

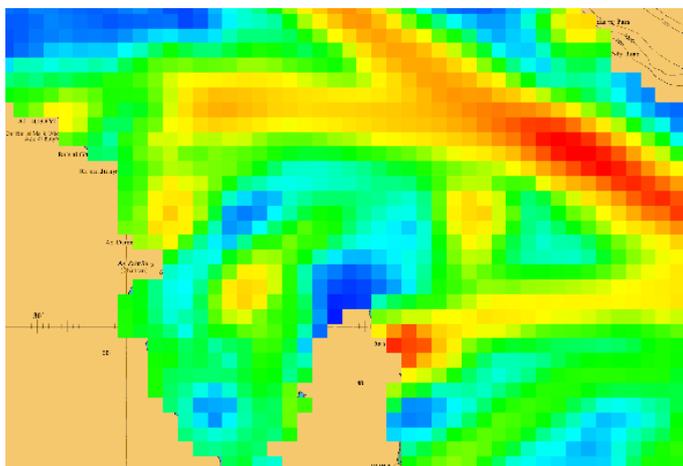
Emissions Regulation and Control

As restrictions on atmospheric emissions become increasingly stringent, the need for quantifying emissions becomes more important. This includes emissions from shipping. The first study of emissions of greenhouse gases from ships was published by the International Maritime Organization (IMO) in 2000, following a request from the 1997 MARPOL Conference.

Ship based air pollution is controlled under the “International Convention on the Prevention of Pollution from Ships”, known as MARPOL. This convention dictates the acceptable levels for emissions, like Nitrogen Oxides (NOx), Sulphur Oxides (SOx) and Particulate Matter (PM). The IMO and it’s member states have amended this convention in recent years, causing the level of admissible emissions from a ship to be reduced and continue to be reduced in the near future.

Monitoring

The accurate quantification of ship emissions is crucial to a full understanding of the state of marine air pollution.

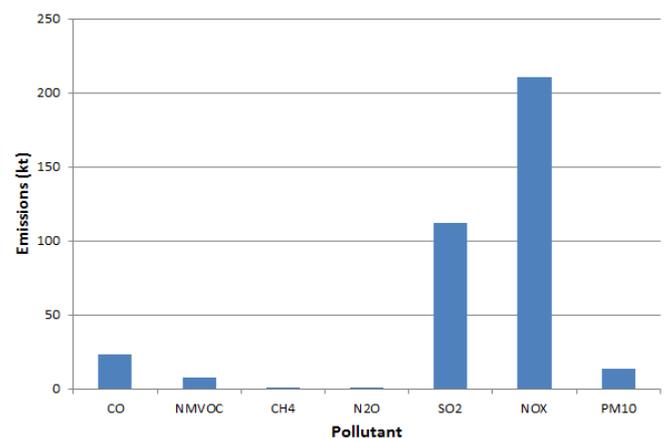


(Emission Heat Map)

Anatec has developed a methodology that goes beyond current limitations of emission assessment and ensures an accuracy not otherwise available.

This is possible because of the unique range and detail of marine data held by Anatec. Current and historical AIS information allows insight into both the routing and vessel specific characteristics, allowing a greater accuracy in the analyses of emissions.

Emissions Results (excluding CO₂)



(Example Data - CO₂ was analysed separately as it represented 10,000 kt of emissions)

Anatec’s emissions model can calculate emissions from shipping for a variety of pollutants using an activity-based method based on AIS data. The data is supplemented with Lloyd’s data on vessel characteristics and used to calculate fuel consumption across a grid, based on engine power, number of hours in grid cell, load factor and specific fuel oil consumption. This is then combined with emissions factors to determine quantities of emissions across the grid.

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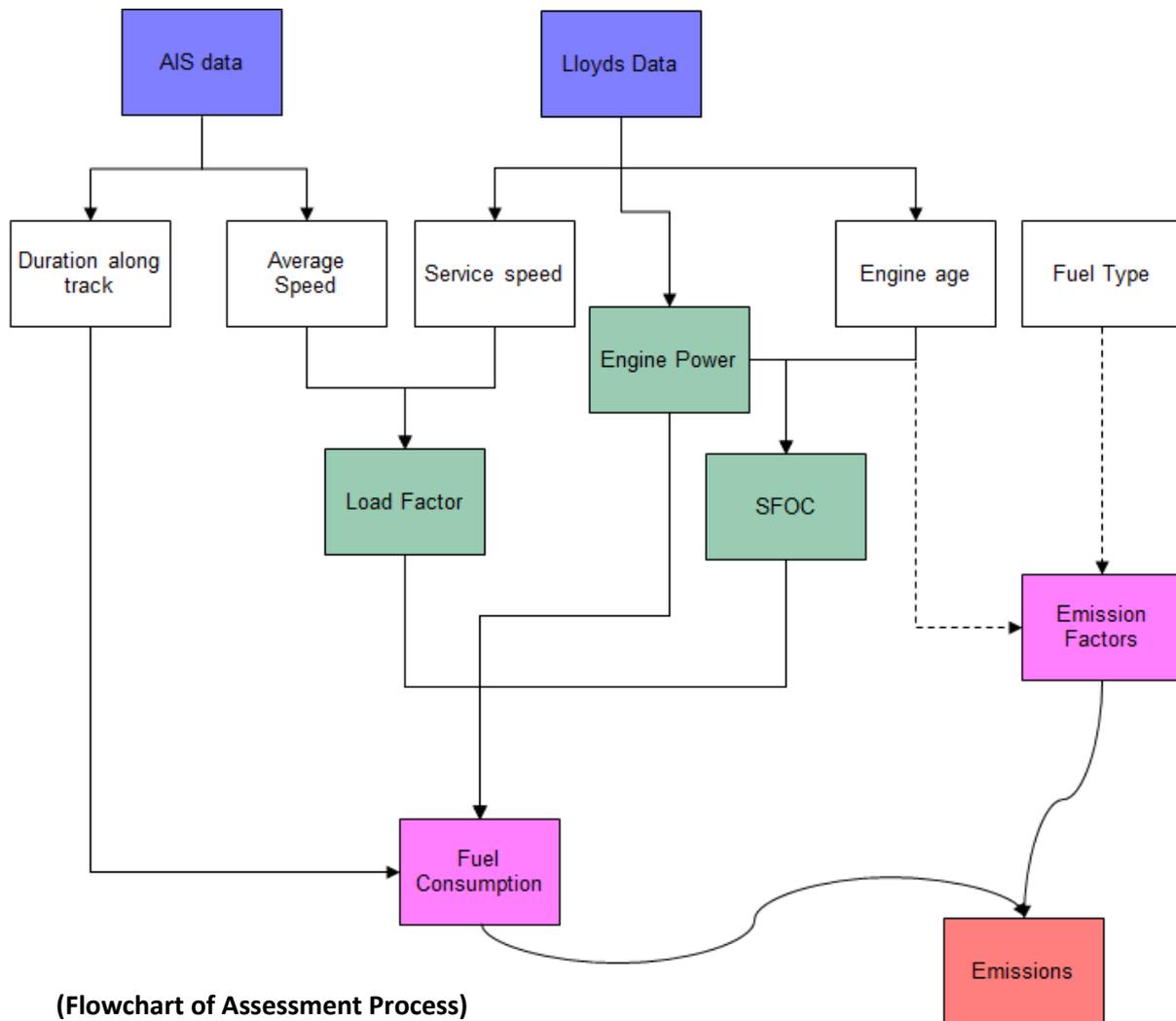
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This work has been conducted for the waters of the Middle East. This analysis has established the annual emissions resulting from shipping and the areas where these emissions were highest, allowing a complete understanding of the state of ship emissions and air pollution within the Gulf.

Contact us below for more information.



(Flowchart of Assessment Process)

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