

Section C Large-scale Dynamic Planet (optional topics – study topic 7 or 8)

Topic 7 Oceans on the Edge

Key ideas

Detailed content

7.1 How and why are some eco-systems threatened with destruction?

- a Human activities are degrading and destroying marine eco-systems on a global scale.

Investigate the global pattern of either coral reefs or mangrove swamps, and how it has changed in the past 50 years.

Examine the global threats to this marine eco-system to explain its changed distribution through human activities including overfishing, pollution and waste disposal from both land and ocean sources, tourism and coastal development.

- b Unsustainable use of marine eco-systems leads to the disruption of food webs and nutrient cycles and can lead to extinction.

Investigate physical processes in marine eco-systems, including marine food webs and nutrient cycles.

Examine how these processes can be disrupted through overfishing, eutrophication and siltation, as well as the impacts of climate change, including bleaching and species migration.

7.2 How should eco-systems be managed sustainably?

- a The pressure to use marine eco-systems is growing, due to rising populations and resource demand, creating difficult choices for humans.

Investigate the growing local pressures on a named and located marine eco-system.

Examine the conflicting views about how the chosen eco-system should be managed.

- b Sustainable management is needed locally and globally if the oceans are to be protected from further degradation

Compare two located case studies of marine management, e.g. sustainable management in St Lucia, management of fish stocks in the North Sea, marine reserves to establish the tensions between achieving economic and environmental sustainability.

Assess the role of global actions to maintain ocean health, e.g. the International Convention for the Prevention of Pollution from Ships (MARPOL) and marine protected areas.