

Environmental Threats and Great Barrier Reef: A Vulnerability Assessment of World's Best Tropical Marine Ecosystems

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Abstract : The Great Barrier Reef of Australia is known for its beautiful landscapes and seascapes with ecological importance. This site was selected as a World Heritage site in 1981 and popularized internationally for tourism, recreational activities and fishing. But the major environmental hazards such as climate change, pollution, overfishing and shipping are making worst the site of marine ecosystem. Climate change is directly hitting on Great Barrier Reef through increasing level of sea, acidification of ocean, increasing in temperature, uneven precipitation, changes in the El Nino and increasing level of cyclones and storms. Apart from that pollution is second biggest factor which vanishing the coral reef ecosystem. Pollution including over increase of pesticides and chemicals, eutrophication, pollution through mining, sediment runoff, loss of coastal wetland and oil spills. Coral bleaching is the biggest problem because of the environmental threatening agents. Acidification of ocean water reduced the formation of calcium carbonate skeleton. The floral ecosystem (including sea grasses and mangroves) of ocean water is the key source of food for fishes and other faunal organisms but the powerful waves, extreme temperature, destructive storms and river run-off causing the threat for them. If one natural system is under threat, it means the whole marine food web is affected from algae to whale. Poisoning of marine water through different polluting agents have been affecting the production of corals, breeding of fishes, weakening of marine health and increased in death of fishes and corals. In lieu of World Heritage site, tourism sector is directly affected and causing increase in unemployment. Fishing sector also affected. Fluctuation in the temperature of ocean water affects the production of corals because it needs desolate place, proper sunlight and temperature up to 21 degree centigrade. But storms, El Nino, rise in temperature and sea level are induced for continuous reduction of the coral production. If we do not restrict the environmental problems of Great Barrier Reef than the best known ecological beauty with coral reefs, pelagic environments, algal meadows, coasts and estuaries, mangroves forests and sea grasses, fish species, coral gardens and the one of the best tourist spots will lost in upcoming years. My research will focus on the different environmental threats, its socio-economic impacts and different conservative measures.

Keywords : climate change, overfishing, acidification, eutrophication

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