

FAIRness wizard: FAIR Micromet Portal FMP2.0

“What we see is a perspective (...), what we hear is an interpretation (...)” (Marcus Aurelius)
the truth is hidden somewhere in the data.

The current state of weather-induced agricultural losses, water use for irrigation, the appearance of new invasive species and disease vectors (strongly depending on micrometeorological conditions), new environmental zoning of plant diseases and pests, deforestation, increased urbanization, rural-to-urban migration and increased urban energy consumption for cooling and heating impose scientific and societal demands for FAIR micrometeorological data.



Are your μ met* data FAIR?



Our adherence to the FAIR principles is documented below:

Findable. Machine-readable metadata is required for automatic discovery of datasets and services. A metadata description is supplied by the data owners for all micro-meteorological data shared on the system which subsequently drives the search engine, using keywords or network, site and sensor search terms.

Accessible. When suitable datasets have been identified, access details should be provided. Assuming data is freely accessible, Zenodo DOIs and links are provided for direct data access.

Interoperable. Data interoperability means the ability to share and integrate data from different users and sources. This can only happen if a standard (meta)data model is employed to describe data, an important concept that generally requires data engineering skills to deliver. In the knowledge portal presented here, the WMO guide provides the design and structure for metadata.

Reusable. To truly deliver reusability, metadata should be expressed in as detailed a manner as possible. In this way, data can be replicated and integrated according to different scientific requirements. While the Knowledge Portal facilitates very detailed metadata descriptions, not all metadata is compulsory as it was accepted that in some cases, the overhead in providing this information can be very costly.

Do you want to make your μ met data FAIR?



YES

NO

FAIR Micromet Portal FMP2.0

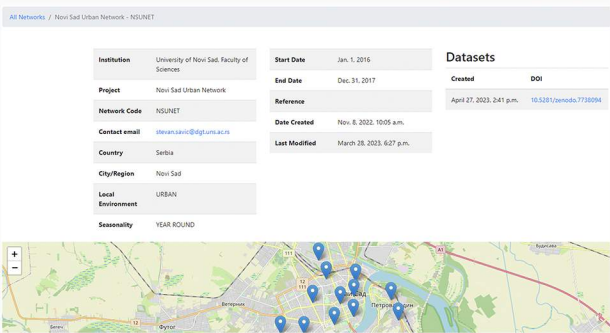
- Data are stored on **ZENODO**
- Metadata and DOI are Findable, Accessible, Interoperable and Reusable through FAIRNESS FMP



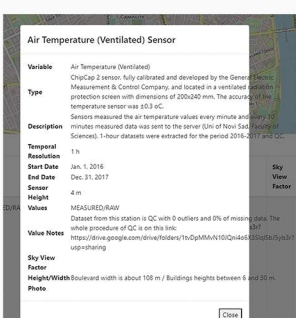
Subscribe and watch!

Even I know that it will make it:

- More Visible
- As open as I want
- Improve data discovery, and access
- Enable re-use
- Enhance (interdisciplinary understanding)



Name	Latitude	Longitude	Altitude (m)	Time Zone	Measurement
40.1	45.49190	10.01100	100000	UTC	Urban Street Canyon
40.2	45.49190	10.01100	100000	UTC	Residential Area (Street Canyon)
40.3	45.49190	10.01100	100000	UTC	Residential Area (Street Canyon)
40.4	45.49190	10.01100	100000	UTC	Residential Area (Street Canyon)
40.5	45.49190	10.01100	100000	UTC	Residential Area (Street Canyon)
40.6	45.49190	10.01100	100000	UTC	Residential Area (Street Canyon)
40.7	45.49190	10.01100	100000	UTC	Residential Area (Street Canyon)
40.8	45.49190	10.01100	100000	UTC	Residential Area (Street Canyon)
40.9	45.49190	10.01100	100000	UTC	Residential Area (Street Canyon)
41.0	45.49190	10.01100	100000	UTC	Residential Area (Street Canyon)
41.1	45.49190	10.01100	100000	UTC	Residential Area (Street Canyon)
41.2	45.49190	10.01100	100000	UTC	Residential Area (Street Canyon)
41.3	45.49190	10.01100	100000	UTC	Residential Area (Street Canyon)
41.4	45.49190	10.01100	100000	UTC	Residential Area (Street Canyon)
41.5	45.49190	10.01100	100000	UTC	Residential Area (Street Canyon)
41.6	45.49190	10.01100	100000	UTC	Residential Area (Street Canyon)
41.7	45.49190	10.01100	100000	UTC	Residential Area (Street Canyon)
41.8	45.49190	10.01100	100000	UTC	Residential Area (Street Canyon)
41.9	45.49190	10.01100	100000	UTC	Residential Area (Street Canyon)
42.0	45.49190	10.01100	100000	UTC	Residential Area (Street Canyon)



Variable	Type	Description	Temporal Resolution	Start Date	End Date	Source	Height	Value Range	Unit	Image/Video	Notes
PTSD1.13 Data	Time Series	PTSD1.13 Data	1 s	2017	2023	FAIRNESS	10 m	0.000000 to 1.000000	°C	Image/Video	FAIRNESS
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To support owners of micrometeorological data to make their data FAIR, the FAIR Micromet Portal (FMP2.0) was developed within the CA20108 COST Action. FMP2.0 is designed and built to guide owners through FAIR principles, in a step-by-step manner, to make large volumes of data FAIR compliant. More details about FMP2.0 and its functionalities can be found in Roantree et al. (2023).

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REREFENCES

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World Economic Forum. The Global Risks Report (14th Ed), 2019
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Roantree, M., Lalic, B., Savić, S., Milošević, D., and Scriney, M., 2023: Constructing a Searchable Knowledge Repository for FAIR Climate Data, EGU General Assembly 2023, Vienna, Austria, 24–28 Apr 2023, EGU23-7786. <https://doi.org/10.5194/egusphere-egu23-7786>, 2023.

* μ met = micrometeorological