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Resilient nations.



Global Industry Alliance (GIA) for Marine Biosafety

Concept paper for public-private participation

Background

1 The introduction of invasive aquatic organisms into new marine environments not only affects biodiversity and ecosystem health, but also has measurable impacts on a number of economic sectors such as fisheries, aquaculture and ocean energy. Addressing invasive aquatic species is not only a matter of ensuring the health and integrity of marine ecosystems, but ultimately about safeguarding ecosystem services that sustain the livelihoods of coastal communities across the globe.

2 In order to assist countries to address the transfer of invasive aquatic species through ships, the International Maritime Organization (IMO), in collaboration with the Global Environment Facility (GEF) and United Nations Development Programme (UNDP), successfully executed a 15-year programme (titled *GloBallast*) that addressed ballast water as a pathway and supported the implementation of the International Convention for the Control and Management of Ships' Ballast Water and Sediments (BWM Convention). To expand and build on this successfully completed project, GEF, UNDP and IMO will now focus on biofouling, the other main pathway for invasive aquatic species related to shipping, aquaculture and other offshore activities, through another project, called GloFouling Partnerships. The GloFouling Partnerships is a five-year (2019-2023) global project with an initial budget of \$40 million from cash and in-kind contributions committed by GEF, IMO, participating countries and leading NGOs.

3 The GloFouling Partnerships will drive actions to implement the IMO [Guidelines for the control and management of ships' biofouling](#), which provide a globally consistent approach on how biofouling should be controlled and managed to minimize the transfer of invasive aquatic species. The IMO Guidelines are applicable to a wide range of shipping and offshore industries. To support a wide implementation of the Guidelines, the Project will help develop global best practices and tools and demonstrate practical ways of overcoming barriers for their implementation, creating and enabling an environment for technology development and transfer, including via the creation of a Global Industry Alliance (GIA) for Marine Biosafety.

Goal of the GIA

4 The Global Industry Alliance (GIA) for Marine Biosafety will be established under the GloFouling Partnerships as an alliance of leaders from maritime industries, especially from sectors addressed by the IMO Guidelines, who will work together and with the GloFouling Partnerships to support improved biofouling management and marine biosafety initiatives. Members are expected to collectively identify and develop innovative solutions to address common barriers and promote the development and uptake of new technologies and operational measures. Maritime industries, for the purpose of this concept paper and the GIA, include ports and marinas; coating industry; in-water cleaning service providers; technology developers; shipping companies and ship operators and managers; ship builders and dockyards; offshore oil & gas exploration and exploitation; deep sea mining companies; class societies; aquaculture industry; marine renewable energy industry; P&I clubs; yacht and sailing boat builders.

GloFouling Partnerships: Opportunity for an IMO-Industry partnership

5 Within the GloFouling Project, 12 developing countries, representing seven major marine regions, have committed to take a lead role in addressing the issue of biofouling and invasive species by building the necessary human and institutional capacity and gaining experiences which can be shared with other countries. Detailed information on the main aspects of the GloFouling Project can be found at its website www.glofouling.imo.org.

6 To lay the foundation for developing sustainable mechanisms to improve biofouling management in developing countries, the GloFouling Project is seeking partnership opportunities with all maritime industries. Such a collaboration between IMO-GloFouling and private sector partners from the industry represents a pioneering collaboration between an international regulatory body and industry to address a major environmental issue and support other benefits such as contribution to reducing the carbon footprint of shipping and other maritime industries and help its transition to a low carbon future.

7 The GIA would continue a successful initiative created in previous IMO projects that has set out a lead example and model for public-private partnerships in addressing emerging global marine

environmental issues¹. Structured correctly, this kind of partnership will allow IMO and its GloFouling Project to achieve results on a much larger scale than might otherwise be possible, creating opportunities to positively influence industry practices while benefiting from the industry strengths that contribute to advancing the global mission of the Project. Likewise, maritime industries, such as shipping, aquaculture and offshore oil and gas, have a deep and pervasive positive influence in the economies of various developing countries, helping render sustainable benefits of the blue economy and the development and dissemination of technological solutions.

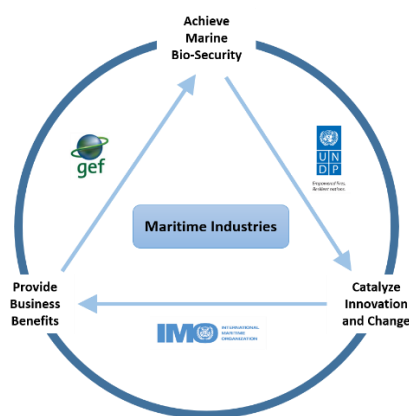


Figure 1: An initiative from the Global Environment Facility (GEF), the United Nations Development Program (UNDP), the International Maritime Organization (IMO) and Maritime industries

Priority areas for partnership

8 During the consultations that have taken place in the preparation phase of the GloFouling Partnerships Project, opportunities for partnerships between IMO and maritime industries were discussed, resulting in the following identified priority areas for partnership:

- a. Development of global and regional information clearing-house mechanisms as a one-stop access for maritime industries (best practices, codes of conduct, status of technologies, regulatory requirements).
- b. Development of tailor-made training programmes targeted at maritime industries and/or its managers, operators and seafarers.
- c. Co-organizing global conferences/symposia focusing on technology developments and sharing of maritime industry best practices.
- d. Establishing and facilitating an IMO-industry dialogue process at the global level to identify emerging issues and opportunities for partnerships.
- e. Activities that accelerate technology transfer and technology diffusion within maritime industries.
- f. Activities aimed at accelerating technology verification and approval processes.
- g. Activities that accelerate development of globally uniform compliance monitoring and enforcement practices through the development of guidelines and toolkits, including electronic information exchange systems for risk assessment and inter-regional cooperation.

Examples of activities

9 It is expected that a number of projects or activities will be undertaken using the GIA that will help advance the development and implementation of best practices to manage biofouling. A tentative list of such activities is given in Table 1. GIA partners would contribute financially and non-financially through the GIA Fund to undertake the approved activities.

¹ For previous initiatives, refer to the GIA for Marine Biosafety (GEF-UNDP-IMO GloBallast Partnerships Programme) and the GIA to support low carbon shipping ([GEF-UNDP-IMO GloMEEP Project](#)).

Table 1: Examples of activities that may be funded under the GIA (tentative list only, as proposed by potential partners during the preparation phase)

Existing barriers	Potential GIA activities
Suggested priority areas:	In-water cleaning and grooming technologies
<ul style="list-style-type: none"> ➤ Barriers for approval of in-water cleaning services in ports and other coastal areas. ➤ Lack of reliable and trusted (and publicly available) data on performance, impact and costs of in-water cleaning technologies. ➤ Reduced availability of sediment management facilities and options in ports for collection and treatment of wastes and biological material resulting from hull and net cleaning. 	<ul style="list-style-type: none"> • Promote activities that accelerate development of innovative technologies, technology verification and approval processes. • Promote defining collaborative models that support removal of barriers that impede introduction or expanded use of new solutions in shipping and port services, aquaculture and offshore marine renewables. • Promote development of a standardized method to consistently and systematically evaluate the performance of in-water cleaning technologies. e.g. How or under which circumstances should performance be assessed (testing conditions); What type of test verification is required; How to report test results. • Promote activities that generate trusted information on performance, operability, safety, durability and cost of coatings, in-water cleaning ROVs and other technologies or systems.
Suggested priority areas:	Operational improvement
<ul style="list-style-type: none"> ➤ Split incentives due to contractual agreements between charterer and ship owner (divided responsibility for fuel cost). ➤ Barriers due to heterogeneity of shipping industry (e.g. company size and ship type). ➤ Lack of information on port requirements and facilities. ➤ Poor spatial planning for shared marine coastal areas 	<ul style="list-style-type: none"> • Development or Review of Risk Assessment Systems based on operational profile of ships (e.g. Big data and application to biofouling management – how to predict potential high-risk fouling candidates). • Contribution to the development of a global knowledge hub as one-stop access to information for all maritime industries. • Form alliances with IMO and GloFouling Lead Partnering Countries to promote new technologies and operational best practices in developing countries. • Develop study on best approaches for unplanned events (e.g. damaged ships, platforms or other structures). • Develop innovative spatial planning solutions for sustainable marine resource management and reduce pests and/or diseases.

Existing barriers	Potential GIA activities
Suggested priority areas:	New and alternative coating solutions
<ul style="list-style-type: none"> ➤ Difficulties for testing research on new coating solutions. ➤ Poor understanding of a wide catalogue of new coating solutions. 	<ul style="list-style-type: none"> • Integration between the industry and academia/research for testing new coating solutions for all kinds of surfaces and nets. • Promote activities that accelerate development of innovative coating systems, technology verification and approval processes. • Development of a Decision Support System for selection of biofouling management methods.
Suggested priority areas:	Ship design
<ul style="list-style-type: none"> ➤ Limited focus on niche areas and their role as hubs for the transfer of invasive aquatic species ➤ Limited and difficult accessibility to niche areas for inspection and cleaning ➤ Limited buy-in from shipping companies to apply hull-cleaning standards and practices to niche areas 	<ul style="list-style-type: none"> • Incentivise hull designs to reduce number of niche areas and/or increase accessibility. • Review of existing technologies / techniques for monitoring, inspecting and cleaning niche areas. • Develop study on future ship design and potential changes to minimise biofouling or harbouring invasive aquatic species.
Suggested priority areas:	Recreational boating
<ul style="list-style-type: none"> ➤ Limited buy-in/awareness from recreational boating communities 	<ul style="list-style-type: none"> • Hold awareness-raising events or demonstrations in local marinas to demonstrate best practices and innovative solutions for managing biofouling (hull cleaning, applying coatings, benefits, etc.).
Suggested priority areas:	Aquaculture
<ul style="list-style-type: none"> ➤ Limited buy-in/awareness from aquaculture industry 	<ul style="list-style-type: none"> • Develop awareness-raising materials to highlight the link between biofouling on nets and invasive aquatic species. • Incentivise new net designs and structures to reduce biofouling and facilitate in-water cleaning.
Suggested priority area:	Human element
<ul style="list-style-type: none"> ➤ Poor understanding and familiarity amongst vessel managers, operators and seafarers about best practices and operational practices for managing biofouling. 	<ul style="list-style-type: none"> • Development of Industry-targeted training tools based on UN Train-X methodology.

Existing barriers	Potential GIA activities
Suggested priority areas:	Global environmental benefits, industry collaboration, research and awareness-raising
<ul style="list-style-type: none"> ➤ Lack of understanding and awareness of the impact of invasive species in marine ecosystems and the knock-on effects on human livelihoods and the wider economy. ➤ Lack of innovative collaborative business models that address invasive species, biofouling, promote energy efficiency, etc. ➤ Lack of a standardized method to assess energy efficiencies and GHG emission reduction potentials that are comparable across a spectrum of ship hull designs and can be consistently applied. ➤ Lack of knowledge exchange platforms. 	<ul style="list-style-type: none"> • Establish and facilitate a GEF-UNDP-IMO industry dialogue process at global level to identify emerging issues and opportunities for partnerships, highlight best practices and R&D on invasive species. • Co-organize global R&D and technology conferences/exhibitions (focusing on coatings, operational measures, technology transfer and capacity building, and sharing of best practices and case studies in all maritime industries). • Pilot study for Technology Transfer to Developing Regions • Promote activities that accelerate technology transfer and technology diffusion within and between maritime industries (e.g. technology demonstrations; pilot studies for technology upgrade)

Incentives and benefits for the private sector as GIA members:

10 Some of the expected benefits derived from membership of the GIA include:

- a. Access to pooled resources to identify potential solutions to different aspects of biofouling management and to overcome barriers that are perceived important by all maritime industries.
- b. Direct tied-back benefit through access to all the tools developed by the GloFouling Project, examples being tailor-made training programmes, global information clearing-house etc.
- c. Direct benefit accrued from activities that promote a globally uniform implementation of regulatory regimes applicable to maritime industries. This includes mitigation of environmental and related business risks including equal business level playing field, social acceptability, feasibility of regulations.
- d. Opportunity to inject new perspectives of the all maritime industries that highlight innovative opportunities for development based on sustainability (e.g., new technologies, improved management methods etc.).
- e. Opportunity to participate and co-organize global conferences and symposia focusing on technology developments and sharing of best practices in shipping, aquaculture, offshore and renewable marine energy.
- f. Membership of an IMO-industry dialogue forum at the global level to identify emerging issues and opportunities for partnerships and contribute to the policy discussions facilitated by GloFouling. Access to decision makers and networks around the world through GloFouling networks.
- g. Global visibility of GIA members and improved global acceptance of participating companies as good corporate citizens and industry champions in addressing marine biosafety issues through global promotions of GIA, and also through publications and awareness-raising materials developed by the GloFouling Partnerships.
- h. Partnership with a global programme such as GloFouling provides opportunities to accelerate technology commercialization, including North-South technology transfer, as well as accelerated technology diffusion within all maritime industries and in developing regions around the world. Partnership with the IMO-GloFouling and the world's most prominent environmental funding mechanism, such as the GEF, could be considered integral to long-term business development strategies. The partnership may help opening new markets or help to protect current interests by foreseeing environmental risks that may ultimately threaten all maritime industries.
- i. Opportunity for offering the in-house expertise and services to a much wider community, and such services could be procured through the Project.

GIA membership

11 The GIA will co-exist with the GloFouling Partnerships and have a five-year duration (2019-2023). GIA members will consist of companies related to maritime industries who have agreed to the annual financial membership subscription model, with a minimum contribution of **US\$ 15,000** per year. The membership fees will be utilized to form a GIA Fund that will be administered by IMO. An Industry Task Force (ITF) comprising the financial partners will be formed to act as the advisory body to the GIA and to recommend GIA Fund allocations. The ITF will ensure that the resources will be used on activities that have direct relevance to the objective of the GIA and benefit all maritime industries and partners.

12 A partnership agreement will be concluded with IMO in order to formalize the GIA. The following pre-requisites will be met by the GEF-UNDP-IMO GloFouling Partnerships before entering into any specific partnership agreements with the GIA founding partners:

- a. There will be adequate controls to ensure that any funds contributed will be used for the specific allocated project or activity.
- b. There will be a contractual relationship between IMO and the GIA Members for the establishment of the GIA and its Fund and this will specifically provide right of withdrawal upon notice.
- c. Participation of all the GIA members will be well publicised by the IMO-GloFouling Partnerships in all the promotional materials and through media, as appropriate.

Management of the GIA Fund

13 IMO will act as the fiduciary for the Fund and the Project Coordination Unit (PCU) of the GloFouling Partnerships will act as Secretary and implement the projects or activities selected by the GIA, with advice from a GIA Industry Task Force consisting of representatives from all the GIA members. A representative from one of the Industry Partners will chair the Task Force on a rotational basis. The Task Force will also have representation in the Global Project Task Force (GPTF), the advisory body for the GloFouling Partnerships Project. GIA funds will be utilized over the course of the duration of the GloFouling Project (2019-2023). The Task Force will meet at least once a year. A model structure for the GIA Fund and implementing the GIA projects and activities is given below in figure 2.

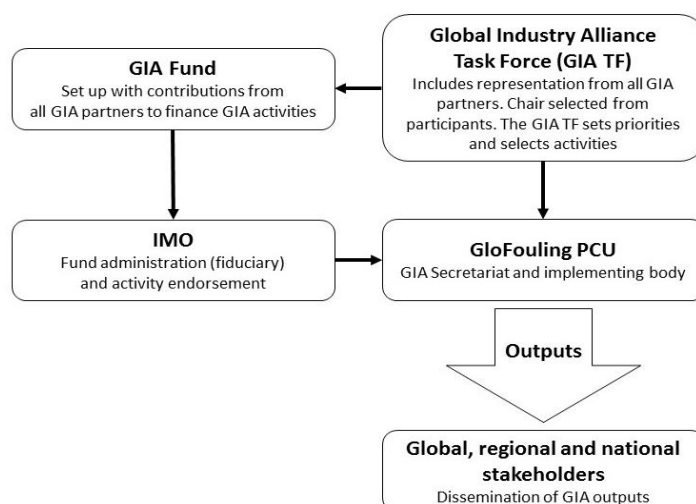


Figure 2: Model structure for the Global Industry Alliance (GIA) for Marine Biosafety

- 14 Private sector representatives are expected to play a major role in all aspects of the GIA via:
- a. Taking ownership and leadership in all relevant decision-making and actual implementation of activities for the GIA.
 - b. Identify barriers for deployment of both ship management and technology upgrades, with emphasis on existing ships in developing countries.
 - c. Define collaborative models that would remove barriers to improve the energy efficiency of ships.
 - d. Form alliances with IMO and the Lead Partnering Countries participating in the GloFouling Partnerships to develop and promote best practices and new technologies for biofouling management, with added contributions to energy efficiency, reduction of marine plastics and underwater noise from ships.

For any further information about the GIA please contact the GloFouling Partnerships Project Manager at lkhodjet@imo.org or the unit at glofouling@imo.org