

## Impact of Ship Traffic to PM 2.5 and Particle Number Concentrations in Three Port-Cities of the Adriatic/Ionian Area

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**Abstract :** Emissions of atmospheric pollutants from ships and harbour activities are a growing concern at International level given their potential impacts on air quality and climate. These close-to-land emissions have potential impact on local communities in terms of air quality and health. Recent studies show that the impact of maritime traffic to atmospheric particulate matter concentrations in several coastal urban areas is comparable with the impact of road traffic of a medium size town. However, several different approaches have been used for these estimates making difficult a direct comparison of results. In this work an integrated approach based on emission inventories and dedicated measurement campaigns has been applied to give a comparable estimate of the impact of maritime traffic to PM<sub>2.5</sub> and particle number concentrations in three major harbours of the Adriatic/Ionian Seas. The influences of local meteorology and of the logistic layout of the harbours are discussed.

**Keywords :** ship emissions, PM<sub>2.5</sub>, particle number concentrations, impact of shipping to atmospheric aerosol

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