
Philippines							
Sri Lanka							
Tonga							
Target(s):	NTFs established and meeting	National website or pages on biofouling and IAS	Report finalised	National strategy and action plan endorsed	Report finalised	National measures drafted.	

**Status of RCOs (updated)**

Region	Regional organization name	Regional Task Force	Regional strategy/action plan	Regional Communication	Support to national and regional activities
South East Pacific	CPPS				
South East Asian Seas	PEMSEA				
Red Sea & Gulf of Aden	PERSGA				
South Asian Seas	SACEP				
Pacific	SPREP				
Target(s):	RTFs established and meet at least once, allowing effective co-ordination of GloFouling Partnerships Plans	Developed regional development plan	Regional website or pages on biofouling and IAS	Supported national activities of beneficiary countries. Organized regional activities to support legal and technical capacity building	

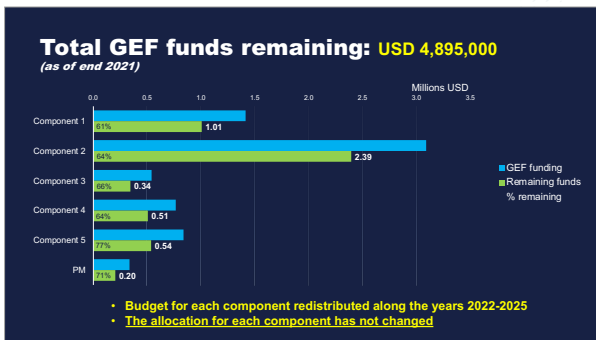


**Budget revision**

As a result of the MTR, the budget was revised for an 18-month no cost extension (see Annex 4 of doc 2/9/1)

Extension request and budget approved by UNDP in April 2022

The budget allocated for activities remains the same. PCU salaries (including new position are sourced mainly through savings and fundraising)



**Budget allocation (2022-2025) Policy (national and regional)**

Comp.	Action name	Budget
<b>National level policy</b>		
1	Finalise National status assessment reports in LPCs	0
1	Develop national strategy and action plan in LPCs	192,000
1	Online seminars for using the Guide on economic assessments	0
1	Develop national economic assessment reports in LPCs	120,000
1	Implement dissemination/communication campaign in LPCs to promote biofouling management for recreational boating	17,000
1	Develop national status assessment reports in PCs	60,000
<b>Regional level policy</b>		
1	Regional awareness seminars/workshop (1 in the Pacific)	0
1	Regional Task Force Meetings	202,734
1	Development of regional strategies and action plans	0

**Budget allocation (2022-2025) Training**

Comp.	Action name	Budget
<b>Training</b>		
2	LPCs to deliver "Introductory training course to biofouling management" through national training institutions	118,294
2	Development of eLearning course on biofouling management	0
2	Development of training modules on non-shipping industries (aquaculture and offshore oil and gas) (IOC-UNESCO)	32,400
2	Development of new training course on Biofouling management plans and record books	18,000
2	Delivery of National training in LPCs on biofouling management plans and record books in LPCs	170,061
2	Development of training course on dry dock operations and application of anti-fouling paints	20,000
2	Delivery of National training in LPCs on dry dock operations and application of anti-fouling paints	170,061

**Budget allocation (2022-2025) Reports and publications**

Comp.	Action name	Budget
<b>Development of global reports and publications</b>		
2	Publication of report on biofouling and GHG emissions	50,000
2	Publication of Guide for Rapid economic assessments	27,500
2	Publication of Best practices for recreational boating	20,000
2	Publication of Best practices for aquaculture (IOC-UNESCO)	20,000
2	Publication of Best practices for offshore oil and gas (IOC-UNESCO)	20,000
2	Best practices for ocean renewable energy industry (IOC-UNESCO)	20,700
2	Best practices for Biofouling Management Plans and Record Books	55,000
2	Best practices for drydock operations and application of anti-fouling paints	55,000
2	Global summary of economic impact of biofouling	27,500
2	Develop and publish GESAMP report on biofouling and invasive species (IOC-UNESCO)	156,116
4	Proceedings of 2nd R&D Forum	0
4	Proceedings of 3rd R&D Forum	0

**Annex 8** Presentations – Day 3 (continued)

**Plan of activities and budget 2022-2025 of the GloFouling Partnerships project (continued)**

### Budget allocation (2022-2025) Awareness materials

Comp.	Action name	Budget
	Awareness raising	
2	Develop video 1	50,000
2	Develop video 2	151,555
2	Draft news items, articles and social media	0
2	New design for website	15,000
2	Develop other awareness materials	51,044
2	Translation of materials	70,000

### Budget allocation (2022-2025) Knowledge and demonstrations

Comp.	Action name	Budget
	Knowledge and demonstration pilots	
4	GloFouling webinars	0
3	Innovation Challenge	43,303
4	R&D Forum and Exhibition on Biofouling Management	315,726
2	Demonstration pilot on in-water cleaning	20,776
2	Demonstration on biofouling management in high value marine ecosystems	155,885
2	Demonstration pilot on drydock operations	54,578
3	Workshop on biofouling for Arab women	64,739
4	Knowledge hub updated	5,000

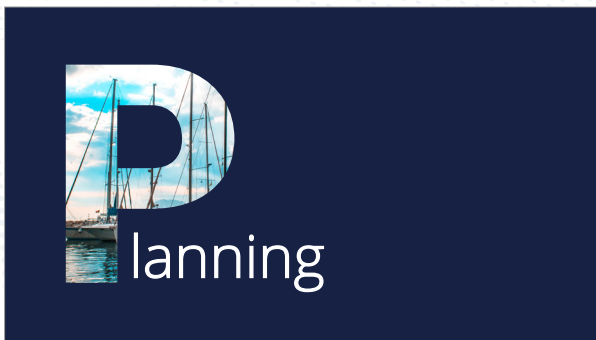
### Budget allocation (2022-2025) Other activities

Comp.	Action name	Budget
	Other Items	
3	Industry promotional activities	22,010
3	WOC webinars	0
3	WOC Sustainable Ocean Summit	40,918
5	Annual (and final) project reports	0
5	Project sustainability road-map	20,000
5	Terminal evaluation of the project	54,521
5	GPTF meetings	167,093
5	Project closure	0
5	Coordination with GEF International Waters	34,474
	Project management	295,350
All	Project technical and admin support	990,291
	Other activities: Accruals 2021 (considered as 2022 budget by UNDP) and activities under implementation (GPTF-2, ongoing reports and tenders), Project representation in international conferences.	477,102



**2<sup>nd</sup> meeting Global Project Task Force**  
London, 11-13 April 2022

**Lunch break**

### Project planning: 2022

Activity	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Regional PEMSEA (2)				28								
Regional SACEP												
Regional CPPS												
Seminar SPREP												
National training Intro course in LPCs												
National status asmts reports												
National strategies												
Online seminars Eco Assmits												
National economic asmts reports												
R&D Forum										11-14		
Demo site IWC												



### Project planning: 2022 (continued)

Activity	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Report best practices for BFMPs & BFRBs												
Development of new training course												
eLearning course												
Best practices aquaculture (ioc-unesco)												
Best practices offshore oil and gas												
Innovation Challenge												
GIA meetings & work												
SOS Conference												
Workshop Arab women												
Webinars					5							

**Annex 8** Presentations – Day 3 (continued)

**Plan of activities and budget 2022-2025 of the GloFouling Partnerships project** (continued)

**Project planning: 2023**

Activity	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
RTF-SPREP												
RTF East Africa												
Training on BIRMPs & BFRBs (delivery)												
Communication event in LPCs (recreational?)												
National strategies												
National economic asstmt. reports												
National status assessments PCs												
Demo site biofouling management in MPAs												



**Demonstration site**  
Managing biofouling for marine protected areas

- Bringing together global experience on the subject
- Sharing experience, protocols and procedures
- Documentary filming and production

**Project planning: 2023 (continued)**

Activity	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Report best practices for drydock operation												
Development of new training course												
Best practices ocean energy (oc.unesco)												
GESAMP report												
Sustainability road-map												
GIA meetings & work												
SOS Conference												
Webinars												
Ex-Com meeting												

**Project planning: 2024**

Activity	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
R&D Forum												
Demo site drydock operations												
Delivery national training dry dock operations												
Global report eco asstmts.												
GIA meetings & work												
Webinars												
National measures?												
Regional strategies finalised/endorsed?												
Ex-Com meeting												
Terminal evaluation												

**Project planning: 2025**

Activity	JAN	FEB	MAR	APR	MAY
Terminal evaluation (finalised)					
GPTF-3					

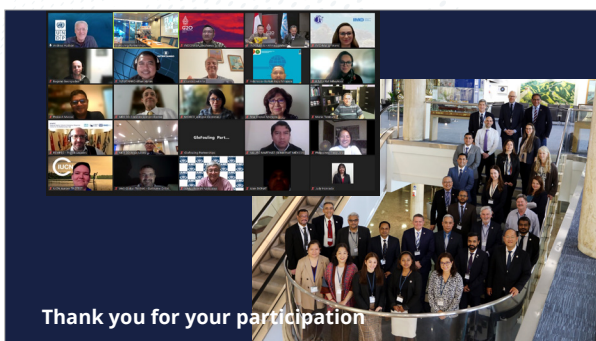


**Thank you**

For more information  
 website: [www.glofouling.lmo.org](http://www.glofouling.lmo.org)  
 Email: [glofouling@lmo.org](mailto:glofouling@lmo.org)

For our latest news, follow us on:  

2nd Global Project Task Force meeting  
London, 11-13 April 2022




**2nd meeting Global Project Task Force**  
London, 11-13 April 2022

**Coffee break**

# Annex 8 Presentations – Other business

## BIMCO presentation

**BIMCO**

### Biofouling and in-water cleaning

BIMCO  
Ashok Srinivasan, Manager, Maritime Safety and Security

IMO Glofouling partnership – 2<sup>nd</sup> meeting – Apr 2022

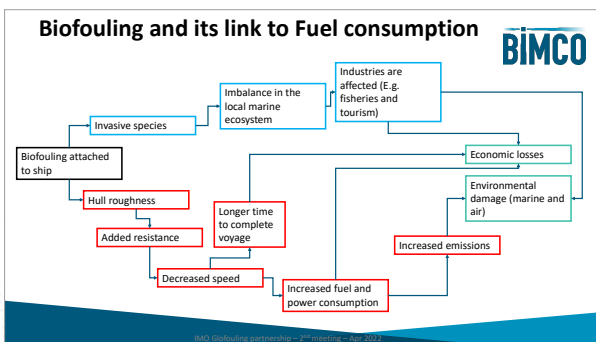
**BIMCO**

**What is the issue?**

1. Risk of Invasive aquatic species
2. Possible local water body pollution
3. Hull drag leading to higher fuel bill and increased GHG
4. Possible impairment in the performance of anti fouling systems

Source: nps.gov

IMO Glofouling partnership – 2<sup>nd</sup> meeting – Apr 2022



**BIMCO**

### What are BIMCO's main goals?

- Creating a level playing field for the shipping industry
- Supporting business through standardisation and harmonisation
- Delivering useful tools, information and advice for the industry

IMO Glofouling partnership – 2<sup>nd</sup> meeting – Apr 2022

**BIMCO**

### Future?

	First spoken at IMO	Guidelines	Partnership programmes	Mandatory requirements
Ballast water	1988	1991- Ballast water guidelines	2000-2004 Globalballast programme 2008-2017	IMO BW/M convention Adopted in 2004 In force 2017
Biofouling	2006	2011 – Biofouling guidelines	Glo-fouling programme ( 2018 .. To run for 5 years)	?

IMO Glofouling partnership – 2<sup>nd</sup> meeting – Apr 2022

**BIMCO**

### Where we started and where we are?

**2018**

**3 years of work..**

**2021**

Small scale implementation project

IMO Glofouling partnership – 2<sup>nd</sup> meeting – Apr 2022

**BIMCO**

### In-water cleaning standard

**Timeline of the standard ( From May 2018 – April 2022)**

- Phase 1 – Analysis and planning
- Phase 2 – Proposals
- Phase 3 – Solutions
- Phase 4 – Test of solutions
- Phase 5 – Finalisation

Image: Hullwiper

**WE ARE HERE**

IMO Glofouling partnership – 2<sup>nd</sup> meeting – Apr 2022

**BIMCO**

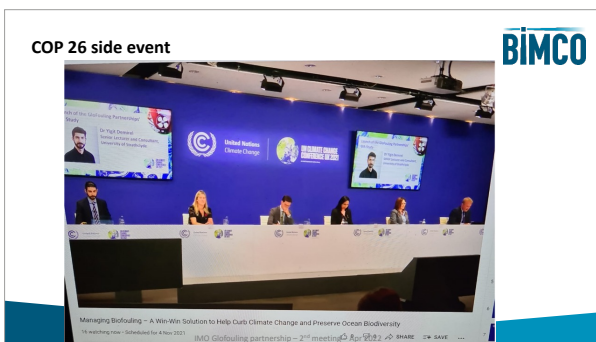
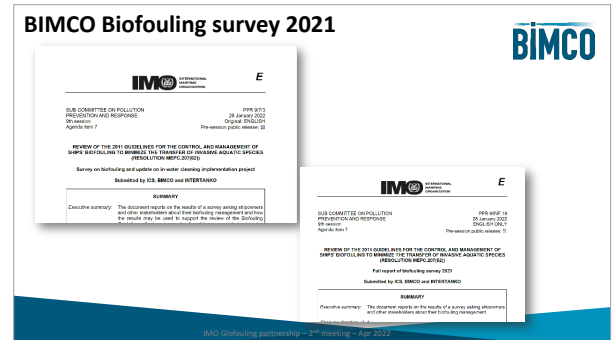
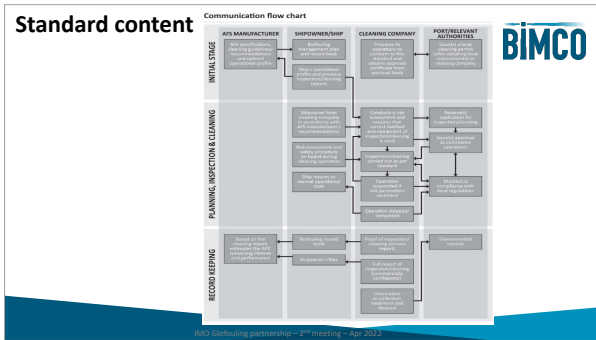
### Approval of in-water cleaners

IMO Glofouling partnership – 2<sup>nd</sup> meeting – Apr 2022



**Annex 8** Presentations – Other business (continued)

**BIMCO presentation (continued)**



**Changing world**

1. IMO – Guidelines on biofouling management under revision
2. Countries introducing unilateral requirements

The infographic includes logos for the United States and Australia. It features a book titled 'CONTROL AND MANAGEMENT OF SHIP BIOFOULING' and a map of New Zealand with text about biofouling requirements. It also lists '5 things to know' about the proposed Australian biofouling management requirements.

IMO Biofouling partnership – 2<sup>nd</sup> meeting – Apr 2022

**GIA**

- Compliance barriers
- Guidelines are critical (especially in the absence of biofouling regulations)

IMO Biofouling partnership – 2<sup>nd</sup> meeting – Apr 2022

**PPR work**

- Correspondence group work in progress
- Inspection frequency
- Cleaning only in dry docking
- Biofouling inspection by authorised companies only

This year from 2022 up to PPR 10 is critical.

**Participation in CG is key!!**

IMO Biofouling partnership – 2<sup>nd</sup> meeting – Apr 2022

**One big challenge**

**Niche areas!!**

IMO Biofouling partnership – 2<sup>nd</sup> meeting – Apr 2022

Thank you!  
hse@bimco.org

**Our vision**  
To be the chosen partner trusted to provide leadership to the global shipping industry.

**Our mission**  
To be at the forefront of global developments in shipping, providing expert knowledge and practical advice to safeguard and add value to our members' businesses.

IMO Biofouling partnership – 2<sup>nd</sup> meeting – Apr 2022

**Annex 8** Presentations – Other business (continued)

**GloFouling Partnerships project team**



## More information?

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[www.imo.org](http://www.imo.org)

## GloFouling Partnerships Publications

