Abstract

This thesis tries to quantify the impact of LNG as a fuel on our environment and on the climate.

Worldwide many different analyses have been made and many individual reports have been written about the impact of LNG on the environment and the climate.

In this thesis the basic data from these reports are used to make a complete analysis of the combined impact of the use of LNG as ship's fuel on the environment and on the climate.

To assess the environmental impact, the emission gasses of LNG are compared with those of the traditional oil-based fuels used in shipping. To assess the impact on the climate, the first thing that's observed is the CO_2 emissions by the ship's engines. In addition to the CO_2 emissions, the impact of methane slip is also considered and taken into account. In this way the global impact per engine type and fuel type can be assessed, expressed in CO_2 equivalents.

Finally, the climate impact of black carbon is discussed and as much as possible also quantified. In this way a complete global warming potential per engine type and per fuel type is reached.