



The Indigo V Indian Ocean Expedition: a prototype for citizen microbial oceanography

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Microbial Oceanography has long been an extremely expensive discipline, requiring ship time for sample collection and thereby economically constraining the number of samples collected. This is especially true for under-sampled water bodies such as the Indian Ocean. Specialised scientific equipment only adds to the costs. Moreover, long term monitoring of microbial communities and large scale modelling of global biogeochemical cycles requires the collection of high-density data both temporally and spatially in a cost-effective way.

Thousands of private ocean-going vessels are cruising around the world's oceans every day. We believe that a combination of new technologies, appropriate laboratory protocols and strategic operational partnerships will allow researchers to broaden the scope of participation in basic oceanographic research. This will be achieved by equipping sailing vessels with small, satcom-equipped sampling devices, user-friendly collection techniques and a 'pre-addressed-stamped-envelope' to send in the samples for analysis. We aim to prove that 'bigger' is not necessarily 'better' and the key to greater understanding of the world's oceans is to forge the way to easier and cheaper sample acquisition.

The ultimate goal of the Indigo V Expedition is to create a working blue-print for 'citizen microbial oceanography'. We will present the preliminary outcomes of the first Indigo V expedition, from Capetown to Singapore, highlighting the challenges and opportunities of such endeavours.