



Reducing the transfer of harmful aquatic species

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How IMO GloFouling Project can contribute to goals of the Baltic Sea Action Plan

1. What is IMO Glo Fouling Project (GFP)
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What is IMO GloFouling Project

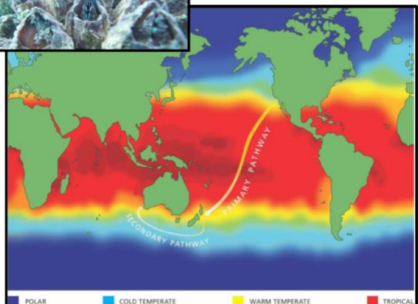
The GloFouling Partnerships project will address the transfer of aquatic species through biofouling

Intended to provide a globally consistent approach to the management of biofouling

Biofouling is the accumulation of various aquatic organisms not only on ships' hulls but as well on other Marine Structures



Biofouling and GHG emissions



Biofouling and Invasive Aquatic Species



The GEF- UNDP-IMO GloFouling Project, launched in December 2018

Ending 2023

The Intergovernmental Oceanographic Commission of UNESCO (IOC) has joined the three main partners (GEF, UNDP and IMO)

IOC Goals: To lead other marine sectors to developing best practices that may address the transfer of invasive aquatic species through improved biofouling management.

IOC-UNESCO will work hand in hand with the GloFouling Project team at IMO to increase awareness of this environmental challenge among key stakeholders.



Who are the Glo Fouling partners

GEF UNDP IMO IOC



Strategic partnerships



Strategic partnerships



Why GloFouling Project

Introduction of invasive aquatic organisms into new marine environments impacts biodiversity and ecosystem health

Has measurable impacts on economic sectors such as fisheries, aquaculture and ocean energy.

Impacts Good Environmental Status of Baltic Sea (EU – MSFD descriptor 1 and 2)

Some facts:

Oceans cover 70% of our planet

50% of the world's population living in coastal areas



Content of GFP

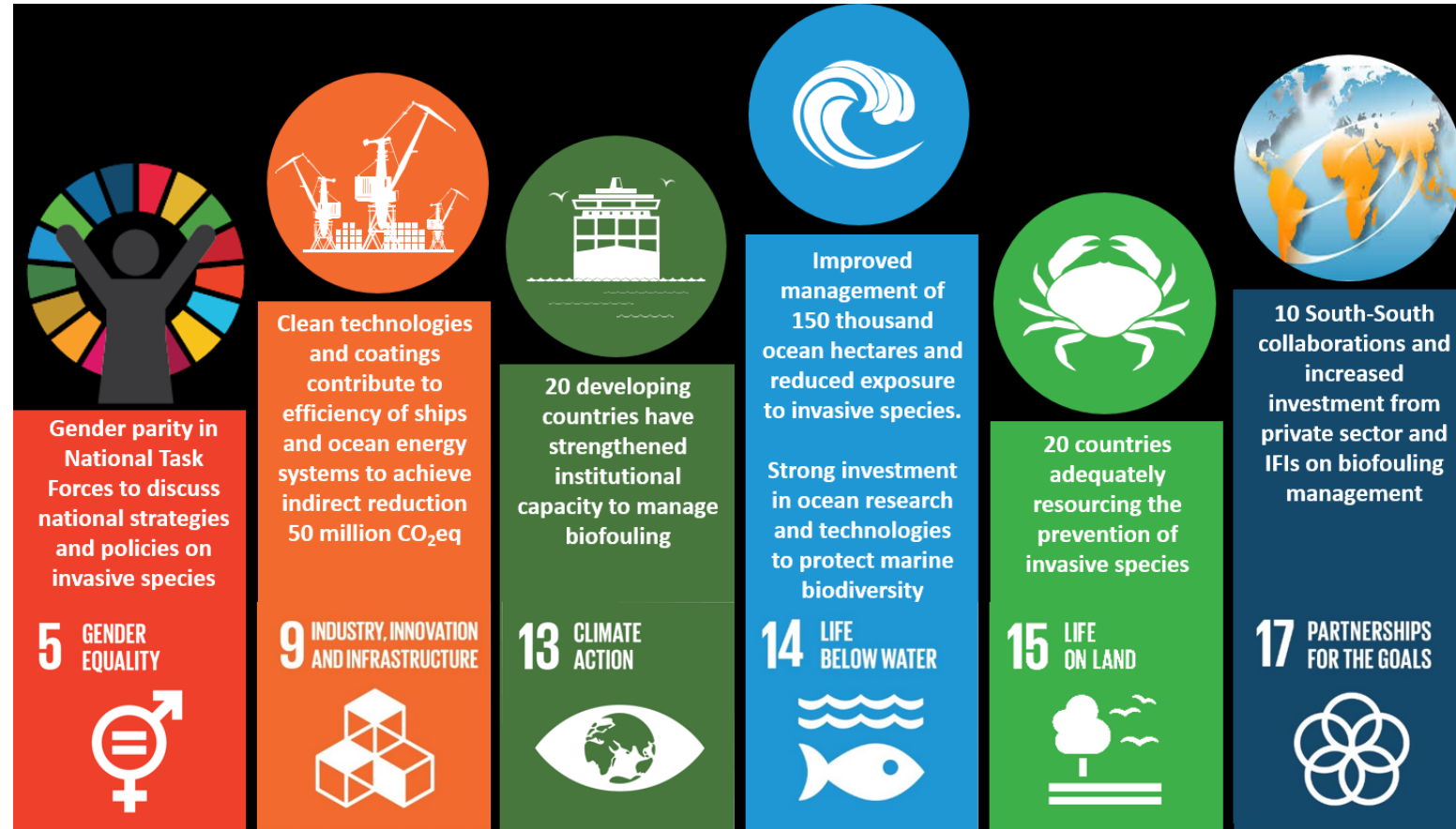
The work of GFP is divided into five major components;

**Linked to
descriptor 1
and 2 of MSFD
Controversial to
descriptor 8**

1. Legal, Policy and Institutional Reforms to minimizing risk IAS transferred through biofouling.
2. Capacity building, technical support for implementation Biofouling Management Guidelines
3. Public-private partnerships, active private sector participation at global, regional, national and local levels, development of innovative technological solutions and sustainability for control and management of biofouling.
4. Knowledge management systems, stakeholder and institutional cooperation of biofouling management and control measures.
5. Monitoring and evaluation.



Content of GFP Sustainable Development Goals



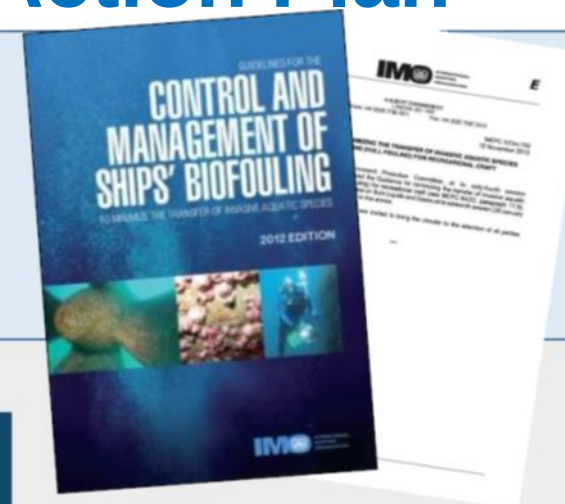


How Glo Fouling Project can assist to the goals of Baltic Sea Action Plan



IMO Instruments

- *Guidelines for the control and management of ships' biofouling to minimize the transfer of invasive aquatic species (2011 Biofouling Guidelines)*
- *Guidance for minimizing the transfer of invasive aquatic species as biofouling for recreational craft*



SDG contributions



International Waters
focal area

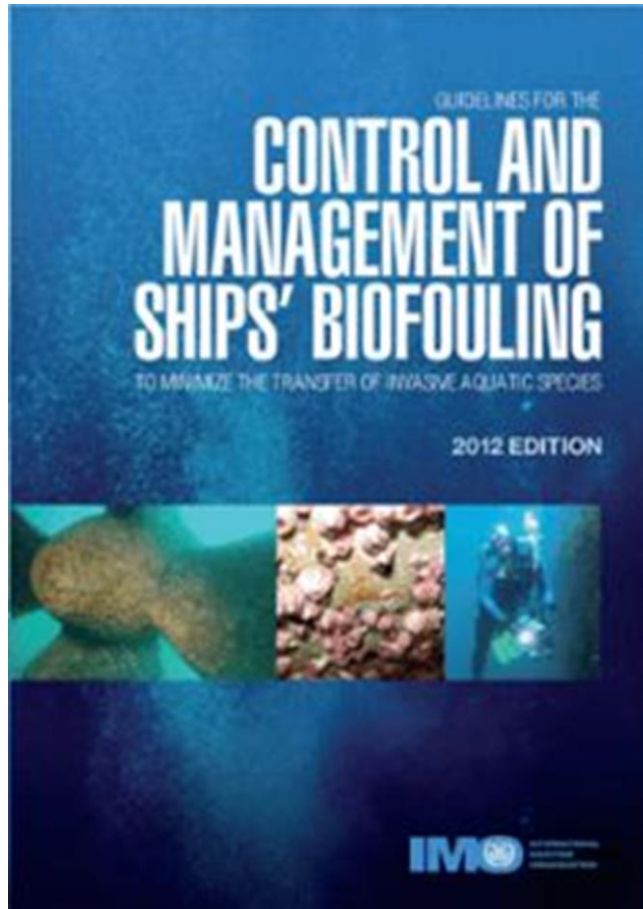


Convention on
Biological Diversity

Aichi Targets

Current situation

What does BMP recommend



The Guidelines recognise the fact that there is no 'perfect solution'

And that the threat of invasive species transferred through biofouling can cause harm

"All ships have some degree of biofouling, even those which may have been cleaned or had a new application of an anti-fouling coating system..."



Current situation

What does BMP recommend

The guidelines provide recommendations in three key areas:

1. Antifouling
2. Cleaning and inspection
3. Vessel design
Focuses particularly on niche areas

*Anti-fouling systems are currently the **primary means of biofouling prevention** and control*

*To maintain a ship as free of biofouling as **practical**, it may be advisable for the ship to undertake in-water inspection, cleaning and maintenance*

*Initial **ship design** and construction offers the **most comprehensive**, effective and durable means by which to minimize ship biofouling risks.*

Current situation

Recreational craft (what influences biofouling)

guidance is for owners and operators of recreational craft less than 24 metres

- type, age and condition of anti-fouling coating systems and hull cleaning practices;
- operating profile, including speeds, time underway compared with time moored or anchored, water temperature, and where the craft is normally kept (e.g. on land, in a marina or on an estuarine mooring);
- places visited;
- design and construction, particularly areas that are more susceptible to biofouling
- (e.g. rudders, propellers and propeller shafts).



Current situation

What does RC Guidelines recommend



The RC Guidelines recognize the fact that there is no ‘perfect solution’

And that the threat of invasive species transferred through biofouling can cause harm

“All Recreational Craft have some degree of biofouling, even those which may have been cleaned or had a new application of an anti-fouling coating system...”



Current situation

What does BMP recommend

Note: RC navigate less
than Commercial
vessels

The guidelines provide
recommendations in
three key areas:

1. Antifouling
2. Cleaning and inspection
3. Vessel design
Focuses particularly on
niche areas

*Anti-fouling systems are currently the **primary means of biofouling prevention** and control*

To maintain RC as free of biofouling as practical, it may be advisable for in-water inspection, cleaning and maintenance

*RC **design** and construction offers the **most comprehensive, effective and durable means** by which to minimize ship biofouling risks niche areas.*

Current situation Recreational craft

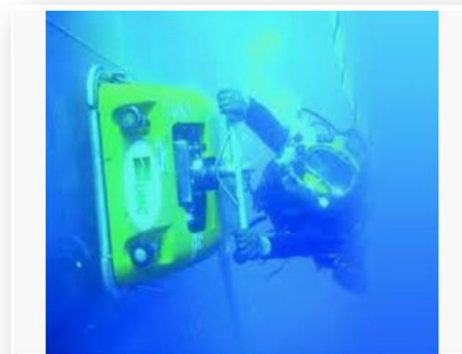
Even if trailered craft is normally kept out of the water, it still has the potential to transfer invasive aquatic species from one area to another via the craft, its trailer or associated gear and equipment



Current situation

Monitoring and cleaning where necessary

- Hull performance monitoring improving
- Limited to vessels that fit relevant equipment
- ‘Noon day’ reporting still commonplace
- Won’t pick up ‘hidden’ niche fouling (mostly)



Hull Cleaning - UMC
umc-int.com

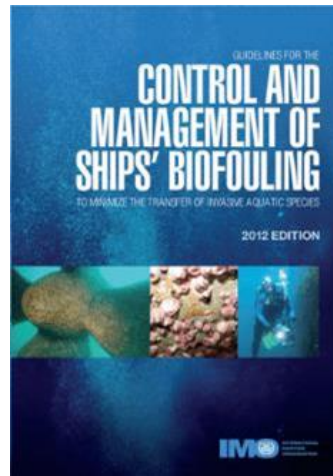
Recommended in water inspections:

- Before and after planned period of inactivity or change in operational profile
- Prior to in-water cleaning
- Following identification of suspected marine pest in internal seawater cooling systems
- Following damage to, or failure of antifouling system.



Short term solution or long term options for Baltic Sea Goals

- Combination of controls will minimize biofouling risks
- Carefully chosen antifouling paint will control fouling
- Cleaning is regularly used now
- In water inspections commonplace
- Start with combination of techniques



Long Term?

In relation to Baltic Sea Action Plan

- Better use of data and management tools
- Fouling risk models are also being used to choose best coating
- Predict if the vessel and or is risking coating failure due to change in operational profile
- Big Data approach that shows promise for more sophisticated fouling control

Ship and RC Design

- Improved 'niche area' design?
- Vessel design with fouling control built in?
- New techniques?
- Best practices (Glo Fouling)
- Combination of techniques
- Head winds regarding vessel construction?



Best Practices Developments

Will be developed within GloFouling in coordination with GF team, World Sailing and ICOMIA

- Developing user-friendly guidance founded in science and best practice
- Consulting with experts from within and across the networks of the partners (200 experts including Helcom)
- Convening a day long workshop of leading staff members from World Sailing, IMO, IUCN and ICOMIA, with up to 20 leading scientists and experts and IUNC - SSC Invasive Species Specialist Group.
- Bringing together guidance, with co-ordination and editing by IUCN Secretariat



Proving compliance with the BMP

Biofouling Management Plan Document

BIOFOULING MANAGEMENT PLAN

In accordance with Appendix 1 of HELCOM Resolution 2010/1, for the control and management of alien species, to minimize the transfer of invasive aquatic species, adopted at HELCOM (2010/1).

SHIP NAME:

IMO NUMBER:

BIOFOULING MANAGEMENT PLAN

In accordance with Appendix 1 of HELCOM Resolution 2010/1, for the control and management of alien species, to minimize the transfer of invasive aquatic species, adopted at HELCOM (2010/1).

SHIP PARTICULARS

Ship's name	
Flag state	
Port of registry	
BID number	
Gross tonnage	
Type (LR classified)	
Registration length	
Beam	
International call sign and MMSI	

PortShield™

Hull-borne Invasive Aquatic Species Risk Management

- Provides document to collate information required by IMO
- Captures key information regarding fouling control
- Recognized and recommended in Authority Guidance



GloFouling contribute to Baltic Sea Action Plan and GES of the EU MSFD

- GF project aimed at reducing IAS's
- Implement GF project to Baltic Sea Action plan
- Helcom involvement of GF needed
- Helcom participating in Best Practices of RC (to be ready at 2021)
- Implementing in more detail Biofouling Management Plan for commercial shipping and the Super Yacht Industry

