Real Ballast Facts Bulletin

Issue #16, 30 October 2025

Stay in touch with BEMA!

- Visit our website www.BWEMA.org
- Follow BEMA for the latest ballast water and biofouling scuttlebutt, news, and regulatory updates.
- Follow us on X: @BEMAssociation and LinkedIn: Official BEMA LinkedIn Page
- For any questions, ask the BEMA Membership Committee at membership@bwema.org

Evolution is the Key to Survival

Welcome to the final edition of the Real Ballast Facts Bulletin!

Yes, that's right - this will be the final edition of the Real Ballast Facts Bulletin ever to be issued by BEMA. After almost 7 years and 16 editions, it is time for BEMA's external newsletter to undergo a little evolution of its own. So, while this may be the last edition of the Real Ballast Facts Bulletin, it is NOT the last edition of our external newsletter. In fact, it's just the start of new, big things to come! But fear not, because this collectible final edition of the Real Ballast Facts Bulletin has plenty to tie you over until we can rebrand and re-release this newsletter in 2026!

Ballast Water

On the ballast water side, this quarter we are super excited to announce that we have completed a partnership with Simplify Ballast to launch BEMA-approved training for ballast water management system operation and regulatory compliance. Check out the article below! We also have updates on the Paris and Tokyo MoU's Concentrated Inspection Campaign for 2025 (spoiler alert: it's about ballast water compliance!) and OSPAR's new Ballast Water Exchange area. Lastly, we have a short update on the U.S. state of California's new emergency ballast water management requirements.

Biofouling

On the biofouling side, this quarter BEMA has been extremely active participating in both the PortPIC 2025 Conference and the 2025 Antifouling Conference. Make sure you check out the pictures and all of the #FoulingGeeks that attended! BEMA has also launched a comprehensive data and research project to help the IMO in developing a mandatory instrument on biofouling management - wait, what's that? You didn't know there was a mandatory instrument coming? Well you'd better check out the article! There is also an article on the proposed Norwegian regulations for biofouling control that you won't want to miss.

Ballastwater & Environmental Manufacturers' Association

Our Association

And what would our external newsletter be without some information about BEMA itself? Get to meet some of our newest members - including a spotlight piece on one of the most interesting and novel players in the new biofouling management market (Echo Tech Marine) and get an update from our recent attendance at the IMO's UNOC Conference in Nice, France! Some #BallastGeeks get all the hard assignments…

All that plus the upcoming calendar of events that you don't want to miss. Come to think of it, maybe we should just call our new newsletter "The Encyclopedia BEMA" because it truly has everything! Make sure you read on and let us know what you think!

We are looking for suggestions for what the newly rebranded newsletter is going to be called, so email your suggestion to membership@bwema.org. If we use your suggestion, not only will you have the pride of knowing that you named the best-read newsletter in all of marine biosecurity, but who knows - there may be some BEMA swag in your future…

New BEMA Member Welcome

We at BEMA are proud to highlight and let you know about our newest members! As BEMA's membership keeps growing, we always look forward to being able to share the great news about the newest companies joining the ranks of the #BallastGeeks and #FoulingGeeks!

This quarter, we are proud to welcome ***three (3) new Full Members, and three (3) new Associate Members***!

New FULL Members

Alicia Bots (aliciabots.com/) is a hull cleaning and inspection robotics company based in Singapore.

Echo Tech Marine (echotechpro.com/) is a company that develops and manufactures equipment for the ultrasonic protection of ships' hulls based out of Baltimore, Maryland.

Hullbot (hullbot.com/) is an Australian company that delivers advanced, autonomous in-water cleaning solutions in Australia and on the U.S. West Coast.

New ASSOCIATE Members

GIT Coatings (gitcoatings.com) is a Nova Scotia, Canada based company providing sustainable graphene-based hull & propeller coatings for ships.

i-Tech (www.selektope.com) is a Swedish company that developed Selektope, a unique biocide which keeps ships' hulls clean.

Mr. Marine (mr-marinegroup.com/) Mr. Marine is a global marine service company who specializes in ballast water systems.

SGS North America (https://www.sgs.com/), one of the premier global testing services companies.

Want to be featured in the uber-collectible first edition of the next newsletter? All you need to do is CLICK HERE!

Introducing BRADD

At MEPC 83, the IMO added the development of a mandatory instrument on the control and management of biofouling to prevent the spread of aquatic invasive species to the work plan. This work will start at PPR 13 and is anticipated to conclude in 2029. BEMA has already begun to step up to ensure this instrument is a practical, science-based, and globally workable instrument that the industry can quickly adopt. To support this, the Biofouling Subcommittee is excited to announce that they've launched the Biofouling Research and Data Development project (known affectionately as BRADD), a coordinated effort to find and provide the data all stakeholders need.

The project focuses on seven key areas: biofouling prevention technologies, assessing the risks from microfouling, looking at the risk to the environment of cleaning microfouling without capture, assessing cleaning compatibility with coatings, ensuring capture standards are measurable and technology-based, performing a global assessment capture-based cleaning capacity, and assessing the need for compliance assessments. By gathering data and case studies from across the industry, BRADD will help shape regulations that protect the environment while supporting operational feasibility.

We invite members and interested stakeholders to contribute their expertise, share data, and join us in this effort. Together, we can ensure the upcoming IMO framework is both environmentally protective and achievable for the shipping community. And while you don't have to be a member of BEMA to contribute, we are looking to our members to be the flag-bearers for this critical work. BEMA has presented BRADD to shipowners, governments, and industry leaders and we are already working to provide input to the upcoming work of the IMO.

Want a quick snapshot of one of the tools BRADD is looking to bring to the conversation, check out this image from our Capacity Plan project:

If you want to learn more about how to get involved, reach out to Petter Korslund, the Biofouling Subcommittee Chair or to BEMA's Technical Director, Mark Riggio (techdirector@bwema.org) to find out how you can be a part of this first-of-it's-kind project.

BEMA in the Spotlight: Training for Compliance

One of the common themes to arise during the data sharing portion of the Ballast Water Management Convention Review Phase has been the lack of crewmember familiarization with their duties and responsibilities under the BWM Convention. Adding to this a cited lack of confidence with systems, performance, the roles and importance of the Ballast Water Management Plan, and confusion about how to fill out the Ballast Water Record Book, crewmembers and Port State Control Officers need to have access to unbiased information about the performance of systems and the obligations that ships, and inspectors have to implement the BWM Convention.

Starting back in early 2025, BEMA's Board of Directors began looking into the potential to develop and deliver a training package to the industry that would provide the critical information needed with a focus on the Convention and the performance of ballast water management systems in the real world. As a result of this development, the Board has agreed to a collaboration with Technical Director, Mark Riggio's company Simplify Ballast to co-brand the training material that Simplify Ballast has already delivered to high value clients such as the U.S. Coast Guard and Australian Department of Agriculture, Fisheries, and Forestry.

The training packages are set up in both computer-based modules and instructor-led courses, each of which can be designed and implemented immediately and tailored to the specific needs of an individual client. BEMA is also beginning to work with other NGOs and Administrations to ensure that this training is available to any interested parties, government agencies, and interested stakeholders throughout the maritime industry.

So if you, or someone you know, needs ballast water management training that has been validated and approved by the manufacturers themselves, don’t hesitate to reach out to BEMA’s Technical Director, Mark Riggio, at techdirector@bwema.org to find out more and to get a quote to have training delivered.

Regulatory Updates & Info

UNOC Conference 2025 Update

Co-hosted by France and Costa Rica, the 3rd UN Ocean Conference brought approx. 15,000 participants over 5 days, including more than 60 Heads of State and Government, to Nice, on the French Mediterranean coast, from June 9th to 13th 2025.

The UNOC outcome, known as the Nice Ocean Action Plan, is a two-part framework that comprises a political declaration and over 800 voluntary commitments by governments, scientists, UN agencies, and civil society. Some examples: EU announced €1 billion investment to support ocean conservation, science, and sustainable fishing; Germany launched a €100-million programme to remove underwater munitions from the Baltic and North Seas; Spain announced five new marine protected areas; a 37-country coalition launched the “High Ambition Coalition for a Quiet Ocean” to tackle underwater noise pollution. The World Bank introduced a ‘Coral Bond’ to help finance reef conservation in Indonesia. And many more…

BEMA was invited to a side Event “Taking Action to Stop the Spread of Invasive Aquatic Species, Protect Marine Biodiversity and Support Climate Action", organized by the governments of Fiji and Norway and the International Maritime Organization, hosted on the tall ship Statsraad Lehmkuhl.

Pictured:
Sveinung OFTEDAL, Norwegian Maritime Administration
Charlene Ceresola, BEMA Technical Committee, Member BIO-UV

In the opening addresses, it was recalled that MEPC 83 took a significant step forward by agreeing to develop a legally binding instrument on biofouling. Presentations covered:

- Data on IAS risk and spreading (film “silent invaders” and IPBES assessment report (see graph below)),
- Solutions for biofouling management (DNV)
- Experience from Fiji through GloFouling Programme (national policy, challenges, solutions)
- Interconnection between all sustainability aspects: biofouling, invasive species, energy efficiency, and emissions reduction (IMO Secretary General)

Referring to the progress made through BWM as an incentive to tackle the biofouling challenge, all participants could observe that the rising IAS curve was modified thanks to BWM regulations starting in the mid 90's, and that powerful work can be accomplished by the IMO.

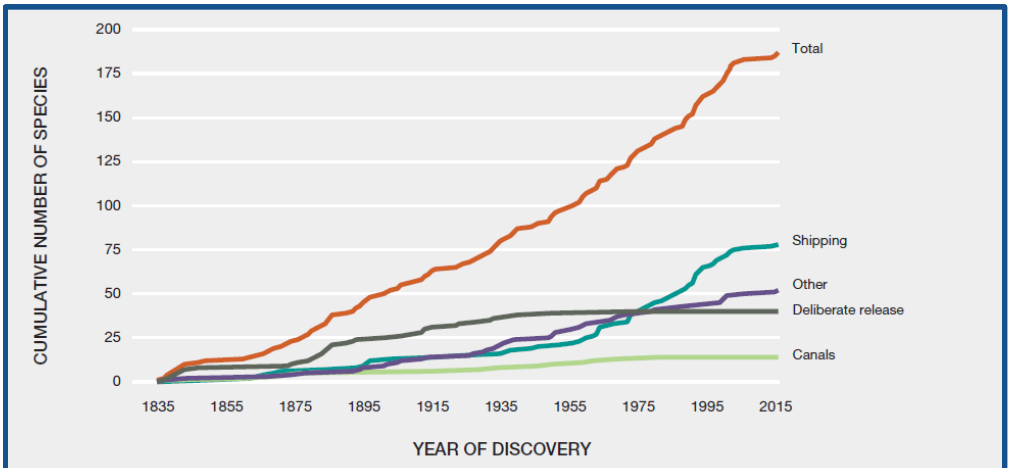


Figure 2 35 **Cumulative numbers of alien species in the North American Great Lakes basin.**

The total number of alien species is shown in the top most line. Other trend lines show accumulations of species whose introductions are attributable to various vectors, including shipping (ballast water, solid ballast, and hull fouling), canals, deliberate release (e.g., intentional stocking of fishes), and other vectors (e.g., bait, aquarium, and unintentional releases). Data sources: Mills *et al.*, 1993; NOAA, 2021; Ricciardi, 2006.

Source: IPBES assessment report, 2023 (Data sources: Mills et al., 1993; NOAA, 2021; Ricciardi, 2006)

Pictured:
Arsenio Domingues, International Maritime Organization
Sveinung OFTEDAL, Norwegian Maritime Administration

This was an inspiring moment for our industry. The shift away from voluntary guidelines toward enforceable measures signals a new era of accountability and international cooperation.

PortPIC / Antifouling Conference Update

Pictured: Petter Korslund, BEMA Full Member Jotun, Chair of the Biofouling Subcommittee

During the first weeks of September, BEMA was hard at work spreading the good news about our BRADD project (what's BRADD? See the article ↑) in both Germany and Sweden. Technical Director Mark Riggio, together with #FoulingGeeks from I-Tech, Jotun, Subsea Global Solutions, GIT Coatings, Alfa Laval, DHI, and Hullbot all were in attendance at one - and in many cases both events - to highlight the important work going on in the biofouling world.

Presentations ran the gamut from very scientific presentations given from doctoral students through to operational experiences gained from trying to implement the new ISO 20679 standard for assessing the performance of hull cleaning equipment. And, of course, when the #FoulingGeeks are involved, there is always a lot of fun and camaraderie.

If you want to make sure you don't miss fun events like this, make sure you check out our events calendar at the end of this newsletter. Or, better yet, why don't you join BEMA so we can make sure to let you know more than just once a quarter? [HERE IS A LINK] to join in case you want to sign up. If you do, you may see yourself in the next evolution of this newsletter in a picture like this, standing next to your fellow #FoulingGeeks!

Pictured:
BEMA Technical Director Mark Riggio with representatives from BEMA Members: Jotun, I-Tech, DHI, Subsea Global Solutions and Alfa Laval

Paris & Tokyo MOU CIC 2025 on Ballast Water Management Is Underway!

From 1 September to 30 November 2025, Port State Control (PSC) authorities under the Paris and Tokyo Memoranda of Understanding (MoU) are undertaking a joint Concentrated Inspection Campaign (CIC) targeting Ballast Water Management (BWM) — a pivotal initiative in implementing the Convention, safeguarding marine ecosystems, and ensuring regulatory integrity.

During this three-month campaign, inspections will focus on whether vessels meet key requirements under the IMO Ballast Water Management Convention, including:

- Possession of a valid International Ballast Water Management Certificate (IBWMC)
- Approved and up-to-date Ballast Water Management Plan (BWMP)
- Crew familiarization with BWMP procedures
- Fully approved and operational Ballast Water Management System (BWMS)
- Complete and accurate Ballast Water Record Book (BWRB)
- Effective sediment management measures
- Proper documentation of any valid exemptions

Let's use this CIC not only as an enforcement checkpoint — but as a shared opportunity to enhance compliance, safeguard ports, and preserve marine biodiversity.

This campaign is not just a regulatory exercise — it's a global effort to protect our oceans from invasive species, while also ensuring the shipping industry maintains compliance, avoids costly detentions, and contributes to sustainable trade. For more information, click on one of the links below:

Paris MoU - Press release on 2025 CIC on Ballast Water Management.pdf
Press-release-on-2025-CIC-BWM-final.pdf
DNV Maritime Port State Control Webinar

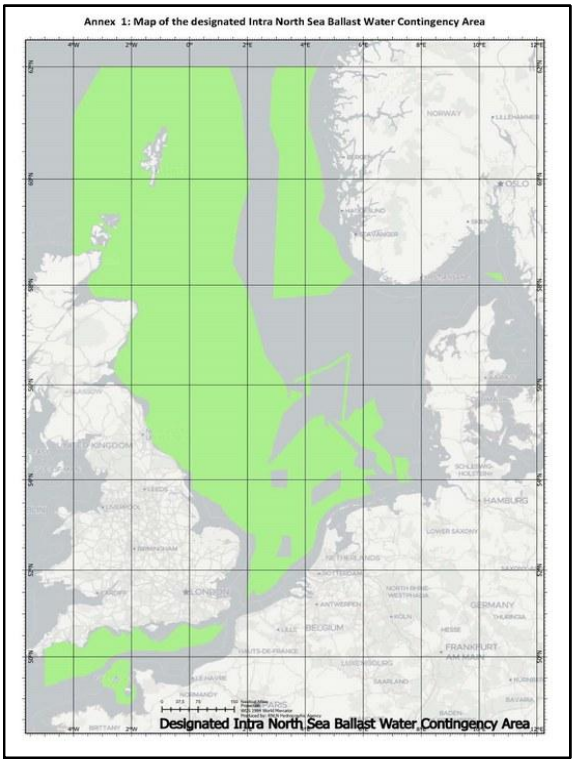
OSPAR Establishes a new Intra North Sea Exchange Area for Ballast Water

Reprinted from https://www.deutsche-flagge.de/en/news/latest-news/

Shipping companies and ships' crews have reported difficulties with ballast water management systems (BWMS) due to sediments in many North Sea ports. Additionally, due to the requirements under the guidelines for conducting ballast water exchange, there have been limited options for ships to conduct efficient and convenient exchanges in the North Sea. Now the OSPAR Commission has established a new Intra North Sea Area intended to assist with ballast water exchange as part of a ship's contingency measures.

It is common knowledge that the filtration stages many BWMS contain have been shown to have issues fouling in ports with high sediment loading. The practical experience of ship owners and crews has shown that some filters – depending on the type and installation setting on board – may reduce flow through the ballast system below the ships' operational demands, limiting a ship's ability to move cargo. In these cases, according to the recently published IMO guidelines on contingency measures, if a ship has identified ballast water exchange as an accepted management practice in their Ballast Water Management Plan, they would be allowed to bypass their treatment system to collect the ballast water needed for operations. Afterwards, the contaminated tanks and piping have to be exchanged to comply with their Ballast Water Management Plan.

Against this backdrop, the OSPAR Commission (formed by Belgium, Denmark, Germany, Norway, the Netherlands, Sweden and the United Kingdom) established an "Intra North Sea Area Ballast Water Contingency and Compliance Area in accordance with BWM.2/Circ.62 and MEPC.387(81)", where the necessary decontamination procedure can be conducted in accordance with all requirements. The agreement contains the geographic coordinates of the contingency measure area and the conditions under which a decontamination procedure is permitted there (paragraphs 2 to 9). In a few individual cases, after approval by the BSH, a ballast water exchange is also permitted.



This facilitation only applies to intra North Sea traffic, will become applicable on June 27, 2025, and expire in June of 2030, unless extended by the aforementioned States.

[CLICK HERE](#) for more information!

Norwegian Biofouling Rules Update

In early June 2025, the Norwegian Maritime Authority (NMA) initiated a consultation on proposed regulations for management of hull biofouling. This consultation follows a regulatory proposal in 2024, which was then reconsidered based on the comments received by the NMA during the 2024 consultation. For details of the consultation, see the NWA website (https://www.sdir.no/regelverk/horingsutlisting/).

The proposed regulations require that all vessels must arrive in Norway with a clean hull or they must be cleaned within 24 hours of arriving. Vessels must follow a biofouling management plan based on the 2023 IMO Biofouling Guidelines, and cleaning must take place using the best available technology in the port where the cleaning will take place.

BEMA's Biofouling Subcommittee prepared and submitted comments on the new proposed regulations in advance of the 10 September deadline. BEMA's comments continue to support the base intention of the consultation, as expressed by the introductory notes, that cleaning of microfouling is not considered a pollutant and does not require full capture, but that cleaning of macrofouling must be done with capture using the best technology available.

As more information comes available on this new regulatory framework, you can bet we will feature it in an upcoming edition of this newsletter.

California State Lands Commission Emergency Ballast Water Rule

As a consequence of the Golden Mussel being discovered in the Port of Stockton and detected in Clifton Court Bay, California State Lands Commission published an Emergency Ballast Water Rule. The emergency rule entered in force on June 16th and is effective for 180 days with up to two 90-day extensions. The Marine Invasive Species Program is working on preparing regular rules.

Vessels carrying ballast water sourced from a location with a measured salinity <18 PSU will have to conduct a ballast water exchange at or beyond 50 nautical miles from land prior to discharging at California's fresh or brackish water ports.

For more information on this new rule, check out the CA State Lands Commission website.

Recent & Upcoming Industry Events

Riviera Maritime Media Marine Coatings Week - October 27 - 31
Riviera Maritime Media Marine Environmental Protection Week - October 28 - 30
KORMARINE - October 21 - 24, Busan, Korea
EUROPORT - November 4 - 7, Rotterdam, The Netherlands
International Maritime Conference 2025 - November 4 - 6, Sydney, Australia
13th Annual World Conference on Oceans - November 11 - 13, Osaka, Japan
International Workboat Show - December 3 - 5, New Orleans, LA

Upcoming Events - 2026

IMO PPR 13 - 09 to 13 February 2026 (tentative), IMO Headquarters, London
IMO HTW 12 - 23 to 27 February 2026 (tentative), IMO Headquarters, London
CMA Shipping - 10 - 12 March 2026, Stamford, CT
IMO MEPC 84 - 27 April to 01 May 2026 (tentative), IMO Headquarters, London
BEMA Annual Meeting - TBD, June 2026, Athens, Greece
Posidonia - 1 - 5 June 2026, Athens, Greece
IMO III 12 - 20 to 24 July 2026 (tentative), IMO Headquarters, London
SMM Hamburg - 1 - 4 September, 2026, Hamburg, Germany
IMO MEPC 85 - 16 to 20 November 2026 (tentative), IMO Headquarters, London

Member Spotlight

Disclaimer: The Member Spotlight expresses the opinion of the contributing Member and do not necessarily reflect the opinions of BEMA. 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 membership@bwema.org for details.

This edition's Member Spotlight is on Full Member, Echo Tech Marine.

The Sound of Clean Hulls: Echo Tech's Solution to Biofouling

Biofouling, the accumulation of marine organisms on a vessel's hull, or any other marine infrastructure, presents significant challenges to the marine industry. This buildup increases hydrodynamic drag, leading to substantial negative economic and environmental consequences. Fuel consumption can increase by 20% or more from the effects of biofouling with the IMO estimating that biofouling alone costs the maritime industry over $50B annually.

In 2016, one of Echo Tech's founding fathers so to speak, recognized the potential of ultrasonic antifouling technology and went to work building a functional system. Since that time, through various entities and hundreds of iterations, Echo Tech has landed where it is today, a US-based ultrasonic MGPS provider with a focus on bulk carriers. Echo Tech is proud to be a leading voice in the battle against biofouling. Our clients range from workboats and tugs to super yachts and bulk carriers.

The general idea of ultrasonic technology came from Russian scientist Constantin Chilowski, whose literature on the matter landed on the desk of French scientist Paul Langevin sometime in 1915. Langevin continued his research throughout WW1 with the hopes of discovering a method to locate U-boats. Fortunately, and unfortunately, the war ended prior to Langevin creating a functioning ultrasonic device, yet he persisted. Langevin finally succeeded in creating a working ultrasonic depth finder by the late 1920's. By the 1950's ultrasonic technology had spread into medical diagnostics and is now an $8B per year industry.

Post WW2 the navy took notice of the lack of biofouling near the sonar areas on submarines which prompted more research into the antifouling properties of ultrasonic technology. The development of ultrasonic antifouling was delayed for decades as a result of non-existent research into fuel efficiency, hydrodynamics, and extremely effective yet toxic antifouling coatings. It wasn't until the IMO adopted the AFS Convention and forced the removal of all marine coatings containing TBT (Tributyltin) by 2008, that ultrasonic antifouling technology began to develop commercially. Even today, amendments to the AFS Convention will take effect and completely remove another effective yet toxic biocide, Cybutryne, from the market by Jan. 1, 2027. This makes environmentally friendly, preventative antifouling measures like Echo Tech's ultrasonic technology increasingly prevalent and important today.

Echo Tech is continuing to push for widespread adoption of ultrasonic antifouling technology since it is efficient, safe, environmentally-friendly, and most importantly, effective at preventing biofouling from occurring. Echo Tech believes the ultrasonic antifouling industry is in the early stages of market development and has unlimited potential to aid and assist maritime operators in saving time and money while meeting environmental regulations and preserving marine ecosystems. Echo Tech is proud to be a Member of BEMA and an active voice in the fight against biofouling.

Note that views expressed are those of the BEMA Member and do not necessarily reflect the opinions of BEMA. If you are a BEMA member and want to see your company featured here, contact the Membership Committee at membership@bwema.org to find out how to get featured! We'll even help you write the story. And if you are not a member - HERE IS THE LINK so you can join!

Make sure to follow BEMA at @BEMAssociation on Twitter and LinkedIn to get the latest #RealBallastFacts directly from the #BallastGeeks and #FoulingGeeks themselves!

And don't forget to send your votes for the new name for BEMA's external newsletter to membership@bwema.org - you, too, could have bragging rights and the pride that comes from being the most clever!