



Marine Biodiversity Roles and Threats

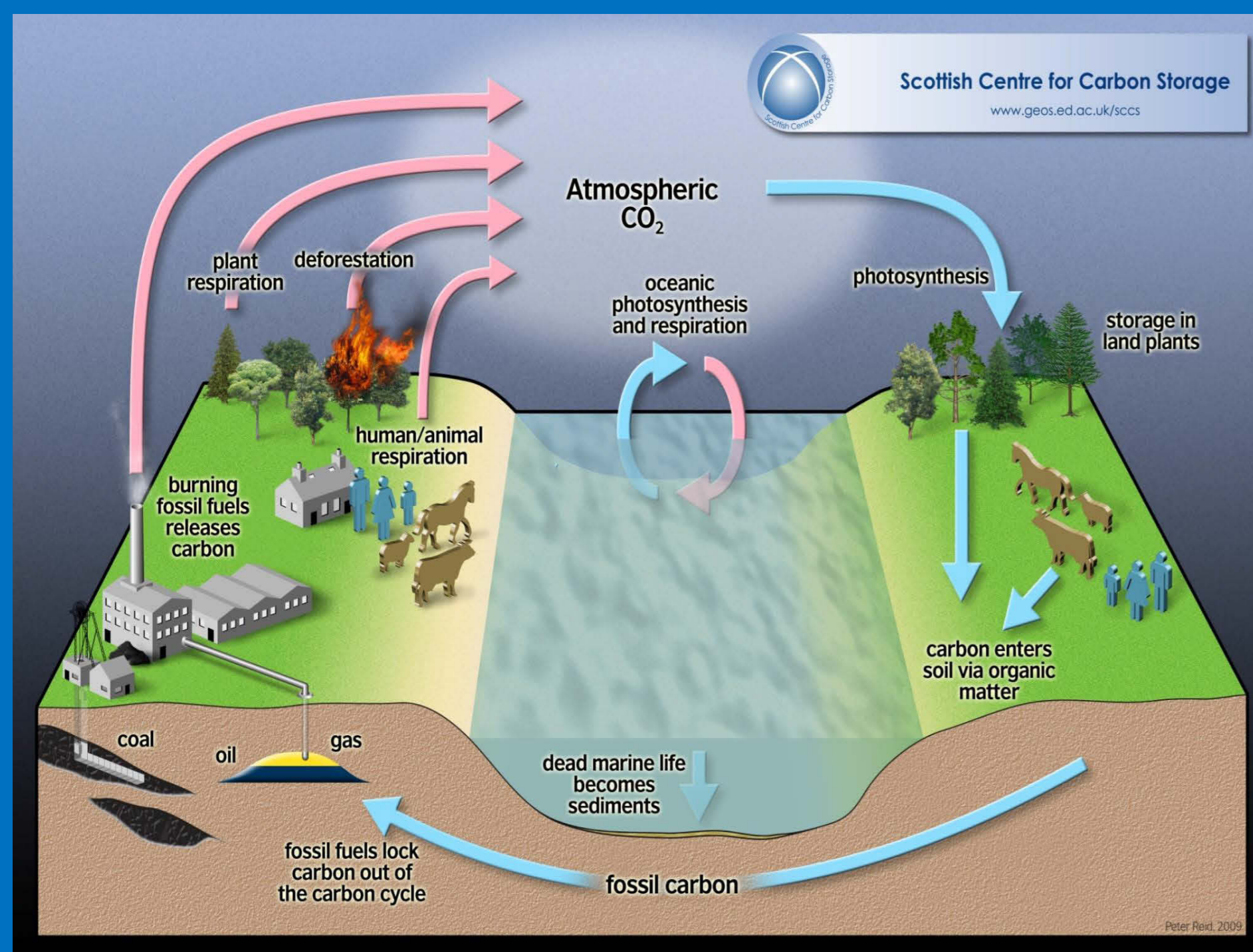


CoCoNet to Protect and Connect

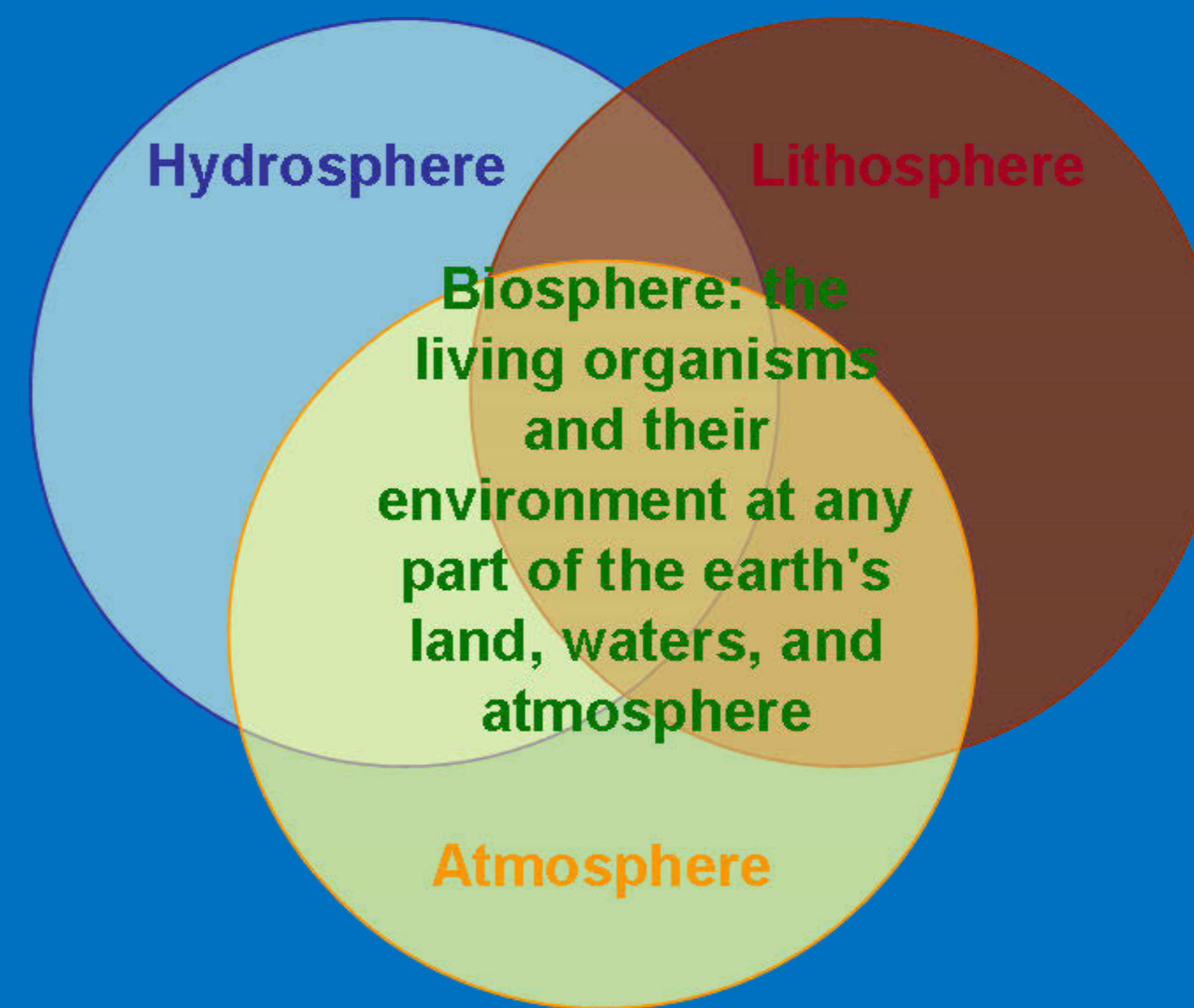
Marine Biodiversity is the measure of the variety of plant and animal species present in the Earth's Oceans and Seas. Current biodiversity is the result of a series of geological, climatic and hydrological changes that take place since the formation of our planet.

Marine biodiversity is important because:

- It provides a variety of goods and services which ensure the well-being of humans



- It contributes to the adjustment of the Earth's climate by absorbing the extra CO₂ of the atmosphere



- It contributes to Earth's biogeochemical processes thus to the preservation of the Earth's biosphere

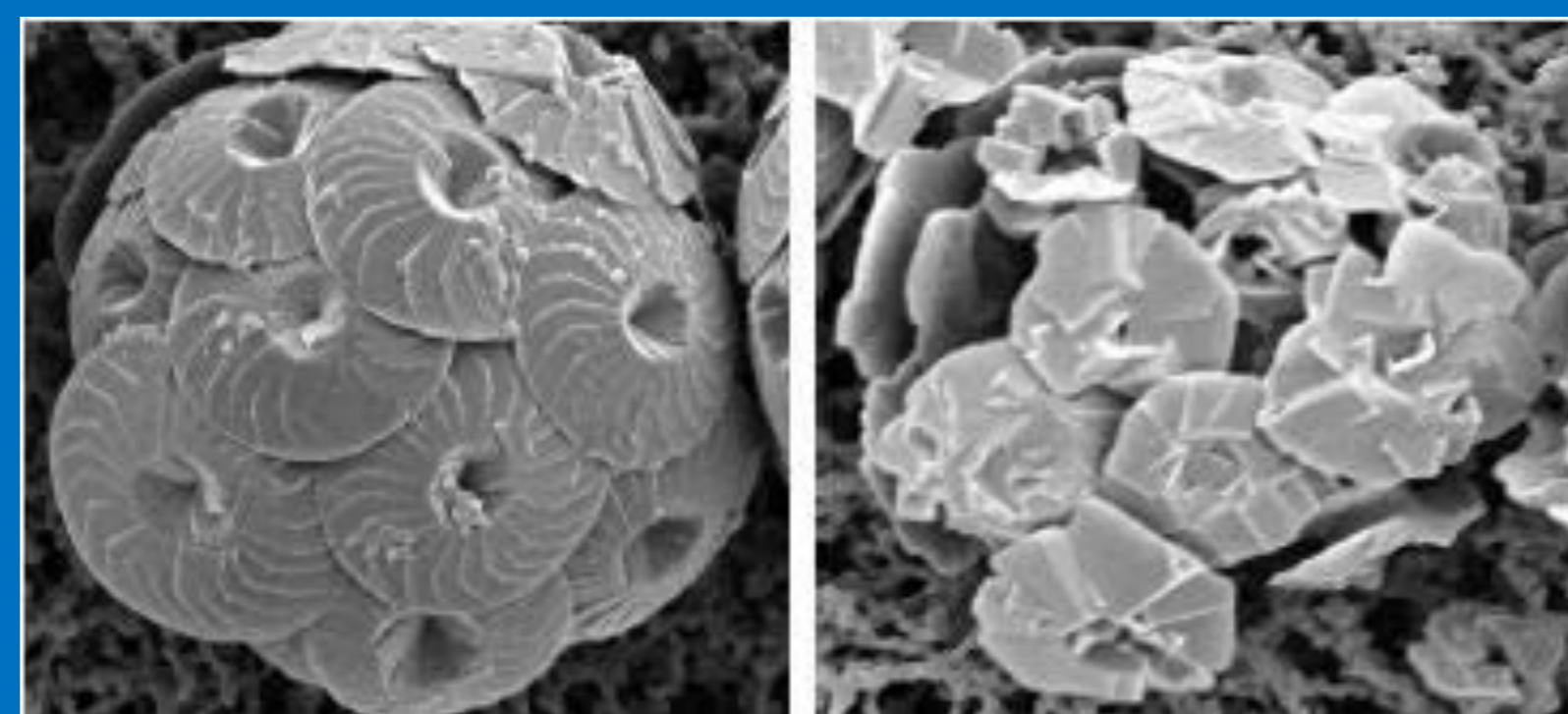
Threats to marine biodiversity:

- Pollution: toxic discharges, bacterial infection, eutrophication, etc.



Eutrophication: increased concentration of nutrients in the sea water stimulates sea plants to grow. Less oxygen and sun light is thus available to other organisms.

- Climate changes and acidification of the sea water (<pH, > CO₂)



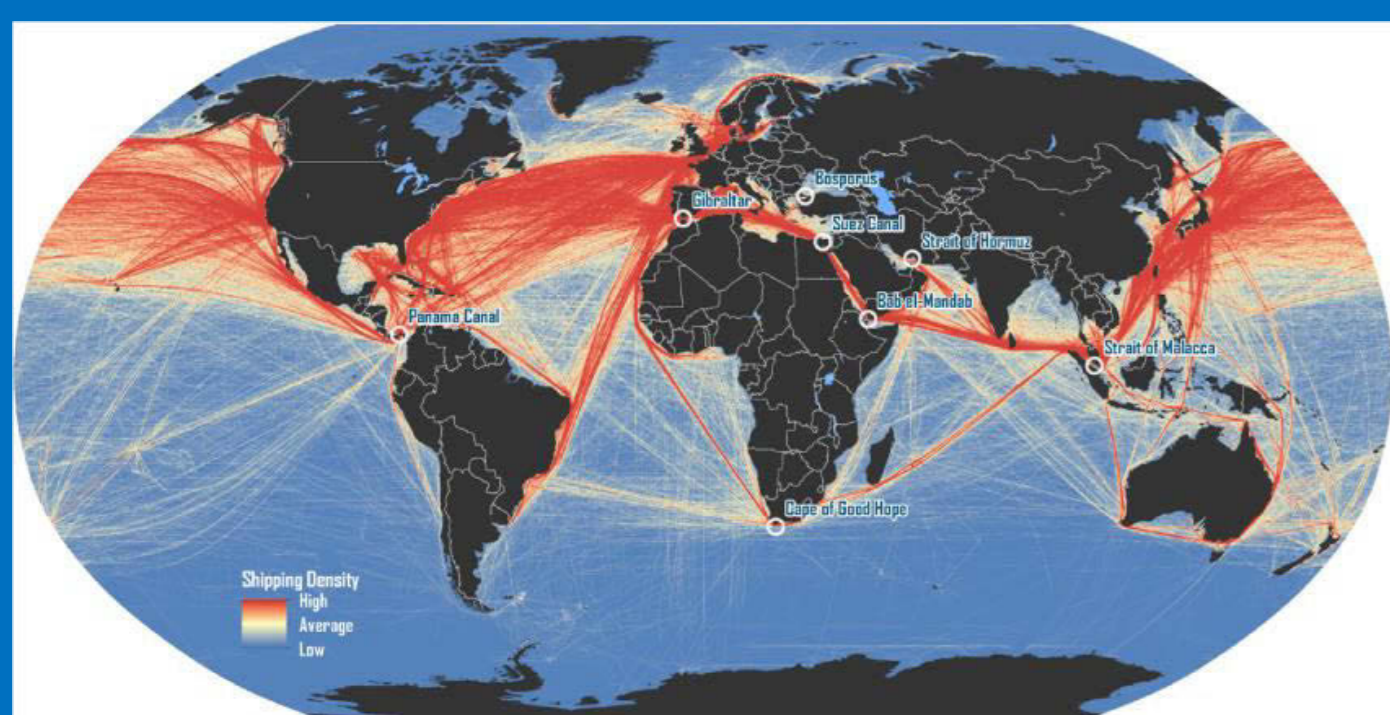
Forecast for acidification impacts on *Coccolithophores*: left image with the current CO₂ concentration and right image with that forecasted for 2100

- Overexploitation of resources



Due to overfishing, the available food for many species is decreased

- Intense Maritime traffic



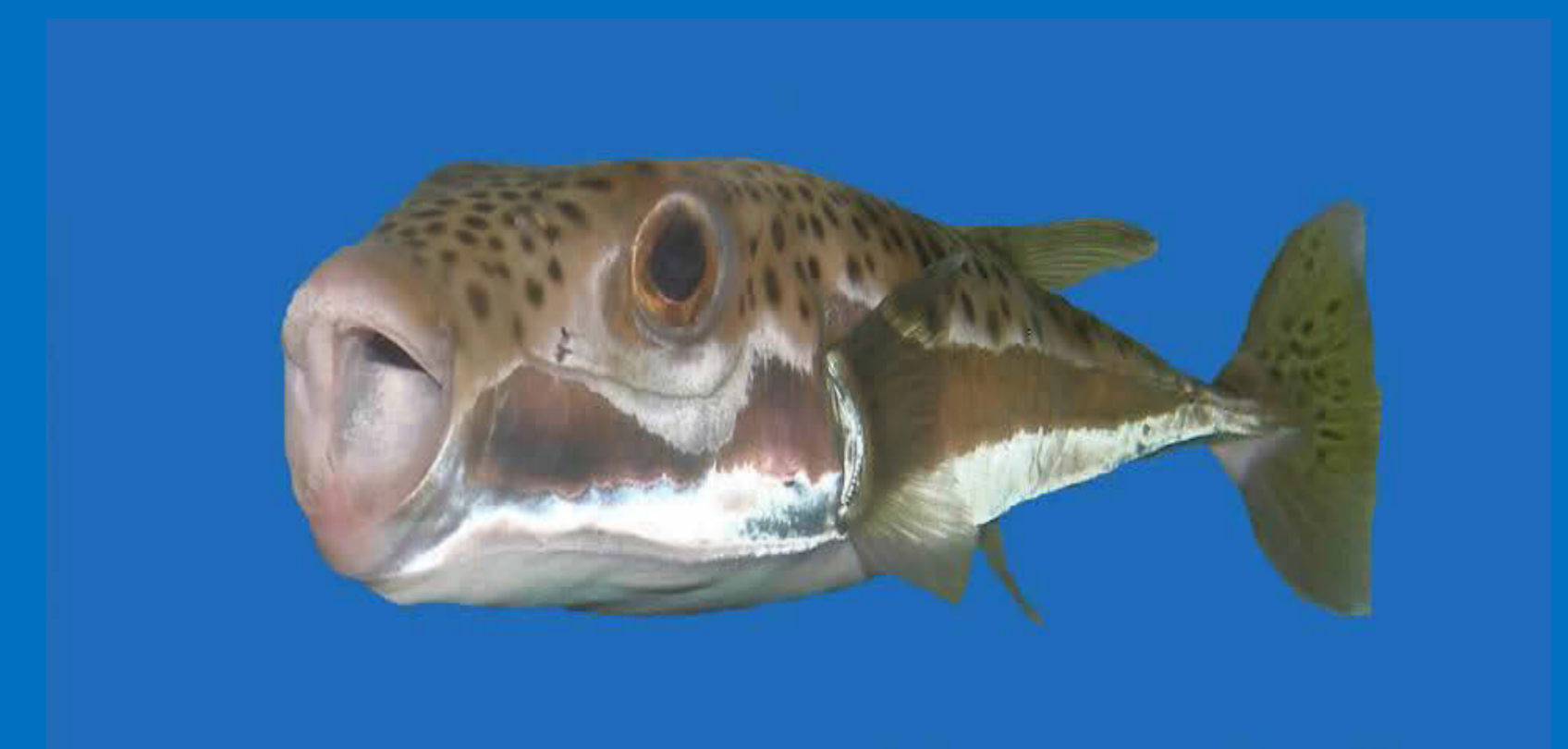
Intense Maritime traffic can cause oil spills and flushing, Noise pollution, sewage and garbage discharges, collision with marine mammals, carbon dioxide emissions, etc.

- Intense coastal development and overpopulation



A sea turtle nesting beach

- Alien species invasion



Lagocephalus sceleratus: it is one of the most harmful alien species in the Eastern Mediterranean Sea. Due to its toxicity it is not consumed by humans. Its population increases rapidly causing severe damage to marine biodiversity, human health and economy.

- Illegal fisheries



Trawling on *Posidonia oceanica* meadows has resulted in serious damages of this protected species

Impacts on marine biodiversity:

- Alterations in food-web and food-chain may bring new diseases and sudden reduction of the number of species
- Habitat alteration or loss leads to species extinction
- Extinction of species that adapt slowly to environmental changes
- Reduction of the population of commercially valuable species with direct impacts on local economies

For more information visit: <http://coconet-fp7.eu/children/>