LIFE 15 IPE IT 013

The Data Sharing Portal

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Arpae Emilia- Romagna

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Action C1: “Implementing the data sharing infrastructure and the AQ model”

The objective of this action is to implement the infrastructure to produce and disseminate air quality information. This will include monitoring, assessment and forecast of pollutant concentrations in Po Valley and Slovenia; products will be addressed to prepAIR partners, stakeholders and citizens.

Coordinator: Arpae Emilia-Romagna

Area of implementation:

Emilia-Romagna, Piemonte, Lombardia, Veneto, Valle d’Aosta, Friuli Venezia Giulia, Trento and Slovenia

Participants:

Environmental Agencies of the regions involved

Action:

- **Project/implement the IT infrastructure to produce and disseminate air quality information (near realtime observed data). Products for PREPAIR partners, stakeholders and citizens.**
- **Sw for gathering data and building/managing snapshot database**
- **Air quality models for forecast and hindcast (Arpae Emilia-Romagna)**
- **Data fusion software for merging data from models and stations**

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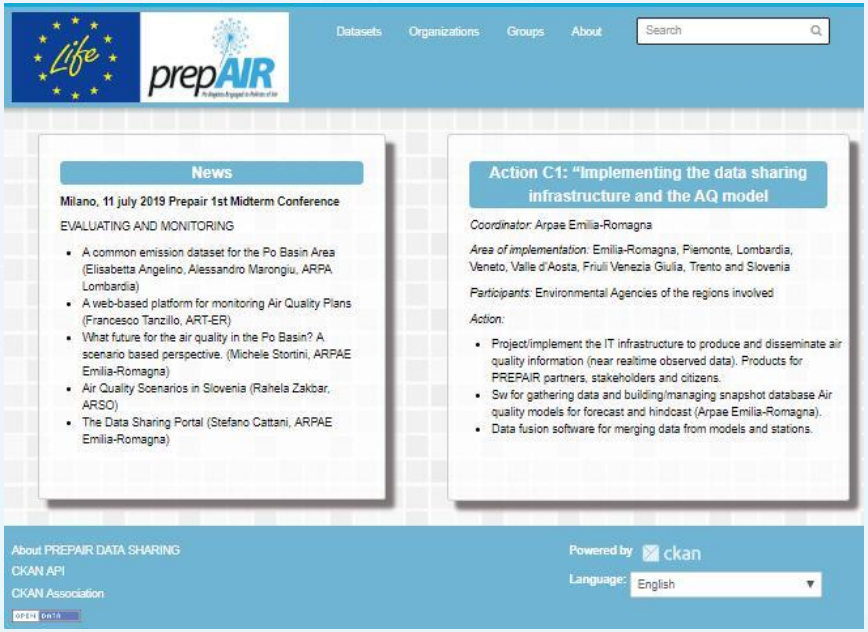
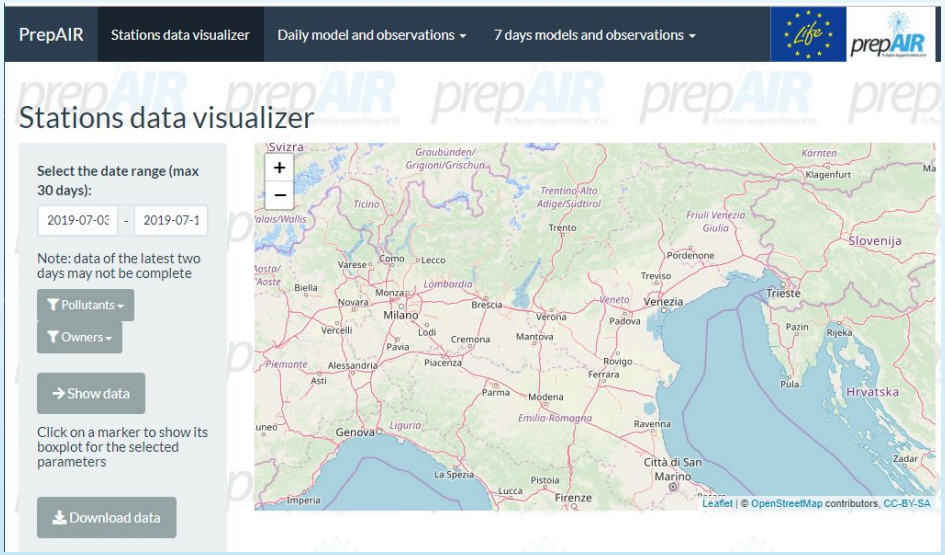
The Data Sharing Portal (two layers)

Layer 1:
(Open) Data Portal



Layer 2:
Visualization Portal



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(Open) Data Portal

The Data Portal https://prepair-data.datamb.eu
meets the requirements of standard EU Open Data Portal

Eight environmental agencies are hosted, each with an “organization” account and its own managed space. The endpoints of data sources are published by “organizations”. It’s avoided data replication.

The “organization Prepair” delivers some products:

- the AQ monitoring data collections
  - near real time snapshot database from monitoring networks
  - data from special stations network (Action A4/D6)
- the output of AQ models and meteorological data set

The Data resources (endpoints) can be reached by free search, or by a “level tree”

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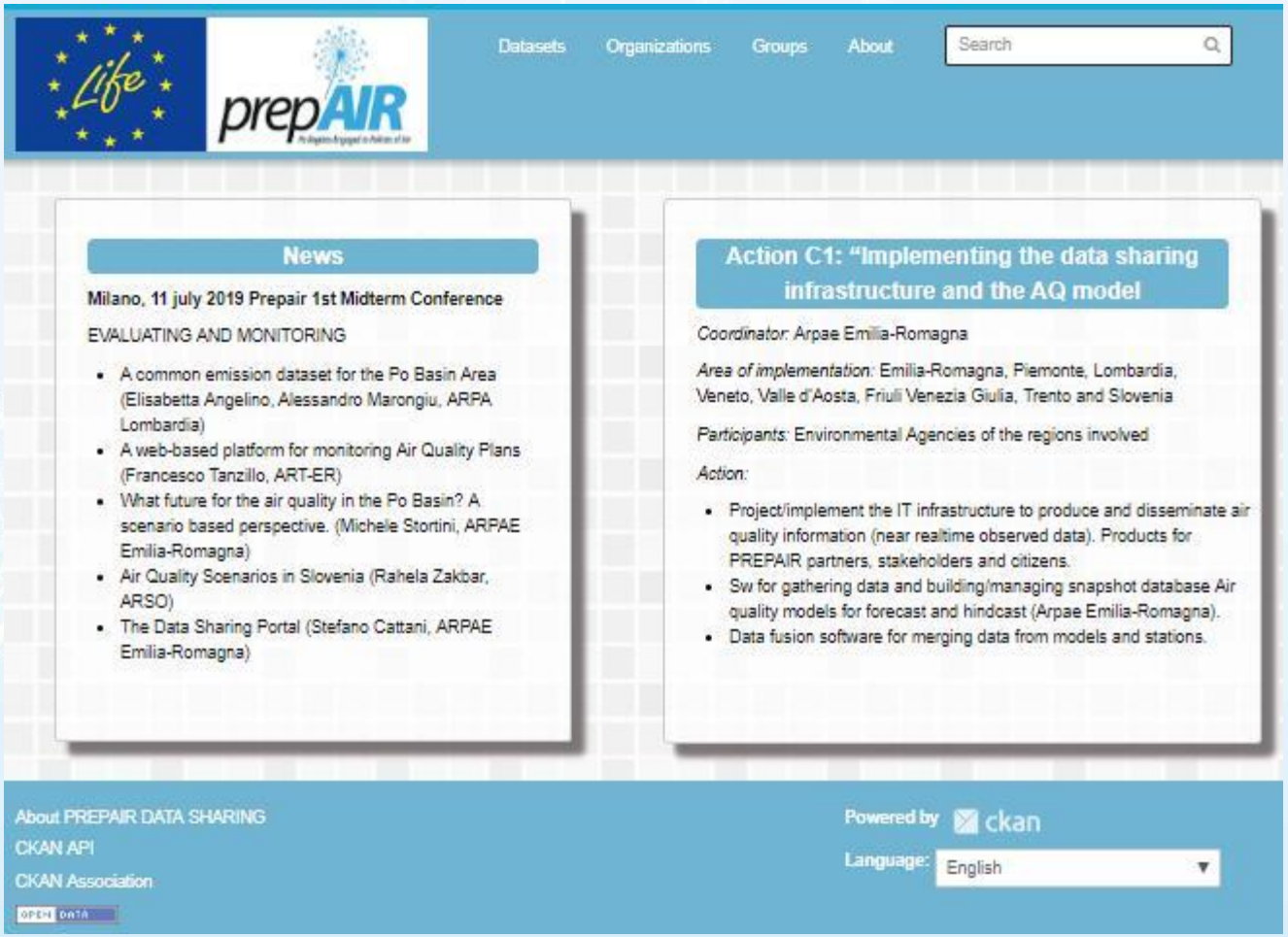
(Open) Data Portal - Home Page (level 0)



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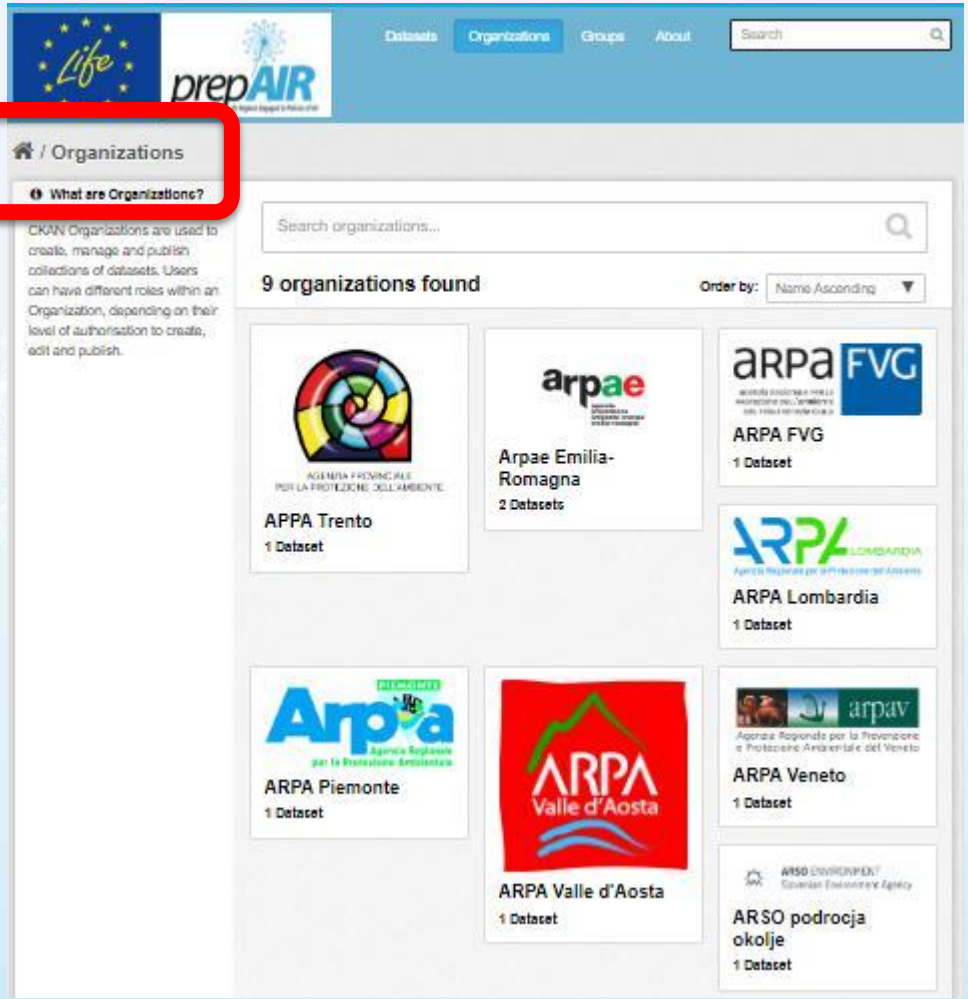
(Open) Data Portal - Organizations (level 1)



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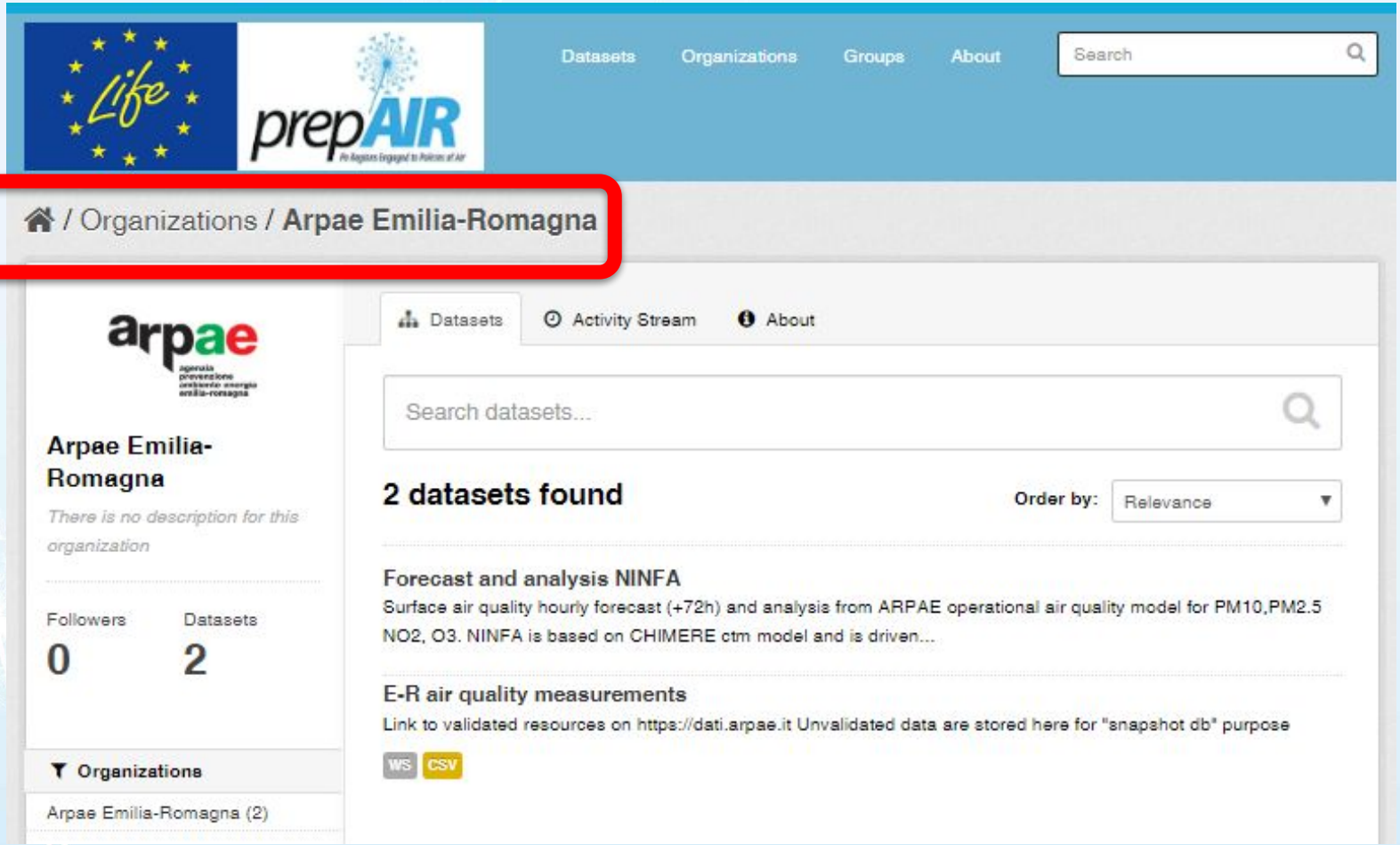
(Open) Data Portal - Organizations (level 2)



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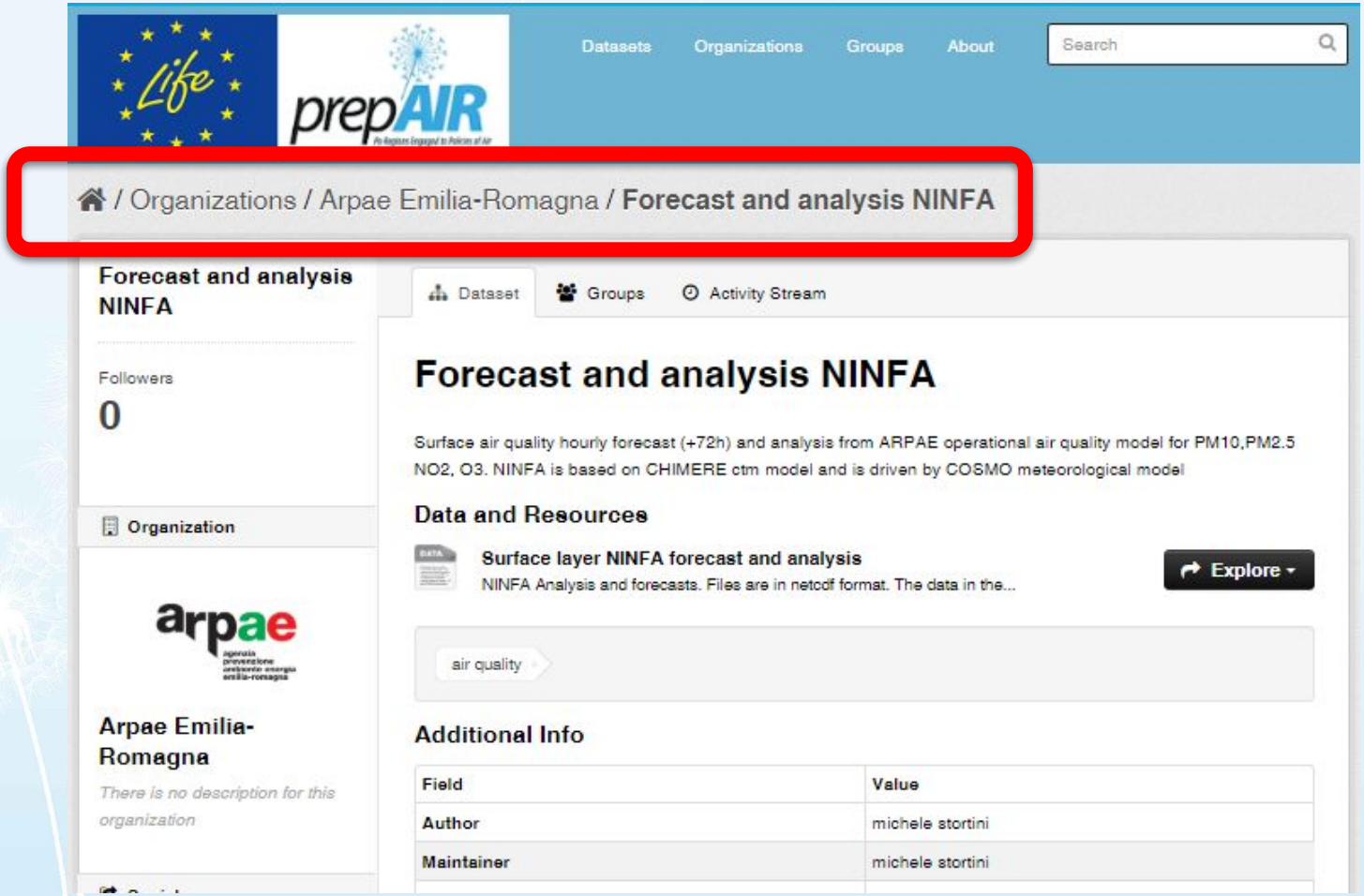
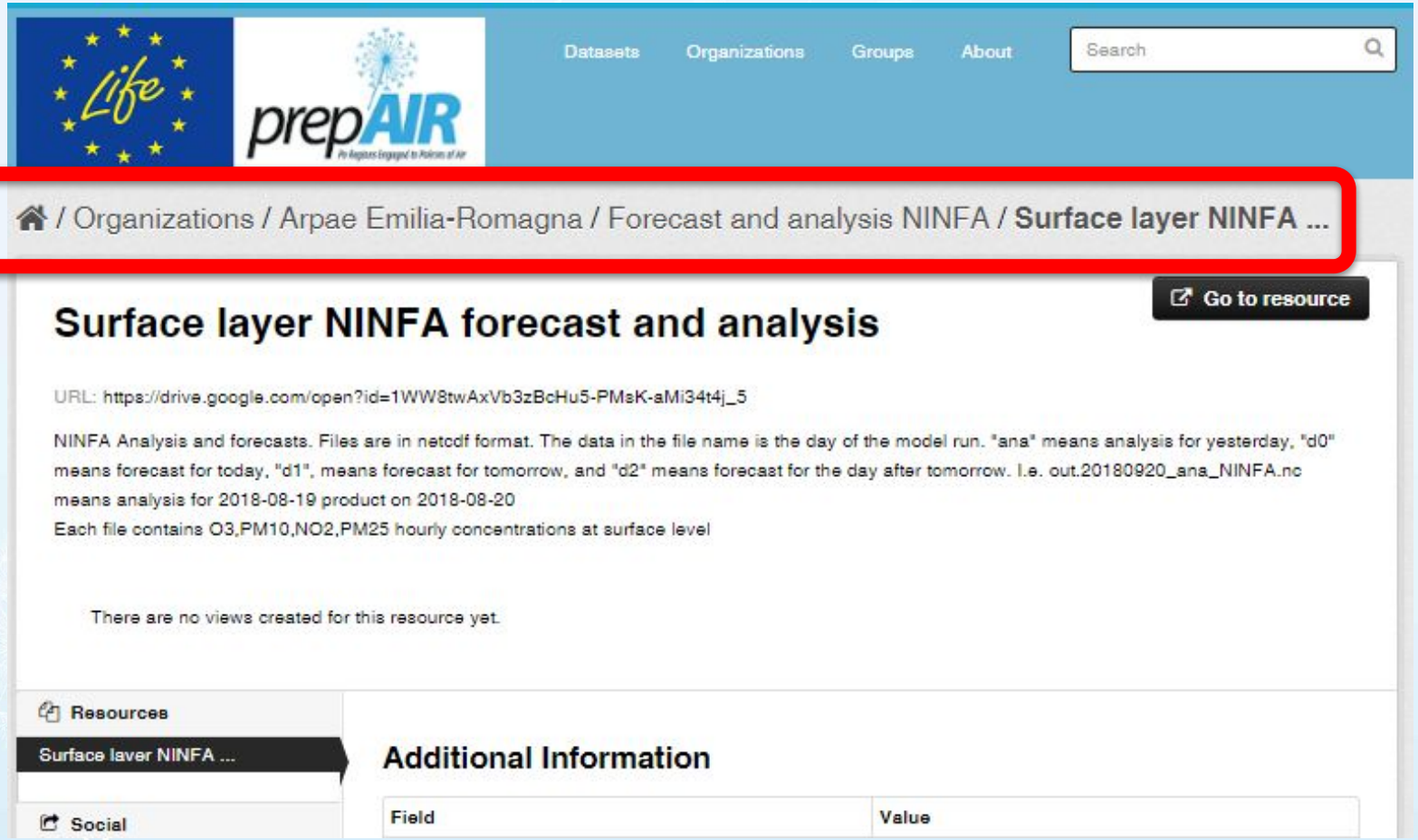
(Open) Data Portal - Organizations (level 3)

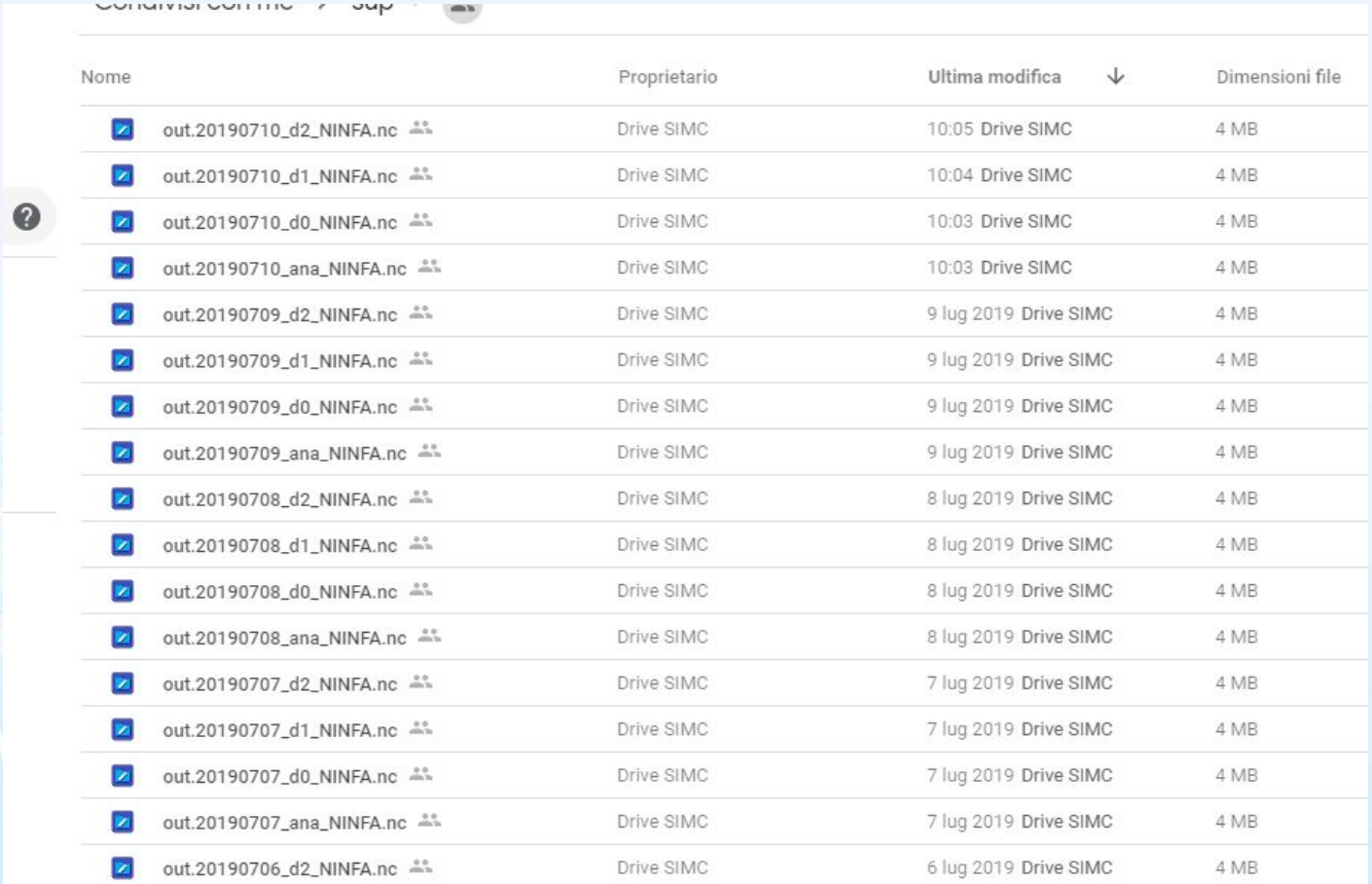


(Open) Data Portal - Organizations (level 4)



(Open) Data Portal - Organizations (level 5)

THE DATA!



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out.20190710_ana_NINFA.nc	Drive SIMC	10:03 Drive SIMC	4 MB
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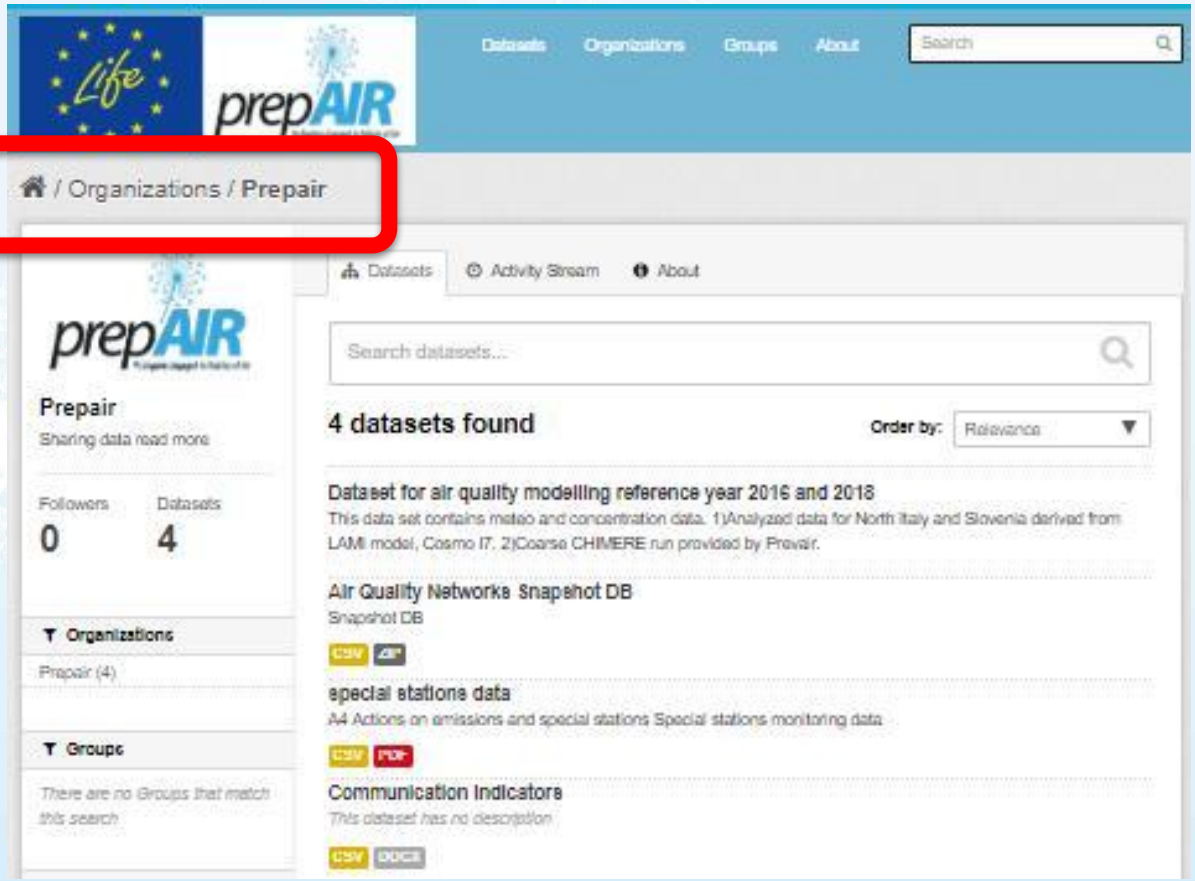
(Open) Data Portal - Prepair Org (level 2)



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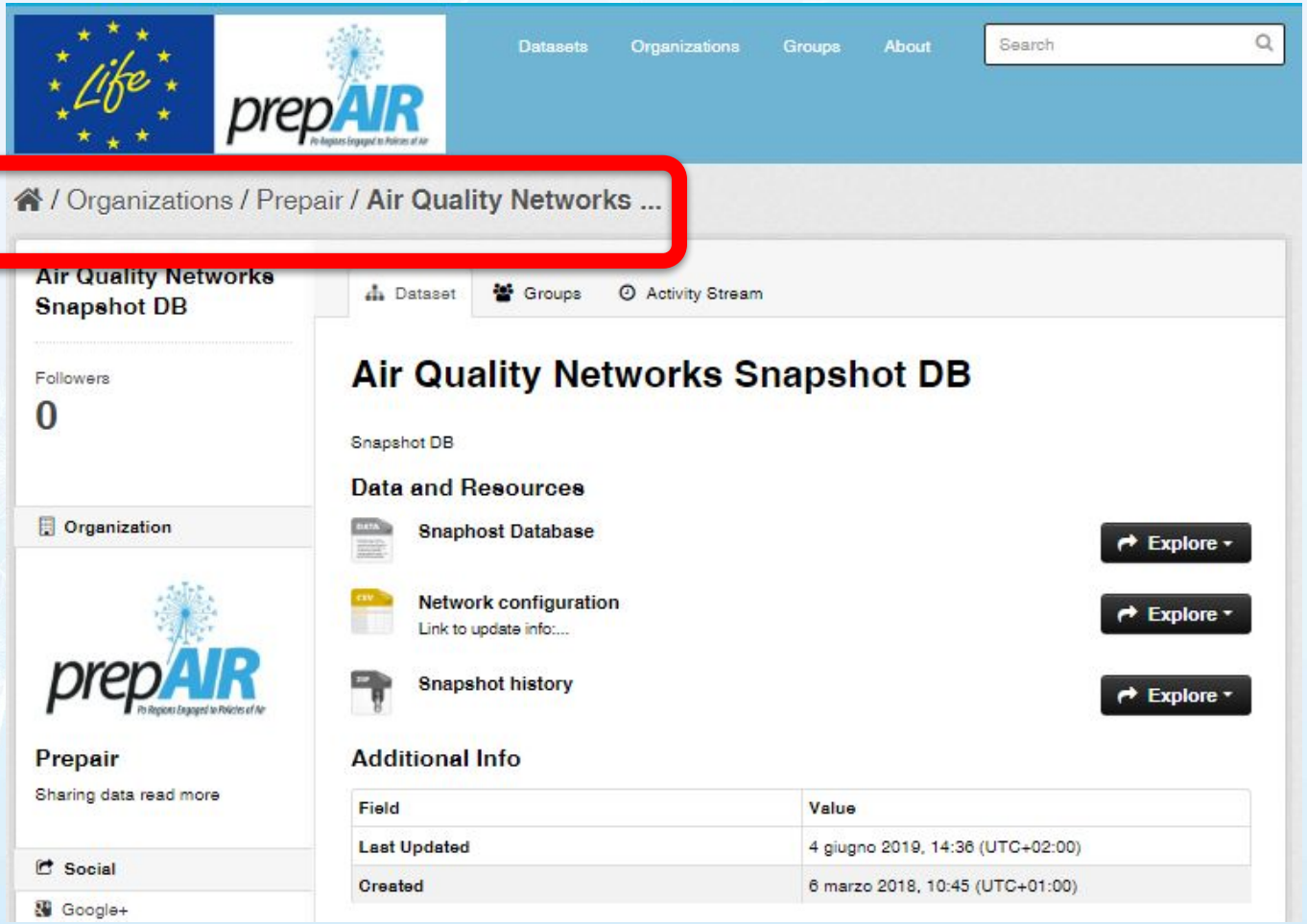
(Open) Data Portal - Prepair Org (level 3)



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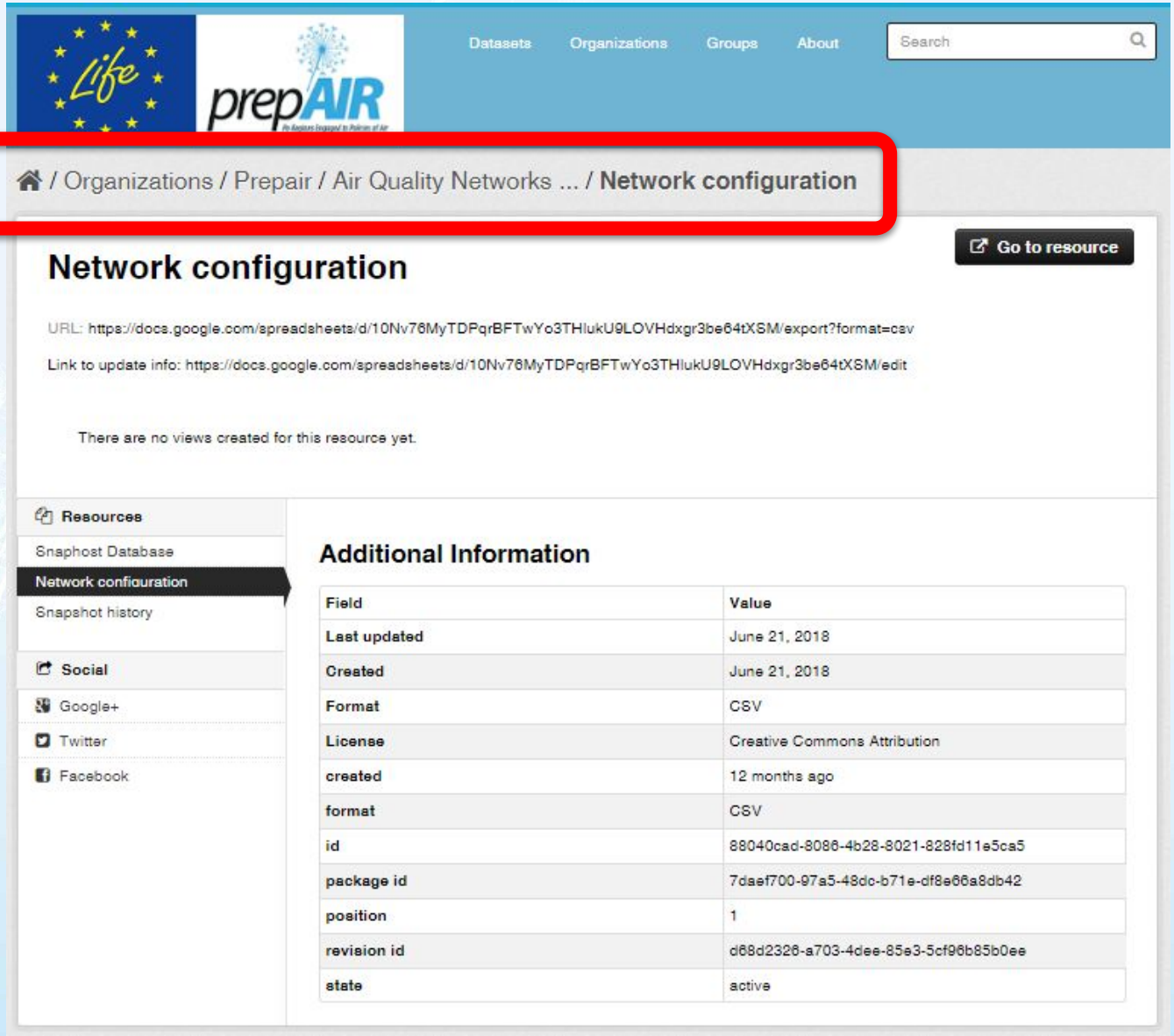
(Open) Data Portal - Prepair Org (level 4)



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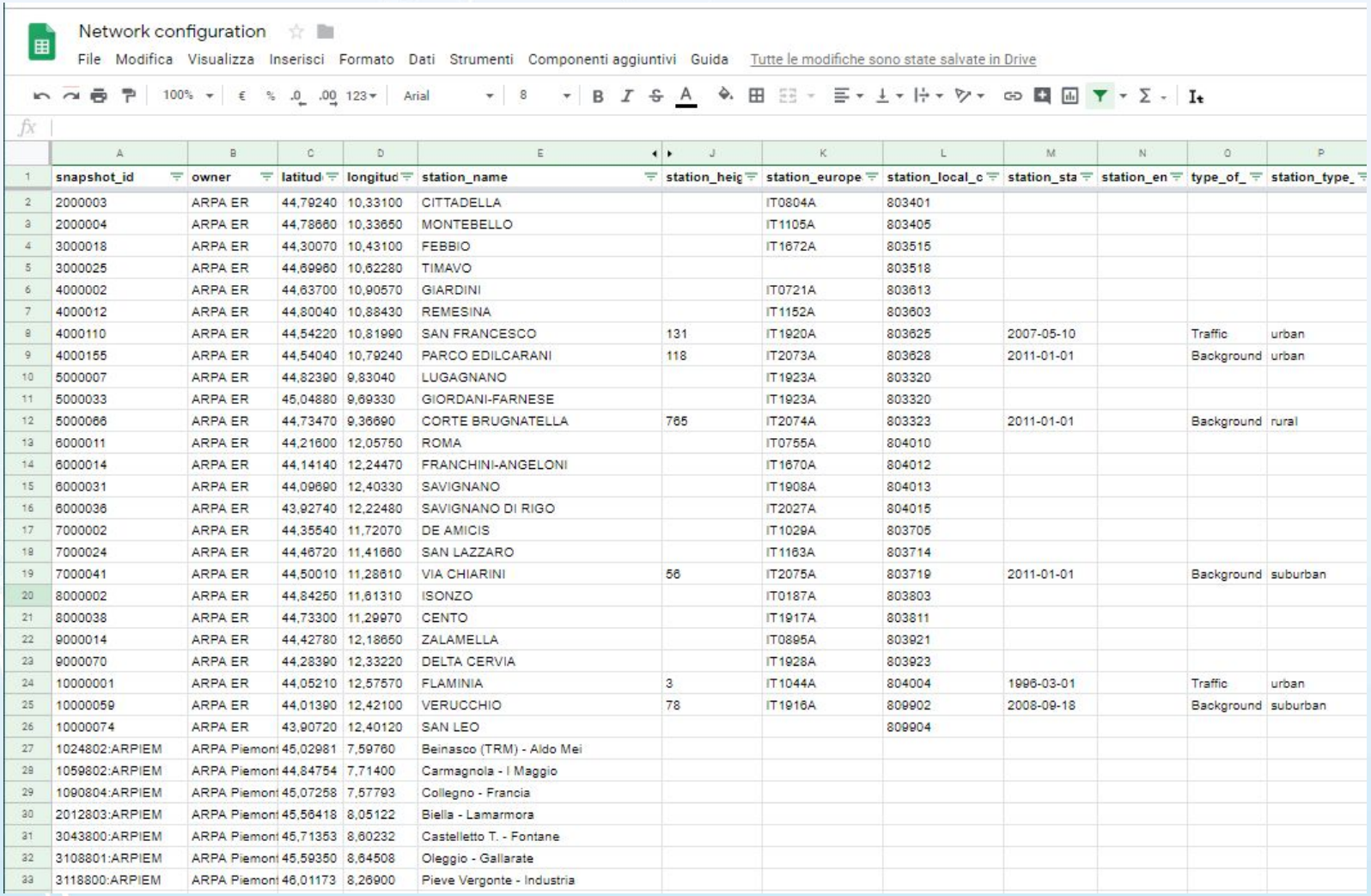
(Open) Data Portal - Prepair Org (level 5)

THE DATA!



Network configuration

File Modifica Visualizza Inserisci Formato Dati Strumenti Componenti aggiuntivi Guida Tutte le modifiche sono state salvate in Drive

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28	1059802:ARPIEM	ARPA Piemont	44,84754	7,71400	Carmagnola - I Maggio							
29	1090804:ARPIEM	ARPA Piemont	45,07258	7,57793	Collegno - Francia							
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32	3108801:ARPIEM	ARPA Piemont	45,59350	8,64508	Oleggio - Gallarate							
33	3118800:ARPIEM	ARPA Piemont	46,01173	8,26900	Pieve Vergonte - Industria							

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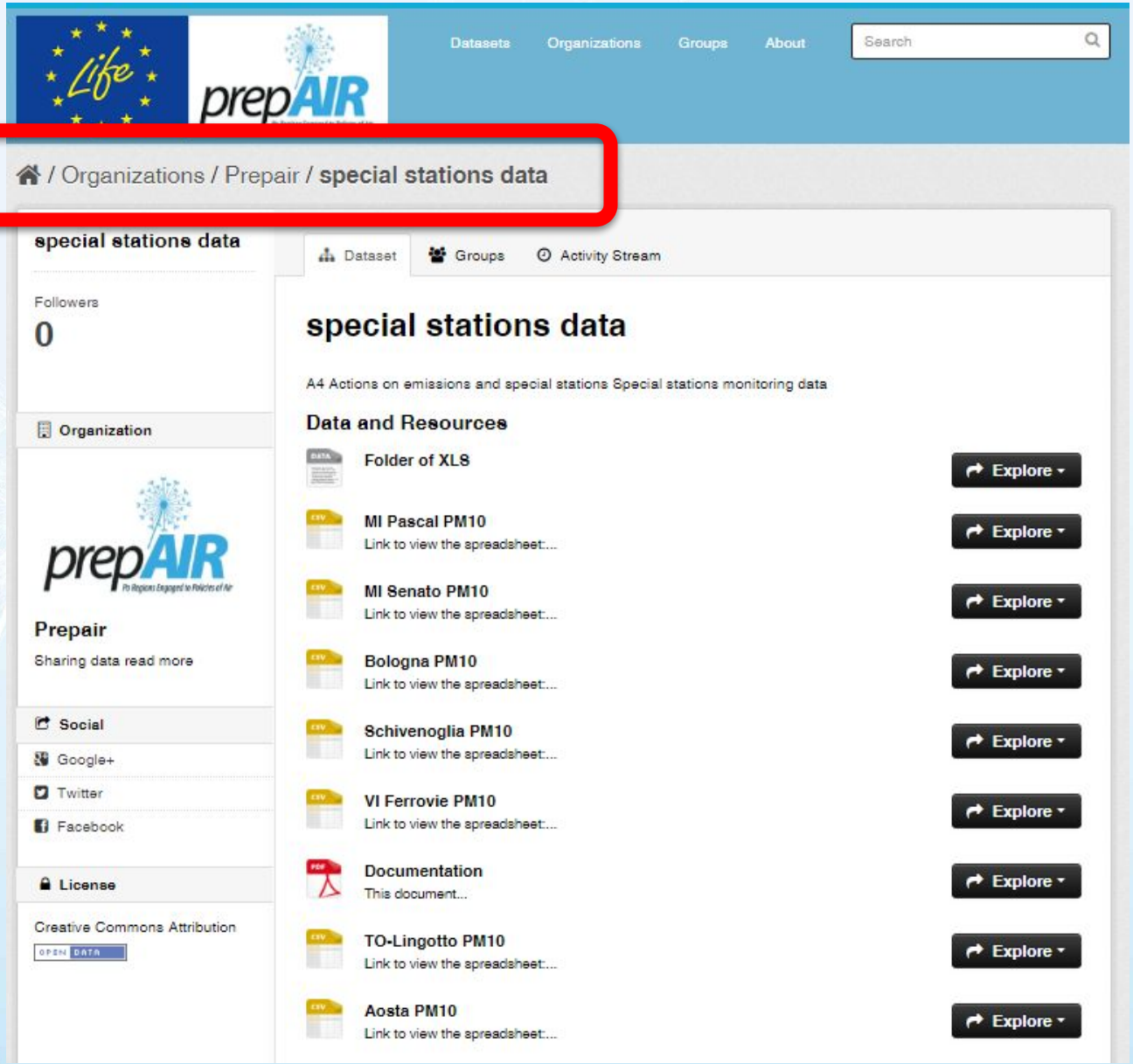
(Open) Data Portal - Prepair Org (level 3)



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Visualization Portal

THE UPPER LAYER (VISUALIZATION AND ANALYSIS OF DATA)

The Visualization Portal is a highly interactive tool to **analyze the data from Data Portal**:
https://prepair-vis.datamb.eu/

The visualization products are (*until now, but in progress…*):

- Stations data visualizer (on interactive map)
- Daily and hourly models and observations (also on 7 days basis)

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Station data visualizer (Home Page)

PrepAIR | Stations data visualizer | Observations

Stations data visualizer

Select the date range (max 60 days):

2019-02-26 - 2019-03-05

Data of the latest two days may not be complete

Select pollutant

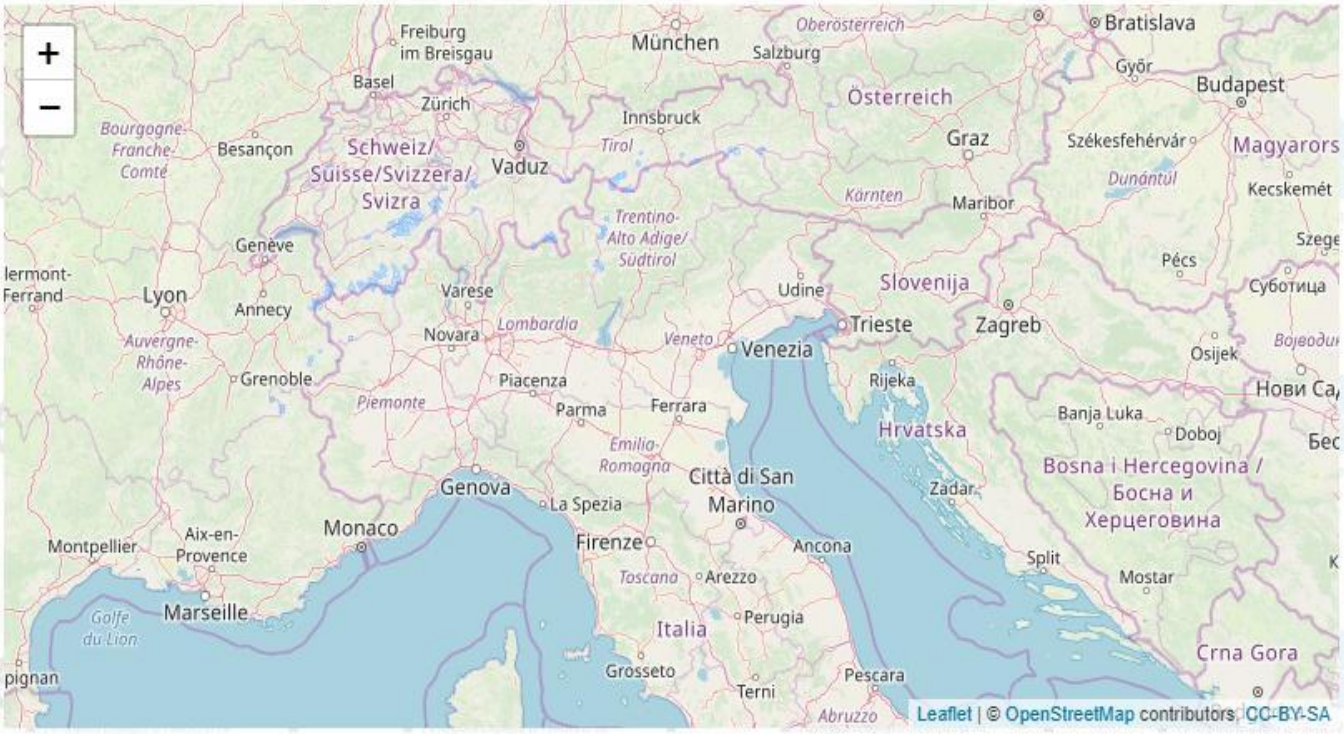
All

Select owner:

All

Click on a marker to show its boxplot for the selected parameters

Extract data



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PrepAIR | Stations data visualizer | Observations

Stations data visualizer

Select the date range (max 60 days):

2019-02-18 - 2019-02-24

Data of the latest two days may not be complete

Select pollutant

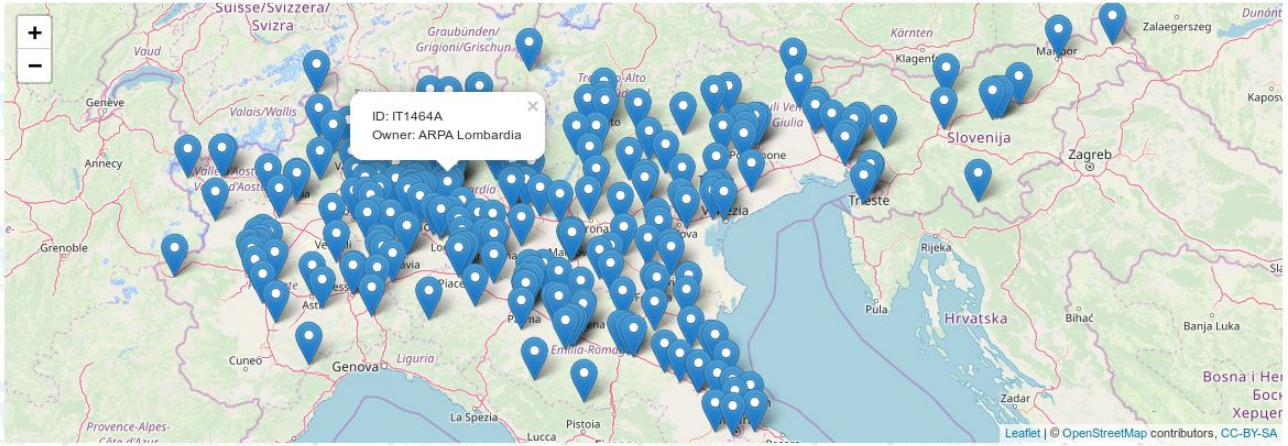
All

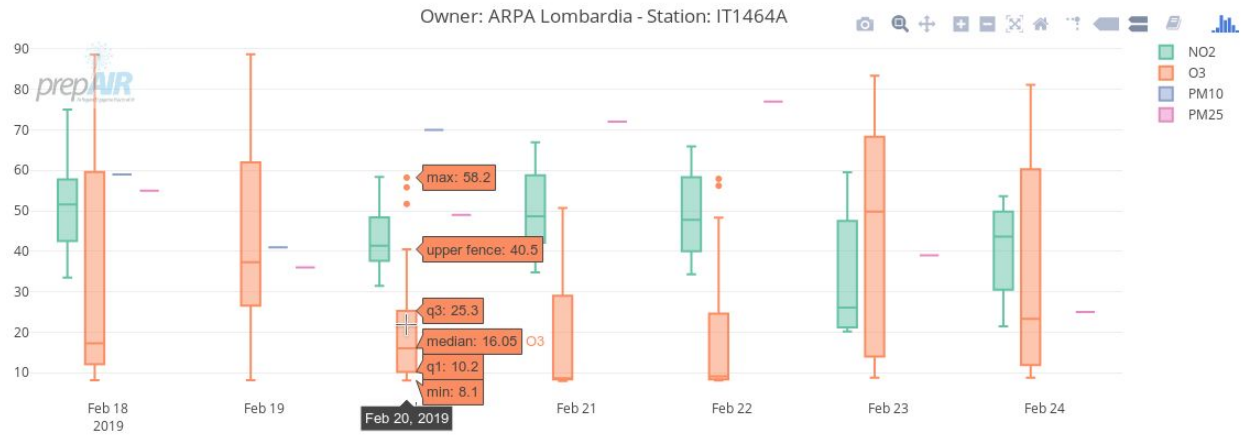
Select owner:

All

Click on a marker to show its boxplot for the selected parameters

Extract data





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PrepAIR | Stations data visualizer | Observations

Daily observations

Select date:

2019-02-21

Data of the latest two days may not be complete

Select pollutant:

PM10

PM10 - PM25 = Daily mean

O3 - NO2 = Daily max

Select owner:

All

Select color palette type:

discrete

Show stations:

yes

Show model:

yes

Select model type:

ana

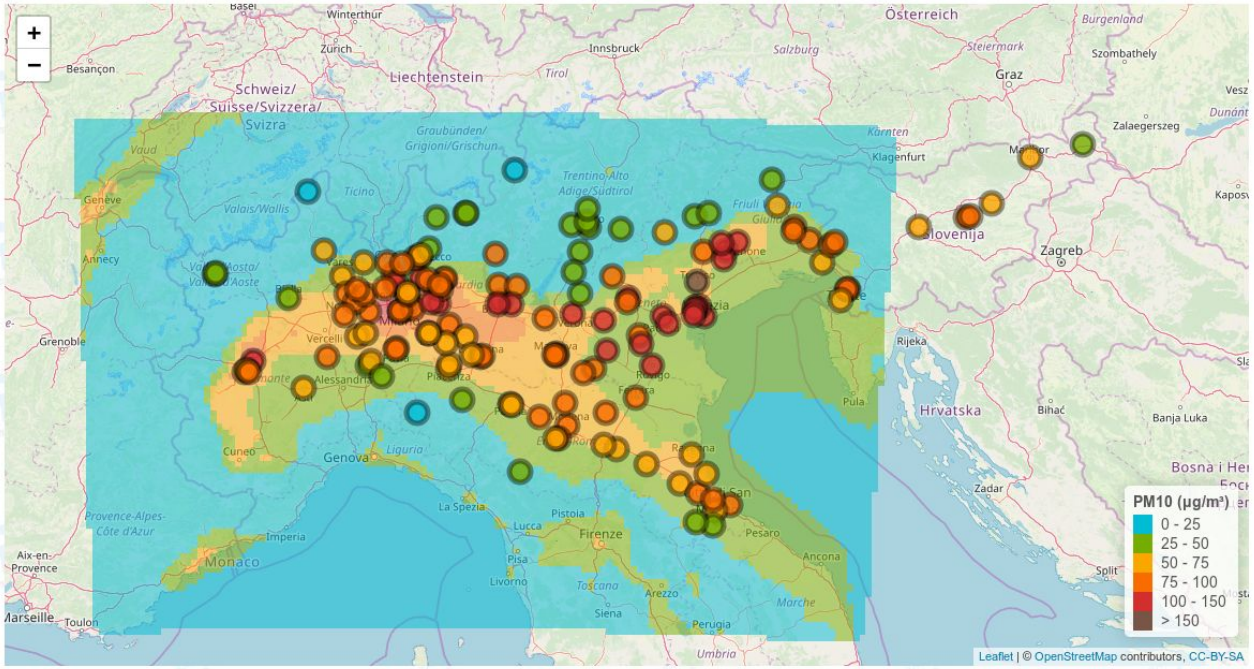
ana = analysis of the selected day

d0 = forecast for the selected day

d1 = forecast for the selected day + 1

d2 = forecast for the selected day + 2

Extract data



PrepAIR | Stations data visualizer | Observations

O3 daily maximums of the 8-hour moving average

Select date:

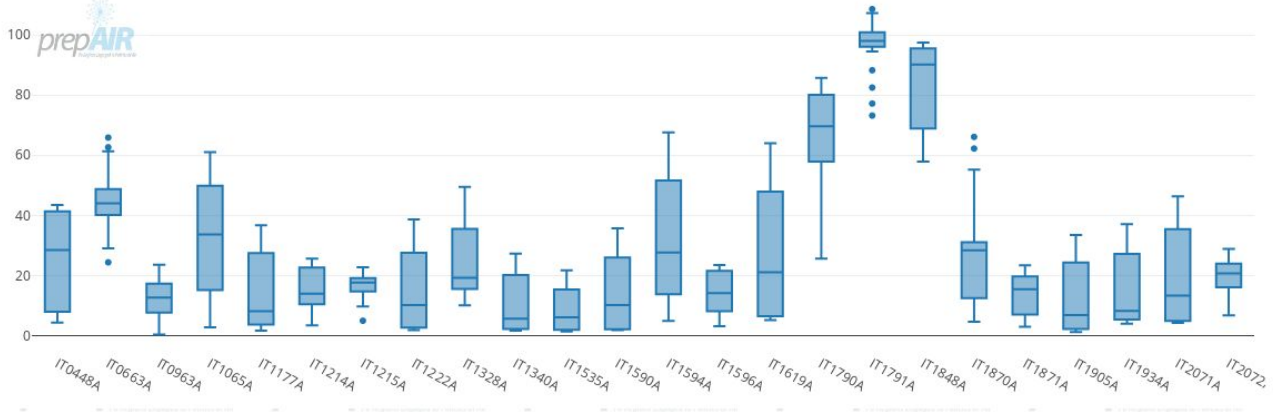
2019-02-21

Data of the latest two days may not be complete

Select owner:

ARPA Veneto

Extract data



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PrepAIR | Stations data visualizer | Observations

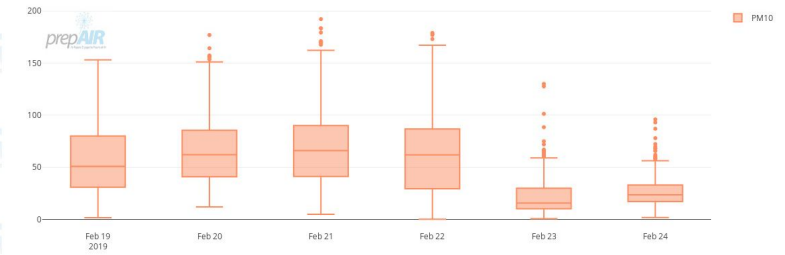
Weekly boxplot

Select date: 2019-02-24

Data of the latest two days may not be complete

Select pollutant: PM10

Extract data



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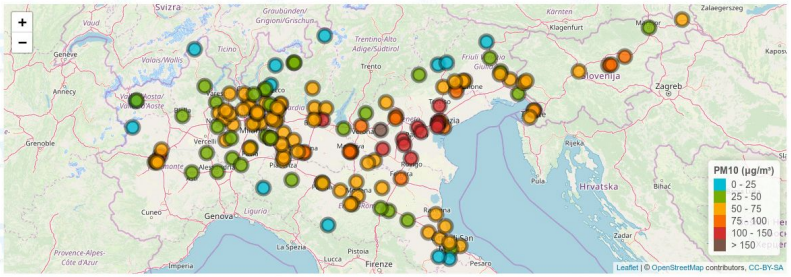

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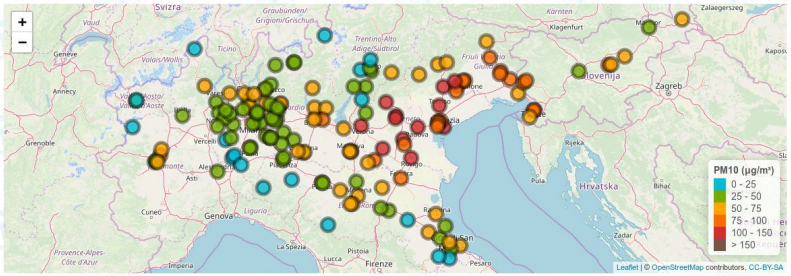

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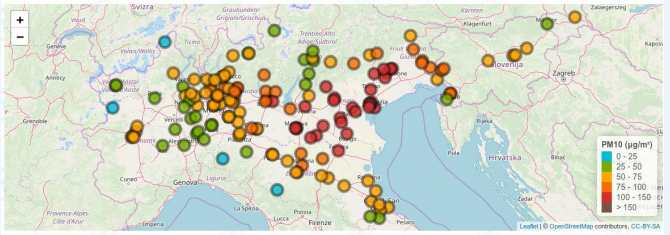
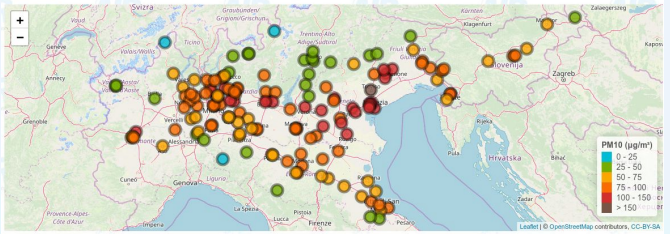


2019-02-21



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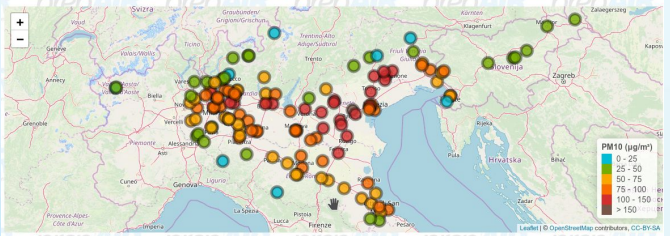

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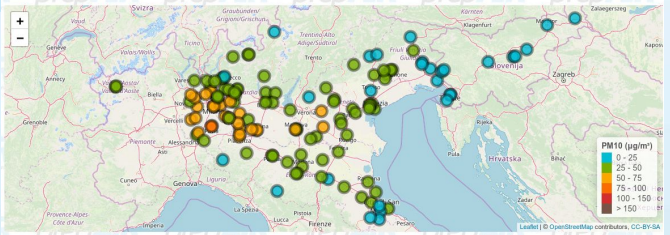

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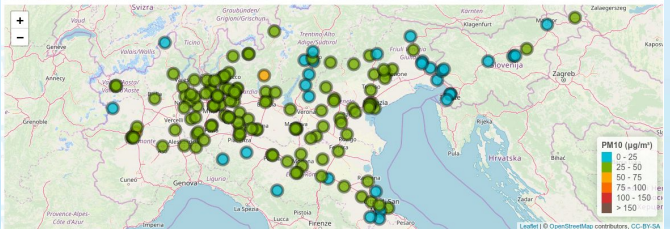

SW platforms of prepAIR Data Sharing Portal are **Open Source**

With the contribution
of the LIFE Programme
of the European Union
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prepAIR
Po Regions Engaged to Policies of Air

TO DO: Integration with official site
www.lifeprepair.eu

THANK YOU

www.lifeprepair.eu – info@lifeprepair.eu

Regione Emilia-Romagna
Regione del Veneto
Regione Lombardia
Regione Piemonte
Regione Autonoma Friuli Venezia Giulia
Provincia Autonoma di Trento
arpae agenzia prevenzione ambiente energia emilia-romagna
arpav Agenzia Regionale per la Prevenzione e Protezione Ambientale del Veneto
Arpa Piemonte Agenzia Regionale per la Protezione Ambientale
ARPA Lombardia Agenzia Regionale per la Protezione dell'Ambiente
ARPA Valle d'Aosta
arpa FVG agenzia regionale per la protezione dell'ambiente del Friuli Venezia Giulia
ARSO Environment Slovenian Environment Agency
Comune di Bologna
Comune di Milano
Città di Torino
ERVET Emilia-Romagna Valorizzazione Economica Territorio
FLA Fondazione Lombardia per l'Ambiente