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### **ECO-ENGINEERING IN A HARBOUR AREA: PEOPLE'S PERCEPTIONS OF THE MARINE ENVIRONMENT AROUND FORNO HARBOUR, ARRAIAL DO CABO, RJ, BRAZIL.**

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Large coastal landscapes has been degraded by human development. The application of ecological engineering techniques to recuperate degraded environments have been widely studied. However, few studies evaluate the people's perceptions about marine environment and eco-engineering. The present study was part of the Green Engineering working group of the World Harbour Project, organized by the Sydney Institute of Marine Science (Australia). In Brazil, this study was carried out at Arraial do Cabo, Rio de Janeiro and aimed to evaluate people's knowledge about marine environment health around Forno Harbour and ecological engineering applications in harbour environments. For this, a survey was conducted through personal interviews and online questionnaire in order to collect responses of different people groups (i.e. residents, coastal managers and marine scientists). A face-to-face questionnaire was applied in locations such as streets, businesses and dive centers. In addition, the questionnaire also remained available online from June to December, 2017. The survey included 19 questions divided into 4 sections: basic personal informations, harbour uses, views on artificial structures and perceptions of ecological engineering. At the end of the survey, we had 179 participants. Among these, the most representative groups were marine scientist, researchers/students and tourists. About 45% of respondents considered the marine environment around the Forno Harbour an unhealthy ecosystem. Most respondents (53%) associated this degradation to human development. However, they consider man-made structures in marine environments as economic development indicator in and around the harbour. About 86% of surveyed showed interest in ecological engineering, but just 30% would be willing to pay extra taxes to support its implementation. Previous studies indicated that eco-engineering techniques in degraded areas may be effective in restoring intertidal fouling community. However, the understanding about what people think about the application of these techniques in harbours can also help to better planning management strategies. This information can be used to support ecological engineering initiatives not only in areas less impacted as Arraial do Cabo, but also in places heavily modified by artificial structures.

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