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## Real Ballast Facts Bulletin

Issue #11, 17 January 2024

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## Less than 300 Days Until Full D-2 Implementation

It is hard to believe that after nearly twenty years, the 2004 International Convention for the Control and Management of Ships' Ballast Water and Sediments will complete the full shift from ballast water exchange (Regulation D-1) to full treatment of ballast water (Regulation D-2) in just 300 days.

It took more than a decade to achieve ratification (4591 days).

It took two years from ratification to the start of the retrofit cycle (731 days).

The retrofit cycle has been going on now for over four years (1890 days).

And now we only have less than 300 days left to complete the cycle. 300 days until all of the ships who did not have an IOPP certificate need to have their ballast water management systems installed. Only 300 more days where extensions, excuses, and delays can create confusion for Port State Control officers. 300 days until the environment is better protected from aquatic invasive species.

And we at BEMA could not be happier!

Join us in celebrating this incredible milestone almost twenty years in the making! Join us as we also continue to work to make the Convention easier to implement for manufacturers as we are preparing to submit a proposal to MEPC 81 for streamlining the approval process for minor components of an already type approved BWMS (see the article below). Join us as we continue to work with interested Administrations and stakeholders to provide adequate contingency measures for vessels operating in extreme water conditions (see the article below). Join us as we work hand-in-hand with all stakeholders in driving the package of amendments to the Convention as part of the Convention Review Plan (see the article below).

But most of all, just join us! BEMA is an important voice in the environmental space, taking part in development of regulations for not just ballast water but also for biofouling and any other areas where we can help reduce the environmental footprint of shipping. By bringing balance to the conversation and driving a practical approach to environmental protection, BEMA is a technical voice for all stakeholders, working to ensure that the ambitious goals of environmental regulation can be practically achieved.

And if you are reading about what we are doing here, that should matter to you. And if you are reading about what we have done, then you are already behind the curve. Join the conversation, join the wave, join BEMA! We would love to [have you onboard!](#)

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## Regulatory Updates & Info

### ★ BEMA Update on MEPC 80

The IMO's Marine Environment Protection Committee (MEPC) held its 80th Session from 3 – 7 July 2023. This BEMA Member News Brief provides a high-level overview of key meeting outcomes related to ballast water. IMO documents referenced below are available by establishing a Public User Account with the IMO.

Key Outcomes:

- The 2023 Guidelines for the control and management of ships' biofouling to minimize the transfer of invasive aquatic species (2023 Biofouling Guidelines) were approved by the Committee.
- The Protocol for verification of ballast water compliance monitoring devices (CMD's) was approved by the Committee. The protocol will be published as BWM.2/Circ.78.
- The Committee approved the text of the Convention Review Plan (CRP) and re-established the Correspondence Group to continue work on developing the package of BWM Convention amendments.
- Resolution of the divergent views regarding the proposed guidance for ships operating in challenging water quality (CWQ) was not achieved, and the Committee invited further proposals to be submitted to MEPC 81.
- The proposed guidance for temporary storage of gray water or treated sewage in ballast tanks was not agreed within the BWRG and the Committee invited further proposals to MEPC 81.
- The Committee approved proposed amendments to the ballast water record book (BWRB) and associated amendments to Guidelines G4 and G6.
- The Committee approved the use of Electronic Record books for the ballast water record book and associated amendments to Regulations A-1 and B-2 of the BWM Convention.
- The Committee invited proposals for a unified interpretation of the procedures for approval of BWMS modifications.
- The BEMA submission MEPC 80/4/11 was considered and the Committee encouraged increased port State control inspections to support implementation of the BWM Convention.
- Re-establishment of the BWRG at MEPC 81 was approved by the Committee.

#### ★ **MEPC Continues to Delay Guidance for Ports with Challenging Water Quality**

Since acceptance by the IMO as an NGO, one of BEMA's primary areas of focus has been the topic of Challenging Water Quality (CWQ). It is a difficult issue with several interested parties representing strong interests. IMO is providing a forum for the discussion, but despite numerous attempts does not seem to be closing on an acceptable guidance document.

Shippers would like vessels to be given great latitude on determining when port waters can be declared challenging, thereby allowing BWMS to be bypassed. Others recognize that if a significant number of vessels, or potentially most vessels in some ports, can relatively casually bypass the BWMS, the environmental protection created by the IMO's BW Convention will be severely diluted. It will also mean that weaker BWMS will continue to face little challenge of penalty.

For MEPC 78, June 2022, BEMA was an active participant in the Ballast Water Review Group (BWRG) where extensive discussions on the fundamental aspects of PCWQ were discussed. BEMA submitted document MEPC 78-4-3, Proposed amendments to the Guidance on contingency measures under the BWM Convention (BWM.2/Circ.62). MEPC did not make a decision.

At MEPC 79, December 2022, BEMA was an active part of further discussions on the topic. Unfortunately, only a "framework for discussing ports with challenging water quality (PCWQ) issues" was agreed upon by the working group and submitted to the Committee.

At MEPC 80, July 2023, BEMA and a number of cosponsors took up the challenge from MEPC 79 and presented concrete guidance based on the framework agreed to during MEPC 79. The result of this was MEPC 80/4/8, a proposed guidance document to help ships' crews when dealing with CWQ.

Despite the formerly agreed-to principles, major representatives for ship owners and managers collectively submitted new attempts to allow broad bypassing of systems, including re-asserting that salinity should be formally accepted as a Challenging Water Quality despite this being specifically agreed as excluded from consideration during MEPC 78 and 79. The extensive conversations at MEPC 80 again highlighted the gulf

between a constructive Guideline, as favored by Administrations and BEMA, and wholesale dilution of the Convention, as proposed by the ship owner- and manager-based NGOs.

In the waning hours of MEPC 80 a compromise text was proposed but again opposition was voiced and the IMO Secretariat noted that no compromise was possible within the confines of MEPC 80. The working group agreed to make one more attempt to work from the compromise text during MEPC 81, but it was strongly indicated that since the BWM Convention review was underway, further consideration of CWQ after MEPC 81 would be handled through the convention review process, not through separate amendments.

Look to BEMA for more updates on CWQ as they come available.

#### ★ **EPA Fines Vessels for Ballast Water Non-Compliance**

For a long time, EPA and USCG have formally made prosecution of ballast violations a low priority. With the recent prosecutions of Swire, MMS Co and CMA CGM there are signs this approach may be coming to an end. Reasons for this could be several; today most vessels are equipped with Ballast Water Management Systems (BWMS), and there is a growing expectation of compliance as the calendar for compliance of all vessels closes, and in February the EPA was sued, in part because VIDA (the Vessel Incidental Discharge Act) is more than two years behind schedule, possibly putting pressure on the existing environmentally protective laws. In June the EPA announced settlements for ballast violations with both Swire Shipping Pte. Ltd. and MMS Co, Ltd (a large Japanese Ship Management company). They will pay penalties of \$137,000 and \$200,000 respectively for claims of ballast water discharge, inspection, monitoring, and reporting violations.

On August third an EPA San Francisco Press Release stated; "The U.S. Environmental Protection Agency (EPA) has settled with CMA CGM, the world's third largest shipping container company, over claims of violations of EPA's Vessel General Permit issued under the Clean Water Act. Under the terms of the settlements, CMA CGM will pay \$165,000 in penalties for claims of violations by four of the company's ships involving ballast water discharge, recordkeeping, inspection, monitoring, and reporting."

These enforcement actions include paperwork and recordkeeping violations which have been noted, if not prosecuted, in recent years. Notably included in this round of action, though, is a violation of discharge standards, specifically the level of total residual oxidant (TRO) in the ballast discharges of cited vessels.

These enforcements all come under the VGP and not the Federal Ballast Law. Seeing three cases in two months, however, both against large vessel operators being settled for large sums, seems to be heralding a significant change in candour of enforcement for our industry.

#### ★ **US EPA VIDA Updates - Legal Issues**

The US Environmental Protection Agency (EPA) agreed in September to finalise nationwide standards for discharges under the Vessel Incidental Discharge Act (VIDA) by September 24, 2024 in response to a lawsuit filed by the Center for Biological Diversity and Friends of the Earth this past February.

The lawsuit specifically cites ballast water impacts to the domestic waterways. This focus on ballast water is creating industry concerns that the ballast water discharge standard in the United States, which is currently set under the 2018 Vessel General Permit to match the IMO D-2 standard, may be changed by the EPA under VIDA and become more stringent.

In their lawsuit, the two environmental NGOs state that "(t)he U.S. Environmental Protection Agency's failure to address pollution from oceangoing vessels as required by the Clean Water Act has caused significant harm to aquatic ecosystems. One type of vessel pollution, ballast water, is widely recognized as a major pathway for the introduction and spread of aquatic invasive species and human and animal pathogens."

The agreement must undergo a public review process and be approved by a federal judge. The release of the EPA's final standards has been postponed repeatedly after being mandated under VIDA in 2018 to be released by 2020. Just ahead of the COVID-19 pandemic, the EPA projected that final standards on ship vessel discharges would be published in March 2021. This update, which sets the release date at September 2024 marks the first publicly announced new date for the release of the standards.

BEMA is keeping a close watch on this story and has provided information in the past to the EPA to support the current discharge standard. Stay tuned and the #BallastGeeks will keep giving you updates as we learn more about this important development!

### ★ **US EPA VIDA Supplemental Notice and Public Meetings**

The US Environmental Protection Agency (EPA) published a [supplemental notice of proposed rulemaking](#) on 17 October 2023, providing new details on their thoughts for the regulating of three discharges under VIDA: ballast water, biofouling release from ships hulls, and grey water discharges.

On the topic of ballast water, the EPA provided their clear rationale for retaining the discharge standard set out in the original 2013 Vessel General Permit, which matches the IMO discharge standard. This represented a major win for our industry as the EPA is under considerable pressure and is even the defendant in a lawsuit which is trying to lower the discharge standard in the U.S. even more. The lawsuit, filed by the Center for Biological Diversity and Friends of the Earth (FOE), specifically cites ballast water impacts to the domestic waterways and the lack of protection that the current standard is bringing.

The new proposed ruling also included a new discharge to be considered: the passive release of biofouling from ships' hulls. This discharge, which was not covered by the original 2013 Vessel General Permit, has come to the forefront recently due to the IMO's release of biofouling inspection and assessment guidelines as well as work on the development and approval of cleaning solutions.

In the proposed rule, the EPA indicated that both passive release of biofouling and the cleaning of microfouling and slime from the hulls, a process known as hull grooming, is considered incidental to the operations of vessels and therefore was covered by the regulations. Further, the EPA noted that cleaning of macrofouling, or larger, complex organisms, without using a capture technique, was not allowed and was not seen as being covered by VIDA.

Lastly, the supplemental rule provided clarity on the potential for an exemption to be issued for vessels with overnight capacity for less than 15 people to have to install greywater treatment systems. This was in response to the original proposed rule which required the treatment or capture of all grey water discharges from any vessel with overnight accommodations.

The EPA held two listening sessions in November, both attended by BEMA members.

The presentation deck used by the EPA is available on their website (<https://www.epa.gov/vessels-marinas-and-ports/vessel-incident-discharge-act-vida-stakeholder-engagement-opportunities>) and recordings of each session are available for stakeholder review. The comment period for this new proposed rulemaking ended on December 17, 2023 and the EPA is only soliciting comments on the specific items contained in this supplemental notice - not the previous proposed rulemaking. So if you have any comments, hopefully you attended our informational forum and got them in on time.

BEMA is keeping a close watch on this story and has provided information in the past to the EPA to support the current discharge standard. Stay tuned and the #BallastGeeks will keep giving you updates as we learn more about this important development!

## **Events and Meetings**

### ★ **IMO-UNEP-Norway Innovation Forum Update**

On September 28th, to mark the celebration of the 50th anniversary of the MARPOL Convention, the IMO held a hybrid conference to highlight the role regulation has played in the innovation of the marine environment, particularly as it relates to environmental compliance and reduction of shipping's overall footprint.

Following opening remarks by Secretary-General Kitack Lim, the conference featured a number of panels and presentations by the thought leaders in the maritime world.

Some of the highlights of the day included an extensive conversation on how innovation facilitates higher environmental performance of shipping which featured EMSA, INTERTANKO, and ABS as well as the

Malaysian and Norwegian Maritime authorities. There was also a highly informative panel on plastic litter from ships and then a forward-looking panel led by Dr. Harry Conway of Liberia (Chair of the MEPC) on how the IMO's fuel standards support innovation in marine fuel production.

The afternoon also featured a panel on decarbonization that focused on green financing and finding innovative financial mechanisms to help drive the IMO's push to the emissions goals for 2050. This panel also highlighted the gap between developed and developing countries when it comes to decarbonization and fuel costs.

Lastly, there was a panel on how partnerships are driving innovation through collaboration and sustainable solutions. This panel featured the Technical Director of the Royal Institution of Naval Architects as well as

the heads of three IMO partnership projects: GloFouling (Ms. Lilia Khodjet El Khil - featured in this quarter's five questions feature), GloLitter (Ms. Tamar Barabadze), and the Head of Projects Implementation (Ms. Gyorgyi Gruban).

If you missed the forum, do not worry! The IMO has posted a link to the recording on YouTube so you can [CHECK IT OUT HERE](#).

### ★ **International Symposium On Ballast Water And Biofouling Management In Invasive Alien Species Prevention And Control**

BEMA is pleased to announce that we were invited to speak at the International Symposium on Ballast Water and Biofouling Management in Invasive Species Prevention and Control which is being hosted by the Turkish Ministry of Agriculture and Forestry in cooperation with the United Nations Development Programme (UNDP) with funding support from the Global Environment Facility (GEF). The main topics of the symposium included introduction of IAS by ballast water, legislation, strategies and their implementation, ballast water and sediment management systems, current situation in ballast water management, biofouling management, and good practices for preventing alien species from being transported as ballast water or biofouling in maritime transport.

To help the Association with the costs of attendance, the UNDP/GEF graciously provided funding to cover travel expenses for the Secretary General to share BEMA's work at this event, held as part of the [MARIAS Project](#). This project is carried out by the Turkish Ministry of Agriculture and Forestry, the UNDP, with funding support from the GEF.

The well-attended event was a 3-day, hybrid symposium and was held in beautiful Antalya, Türkiye. Speakers and participants were from various regulatory bodies (IMO, HELCOM, UNDP, national Administrations, etc.), universities and research institutes, NGO's, and industry stakeholders. BEMA's presentation to share the Association's perspectives and work to support implementation of global biosecurity regulations was well received.



### ★ **Global Industry Alliance (GIA) for Marine Biosafety Quarterly Meeting Update**

The IMO's Glofouling Partnership's Global Industry Alliance (GIA) for Marine Biosafety held its quarterly meeting in early December and one of your fellow #ballastgeeks was in attendance! As we noted in the

previous newsletter, the GIA is sponsoring four projects regarding biofouling and updates were provided at the meeting on three of the four projects.

The contract for the study on port perspectives on biofouling management project has been awarded and work has begun on the project. Surveys are currently being sent to a diverse list of ports around the globe, with a draft report anticipated for late in Q2. The short documentary film being developed on the impacts of biofouling is anticipated for release late in 2024. Lastly, the analysis of water quality as a result of in-water cleaning remains in the developmental stage with testing anticipated for late Q2 and Q3 of 2024. No update was provided on the last project, the Compilation and Comparative Analysis of Existing and Emerging Regulations, Standards and Practices Related to Ships' Biofouling Management Compilation of Existing And Emerging Standards.

One additional item of discussion was the IMO's 3rd GloFouling Partnerships Forum and Exhibition on Biofouling Prevention and Management for Maritime Industries. This event is slated to take place in Q4 of 2024 in Busan, South Korea. While this event is not specifically a GIA project, it is of significant interest to the members. The target dates are in early November although exact dates and venue are still being finalized.

Special thanks to Membership Committee member, and #biofoulinggeek Karl Lander for giving us all an update on this critical maritime event!

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## Recent & Upcoming Industry Events

### Events - 2024

**IMO PPR 11** - February 19 - 23, 2024, IMO Headquarters, London

**CMA SHIPPING** - March 12 - 14, 2024, Stamford, Connecticut

**BEMA 7th Annual Meeting** - March 15, 2024, Stamford, Connecticut

**IMO MEPC 81** - March 18 - 22, 2024, IMO Headquarters, London

**International Conference on Aquatic Invasive Species (ICAIS 2024)** - May 12 – 16, 2024 in Halifax, Nova Scotia, Canada

**POSIDONIA** - June 3 - 7, 2024, Athens. Greece

**SMM Hamburg** - September 3 - 6, 2024, Hamburg, Germany

**IMO MEPC 82** - September 30 - October 4, 2024, IMO Headquarters, London

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## Member Spotlight

*Disclaimer: The Member Spotlight expresses the opinion of the contributing Member. BEMA is not responsible for the statements nor does BEMA endorse individual persons or companies.*

*Each publication of the Real Ballast Facts Bulletin shines a spotlight on a featured BEMA Member. We're proud of our Members and are happy to share their accomplishments, industry developments and latest news. All BEMA Members have equal opportunity to be featured and are encouraged to contact [external-affairs@bwema.org](mailto:external-affairs@bwema.org) for details.*

This edition's Member Spotlight is on Armach Robotics and their newly formed organisation, [Greensea IQ](https://www.armachrobotics.com).

Greensea IQ is tackling the issue of biofouling management on ship hulls under a program known as EverClean. Originally introduced by Armach Robotics (a BEMA member since 2022), EverClean provides proactive cleaning via small autonomous robots. While multiple definitions exist, proactive cleaning is the removal of early stage biofouling (microfouling) from a ship's hull via gentle means before it progresses to

more advanced levels (macrofouling) that require more aggressive cleaning methods. EverClean's robots use a soft brush technology that was developed to work with modern coating systems, ensuring removal of microfouling without damaging these specialised coatings. Using a proprietary navigation, control and autonomy platform originally developed by Greensea Systems, the EverClean robot is able to operate with minimal human intervention. Integrating the high degree of autonomy into an easily deployable robot, EverClean is able to efficiently and economically provide an always clean hull through frequent biofouling removal. Additionally, through EverClean IQ precision navigation information can be coupled with the collected sensor data to provide shipowners with an unprecedented level of information regarding biofouling level, coating condition, and eventually hull condition.

Greensea IQ was established in late 2023 to unite Greensea Systems with its former subsidiaries Armach Robotics and Bayonet Ocean Vehicles under a singular new business entity. With a dedicated biofouling R&D facility in Florida, as well as facilities in Vermont, Massachusetts and California, Greensea IQ is well positioned to advance biofouling management strategies across the shipping industries. More information on EverClean and Greensea IQ can be found [here](#) and [here](#).

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## Five Questions With...



This quarter, BEMA is pleased to announce that we are bringing back our very popular "Five Questions" feature! And boy are we ever bringing it back with a bang as we are featuring not only five, but SEVEN Questions with [Lilia Khodjet El Khil](#), Technical Manager in the IMO's Department of Partnerships and Projects, Manager of the IMO's GloFouling Project and IMO's lead for the GEF-UNDP-IMO GloFouling Partnerships program.

### Q1: *How did you get involved in the IMO-led GloFouling Partnerships project?*

I started my career in shipping working with REMPEC, a regional centre managed by IMO whose mandate is to address ship-source pollution in the Mediterranean region. During my time with REMPEC I had an opportunity to be involved in the implementation of several technical cooperation projects, one of these being the GEF-UNDP-IMO GloBallast Partnerships project, tackling invasive species introduced via ships' ballast water and sediments. I also worked for the shipping industry in Canada for several years at a time when this topic was high on the agenda in North America, and later, as a consultant, I developed a study on current industry practices for biofouling management globally and in Canada. With this expertise in hand, I applied for the position of Project Manager of the GloFouling Partnerships project and was selected by IMO. The implementation of the project started in 2019 and the project is set to run until May 2025.

### Q2: *How do your industry partners help drive the research that is happening in biofouling?*

Working with the industry is a win-win situation when it comes to tackling barriers to the uptake of the IMO Biofouling Guidelines worldwide, which is what the GloFouling Partnerships project tries to achieve. This is because managing biofouling on ships, in addition to minimizing the risk of introducing invasive aquatic species, will result in increased fuel efficiency. Industry has long-lasting, hands-on expertise on minimizing biofouling on ships which the project and the developing countries with which we work can benefit from. To channel industry contribution, we have established a Global Industry Alliance for Marine Biosafety under the project. The Alliance is made up of private companies, including ship owners and other companies whose primary line of work is developing anti-fouling systems and technologies to monitor biofouling. The Global Industry Alliance has commissioned important studies to get a better understanding of the relationship between biofouling management and GHG emissions, and a useful compendium of regulations, standards and practices worldwide related to addressing the introduction of aquatic invasive species via biofouling. The Alliance has also produced awareness materials that help everyone getting a grasp of the issue and how to tackle it – and more is in the pipeline.

### Q3: *What is it like to work every day at the IMO?*

Working for an organization like IMO is an incredible opportunity to contribute towards global efforts for safe, environmentally friendly international shipping. Maintaining shipping flows is essential to enable smooth international trade. The maritime sector needs to comply with best management practices and applicable regulations developed at IMO to protect our oceans from degradation. As a project manager for the GloFouling Partnerships project, I start every morning at IMO with a sense of purpose and the willingness to make an impact. This is a great motivation and helps me address the many challenges that any project manager working in the technical cooperation field faces in their daily work. Last but not least, I enjoy interacting with my IMO colleagues from many different countries and with an incredibly diverse expertise, as well as with all the stakeholders in the field, such as policy-makers; the private sector; governmental and non-governmental organisations, other UN agencies, researchers, training institutions etc – I still learn every day about the different facets of shipping.

*Q4. What do you enjoy doing for fun?*

My main activity outside work is physical training in the open air two to three times a week. Training is essential to maintain health, focus and to manage stress. When I am on holiday, I usually spend time with my family in the Mediterranean region, either snorkeling in the beautiful sea off Tunisia and hiking or skiing in the wonderful nature and mountains of Northern Italy.

*Q5. What is the one place you haven't been that you would like to visit most?*

During my career, I have had opportunities to visit many unique places around the globe, including special marine areas such as the Galapagos Island recently - which made me realize even more how important it is to protect our fragile marine environment. But being a shipping lover, the next place to visit on my list, if I had the choice, would be Singapore, a place that is distinctive in many ways. Other places I would like to visit would be mysterious India and sophisticated Japan.

*Q6. How do you see ballast water and biofouling working together to manage AIS?*

There are similarities and dissimilarities when it comes to comparing ballast water and biofouling. Both of course are shipping mediated vectors for the introduction of invasive aquatic species, although in different ways. And there have been regulatory developments at IMO to address both issues, the latest for biofouling management being the adoption of revised guidelines at the last MEPC meeting this July. The difference lies in the type of technologies that are needed to address the problem. For biofouling this is mainly anti-fouling coatings and other systems to prevent, control or clean biofouling growth. Most of the technologies to address biofouling are already available, some of them very innovative. There are however uncertainties around performance to achieve a given standard. IMO Member States are set to tackle in-water cleaning in future work and the project will monitor these developments.

*Q7. How can our members get involved in the GEF-UNDP-IMO GloFouling Partnerships Project?*

The project welcomes industry contribution in many ways. Essentially, for private companies, this will be by becoming a member of the Global Industry Alliance, a platform for collaboration aimed at catalysing inputs from key players in the industry. Information on the Alliance is available on the project website: [www.glofouling.imo.org](http://www.glofouling.imo.org). When possible, we try to involve private companies (mainly technology developers) in demonstration activities. Relevant associations could consider joining our network of Strategic Partners. Strategic Partners are members of the project's Global Project Task Force and bring in a pool of diverse expertise we can draw on to support some of the project's activities or publications.

A huge thank you to [Lilia Khodjet El Khil](#) for her taking the time to share these insights with BEMA!

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