I&E INDUSTRIES & ENVIRONMENT

Study on Port Perspectives for Biofouling Management

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Ashley Coutts, and Frank Stuer-Lauridsen

24 April 2024
Pacific Ballast Working Group
Portland, Oregon, USA

SAFER
GREENER
SMARTER

SGS

Study Overview

- Global Environment Facility-United Nations Development Programme-International Maritime Organization (**GEF-UNDP-IMO**) **GloFouling Partnerships Project**
  - **6.5-year** global initiative to protect marine ecosystems from the negative effects of invasive aquatic species (IAS) transferred through biofouling on ships
  - **Objectives:**
    - **Build capacity** in developing countries to implement IMO BF Guidelines (and other relevant guidelines)
    - **Catalyze reductions in IAS transfer** (also reducing GHG)
- Study on biofouling management in ports
  - Commissioned by the Global Industry Alliance (**GIA**) **for Marine Biosafety**
  - Timeline: November 2023 – April 2023

Terms of Reference

Aspects of biofouling management in ports:

- Impacts
- Regulations and regulatory gaps
- Positive and negative implications
- Risk assessment
- Management and best practices (cleaning in ports, port-approved technologies)
- Data availability

Inputs from ports and stakeholders is being solicited by:

- Introductory letters from IMO and SGS to ports and relevant stakeholders included with
- Survey to ports regarding existing and future biofouling management

Study Team

- Members of study team located in **8** countries
- Environmental testing services in **>550** ports
- **>10,000** environmental services events in total (ballast water, scrubber washwater, drinking water, etc.)
- Members of ISO Working Groups 20679 and 6319 on biofouling

Project Team – Roles and Responsibilities

Project Sponsor

Vladimiro Bonamin (SGS)

Project Director

Lisa Drake (SGS)

Legal Review

Ernesta Swanepoel (Ernesta Swanepoel – International Environmental Law Specialist)

Quality Manager

Peter Stehouwer (SGS)

Subject Matter and Shipping Experts

Vladimiro Bonamin, Guillaume Drillet, Li Gang, Robert Goldring (USCG, ret.), Gerd Schneider, and Ersi Zacharopoulou (SGS)

External Reviewers

Frank Stuer-Lauridsen (LITEHAUZ) and Ashley Coutts (Biofouling Solutions Pty Ltd)

Surveys

- **Port** Survey
  - SGS Affiliates and team members contacted **ports/regions/Administrations**
- **GIA** Survey
  - Interviewed/received feedback from 13 members (GIA members + other stakeholders)
- **Researcher** Survey
  - Contacted International Council for the Exploration of the Sea (ICES) working groups (3) and Global TestNet
  - Met with Prof. James Carlton
- Comprehensive feedback

→ “Bright spots” to make recommendations

Port Survey

- **Requests for information sent = 168 + 146 = 334**
- Questions: **IMO Biofouling Guidelines**, **biofouling training**, and the IMO International Convention on the Control of Harmful Anti-Fouling Systems on Ships, 2001 (**AFS Convention**, IMO 2001)
- **Responses received**
  - **77** responses
    - **37** countries and **2** regions (Australia, Belgium, Brazil, Cambodia, Canada, Egypt, Estonia, Fiji, Germany, Greece, Indonesia, Ireland, Japan, Kenya, Laos, Malaysia, Madagascar, Morocco, Myanmar, New Zealand, Nigeria, Norway, Pakistan, Panama, Philippines, Portugal, Romania, Senegal, Singapore, South Korea, Spain, Sri Lanka, Taiwan, Timor-Leste, Thailand, United States and Vietnam)
    - Mix of national, regional, and port responses
  - **7** countries with biofouling training in place or planned
    - Australia, Canada, Madagascar, New Zealand, Nigeria, Pakistan, and Sri Lanka

Terms of Reference

- **Impacts**
  - impact of biofouling on port equipment/infrastructure and maintenance;
  - impact on local environment of biofouling waste, including microplastics, biocides and other chemicals from hull coatings during or after cleaning;
- **Regulatory**
  - applicable national and local regulations and liability aspects for ports;
  - regulatory gaps applicable to biofouling and related issues for ports;
- **Positive and negative implications for ports**
  - added value for ports derived from sustainable biofouling management;
  - best practices that can contribute to minimize biofouling risks;
  - implications for ports in relation to non-sustainable biofouling management practices;
  - incentive programmes and business models for biofouling services (ports as service providers);
  - awareness and communication aspects benefiting ports to improve biofouling prevention and/or management;
- **Risk assessment**
  - vessel inspections and risk assessment including pre-arrival information and ship inspection;
  - implications for vessels idle periods in port areas;
- **Management and best practices**
  - requirements for cleaning in ports including any approval procedure for cleaning technologies;
  - port-approved technologies and methodologies for biofouling prevention and management; considerations for biofouling waste management (collection and disposal onshore) including the management of chemical and biological risks;
- **Data availability**
  - support or participation in scientific research related to invasive aquatic species and/or biofouling; and
  - data on sampling/registry of invasive aquatic species in port waters and any data related to the composition of collected wastes available in ports.

Thank you!

Do you have any questions?

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Fighting Climate Change – Carbon Neutrality Strategy

Carbon-neutral since 2014

Step I
Reduce consumption at source

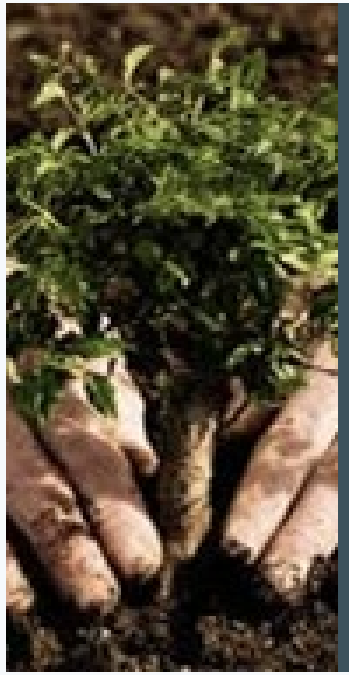
2 main sources of consumption:

- Energy Efficiency In Buildings
- Sustainable Mobility

Step II
Use **green energy**

- **97%** of the electricity we use comes from **renewable sources**

Step III
Compensate residual CO_2



- Tree-planting projects
- Renewable Energy Projects Sponsorship

SA30

Science-Based Target of reducing our CO_2 emissions per revenue by 55% against a 2014 baseline

2022 "**integrated**" annual report—combining financial and non-financial reporting

Dow Jones Sustainability Indexes

10 years!