



# 9<sup>th</sup> CARAH

## International Conference on Artificial Reefs and Related Aquatic Habitats

### EDITORIAL

Over the last three decades artificial reef technology has become an important tool for the management of fishery, recreational and conservation issues in coastal zones. If conducted in accordance with social and environmental bases, thus attending to the demands of local stakeholders, AR projects have great potential in terms of the conciliation of conflicts of interest among all the social segments interested in taking advantage of marine resources. The development of reef unit materials and designs tends to be adapted specifically to local ecosystems and social demands. Further, modern logistics for the construction, transportation and deployment of artificial reef systems are determined in accordance with practices and guidelines regarding recommended materials and methodology now adopted all over the world for the monitoring of the results and benefits of AR programs, most of them now accepted by the public administration and governmental agencies which regulate the deployment of unnatural substrates on the sea bed. The applicability of the AR concept has gradually come to be recognized not just as an efficient - though complicated - good, but rather as a well managed *fish aggregating device* for the creation of a real man-made artificial ecosystem, designed to produce new biodiversity and fish biomass that may be more sustainably exploited by coastal communities.

I am indeed very optimistic regarding the benefits of social and environmental applications of AR technologies, particularly in those countries where coastal fishing communities are still struggling for survival exclusively on the basis of the same marine resources which are being rapidly depleted by commercial fisheries. The role of ARs in enhancing marine biodiversity and increasing fish biomass, creating alternate pathways within the local marine food web to be exploited by artisanal fishermen, decreasing their historical pressure on natural ecosystems, has now become clear. I also foresee great possibilities for a worldwide AR network, associated with anti-trawling systems in order to protect traditional fishery stocks against illegal bottom trawling, avoiding over-exploitation and physical damage to natural fishing grounds. All these applications and many more will help to protect marine biodiversity and at the same time provide new opportunities for the improvement of environmental conservation and quality of life in coastal zones.

This special issue of the Brazilian Journal of Oceanography offers scientists and students of Fishery Oceanography, Marine Ecology, Oceanography, Marine Sciences, as well as governmental agencies and the general public, 19 peer reviewed articles that were presented during the 9<sup>th</sup> Conference on Artificial Reefs and Related Aquatic Habitats (9thCARAH) held in Curitiba, Brazil, between 8 and 13 November 2009. These are but a few examples of national AR programs being conducted on open near-shore shelves and oceanic islands and in estuaries of the Mediterranean Sea and Atlantic and Pacific oceans. It is my hope that readers, particularly those interested in the AR concept and its applications in the marine environment, will find in these articles useful clues to help them solve conflicts they will certainly have to face during their own coastal management studies and actions for the conservation and sustainable use of marine resources which will, ultimately, benefit future coastal generations.

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Guest Editor

