



OCEAN Learning: New Perspectives for the Science Curriculum

This resource aims to support teachers in utilising the powerful footage from **OCEAN WITH DAVID ATTENBOROUGH** to enhance students' understanding of the ocean's role as both a victim and a solution to the climate and biodiversity crises. Each clip is summarised thematically, with clear curriculum links and suggested resources to support teaching these topics in class.

Resource Exploitation

Clip 1 (00:00-05:42)

This first clip introduces the viewer to the **impact of trawling on seabed habitats, fisheries, and ocean health**. The clip emphasises the importance of marine sediment as a carbon store. It also makes comparisons to the Amazon rainforest and demonstrates the importance of the ocean and its relevance to the climate.

Curriculum topics

- Diversity of ocean habitats
- Carbon stores and the carbon cycle
- Positive and negative human impacts on the environment

Resources

- **Lesson** [Earth's life support, the carbon cycle | Ages 7-11 | Science & Geography](#)
- **Lesson** [The carbon cycle and climate | Ages 11-14 | Science](#)
- **Lesson** [The carbon cycle, stores, and fluxes | Ages 14-16 | Science](#)
- **Diagram** [Carbon cycle interactive \(intermediate\)](#)
- **Diagram** [Ocean habitats interactive](#)
- **Immersive Digital Platforms and activities** [Ocean Observatories – Your portals to the underwater world](#)

"It's hard to imagine a more wasteful way to catch fish." SIR DAVID ATTENBOROUGH



Habitat Destruction

Clip 2 (05:42-08:39)

This clip covers the **Arran Case Study** and **illustrates the impact of scallop dredging** on pristine seabeds before and after they are turned into wastelands. The clip also covers other seabed habitats, including sponge gardens.

Curriculum topics

- Positive and negative human impacts on the environment
- Diversity of life and habitats in the ocean
- Importance of primary producers for life on Earth

Resources

- **Lesson** [Could worms save the world? | Ages 7-11 | Science](#)
- **Lesson** [Protecting ocean biodiversity | Ages 11-14 | Science](#)
- **Immersive Digital Platforms and activities** [Ocean Observatories – Your portals to the underwater world](#)

“An area almost the size of the entire Amazon Rainforest is trawled every year.”

SIR DAVID ATTENBOROUGH



Earth's largest habitat is the ocean.

It covers about **71% of the planet's surface** and contains roughly **97% of all water on Earth**, making it the most **extensive and diverse ecosystem**, home to countless species and critical for regulating climate.

Food Webs and Interdependence

Clip 3 (08:39-12:25)

This clip shows how bottom trawling is still legal in **marine protected areas (MPAs)**. Industrial fishing exists all over the world, all the time, and has a huge impact on life in the ocean, including in Antarctica. This also leads to a study on interdependence through food webs and adaptation.

Curriculum topics

- Fisheries and wild harvest
- Food webs
- Adaptation

Resources

- **Lesson** [How is life adapted to ocean habitats?](#) | Ages 11-14 | Science
- **Lesson** [Let's get fish smart](#) | Ages 7-11 | Science
- **Lesson** [Save our saltmarshes](#) | Ages 7-11 | Science

"My lifetime has coincided with the great age of ocean discovery."

SIR DAVID ATTENBOROUGH



3 BILLION
PEOPLE RELY ON
SEAFOOD FOR PROTEIN



Resilient Marine Ecosystems

Clip 4 (12:25-17:03)

A positive pivot: examples from around the world where **ocean recovery happens quickly when pressure is removed** (e.g. no-take zones and fishing bans). This shows the resilience of marine ecosystems and provides evidence-based hope.

Curriculum topics

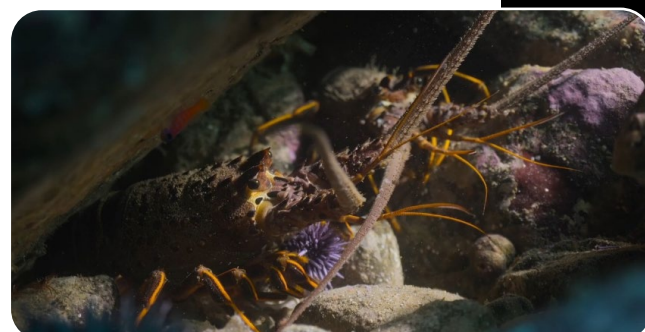
- Positive and negative human interactions with ecosystems
- Relationships in an ecosystem – the interdependence of organisms in an ecosystem

Resources

- [Lesson Ocean as climate ally | Ages 11-14 | Science](#)
- [Unit Coral Oceans | Ages 14-16 | Science](#)

Marine Protected Areas (MPAs)

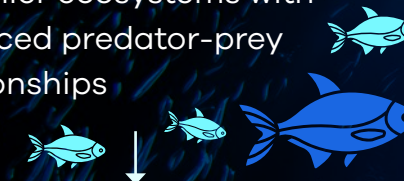
safeguard habitats and species within their boundaries, allowing populations to recover and thrive without fishing pressure or other disturbances.



Impacts of MPAs on ecosystems

Inside MPAs, fish and other marine organisms are protected from exploitation. This leads to:

- Increased population sizes
- Larger, more mature individuals
- Healthier ecosystems with balanced predator-prey relationships



- As populations grow, resources inside the MPA become limited, and species begin to move outside the protected area



- Adult fish migrating to adjacent areas



- Larvae and juveniles dispersing through ocean currents



Sustainable Resource Management

Clip 5 (17:03-19:50)

This clip covers how marine protected area increases biomass inside and spill over beyond boundary. It shows that recovery is not only ecological, but economically beneficial too.

Curriculum topics

- Food webs and energy flow
- Sustainable resource use

Resources

- Immersive digital platform [The Sea We Breathe](#) | Blue Marine Foundation
- [Facilitation Guidebook for Teachers](#)
- [Ocean Champion Guide for Ages 8+](#)
- [Ocean Champion Guide for Ages 12+](#)

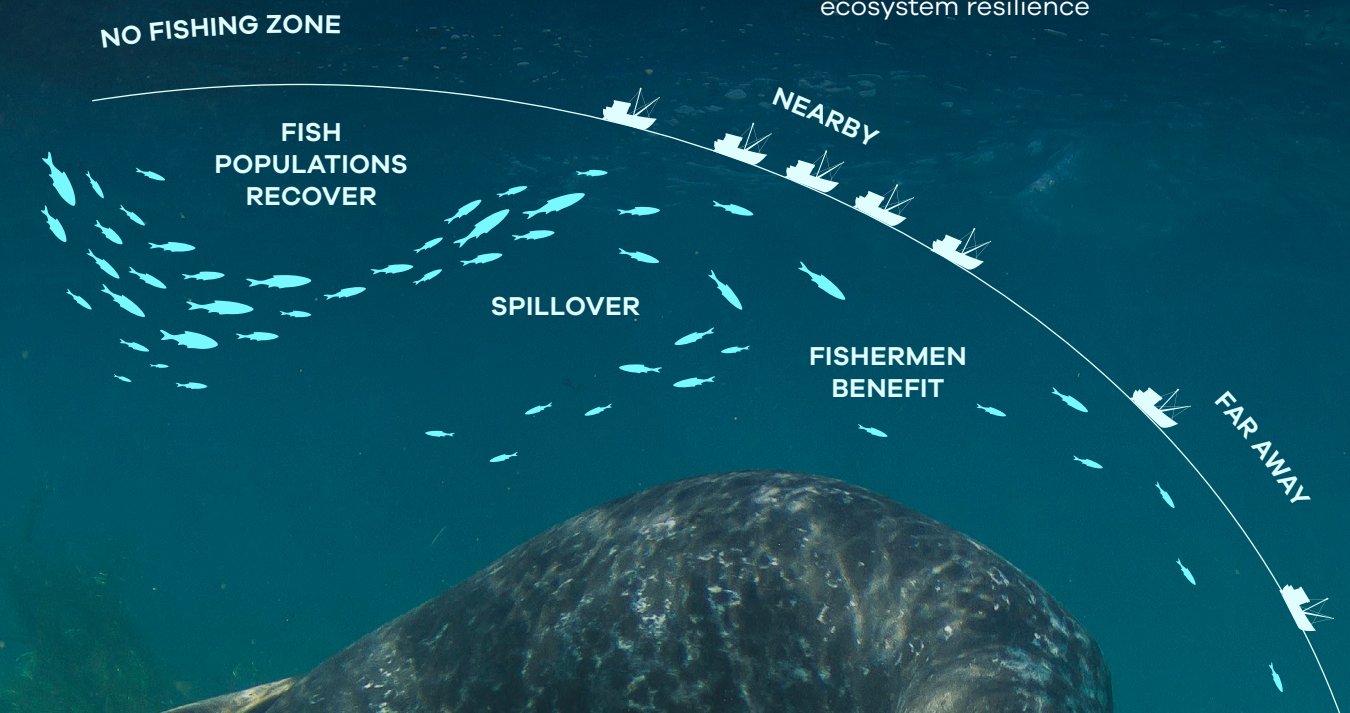
"The ocean is the lifeblood of our home."

SIR DAVID ATTENBOROUGH



The spillover effect benefits surrounding ecosystems and fisheries by:

- Enhancing species richness outside MPAs
- Supporting sustainable fishing
- Strengthening food webs and ecosystem resilience



MPAs act as breeding and nursery grounds – the overflow of life beyond their borders boosts biodiversity across a much larger region.

Ocean Protection for Planetary Health

Clip 6 (19:50–23:15)

A closing call to action: expanding ocean protection to include **seamounts** and vulnerable **deep-sea** ecosystems. Attenborough frames the ocean as the “life blood of our home”, arguing that protecting the sea is essential to protecting the planet.

Curriculum topics

- Interdependence in ecosystems
- Positive and negative human interactions with the environment
- Importance of global biodiversity and ecosystem stability

Resources

- **Immersive digital platform** [The Sea We Breathe](#) | Blue Marine Foundation
- [Facilitation Guidebook for Teachers](#)
- [Ocean Champion Guide for Ages 8+](#)
- [Ocean Champion Guide for Ages 12+](#)

“The ocean’s power of regeneration is remarkable—if we just offer it the chance.”

SIR DAVID ATTENBOROUGH



Seamounts – Biodiversity Hotspots

Seamounts create unique habitats that support a wide range of marine life, including corals, sponges and fish species

Nutrient Upwelling: Their structure disrupts ocean currents, causing nutrient-rich waters to rise, which boosts plankton growth – the foundation of marine food chains

Spawning and Feeding Grounds: Many fish species, including commercially important ones like tuna, use seamounts as breeding and feeding areas

Connectivity: They act as “stepping stones” for species migration across the ocean, maintaining genetic diversity



*"After almost 100 years
on the planet, I now
understand the most
important place on Earth
is not on land, **but at sea.**"*

SIR DAVID ATTENBOROUGH



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