The WMO OSCAR/Surface and WSI webinar for RA VI

2 SEPTEMBER 2025 14:00– 16:00 CEST

Introduction to OSCAR/Surface, registration of users and navigating (search capabilities as metadata database tool) the OSCAR Surface GUIs

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Task Team on WIGOS Operational Tools (TT-WOT)

- The **Task Team on WIGOS Operational Tools** (under the Expert Team on WIGOS tools and Regional WIGOS Centres) is the team that supports the development and operations of the three WIGOS systems: **OSCAR/Surface**, WDQMS Webtool, and the Incident Management System. Its work focused particularly on addressing user requirements and ensuring effective data monitoring within GBON and RBON frameworks.

- One of the objectives in the TT-WOT Work Plan (2024-2026) is to integrate additional WIGOS observing components into OSCAR/Surface: **hydrology**, cryosphere, ocean, etc.

- The TT-WOT includes a **subgroup** focused on the **integration** of the WIGOS Tools for **Hydrology**.

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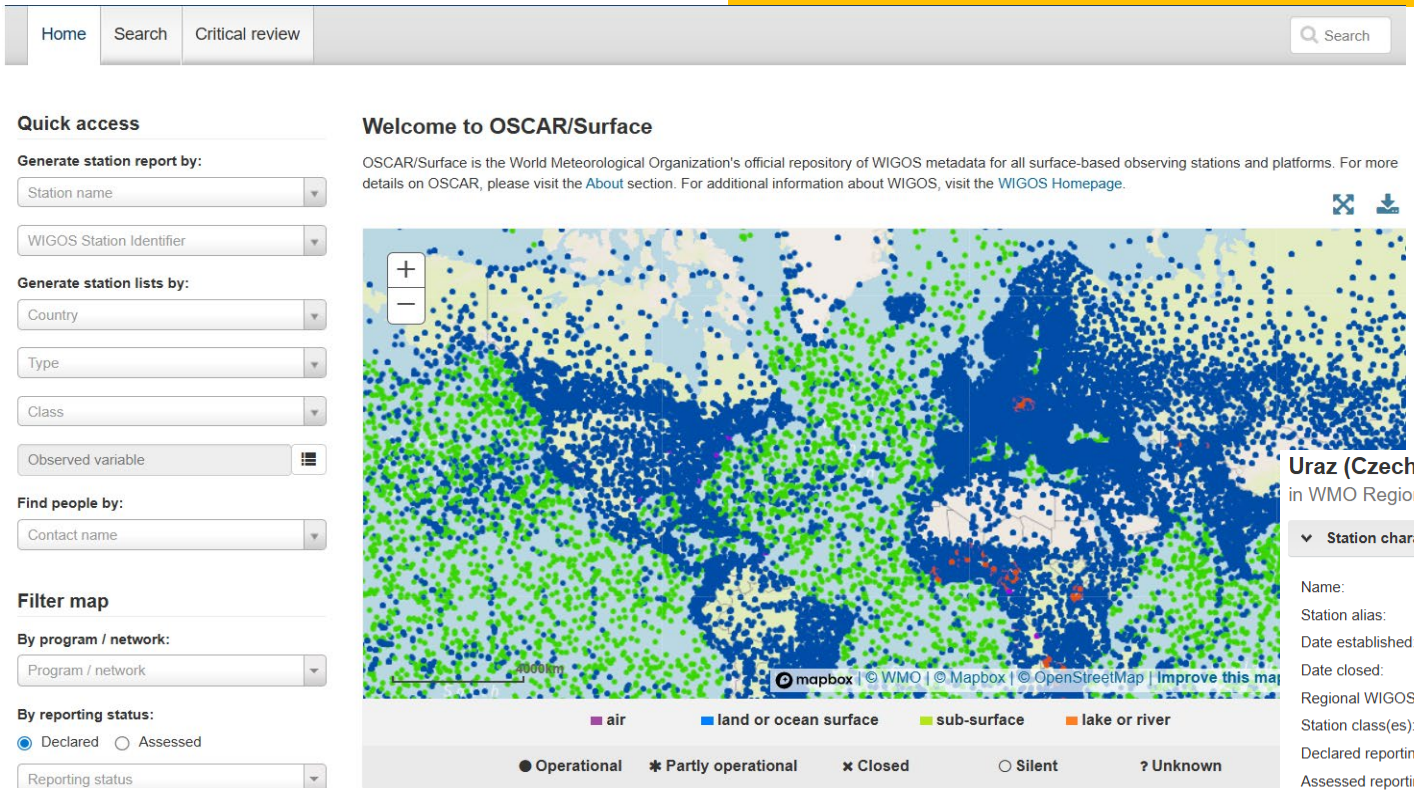
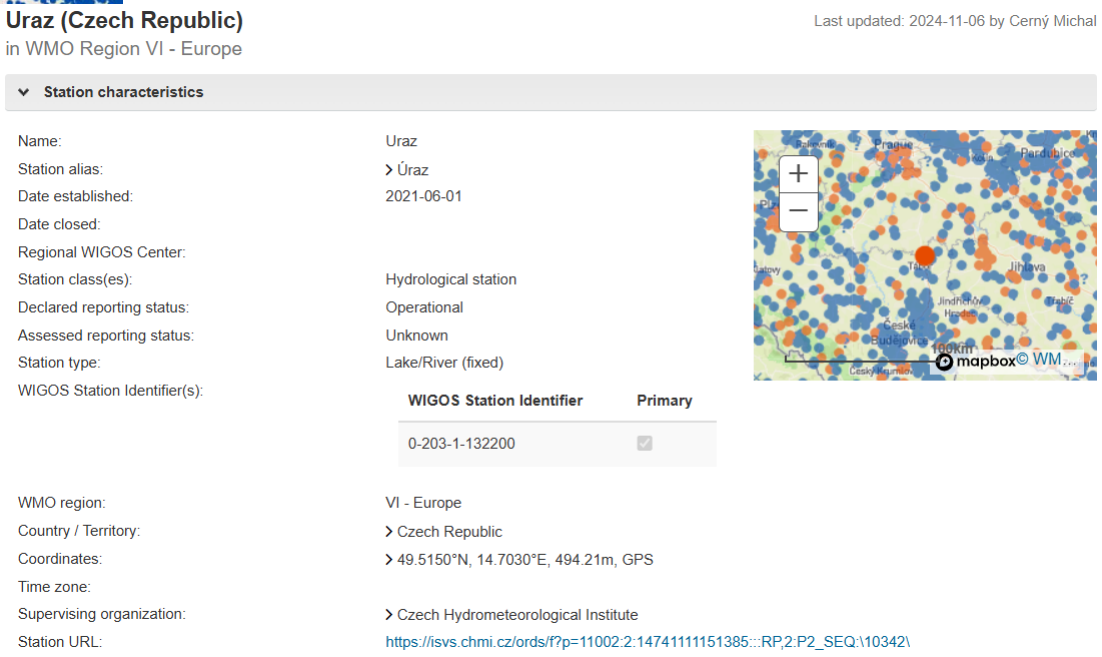
Introduction to OSCAR/Surface

http://oscar.wmo.int/surface



- OSCAR contains information about observing stations
  - Surface-based
  - from all earth domains
- Current and historical metadata
- OSCAR is a web-based tool



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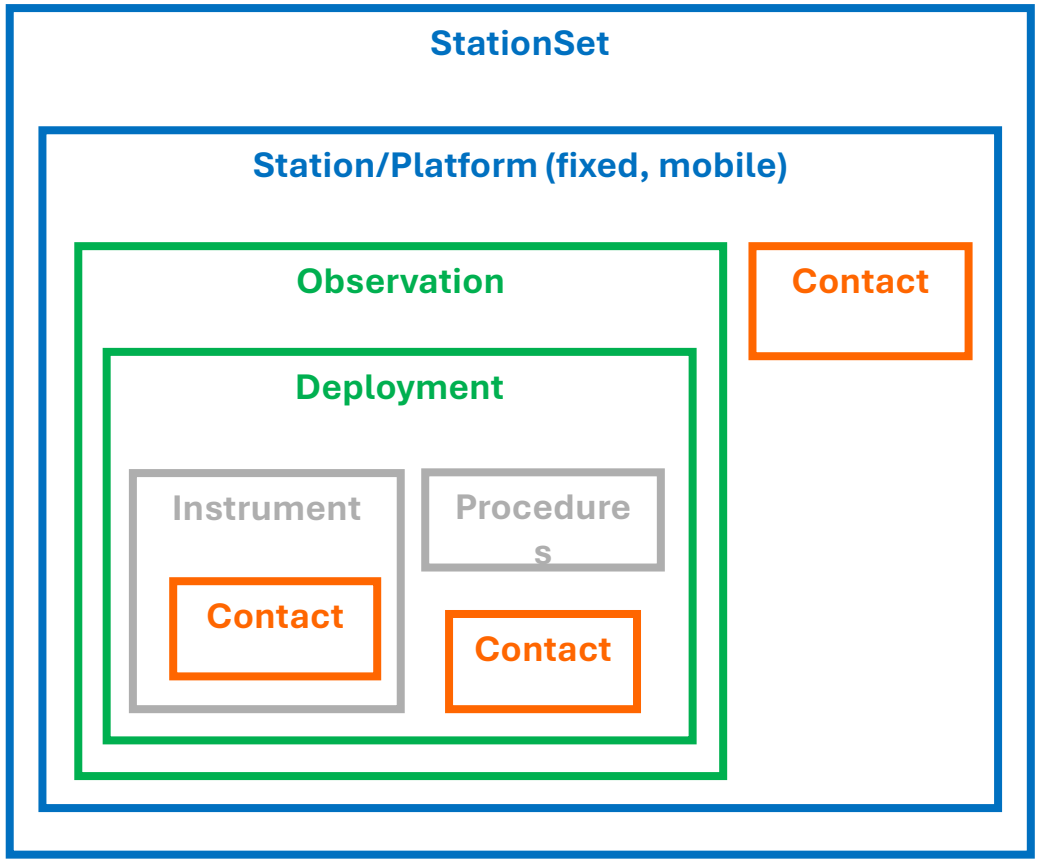
OSCAR/Surface and its relation to the WIGOS Metadata Standard

1. Observed variable
2. Purpose of observation
3. Station/ platform
4. Environment
5. Instruments & methods of observation
6. Sampling
7. Data processing and reporting
8. Data Quality
9. Ownership and Data Policy
10. Contact

→ Defines categories and elements
→ «flat»



→ Reference implementation of WMDS
→ Hierarchical structure (WMDR)

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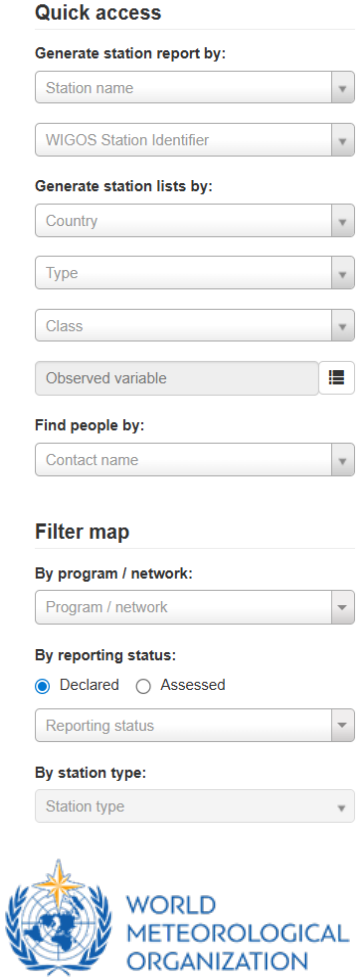
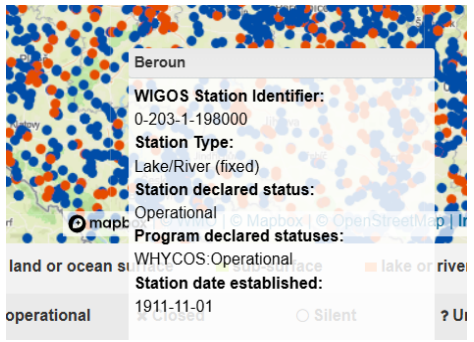
OSCAR quick access & reports

Quick access & Map filter





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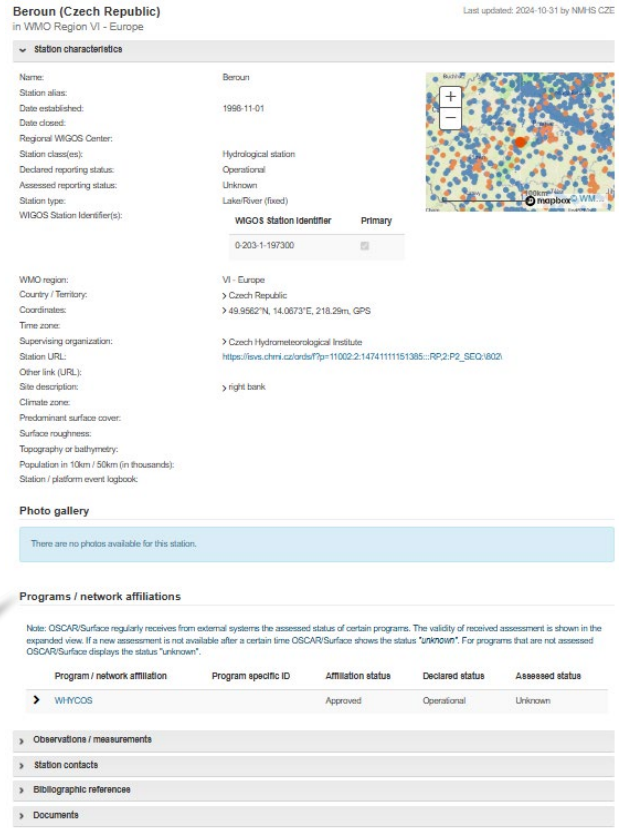

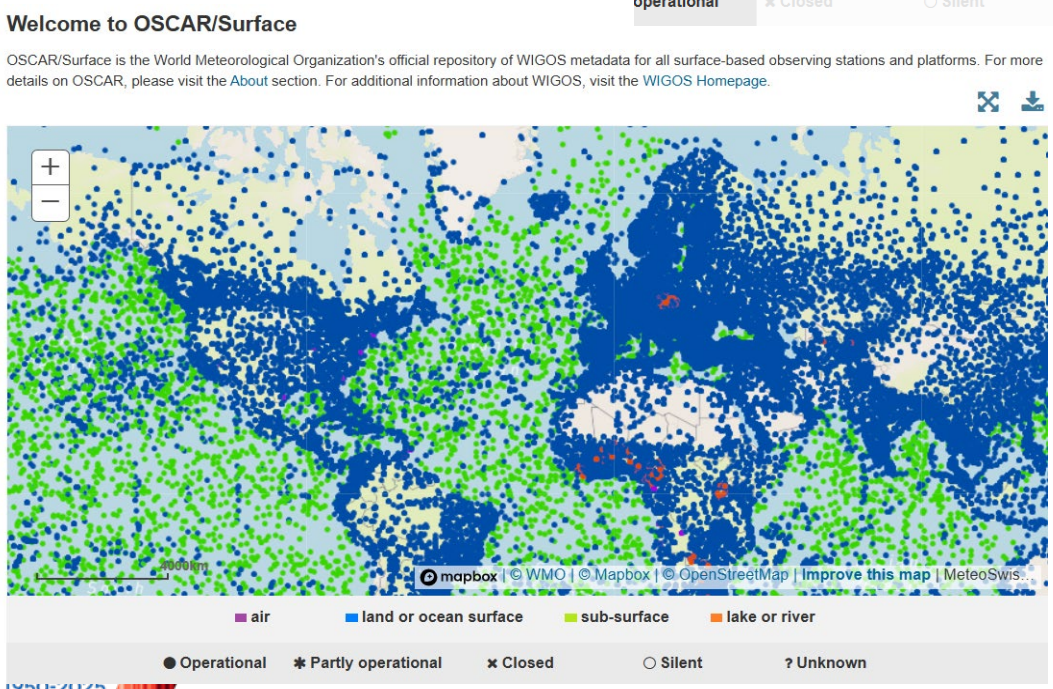

Detailed station report

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OSCAR/Surface Station Report

Beroun (Czech Republic)
in WMO Region VI - Europe

- Station characteristics
- Observations / measurements
- Station contacts
- Bibliographic references
- Documents

Beroun (Czech Republic)
in WMO Region VI - Europe

Last updated: 2024-10-31 by NMHS CZE

Station characteristics

Name:	Beroun
Station alias:	
Date established:	1996-11-01
Date closed:	
Regional WIGOS Center:	
Station class(es):	Hydrological station
Declared reporting status:	Operational
Assessed reporting status:	Unknown
Station type:	Lake/River (fixed)
WIGOS Station Identifier(s):	

WIGOS Station Identifier	Primary
0-203-1-197300	☑

WMO region:	VI - Europe
Country / Territory:	Czech Republic
Coordinates:	49.9562°N, 14.0673°E, 218.29m, GPS
Time zone:	
Supervising organization:	Czech Hydrometeorological Institute
Station URL:	https://isvs.chmi.cz/ords/f?p=11002:2:1474111115138
Other link (URL):	
Site description:	right bank
Climate zone:	
Predominant surface cover:	
Surface roughness:	
Topography or bathymetry:	
Population in 10km / 50km (in thousands):	
Station / platform event logbook:	

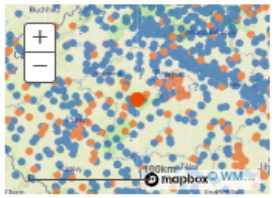

Photo gallery

There are no photos available for this station.

Programs / network affiliations

Note: OSCAR/Surface regularly receives from external systems the assessed status of certain programs. T
expanded view. If a new assessment is not available after a certain time OSCAR/Surface shows the status
OSCAR/Surface displays the status "unknown".

Program / network affiliation	Program specific ID	Affiliation status
WHYCOS		Approved

Observations / measurements

Terrestrial > Hydrological

Surface water > Stream discharge - [Geometry: Volume]

Variable:	Stream discharge
Geometry:	Volume
Programs / network affiliations:	WHYCOS
Last updated:	On 2024-10-31 by NMHS CZE

Deployments

From 1911-11-01

Instrument characteristics

Observing method: Stage-discharge relation

Surface water > Stream level - [Geometry: Point]

Variable:	Stream level
Geometry:	Point
Programs / network affiliations:	WHYCOS
Last updated:	On 2024-10-31 by NMHS CZE

Deployments

From 1911-11-01

Instrument characteristics

Observing method: Recording gauge

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OSCAR detailed search

Various search targets

Home | Search | Critical r

- Station
- Station cluster
- Instrument
- Contact
- Bibliographic Reference

Search for stations

Browse by station name

Station name:

WIGOS Station Identifier:

Search using advanced criteria

Criteria matching: All / Any

Search term:

Near Real Time only:

Station type:

- Air (fixed)
- Air (mobile)
- Lake/River (fixed)
- Lake/River (mobile)
- Land (fixed)
- Land (mobile)
- Land (on ice)
- Sea (fixed)
- Sea (mobile)
- Sea (on ice)
- Underwater (fixed)
- Underwater (mobile)

Station class:

- Agricultural meteorological station
- Aircraft meteorological station
- Automatic weather station (AWS)
- Climatological station
- Cryosphere station
- GBON Surface station
- GBON Upper air station
- Hydrological station
- Precipitation station
- Radar wind profiler station
- Radiation station
- Sea profiling station
- Space Weather station
- Surface land meteorological station (SYNOP)
- Surface marine meteorological station
- Upper-air / PILOT station
- Upper-air / Radiosonde station
- Weather radar

Program / network affiliation:

Programm approval status: All

Station reporting status: declared: Any and assessed: Any

WMO Region / Country: VI - Europe

Organization:

Variable:

Geometry :

Climate zone:

Geographic coordinates: Latitude to / Longitude from / Longitude to / Latitude from

Elevation: From: meters To: meters

Search | Reset

Finely tuned search

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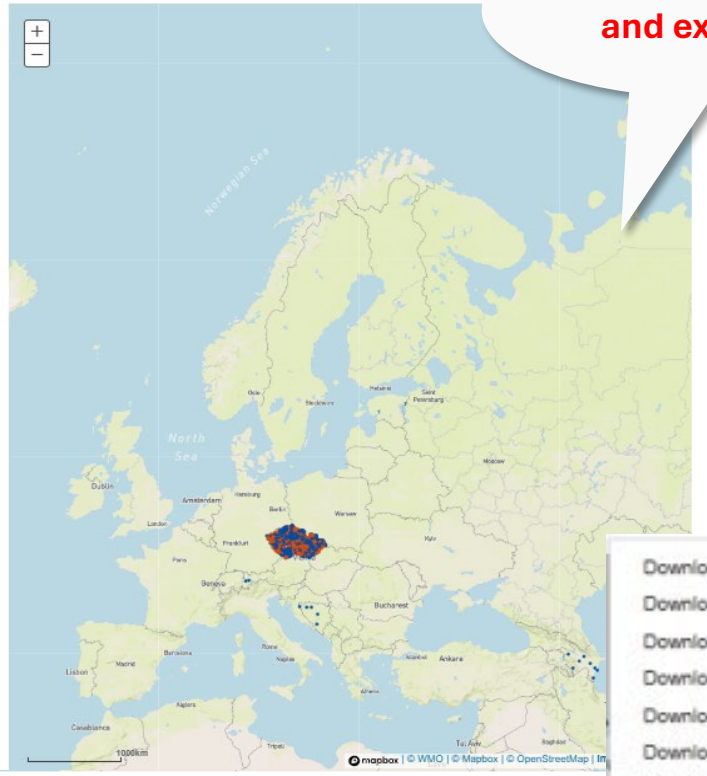
Search results and exports

Search results

1857 stations / platforms found.

The results shown on the map refer to the station declared status.



- Download map as PNG
- Download map as JPG
- Download map as GIF
- Download map as EPS
- Download map as KML
- Download results as XML
- Download results as CSV

WMO Region	Country	Station	Coordinates	WIGOS ID
Europe	Austria	Jamtalferner	46.8870°N 10.1754°E Elevation: 2141	0-40-0-197091
Europe	Azerbaijan	GOYCHAY	40.6500°N 47.7500°E Elevation: 94	0-20000-0-37749
Europe	Azerbaijan	LACHIN	39.6500°N 46.5333°E Elevation: 1094	0-20000-0-37898
	Azerbaijan	LANKARAN	38.7333°N 48.8333°E Elevation: -13	0-20000-0-37985
	Azerbaijan	NEFTCHALA	39.4000°N 49.2500°E Elevation: -25	0-20000-0-37925
	Azerbaijan	SABIRABAD	40.0166°N 48.4666°E Elevation: -17	0-20000-0-37843
Europe	Azerbaijan	SALYAN	39.5833°N 48.9666°E Elevation: -22	0-20000-0-37913
Europe	Azerbaijan	SHAMKIR	40.8333°N 46.0333°E Elevation: 404	0-20000-0-37734
Europe	Azerbaijan	ZARDAB	40.2000°N 47.2166°E Elevation: -6	0-20000-0-37835
Europe	Bosnia and Herzegovina	BANJA LUKA	44.7833°N 17.2166°E Elevation: 153	0-20000-0-14542

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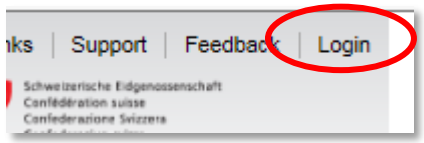
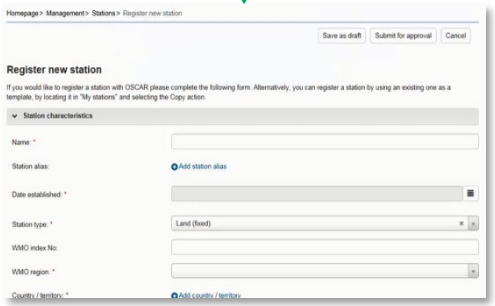
Security and user management

- **Authentification** by identity provider (Swiss Government)
- **Authorization** within application based on «trust-relationships» and various «user roles»



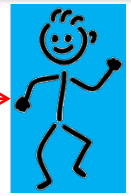
Register

Edit all stations in country
Also: register Metadata edirors



Admin

NFP



Edit all stations in country
Also: register new contact

Metadata Editor

Edit assigned stations
Also: register new contact

Station contact

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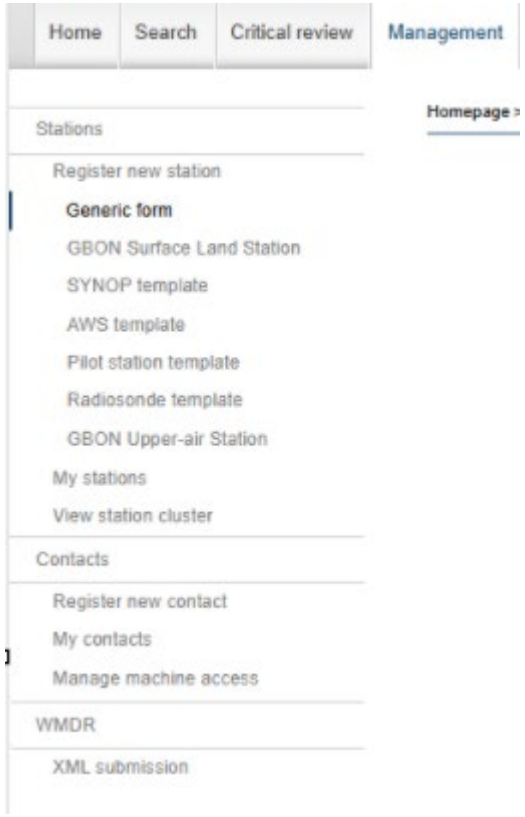
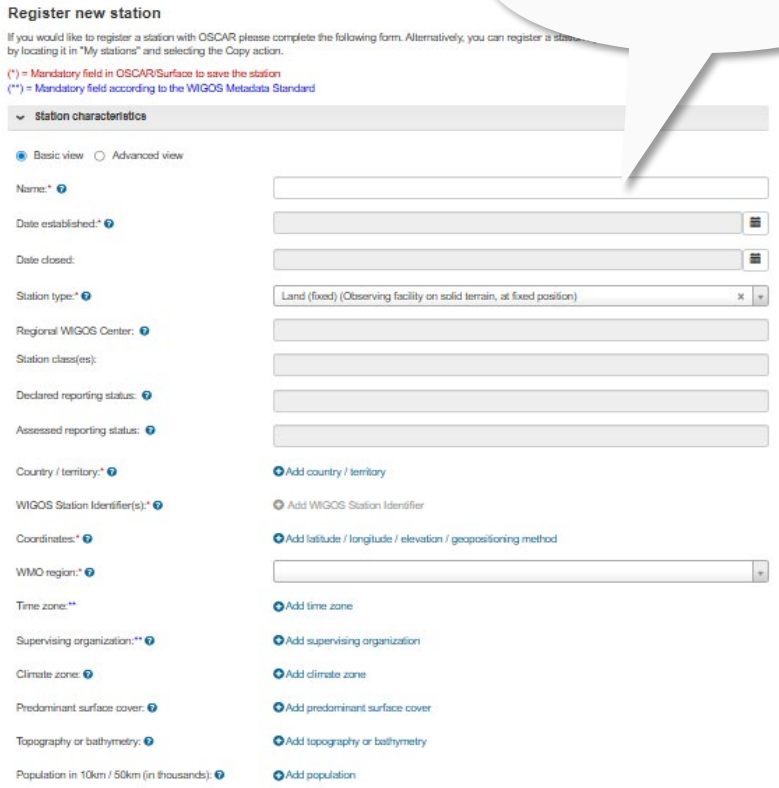
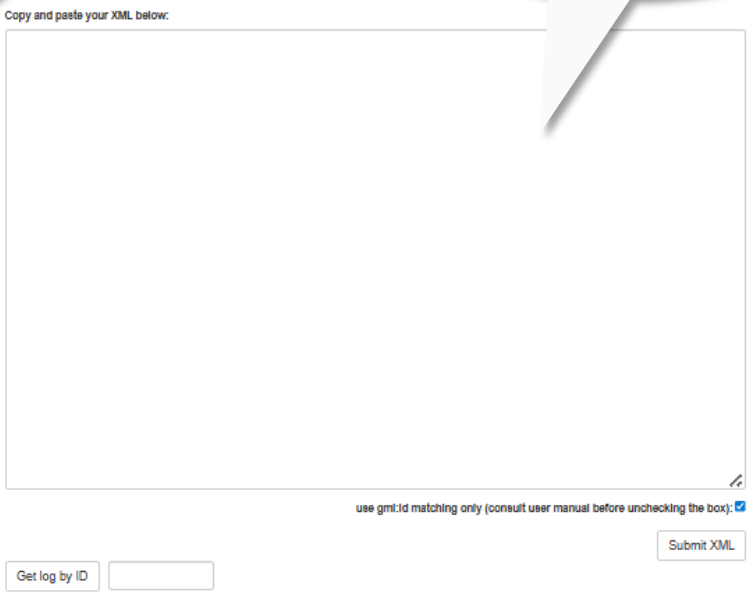
OSCAR management console



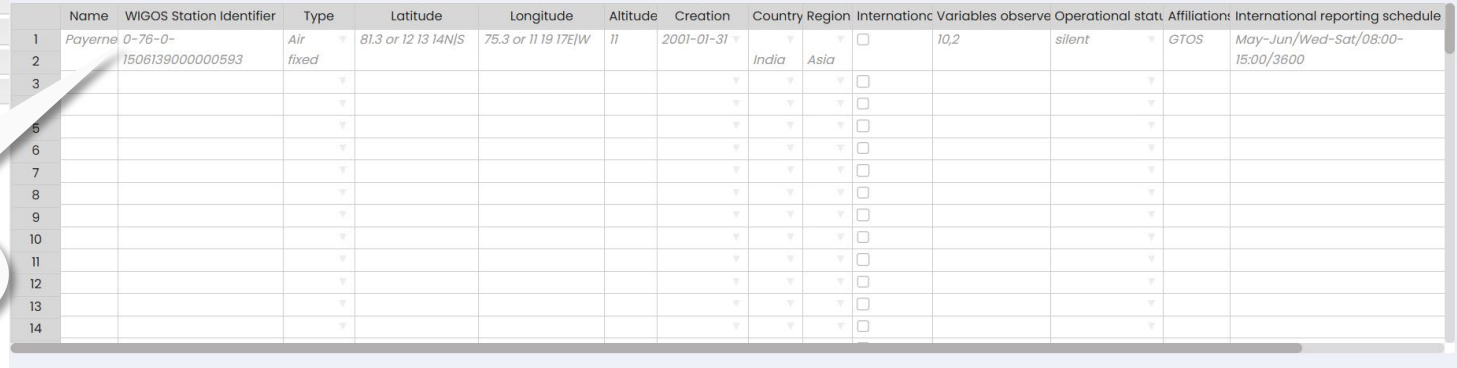
Various station forms



WMDR XML interface



https://oscar.tools.wmo.int/web-client#createStation



	Name	WIGOS Station Identifier	Type	Latitude	Longitude	Altitude	Creation	Country	Region	International	Variables observe	Operational statu	Affiliations	International reporting schedule
1	Payerne	0-76-0-1506139000000593	Air fixed	81.3 or 12 13 14N|S	75.3 or 11 19 17E|W	11	2001-01-31	India	Asia		10,2	silent	GTOS	May-Jun/Wed-Sat/08:00-15:00/3600
2														
3														
4														
5														
6														
7														
8														
9														
10														
11														
12														
13														
14														

Batch station registration

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Steps for the Registration of Hydrological Stations in OSCAR/Surface: Simple

- Process:
  1. Nomination of responsible person(s) for metadata management in OSCAR/Surface.
  2. Attendance of training on OSCAR/Surface and allocation of WSIs.
  3. Registration in OSCAR/Surface and discussion on WSI schema allocation with NMHS/WMO Secretariat.
  4. Registration of hydrological stations in OSCAR/Surface
  5. Feedback to WMO Secretariat and further training

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Summary

- OSCAR/Surface is a web tool to search, visualize, download station metadata
- Follows the WMDS metadata standard
- Stations metadata describes where, when, by whom and how observations were made
- Each organization is responsible to manage its station metadata in OSCAR/Surface
- Management via GUI (forms or web client) or machine to machine (WMDR XML)
- Process for registration of hydrological stations in place

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Thank you