

Effective citizen science, playing a role at marine conservation

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Florida / Caribbean barrier reef has already been lost. Great barrier reef of Australia lost around 65% of its corals, there are immense efforts exerted by scientists and marine biologists to protect and maintain the remaining 35%. Red Sea/ Eastern Africa and Arabian Gulf are highly threatened as well. The philosophy of "protection is always preferred over restoration" is a luxury that no longer applies to most regions. NOW Restoration is necessary to preserve the biodiversity and functionality of reefs and ensure the sustainability of their resources.

Environmental Education for a Sustainable Future:

The proposed "Effective citizen science program" consists of 2 directions: (a) Raising awareness, and (b) Practical efforts. The Program is designed to give students / volunteers an introduction to coral reef ecology & awareness; how to view the reef scientifically by assessing key biotic and abiotic reef components; teaches the volunteers how to use real world scientific sampling, conduct reef survey techniques and create new artificial reef. (Creating new life, NEW Reef)

By the end of the program, students / volunteers should have full knowledge about climate change and its impact on marine life, conservation strategies and how to contribute in restoration efforts. The volunteers should leave a positive impact by creating a new marine life (artificial and/or natural habitat).

Program structure

Raising Awareness: over four sessions / workshops, it includes four theory presentations:

- (1) Introduction and Reef Check Method, Fish, Invertebrates
- (2) Human Impact, Substrates including Coral, Algae, Reef Rock and Sands
- (3) Informative talks about sharks, dolphins and dugongs in Arab Gulf
- (4) Explain about the flora and fauna around Arab Gulf coast

Practical efforts

- Identifying corals to their taxonomic levels
- Identifying Biodiversity of corals in an area
- Monitoring threats such as predation, bleaching, or diseases;
- Monitoring corals for health condition and status
- Conducting advanced research and / or restoration projects
- Identifying rare or endangered species of coral
- Create new habitat for corals –artificial and / or natural
- Growing corals as initiative to create new habitat for marine animals

We take an ecosystem learning / educating holistic approach, focusing on the long-term sustainability and adaptability of the ecosystem rather than just trying to add more corals into areas where they will not survive. Finally, we also adhere to the code of ethics outlined by the Coral Restoration Consortium.

Keywords

Corals ; Restoration ; Citizen Science