

Global Ocean Corps and Conveyor: A Capacity Development Program

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ABSTRACT

Oceanography is by nature a global science, and thus requires a global trained workforce. Yet in many coastal nations, the number of trained professionals working in ocean science fields is lacking. Global Ocean Corps and Conveyor (GOCC), an endorsed capacity development programme of the UN Decade of Ocean Science for Sustainable Development, aims to increase the geographical and cultural diversity of the ocean science workforce through facilitating and building sustained long-term education and research collaborations between scientists around the globe. Based upon our collective experience with schools and workshops held in Ghana, Malaysia, University of Rhode Island Coastal Resources Center, and elsewhere, we are confident that a well-funded Ocean Corps would inspire large numbers of scientists, especially early-career scientists, into its ranks, thus molding many of them into champions for international capacity development for the remainder of their careers, and fostering truly global ocean science collaborations worldwide.

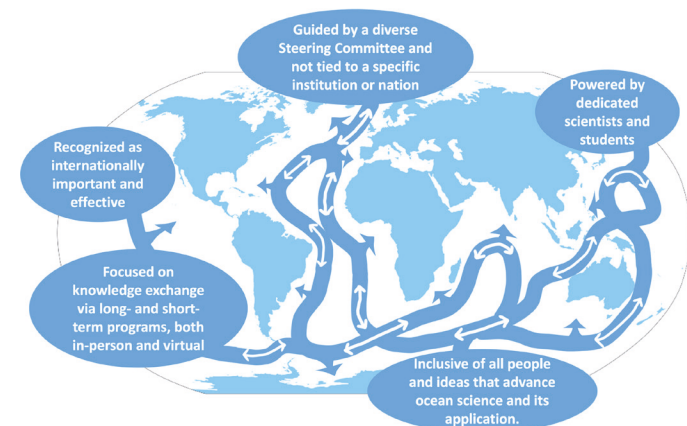


FIGURE 1. Global Ocean Corps and Conveyor (<https://globalocean corps.org>) will increase ocean science collaboration around the world through exchange of people and ideas.

Vision and Potential Transformative Impact

The mission of the GOCC will be to:

1) Increase ocean science, its application to management and related training for students, scientists, and other professionals.

2) Improve multi-cultural understanding and exchange in a variety of ways (e.g., summer schools, workshops, sandwich degree programs, online cloud computing workshops, etc.) and promote global collaboration.

3) Enhance and highlight approaches and opportunities for international engagement and science expansion.

While goals 1 and 2 are consistent with those of the U.S. Peace Corps, our intention is that the GOCC will be different in principles and practice in that it will be led by a global group, and will serve the international community. Scientists of all career stages would benefit from scientific exchanges, but such exchanges are especially advantageous for early-career scientists, who can more easily adjust their career trajectories such that capacity development becomes an important part of their portfolios. We have seen many cases in which early-career scientists become passionate advocates after participating in exchanges and capacity development activities. Therefore, while we will recruit participants from all career stages, we will place a special emphasis on engaging early-career scientists. Moreover, this will allow actions during the Decade to have a lasting impact. The GOCC will provide structure for those who want to run an exchange project, and for those who want to complete or connect similar projects from, for instance, different regions. We aim to greatly increase the number of global collaborative ocean science projects, for the benefit of all.



FIGURE 2. Participants of the 2018 Coastal Ocean Environment Summer School in Ghana (<https://coessing.org>).



FIGURE 3. CEMACS (Centre for Marine and Coastal Studies) workshop in Malaysia.

How Is the Project Realizable, With Connections to Existing Scientific Infrastructure, Technology Development, and Public-Private Partnerships

Ocean Corps will tap into the massive interest amongst scientists, especially young scientists, to become involved in international capacity development. Ocean Corps will greatly enlarge the pool of scientists working on global collaborative projects, and will catalyze the development of ocean science worldwide. Existing activities, including the Coastal Ocean Environment Summer School in Ghana (<https://coessing.org>), workshops held at the University of Rhode Island Coastal Resources Center, summer schools in Malaysia, and others, prove the realizability of the Ocean Corps concept. With a funded Ocean Corps in place, many partnerships between scientists in higher-resourced and under-resourced nations could be built. Existing capacity development efforts could be used as examples for similar ventures, but each partnership would be free to develop the size, curriculum, goals, duration, and structures best suited for their own needs. The main infrastructure that Ocean Corps will build upon is the substantial human infrastructure of ocean science, in the form of ocean scientists who are eager to develop collaborations in under-resourced areas abroad. Technology development is another part of our vision—in 2020 and 2021, education went online, using Zoom, and in 2022 we will experiment with hybrid in-person/online activities.

Scientific/Technological Sectors Engaged Outside of Traditional Ocean Sciences

The main “non-traditional” vein that an Ocean Corps would tap into is a widespread “I want to help” spirit, particularly among early-career scientists. The Ocean Corps lead and collaborators have recently given Zoom talks on the Ghana school at many oceanographic institutions in the United States and elsewhere. After every talk, several more scientists ask to join the effort. At the same time, the potential hosts for summer schools are also growing; we plan to hold the 2022 Ghana summer school in Nigeria as a first test of holding the school in a different location.

Opportunities for International Participation and Collaboration

International participation and collaboration are central goals of Ocean Corps. We aim to develop a sustained, long-term network of summer schools, sandwich degree programs, workshops, and other collaborative endeavors, all connected by a common vision of the greater good for ocean science.

Develops Global Capacity and Encourages the Development of the Next Generation of Ocean Scientists, Engineers, and Technologists

The Global Ocean Corps and Conveyor programme will build capacity, on a global scale, through education and research collaborations between scientists throughout the world, in both highly resourced and under-resourced nations. The education in such exchanges is bi-directional. Performing ocean science in multicultural environments provides scientists, especially early-career scientists, with an invaluable perspective. Experience has shown that summer schools and other exchange programmes also provide early-career scientists with uncommonly valuable leadership opportunities; for instance, in the areas of curriculum development, organization, and networking.

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