



Protecting Blue Horizons

The Offshore Wind Farm Owner

One possible scenario: Along the western coast of an island in a temperate Sea, a species rich ecosystem needs urgent protection. As a result, also the octopus population, a commercially important species for the local fishers can recover. Overfishing, particularly from destructive bottom trawling, pollution and invasive species, strain the ecosystems. In order to protect fish and octopus nursery areas and allow the juvenile individuals to grow, a Marine Protected Area is being planned.

NB Another scenario can be chosen to fit your context better, applicable to all. See fictional map or use a map of a coastal area close by to help visualise the conflict areas between different interests.

MPAs are geographically distinct zones which aim at safeguarding the biodiversity through habitat protection, maintaining marine ecosystem healthy or restore them to a healthy state for the supply of ecosystem products and services. They are fundamental because they help to release the pressure on the habitats and on the species. Indeed, many human activities and all the phenomena linked to the climate change put a huge pressure on ecosystems.

Imagine being the owner of a company interested in the construction of an offshore marine wind farm in the western coast of the island. This area is particularly favorable for the production of **clean energy** because it is one of the windiest parts in South Italy. Offshore wind farms represent a **highly efficient way of producing energy** because wind speed tends to be **faster** and **steadier** on sea than on land so this means that more power can be generated more reliably.

Offshore wind can generate electricity without burning any fuel or emitting any greenhouse gas. This farm can be an occasion to generate clean energy that will be able to provide electricity for the entire western coastal cities of the island. For this reason, the local municipality fully supports your project. Moreover, you have big financial interests in the realization of this farm because wind energy has become extremely profitable in recent years.

However, the realization of your wind farm has encountered some negative opinions. The area you have evaluated as most strategic for the realization of the farm is located within the Marine Protected Area. Thus, the Conservation Organization which is working to enforce regulations to strengthen marine protection considers your project too hazardous for the marine ecosystem and its biodiversity. In particular, if the turbines are built too close to the coastline, the rocky sea bottom, which is a fundamental nursery area for fish and octopus, will be compromised. To connect the offshore production site to the mainland, cables and the receiving station further effect the environment. Moreover, because the wind farm would be built within the view of the coastline, the project is opposed by residents and by the local tourism company which is convinced that the view of the wind turbines, the noise, and other changes to the seascape will negatively affect the experience of their clients.

You will explain the advantages and disadvantages of your project and try to convince the opponents that the benefits exceed the negative externalities.

You should consider the option of moving the installations provoking heavy environmental impacts outside the MPA. Otherwise you may have to face expensive extra-precautions likely to be required by the licensing authority. This may also help to reduce already high tensions around construction

of the receiving station of the underwater transmission cables. Ponder the pros and cons in your assessment of what are the minimum requirements for the wind farm to operate profitably.