History of research of biofouling and antifouling systems conducted by Brazilian Navy

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From 1983 to 2007, the BIOTECMAR Department of the IEAPM analyzed 320 Painting Reports of ships and submarines of the Brazilian Navy, generating information about the fouling organisms and the efficiency of the different types of inks used. Over the years, several aspects were integrated for best practices, such as considering the operational profile of the vessels and the environmental parameters of the anchoring areas of navy vessels.

From 1997 to 2008, the fouling occurring in 57 vessels of the Brazilian Navy (BN) during its explorations, including mainly Patrol Ships, Corvettes, Frigates and Submarines, were analyzed. In specific reports for each vessel, the antifouling effectiveness of the paints applied to the hulls was evaluated.

IEAPM had an effective contribution to the 2001 Antifouling Paint Convention with 30% of the proposed articles approved in the Convention. Methods developed by IEAPM to test AF systems has national and international recognition as well as the use of the Biofouling Index to evaluate and compare the different types of AFS.

Between 2003 and 2004, the BIOTECMAR Department of IEAPM tested 10 new paints from 6 companies, with the aim of replacing the Tributyl Tin (TBT) biocide, which was banned because it is highly toxic to the environment.

Since 2007, the BIOTECMAR Department of the IEAPM has been testing new anti-fouling paints without TBT manufactured by different companies, aiming to homologate the most efficient formulations to be used by the ships and submarines of the Brazilian Navy.

The participation of IEAPM in the project Low Emission Antifouling (LEAF), project funded by the European Community, the coordination of GEBIO project for management and control of biofouling and bioinvasion in Brazilian coast and the recent nomination of the IEAPM as coordinator of the Glo Fouling Project in Brazil, demonstrate the international level that biofouling research has achieved in the Brazilian Navy.