

# Data portal development

Results of the developments that have occurred  
so far and future developments

# Content of SwEPA/SMHI program

Main outcome: improved fulfilment of EU requirements on air quality in

## Chapter 27

4 components:

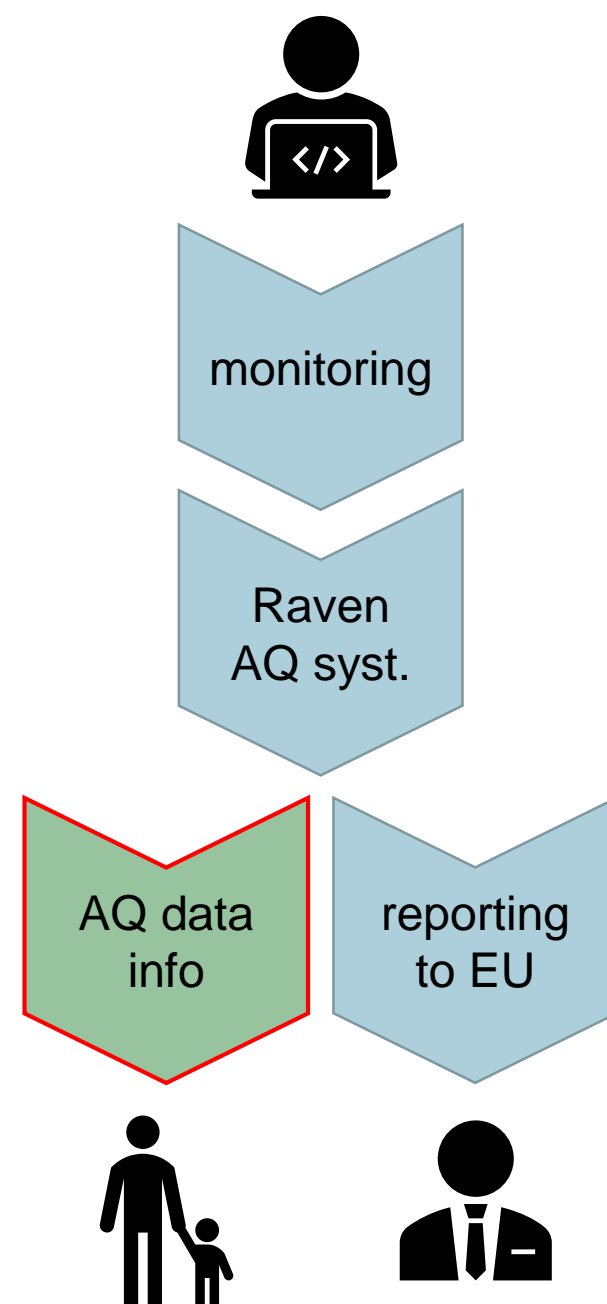
1. Increased processing capacity of emission data
2. Increased capacity for guidance towards LSGs
- 3. Increased public accessibility to AQ-measurements**
4. Regional dialogue on availability, acquisition and usage of AQ-data established

# Data flow and EU requirements

- A public **tailored website**, ready to fetch **AQ-data** from the **Raven database\***, will be free to use (open source) for national websites.
- The outcome will be User Friendly public availability of the Air Quality measurements data (NRT), as well as the AQ-index\*\*
- Includes web content accessibility for disabilities (color blind etc.)\*\*

\*Raven is developed by NILU and 4sfera on behalf of the EEA.

\*\*EU requirements

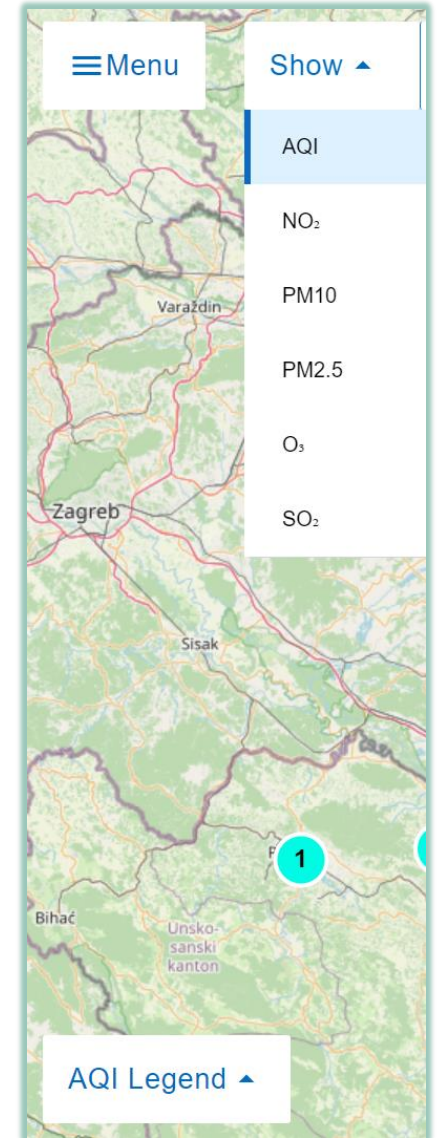


# Type of data included

Priority pollutants: NO<sub>2</sub>, PM10, PM2.5, O<sub>3</sub> and SO<sub>2</sub>

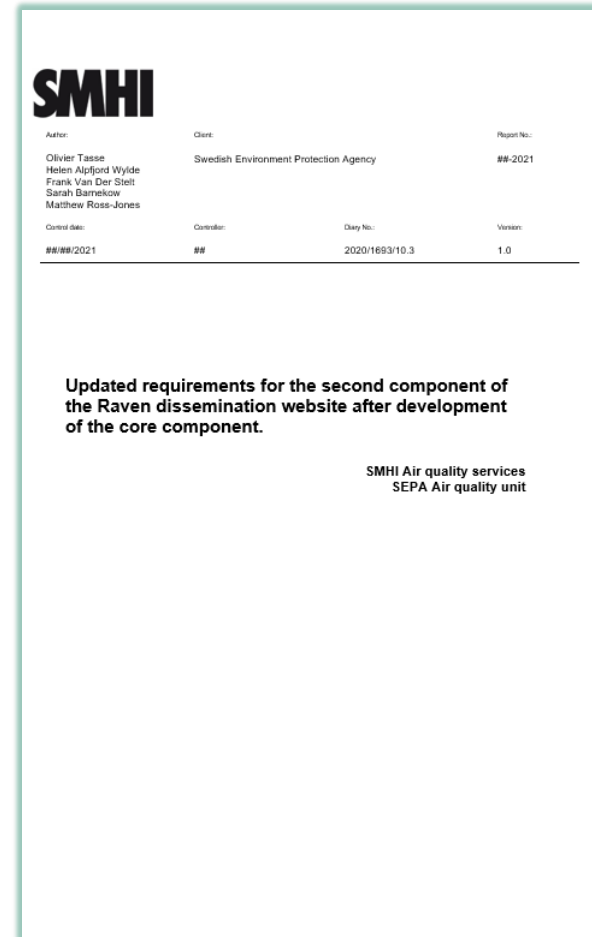
Air Quality Index

- Up to date (near real time) : hourly measurements from station without quality review (E2a)
- Validated : after review
- Verified : after final approval of validations (E1a)



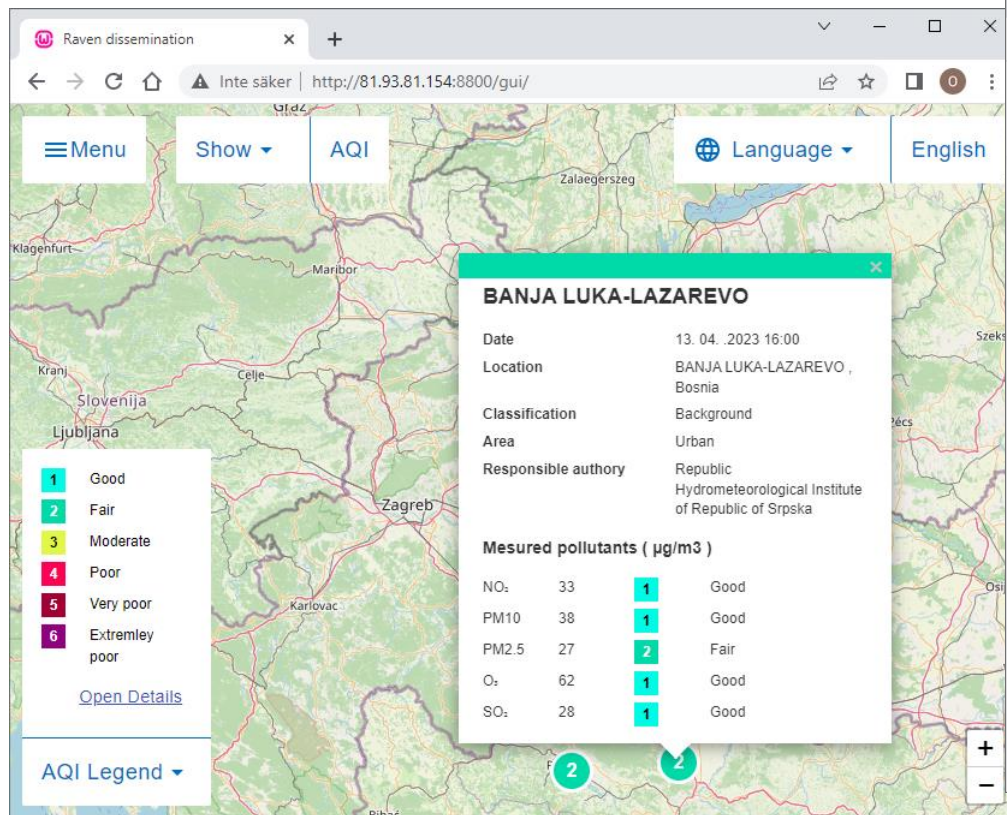
# Road map for the data portal

- near-real time (NRT) data in an interactive map,
- time series diagram of each pollutant (time frame and resolution can be changed),
- updated metadata for the stations (coordinates, picture, etc.)
- includes verified data (Historical) as well as NRT
- download of data available (csv-format)
- filter options to pre-select stations (e.i: from geography, pollutant, time period etc.)
- inactive station measurements can be visualized (in grey)
- possibility for the systems owner to add other contents (logo, health contents, etc.).

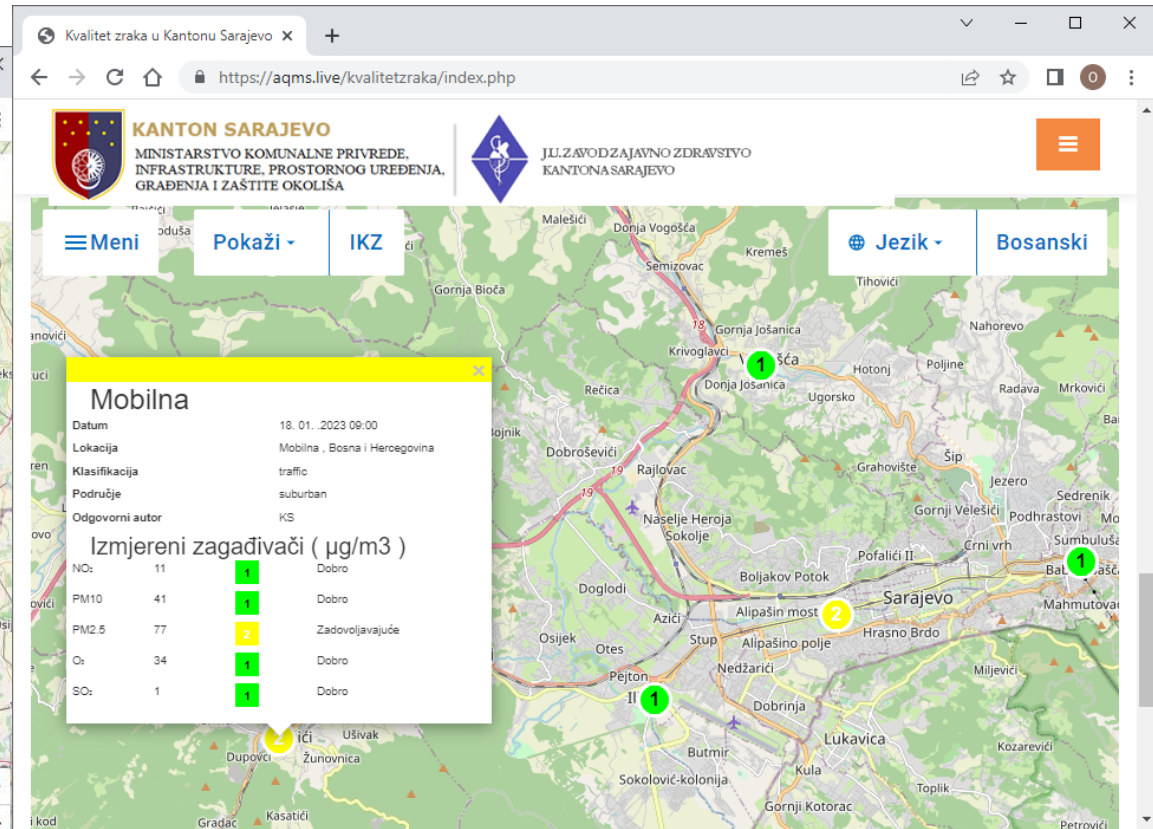


# Graphical Interface ready to use

NRT data in a interactive map implemented in Bosnia-Herzegovina:



Republic of Srpska



Sarajevo Canton

# Summary of the data portal deliverable

- Access to AQ-info in an interactive map
  - station info: NRT-data in a side bar (panel)
  - data portal: aggregate verified data
  - data download
- Graphical Interface from basic users to experts
- Optimized data loading time
- Flexible screen size (Responsiveness)
- Accessibility to disabled (color blind etc.)

The screenshot shows a web browser window with the URL `raven-tst.smhi.se`. The page is titled "Raven dissemination" and features a "Data portal" sidebar with the following sections:

- Station information**:
  - Name**: Podgorica
  - Date**: 26.04.2023 12:19
  - Location**: Podgorica, Montenegro
  - Classification**: Traffic
  - Area**: Suburban
  - Responsible authority**: SMHI
  - Operational since**: [unspecified]
  - Position**: [Google maps](#)
  - Latitude**: 42.441
  - Longitude**: 19.2566
  - Current status (µm/m<sup>3</sup>)**:
    - NO<sub>2</sub>: 17 1 Good
    - PM10: 9 1 Good
    - PM2.5: 2 1 Good
- Name**: Bielo Polje
- Date**: 26.04.2023 12:19
- Location**: Bielo Polje, Montenegro
- Classification**: Traffic
- Area**: Urban
- Responsible authority**: SMHI
- Operational since**: [unspecified]
- Position**: [Google maps](#)
- Latitude**: 43.0295
- Longitude**: 19.7424
- Current status (µm/m<sup>3</sup>)**: [unspecified]

- Data portal**:
- Station info on
- Near real time** (selected)
- Historical
- Regions**:
  - Central Montenegro
  - North MontenegroTotal regions: 2
- Stations \*** 2/2:
  - Bielo Polje
  - Niksic
  - Pijevlja
  - PodgoricaTotal stations: 4
- Pollutants \*** 0/3:
  - NO<sub>2</sub>



# Demonstration

- Work in progress
- Accurate (true) Historical data from 2021
- Mock-up (faulse) NRT-data

Let's start the demo directly from SMHIs test environment:

➤ <https://raven-tst.smhi.se/>





SWEDISH ENVIRONMENTAL  
PROTECTION AGENCY

**SMHI**