



 **Green** Inland Ports

# Good Practices

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# 01

## Noise and odour management

## 1.0 Noise and odour management

### 1.1 Description

Port activities often generate noise, odour, light and dust (Port of Amsterdam, n.d.). This can lead to negative impacts on the local population and the environment. Noise and odour nuisance can lead to a variety of health effects, such as poor sleep quality, decreased focus during school or work, increased stress levels, less ventilation in houses due to more windows kept closed and health complaints such as headache, dizziness and nausea (GGD, n.d.-a, n.d.-b). According to EcoPorts et al., (2022) noise and odour management systems may include:

- Detecting noise and odour nuisances and checking them against local / national noise limits (in the case of Groningen Seaports, the Province of Groningen has set a limit of 65 dB).
  - A point of contact or website where nuisances can be reported can be set up by the port authority.
  - Measurements can be carried out and be implemented in models, which shows the dwellings that are susceptible to suffer from relevant levels of noise or odour exposure. In the case of Groningen Seaports, the measurements have been executed by the municipalities.
- Investigating what the source of the nuisance is.
- To make sure that emitters take as much of preventive measures and good practices/technologies to prevent or minimize the nuisance.

Noise prevention or minimisation measures can be put in place through mufflers, dampers, acoustic enclosures/barriers, limiting hours of operations, electrification of processes, and land buffers. Odour prevention or minimisation of nuisance can be achieved through identifying and blocking out where odours can leak, increasing the discharge height of chimneys, using activated charcoal filters, or using fewer products or materials with a strong odour. Legal requirements may be set in order that companies within a landlord port structure have the freedom to choose their own methods of compliance.

### 1.2 Specific aim/goal of the measure

Noise and odour management aims to minimise noise and odours to avoid disrupting or harming workers and/or communities. The extent to which noise and odour should be reduced depends on the location of the port, as close proximity to urban environments or nature reserves asks for a more cautionary approach.

## Ports that have implemented noise and/or odour management

- Bremerhaven
- Port of Antwerp–Bruges
- Groningen Seaports
- Port of Rotterdam
- Port of Amsterdam
- Port of Andernach
- Minden Port
- Port of Giurgiulesti
- KOTUG
- ZULU Associates
- Van Berkel Logistics

Although we primarily found examples in seaports, these examples may also be relevant to inland ports, depending on the activities taking place at the inland ports and the proximity to nature and communities.

We have also encountered a number of barge and terminal operators that put effort in this good practice, such as KOTUG International, ZULU Associates, and Berkel Logistics, which shows that this good practice can also be implemented on company level without intervention of the port authority.

## Stakeholders

- Port authority: The port authority may take on a neutral and governing role between the stakeholders that experience nuisance from the port activities, and the companies located within the port that emit the nuisance.
- Local or national authorities: Which authority makes rules regarding noise and odour nuisance differs per country. Authorities play a role in limiting nuisance for inhabitants, but also for the environment.
- Companies within the port area who may cause noise and/or odour nuisance: When a port puts effort in a noise and odour management system, they will be stricter against reported nuisance. This means that there is a large chance that companies must implement measures to limit their noise and odour emissions.
- Local residents: In many countries, there are currently rules regarding noise and odour nuisance. However, a better management programme will increase the likelihood of residents not experiencing nuisance.

## 1.3 Possible obstacles when implementing

- Financial constraints are cited as the main obstacle. Together with the subjective origin of the problem, mitigating nuisance can be relatively expensive (European Environment Agency, 2021).
- Nuisance is very subjective, so whether or not the port is making sufficient efforts to prevent noise and odour pollution can be difficult to determine.
- Currently, the instruments and measures to address these problems are well identified and available, but the political will to implement them is not always there (European Environment Agency, 2021).
- Managing nuisance can be difficult when a government is fragmented across different administrations (European Environment Agency, 2021).
- Lack of space and overcrowding in land use planning are major challenges, making noise and odour pollution near ports a growing problem (European Environment Agency, 2021).
- It can be very challenging to combine noise and odour management with existing port infrastructure, or to balance effective management with operational efficiency.
- The second survey conducted within the GRP Project shows that there is a number of ports that have implemented this good practice but are not active in the enforcement.
- Inland ports have different experiences with implementing this measure, but on average inland ports experience this good practice as relatively difficult to implement (source: Green Inland Ports survey, 2024).

## 1.4 Key learnings

Noise and odour nuisance can lead to serious health problems and can have a large impact on the environment. A relatively small share of ports already has a platform where noise and odour nuisance can be reported, and these are especially the larger ports located closer to urban areas. To create a situation where industrial port activities and residential living co-exist together, more awareness should be created around limiting possible noise and odour nuisance, and a good reporting system should be set up in all inland ports where nuisance may occur.

## 1.5 Sources

**EcoPorts, Groningen Seaports & ESPO**, 2022. *Port Environmental Review System 2023/2025*,

Groningen:

**European Environment Agency**, 2021. *Measures to manage and reduce noise impacts: opportunities and challenges*:

**GGD.n.d.-a**. Geluidsoverlast, <https://ggdleefomgeving.nl/overlast/geluidoverlast/>.

**GGD.n.d.-b**. Geurhinder, <https://ggdleefomgeving.nl/overlast/geurhinder/>.

**Port of Amsterdam**.n.d. Sustainable port,

<https://www.portofamsterdam.com/en/discover/sustainable-port>.