During the 3rd edition of the International Antifouling Conference, an expert panel discussion was held on the topic.

"Sustainable Development: Balancing Environmental goals with regulatory restrictions and guidelines"

The following industry representatives provided their perspectives and expertise during the panel:

- Dr Markus Hoffmann, Director R&D - I-Tech AB Moderator
- Mr Mark Riggio, owner – Simplify Ballast & Technical Director – Ballastwater & Environmental Manufacturers Association (BEMA)
- Dr Lena Granhag, Associate Professor - Chalmers University
- Dr. Santiago Arias, head of product sustainability – Hempel
- Dr Cecilia Ohlauson, Director Regulatory Affairs and Sustainability – I-Tech AB

Panel overview

Overall, the panel discussed the regulatory landscape for marine antifouling coatings, both the:

- Marine biocides regulatory landscape and;
- the biofouling management regulatory landscape for marine vessels.
- The impact of global and regional regulations on marine coatings innovation.

Marine biocides regulation

Antifouling products are regulated both on an international level and a regional level – with focus on specific regional chemical regulations in particular, including K-REACH and EU BPR. Korea is an example of how regulation forces paint companies to adapt fast to new regulation.

Additionally, international and regional regulatory approaches for biofouling management were discussed.

It was highlighted that for many other biofouling management technologies, such as those that do not contain biocides in wet coatings, intense regulatory approval is not required. The question was raised: how is their safety ensured? Is it a fair market?

Panellists discussed how a balanced regulatory framework where all technologies are compared together is needed.

It was agreed that the regulatory landscape for marine biocides can be an innovation valley of death, and that it is tough for a new biocide to reach the market and succeed, due to the high demand for data included in the dossiers and the expense of funding regulatory approval and the long timescales involved.

Experts agreed that the regulatory landscape governing biofouling management is complex and evolving. Experts also agreed that the regulatory landscape governing marine biocides is complex, expensive, and can prevent innovation from coming into the market.

For this reason, experts agreed that regulations negatively affect product development timelines and investment decisions, since it's so hard to provide a specific timeline for achieving regulatory approval and difficult to quantify the total amount required financially.

It was highlighted that there is a lack of alignment between chemical regulators and shipping specific regulators and that they might be developing in different directions, one limiting availability to biocidal antifouling products and one requiring more efficient fouling protection.

Biofouling Management Regulation

The International Maritime Organisation (IMO) has been at the forefront, issuing rules and guidance for both commercial and leisure vessels. Notably, the IMO-AFS has addressed harmful substances like TBT (2008) and Cybutryne (2023), prohibiting their use in antifouling coatings.

The 2023 guidelines provide additional information on the development of Ship Biofouling Management plans and Record Book.

Currently, a review of the 2023 IMO Biofouling Management Guidelines is underway; the closing date for review was 11th September.

As it stands, experts from the audience informed that revised guidance for ship biofouling introduces a rating scale to assess the extent of fouling in inspection areas. It also provides additional information on achieving adequate coverage and inspecting the condition of anti-fouling systems (AFS). It requires new inspection and cleaning reports to be included in the record book.

Furthermore, national requirements from Brazil and Norway were added to the existing additional requirements from the USA, Australia, and New Zealand.

Brazil has issued additional national guidance for ships over 24 meters operating within Brazilian jurisdictional waters. Vessels are now required to carry a Ship Biofouling Management Plan and a Biofouling Record Book on board. Fines have been introduced for transporting or releasing substances harmful to the environment.

Norway has also issued additional national guidance for ships operating within its territorial waters, including those around Svalbard and Jan Mayen. All vessels entering Norwegian territorial waters from outside the North-East Atlantic Emission Control Area (NEZ) must have a Biofouling Management Plan in place, along with documentation of any cleaning measures undertaken There was a great discussion around these guidelines introducing the need for documentation to demonstrate that the hull is free from macrofouling and must include details such as the time and location of biofouling removal and the cleaning methods used. Experts in the room agreed that this ‘zero-macrofouling’ rule will be hard to meet,

Learning from other sectors

Learnings were shared from the Ballast Water Management technology sector, for which the International Ballast Water Management Convention came into force with international jurisdiction, in which newbuild ships had to comply from 2017 and existing vessels from September 2024. This is an example of a regulatory shift that gives the marine coatings industry an idea of how regulation can be a catalyst for change in the industry.

Looking to the future

When asked to imagine talking about what they wished this industry had done differently, starting right now, and what opportunities are we (as a sector) at risk of missing if we don't act decisively in the next 2-3 years?

- Take learnings from the Ballast Water technology sector and also from the scrubbers technology sector, learn from other industries that faced large international regulations, catalysing uptake in a short period of time. What did they do wrong? What did they do right?