

Abstract

Since some decades, the environment became an important hot topic especially in the merchant marine field. Indeed, more and more measures and tryouts are implemented in order to have environmentally friendly vessels and offshore structures. However, lots of talk concerning merchant marine relation with marine fauna are now organized.

Thus, this Master thesis, via some explanation about which elements can be found underwater and on its surface (such as animals and infrastructures), will state some issues faced by marine mammals and sea birds : noise and vibrations, collision with vessels, instruments interferences, habitat destruction... Human influence on marine fauna is therefore negative.

Nowadays, we should concentrate on developing new measures using for instance new technologies, altering ships' courses, strengthening legislations... Indeed, there will first be a discussion on solutions already existing (such as repulsion means implemented on some fishing boats, activists and localization means) helping to avoid getting things worse. Afterwards, potential middle term solutions will be explored such as the development of guidelines for the officer of the watch and an application (created via a Python code) to reroute the ship without too much issue for the company. Last but not least, mariners' points of view on the proposed solutions in addition to their opinions on vessel's impact on marine mammals in the long run will be discussed.