

Erasmus +

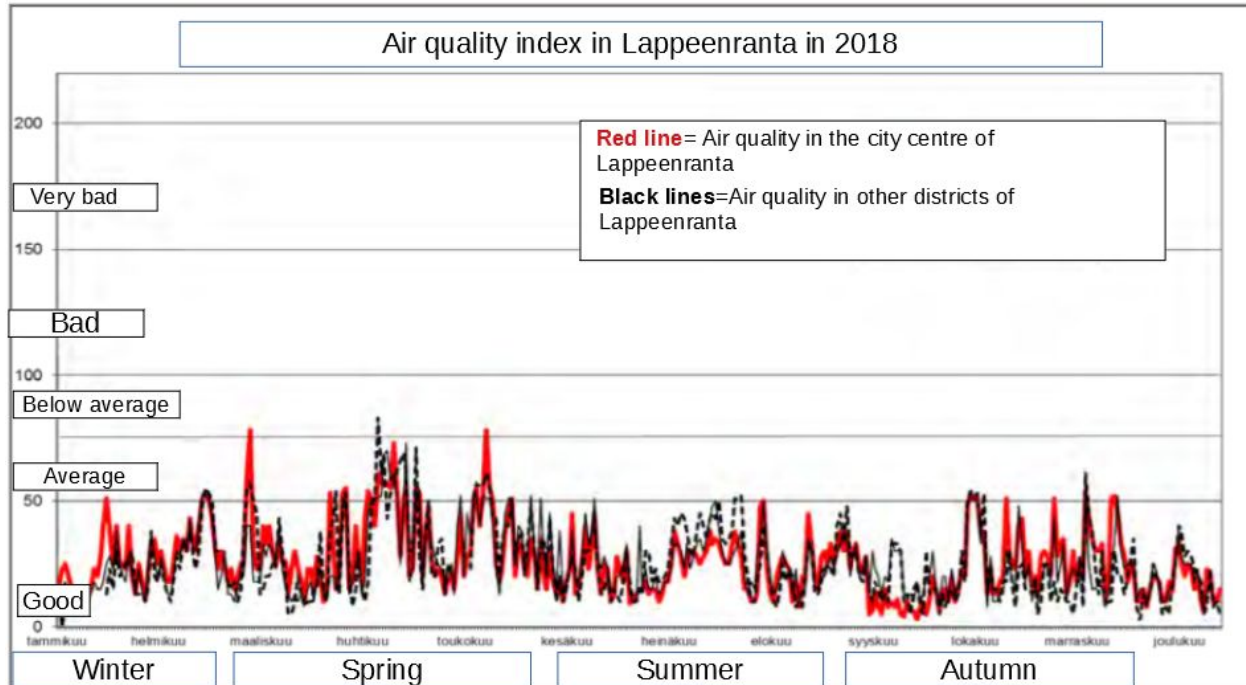


**MY TOWN**  
2020



# Air quality in Lappeenranta

# What is the quality of air like in Lappeenranta?



In general, the air quality in Lappeenranta is good. Even so, air quality has occasionally been worse than normal for various reasons.

The red line represents air quality in the city centre of Lappeenranta. As you can see, air quality has been mostly good and only a couple of times “average” or “below average”.

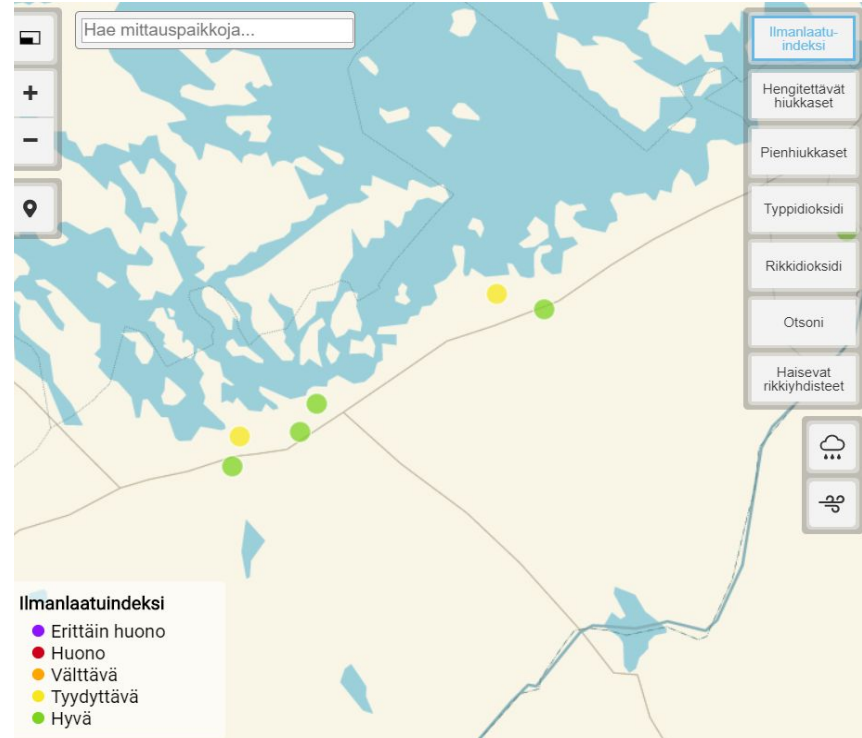
# How is air quality measured?

There are several air quality measuring stations in Lappeenranta placed in different areas of the town to get a comprehensive picture of the air quality.

The stations measure:

- Sulphur dioxide (SO<sub>2</sub>)
- Nitrogen dioxide (NO<sub>2</sub>)
- Particulate matter

The map shows where the measuring stations are located.

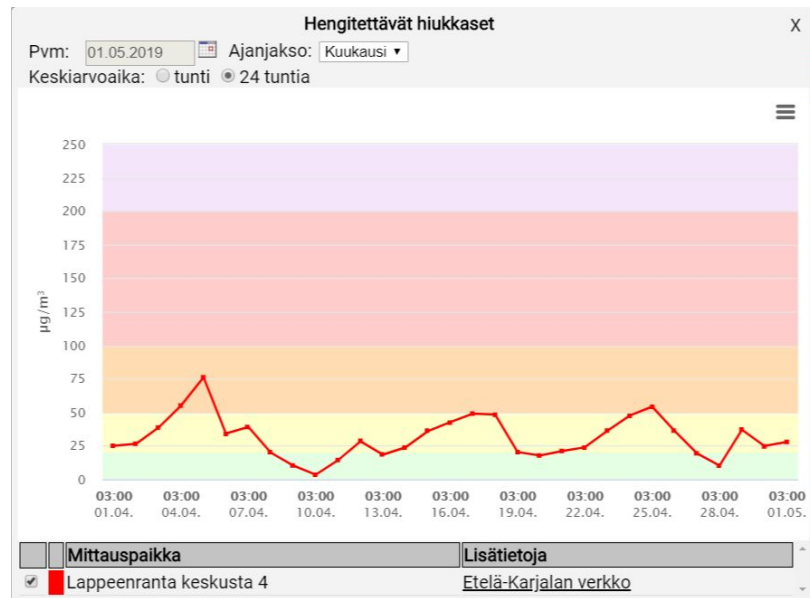
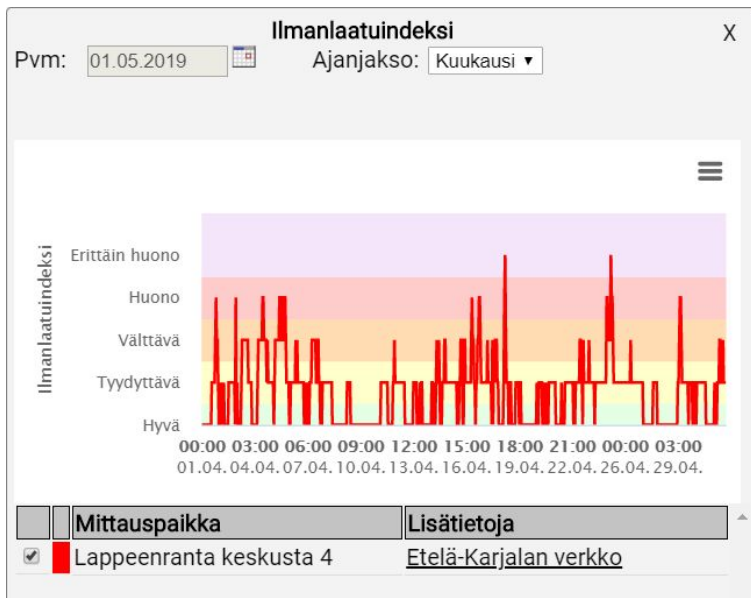


# What factors affect the air quality?

- During spring, road dust has a considerable effect on the air quality in Lappeenranta.
- Road dust is mostly particulate matter; therefore, particulate matter concentration is higher in the spring.
- Industry is also a factor that affects air quality. Lappeenranta has wood processing industry and mineral mining, which have some negative effects on the air quality as they release sulphur dioxide and particles, for example.
- Naturally, traffic also affects the air quality, releasing mostly nitrogen dioxide.



During winter, gravel is spread on the roads to prevent slipperiness. During spring, the gravel is swept away, which causes road dust.



These pictures represent the air quality in Lappeenranta on April 2019. They prove that road dust has a huge impact on the air quality.

# How can air quality be improved?



- The most substantial part of the air pollution comes from industry. The companies' responsibility is to try to reduce their air pollution.
  - Factories could, for example, install filters.
  - New technological innovations could help to reduce pollution
- More public transport means less traffic so, using public transportation could reduce air pollution.
  - Most of the residents of Lappeenranta own a car. Our city has tried to improve public transportation, but there are still some practical issues with it. For example, there are not too many bus routes to distant suburbs.
- Planting trees. Trees can purify the air around them by removing microbes and mold.

# How does bad air quality affect people?

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- Bad air quality is harmful to those who are sensitive to air pollution.
- It's also affecting to the living comfort of the residents in the city area.
- We also know that bad air quality has adverse effects on the residents of cities.
  - For example
    - If the sulphur dioxide concentration is high, it can cause more asthma attacks and respiratory infections than usual with children and adults.
    - Particulate matter is harmful to elderly people and those who suffer from heart and lung diseases.

