

# Bioreactor Landfill odour monitoring in the Republic of Croatia

## Our Client

County Waste Management Centre Marišćina (CWMCM) is a waste management body created by the Republic of Croatia. It is responsible for performing the Environmental Impact Assessment (EIA) in the area of Primorje-Gorski Kotar County in Croatia. The county hosts up to 291,000 people as per the 2015 census and covers up to an area of 3,588 km<sup>2</sup>. It was formed under the umbrella of the National Waste Management Plan of Croatia. The CWMCM harbours plants for mechanical and biological treatment of unsorted municipal waste and transshipment stations across the country.



Image is representative

## The Challenge

The CWMCM had been receiving complaints by the residents and travellers nearby about the odour emitting from the municipal waste management landfill plants. Harmful gases like ammonia, sulphides, methane, and carbon dioxide are common in Bioreactor landfills. Exposure to such toxic gaseous substances could worsen the health by causing asthma and other related health issues. The CWMCM needed an odour monitoring system that could detect harmful gases like SO<sub>2</sub>, CO, CO<sub>2</sub>, methane, and other air pollutants like PM<sub>2.5</sub> and PM<sub>10</sub>. In order to adopt odour mitigating measures, they needed an odour monitoring system that could detect such harmful gases and other air pollutants.

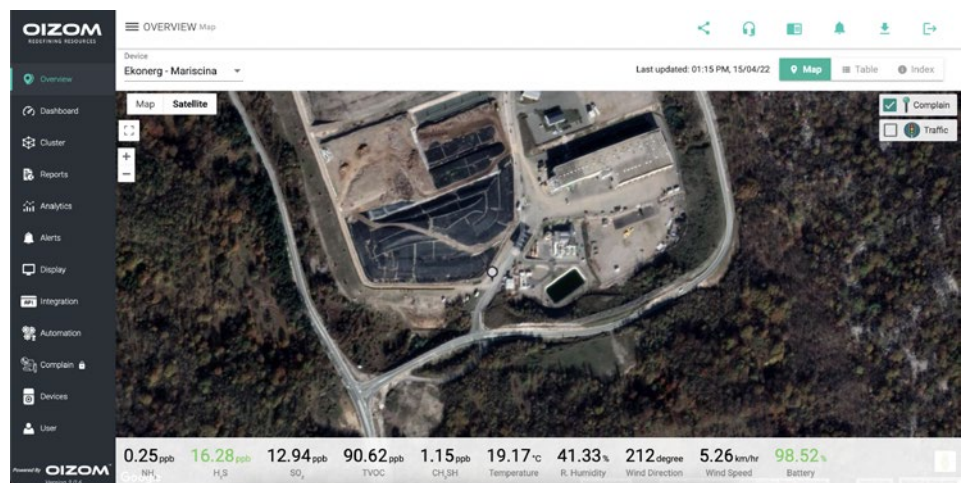
## Installation Details

1 Odosense Smart was installed in the County Waste Management Centre Marišćina Bioreactor Landfill.



## The Solution

Oizom with Eknerg offered Odosense Smart to be installed in the vicinity of the Bioreactor landfills. It can detect harmful gases such as SO<sub>2</sub>, CO, CO<sub>2</sub>, ammonia, and other air pollutants like PM<sub>2.5</sub> and PM<sub>10</sub>. Odosense also comes inbuilt with a notifying mechanism where it can warn the authorities of an increase in the odour levels. This empowers the CWMCM to adopt appropriate measures to safeguard the residents nearby from exposure to such toxic gases. It is also helpful in detecting the levels of gases that could potentially lead to landfill fires.



## The Result

Oizom's accurate, smart and efficient odour monitoring system, Odosense has helped notify the parameters levels of odour and air pollution levels to the authorities of the Bioreactor landfills in Croatia. Its remote calibration facility and its wide range of internet connectivity options have been useful in gathering data about the various hazardous gaseous levels remotely. It is easier for the authorities to now warn the residents nearby in case of any leakage from the Bioreactor landfill because of the real-time odour and air pollution monitoring capabilities in Odosense.

*"The Device Installation went without issues and the device got connected to Wifi and SIM simultaneously. Great product, in terms of robustness and connectivity."*  
- Hrvoje Malbasa,  
Eknerg

Oizom is an environmental IoT company offering data-driven environmental solutions for better decision making. With our sensor-based hardware, we monitor various environmental parameters like air quality, noise, odour, radiation, weather conditions, etc. Our data analytics platform derives many actionable insights for authorities, communities, and industries. Oizom strives to play an essential role in a sustainable future through smart environmental solutions and data science.