

Inspirer un air meilleur

TOWARDS TRANSPARENT AIR QUALITY MONITORING IN PORTS OF THE SOUTHERN REGION

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Reference Air Quality Monitoring Stations



Micro-sensors : Enhancing Maritime Monitoring

SO2, NOx, PM1, PM.25, PM10 CO2, Ultrafine particules

openairmap.atmosud.org

High résolution ship plume modeling : Geographical and sectoral impact of plume dispersion: guiding stakeholders' mitigation actions

Toward Next-Generation Maritime Monitoring

 Recently, numerous projects have highlighted the contribution of plumes to local air quality. Within these plumes, observations have shown that ultrafine particle concentrations can exceed 700,000 particles/cm³ and nitrogen oxide concentrations can reach 1,000 μg/m³ Information : Bridging authorities, stakeholders, and citizens www.atmosud.org

Emissions inventory : Tracking emissions to improve the effectiveness of measures

instantaneously [1] to [7].

- Fugacity : the impacts of emissions from the ship maneuvering phase are brief, lasting only about a minute. Those from the berthing phase can be longer, with a dispersion width ranging from tens to hundreds of meters.
- Regarding chronic exposure, their contribution to pollution adds to existing urban sources such as road traffic, residential emissions, and industrial activities. Depending on the environment, this pollution can significantly contribute to longterm exposure, especially in areas located near port terminals.

Live Emissions Data: A Step Forward in Port Environmental

SIGNAL'AIR : an application to support citizen engagement

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References

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Management

A new methodology enables realtime estimation of ship emissions by combining fuel consumption data and vessel activity. Using ship characteristics and AIS movement data, emissions are calculated per ship, per phase, and per port, offering detailed insights for hourly to annual maritime pollution assessments.

