



Education and **Oceans**



The health and wellbeing of humans and the oceans are inextricably linked, and education is the key to providing solutions that sustain both.

The ocean provides more than 50% of our oxygen, absorbs 50 times more CO₂ than the atmosphere, and supports the world's largest ecosystem. More than three billion people rely on seafood as a primary source of protein, and nearly 10% of all jobs globally are directly supported by the oceans. Yet, ocean literacy — an understanding of the ocean's influence on you, and your influence on the ocean — is low globally, as fish stocks rapidly deplete, seas rise, and piles of floating rubbish grow. Education is the single best tool we have to save our oceans, and thereby, the planet.

Key challenges



- **Citizens across the world have a limited knowledge of ocean-related environmental or protection issues.** This lack of familiarity is attributed to the absence of ocean concepts in formal science curricula (Eddy, 2014; Hoffman & Barstow, 2007).

- **There is a tremendous opportunity to incorporate ocean literacy into STEM education.** Yet national curricula globally lack any ocean literacy related content. Coastal and marine issues are nearly absent in science or geography curricula in countries like the UK, Canada, Brazil, China, and Australia. The word 'ocean' is not mentioned once in New Zealand's curriculum
([Visbeck, 2018](#); [Gough, 2017](#)).

Make the case



- **Teachers are a force multiplier for ocean literacy.** In the US, 850 teachers who were trained on ocean science and conservation have educated 500,000 students in classrooms, and more than three million others through conferences and outreach
([NOAA, 2020](#)).
- **Ocean literacy is key to conservation and the protection of livelihoods.** Across three countries, education on sustainable fishing practices and establishment of protected areas for fishing and conservation, has had a positive impact. Fish populations have remained stable or increased in 97% of the more than 600,000 hectares protected, providing stable jobs, food, and income
([Rare, 2018](#)).
- **Providing ocean literacy in schools can have a direct and immediate impact.** In the UK, a student-led education programme outlining the consequences of plastic waste in the oceans has led to more than 1,000 schools going plastic free
([Surfers Against Sewage, 2019](#)).
- **Educated consumers drive the purchase of sustainable seafood, with great benefit to marine environments.** Through consumer education and its commercial fisheries certification programme, the Marine Stewardship Council (MSC) has helped to grow sustainable fish populations across the world. Today, over 15% of all marine wild catch is MSC certified and sold at over 38,000 sites throughout the world
([Blue Circle, 2019](#); [MSC, Accessed 2020](#)).

- **Ocean literacy has intergenerational impact.** With the aim of creating sustainability in their fishing stocks for the next generation, fishermen in Lira, Spain, created the Mardelira Project, providing marine environmental awareness training to children in classrooms, and related visits to the field. Children write a 'Letter to the Future' with their learnings, read at their local town council meetings
(FAO, Accessed 2020).
- **Ocean literacy is vital to protecting global food stocks.** Studies have estimated that all commercial and wild seafood stocks may collapse by 2048, with three billion people relying on seafood as a major source of protein. Education is a critical component to ensuring sustainable fishing practices are put into place
(Stokstad, 2006; FAO, 2018).
- **Ocean literacy provides valuable social and economic returns.** Limiting global warming to 1.5 degrees Celsius, as outlined in the Paris Climate Agreement, could result in billions of dollars in extra revenue for fisheries globally, most concentrated in the developing world where many rely on fish as a source of protein
(Sumaila et al., 2019).

Key infographic



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Key talking points



- Globally, education about the oceans is often absent from the curricula.
- Education programmes in schools and with professionals working in fishing and conservation have had a positive impact on ocean health.
- Ocean literacy is vital to protecting global food stocks
- 10% of the world's population depends on fisheries for their livelihoods, and 4.3 billion people are reliant on fish for 15% of their animal protein intake.