

Ballast Water Treatment – From R&D to Implementation

The introduction of aquatic invasive species via ship's ballast water is a widely known and well documented issue. Technology development, global outreach and awareness and development of various regulatory regimes have been under way for nearly 30 years.

While interim measures have been implemented in some areas along with ballast water reporting requirements in others, the introduction of AIS has carried on, largely unabated. A new set of challenges now faces scientists, regulators, ship owners, ship builders and the technology sector: implementation.

The objective of this paper and the accompanying presentation is to define specific challenges to practical, uniform implementation. It will consider the performance of the methodology and equipment for sampling, detection and analysis. Further, the efficacy of treatment technology as it is implemented, taking into account the diversity of biological factors, water conditions, and overall environmental circumstances that will be encountered as the ship travels the world's oceans, coastal areas and harbors during its normal operations will be addressed. Finally, it will examine the practical engineering challenges associated with the integration of new equipment across a fleet of tens of thousands of vessels of various designs.

The conclusion will be demonstrated that, while challenging, the unified work of science, government and industry will prevail and ballast water treatment will address this AIS issue in a meaningful and beneficial manner.