

Minutes of Meeting – July 2023

MRC Research Advisory Board (RAB)/02-23

The Maritime Research Center (MRC), Pune conducted an interaction for the Research Advisory Board (RAB) members along with the assessment and review of research work of MRC fellows and interns in July 2023. The meeting was conducted in the along with the webinar presentations to discuss the progress and the future plans for conducting research at MRC. The current projects were reviewed to develop a comprehensive understanding of the progress made for the Underwater Domain Awareness (UDA) framework in the tropical waters of the Indo-Pacific and beyond. The following RAB members attended the event:

(a)	Dr. Satheesh Sheno	-	Attended
(b)	Prof. Radhika Seshan	-	Unable to attend
(c)	Dr. (Cmde) Somen Banerjee	-	Attended
(d)	Prof. Varsha Kelkar Mane	-	Unable to attend
(e)	Dr. R Vijay Kumar	-	Unable to attend
(f)	Dr. (Cdr) Arnab Das	-	Attended

In addition to the RAB members, multiple other advisors of MRC and domain experts attended the workshop from across the world and gave their guidance to progress the UDA framework. The [report on the workshop](#) and its proceedings are available at MRC website.

The webinar aimed to provide an opportunity to the research fellows and interns to present their work that addressed gaps in policy, technology and acoustic capacity & capability at a global, regional, national and local levels. The program aimed to showcase the research and findings of undergraduate and postgraduate interns and fellows who have been engaged in studying the Underwater Domain Awareness (UDA) Framework. This framework, developed by MRC, focuses on promoting safe, secure, and sustainable growth in the tropical littoral waters of the Indo-Pacific region. The interns' presentations covered a diverse range of topics, including marine spatial planning, climate change impacts, sediment management, water quality assessment, and autonomous underwater vehicle (AUV) design.

The RAB members and other advisors were unanimous in their instructions that MRC's efforts to engage in diverse research topics that highlight interdisciplinary nature of UDA is commendable. RAB stressed that there is a need to promote digital transformation using advanced technologies such as artificial intelligence, machine learning, real-time data analysis, and digital tools to address complex maritime and environmental issues. These innovative solutions showcased the potential of technology in enhancing maritime governance and sustainability.

RAB members congratulated the interns for their valuable contributions and highlighted the significance of their work in the context of the blue economy and sustainable development. Dr. Shenoj emphasized the potential of AI and machine learning to enhance noise identification. Dr. Banerjee acknowledged the importance of direction provided by MRCs mentor programme and the director's role in emphasizing the importance of the hybrid approach.

The RAB revisited the three-step approach and reviewed the company's progress so far through this lens:

Outreach

The awareness gap needs to be bridged with massive and structured sensitization initiatives like workshops, seminars, short courses and more. Policy makers, stakeholders, practitioners, academia, researchers and more need to be reached out and made aware.

Engage

The gains of the outreach initiative, has to be institutionalized with comprehensive and inclusive engagement. The students and young professionals need to be brought under a UDA fellowship program of varied duration to enhance their knowledge and skilling levels, so that they can be part of the growth journey. The policy makers and stakeholders need to be engaged with specific MoU on issues of their relevance. The policy makers and stakeholders could also participate in the UDA fellowship program and recruit their next generation of leaders and practitioners from these fellows.

Sustain

With the supply (skilled and knowledgeable human resource) and demand (policy & stakeholder requirement) sorted out, we need to build formalized and sustainable policy and technology intervention mechanisms. Frameworks need to be formalized along with the technology infrastructure. Funding and research priorities need to be restructured appropriately.

The RAB reviewed the existing activities at MRC and NDT and expressed their satisfaction at the progress made. They advised that MRC researchers to publish their work in other international journals and offered to guide the fellows and collaborate with them.

The RAB was also briefed on the MRC activities since the last meeting. MRC informed them that the formalized and structured recording of the activities is done through the quarterly [UDA Newsletters](#).

MRC has been undertaking regular publications to document their research and innovation activities. MRC has a much formalized documentation mechanism through their Knowledge Center and UDA Digest. The [Research Notes](#) are published by each and every intern and fellow at regular basis. Also, the [UDA Digest](#) contains regular publications to sensitize the ecosystem on the work being undertaken. These two platforms have become reasonably strong with their extensive and broad spectrum of contents to support the UDA framework.

Dr. (Cdr) Arnab Das
Director, MRC