Training Workshop for Regional WIGOS Centres functions and tools in RA VI

Santander, Spain, 20-22 November 2023

OSCAR/Surface Training

WMO | IMO-WMO 1873 2023

WMO OMM

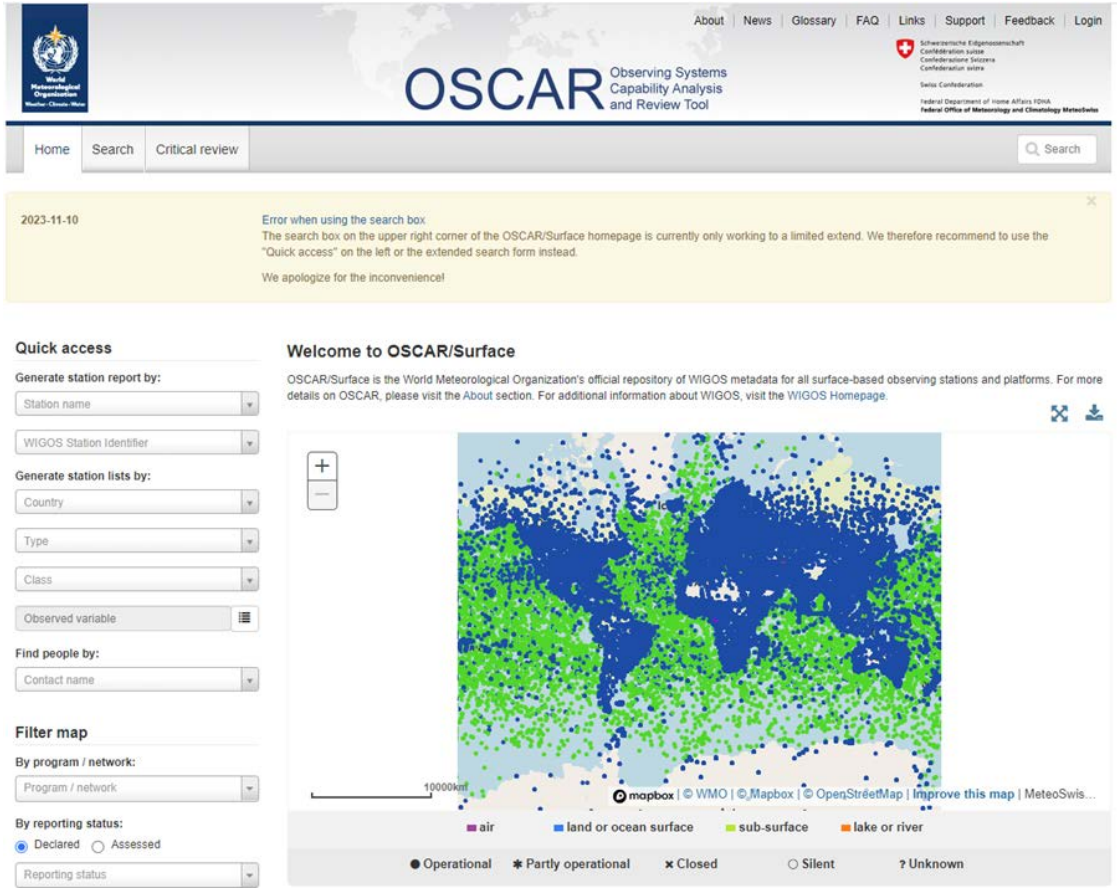
Outline

1. Introduction
2. Main features and functions of OSCAR/Surface
3. How to register and login in OSCAR/Surface
4. The roles and authorities of the users in OSCAR/Surface
5. How to assign WIGOS Station Identifier (WSI)
6. How to register a new staton
7. The templates for registration of stations
8. How to update metadata
9. How to use OSCAR/Surface WebClient and API

Introduction to OSCAR/Surface

The **Observing Systems Capability Analysis and Review** tool (OSCAR) of the WMO Integrated Global Observing System (WIGOS) Information Resource (WIR) is a key source of information for WIGOS metadata.

- **Official repository for the metadata of the WIGOS Stations/platforms**
  - *Land, ocean, lower and upper atmosphere*
  - *Fixed, mobile observing facilities*
  - *In situ, remote-sensing instruments*
  - *Physical, chemical, biological, hydrological observations*
  - *Observations serving weather, climate, warnings, …*
- **Consistent with WIGOS Metadata Standard** (WMO-No. 1192) and
- **Accessible by all users to see the registered stations and metadata**
- **Provides metadata for monitoring functions of WDQMS**



Main features and functions of OSCAR/Surface

Quick access
&
Map filter

Quick access

Generate station report by:

Station name

WIGOS Station Identifier

Generate station lists by:

Country

Type

Class

Observed variable

Find people by:

Contact name

Filter map

By program / network:

Program / network

By reporting status:

Declared Assessed

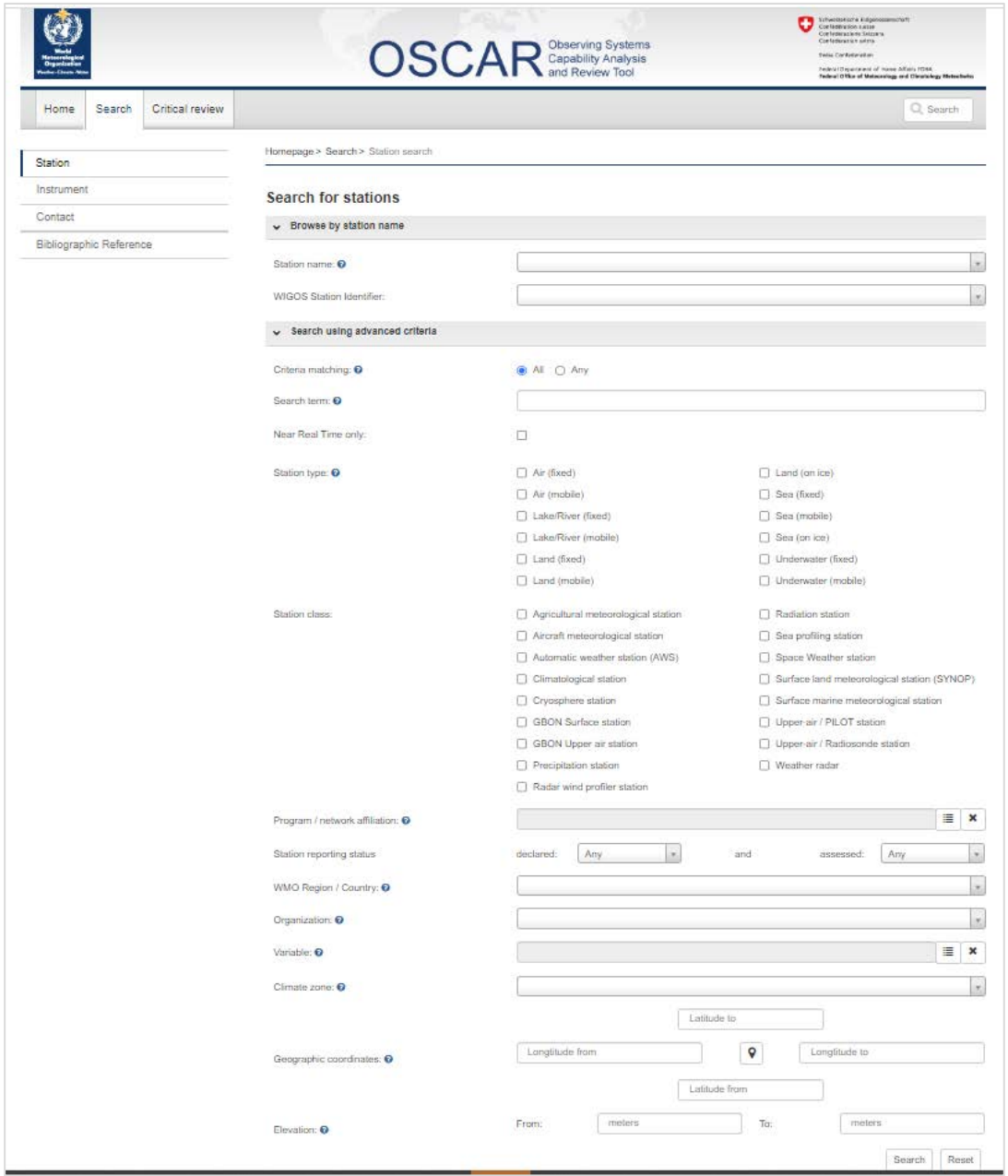
Reporting status

By station type:

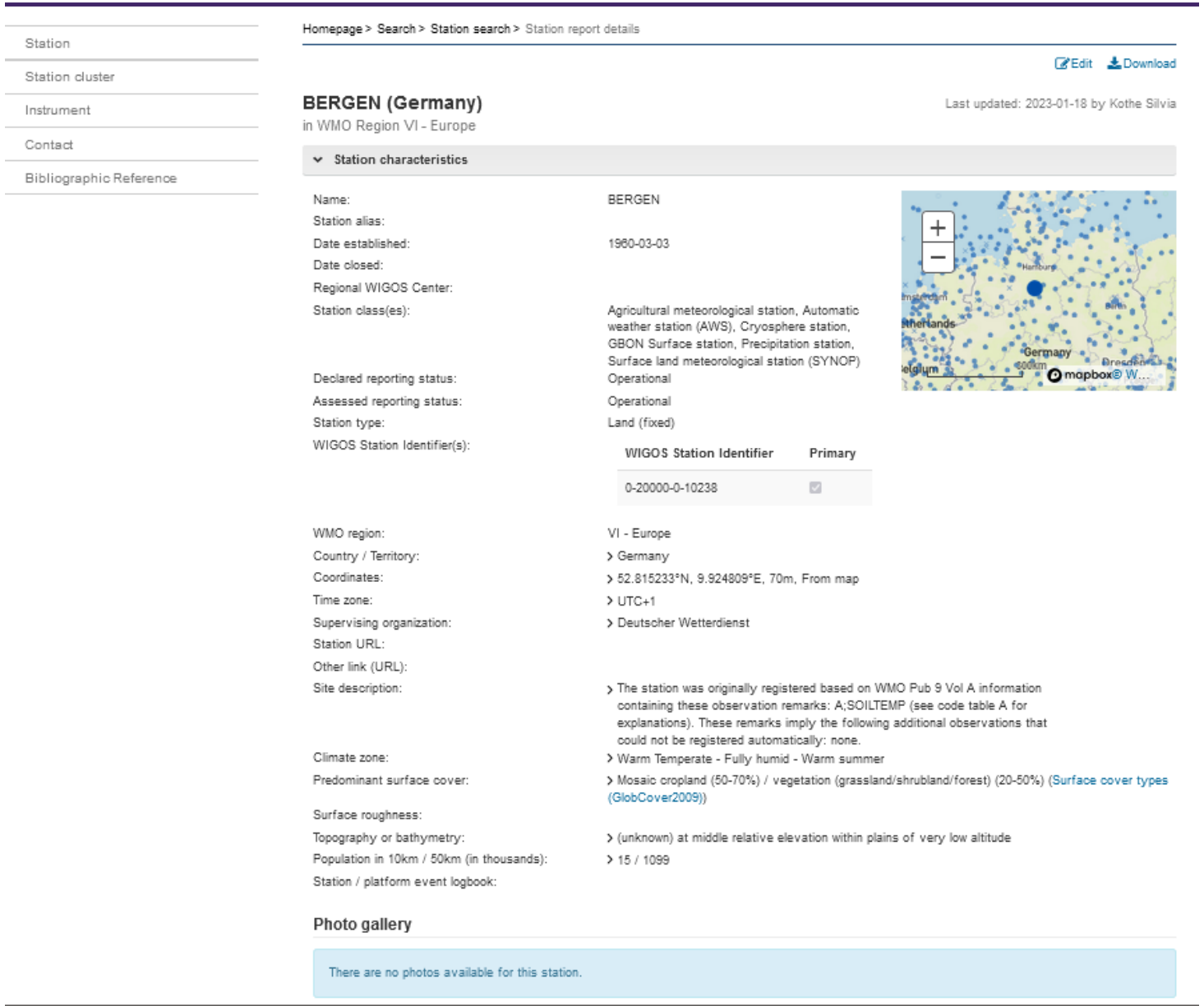
Station type

Several search, filtering and view options

- *Country*
- *Station name*
- *WIGOS Station ID*
- *Station type*
- *Station class*
- *Observed variable*
- *Affilated program/network*
- *Operational status*
- *Coordinates and elevation*
- *Contacts*
- *WMO Region*
- *Organization*



Main features and functions of OSCAR/Surface

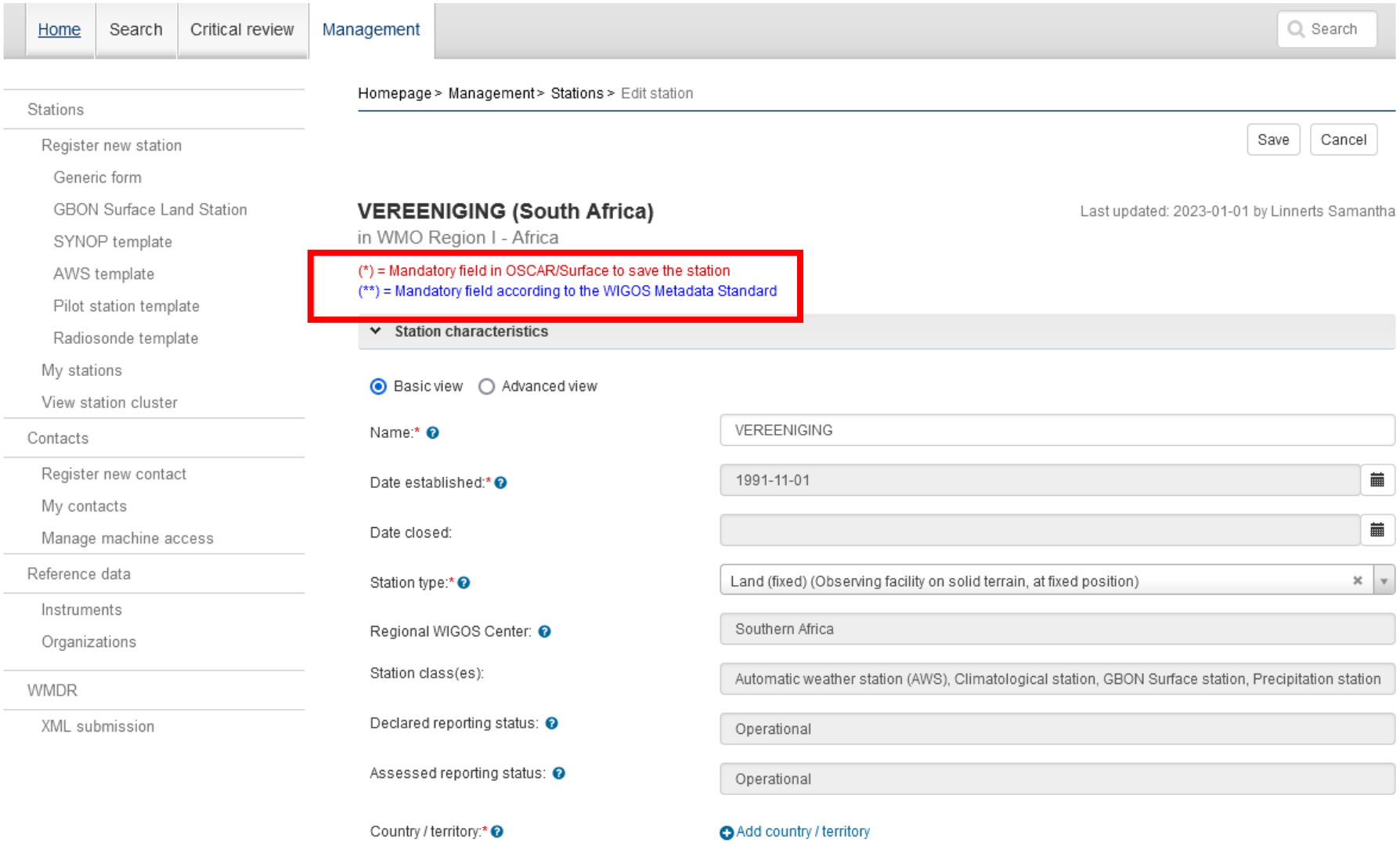


Search and download station report

- **Download station report**
  - *Station report as PDF*
  - *Station as WMDR XML*
- **Download country information**
  - *Download map as PNG*
  - *Download map as JPG*
  - *Download map as GIF*
  - *Download map as KML*
  - *Download results as XML*
  - *Download results as CSV*

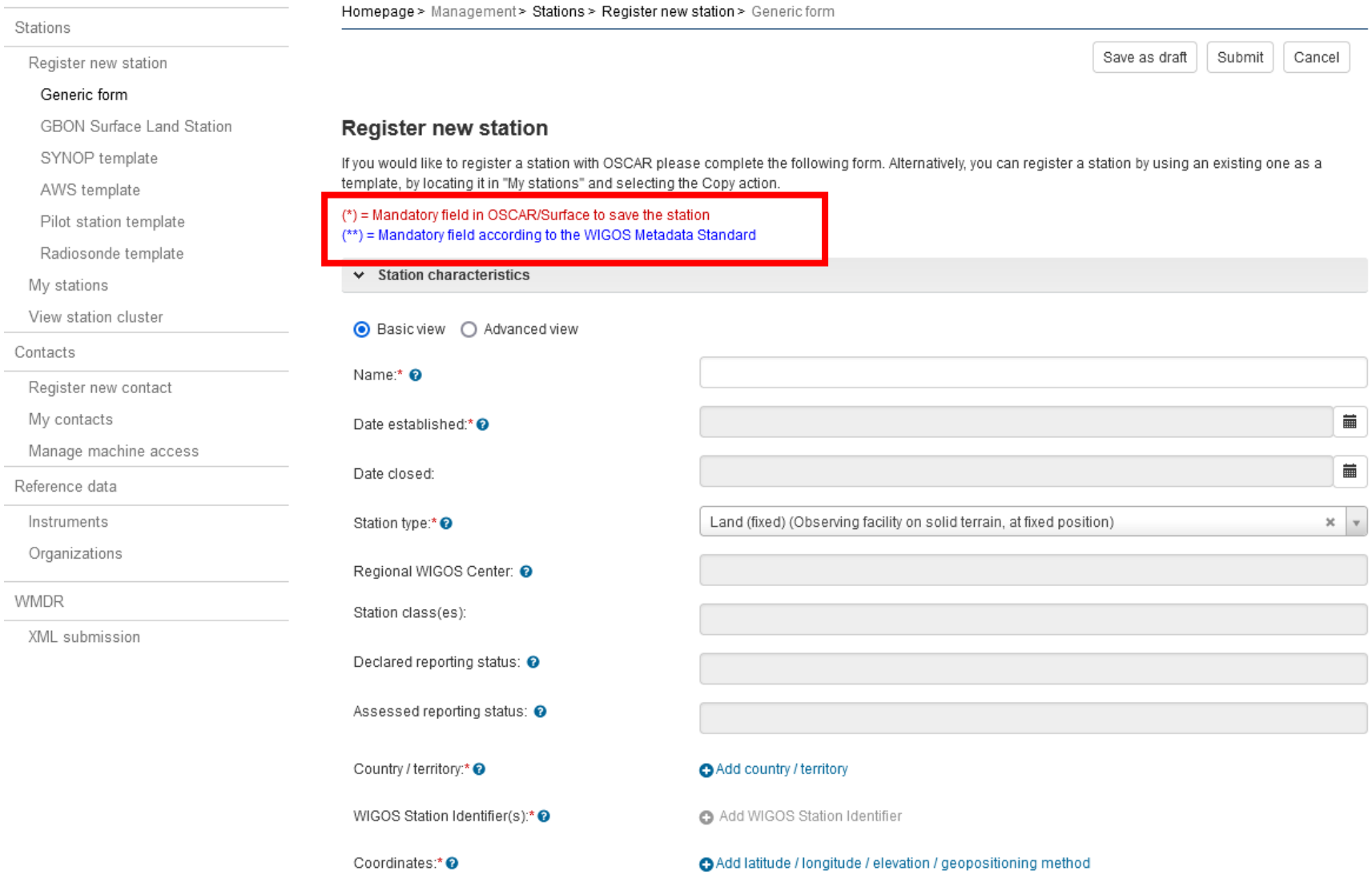
Main features and functions of OSCAR/Surface

Edit station metadata



Main features and functions of OSCAR/Surface

Register a new station



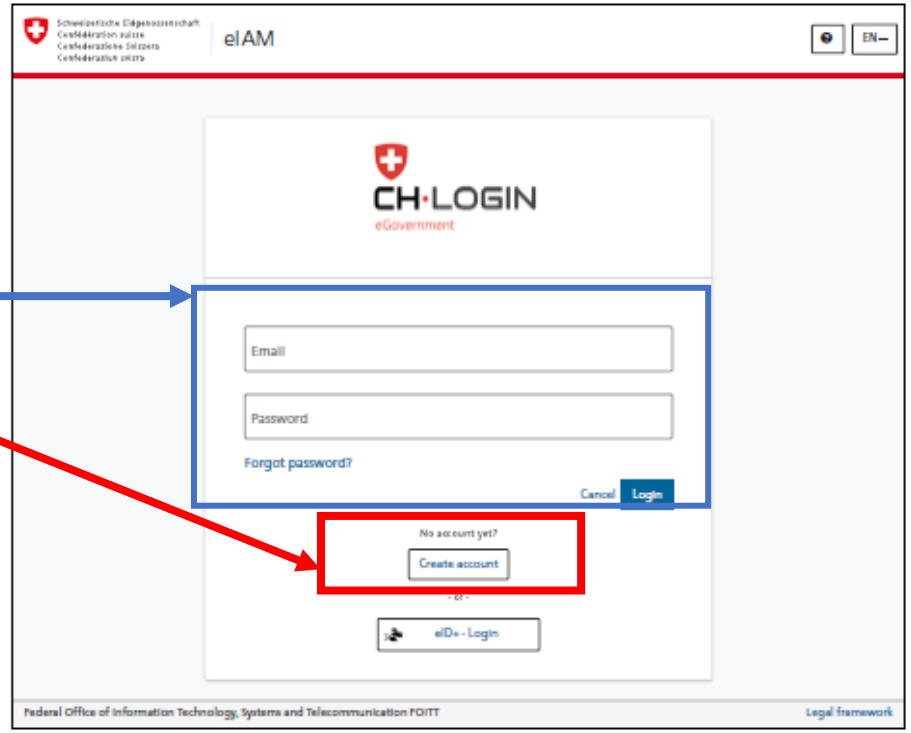
How to register and login in OSCAR/Surface

Users need to be registered to be able to update information in OSCAR/Surface.

The registration only has to be done once. There are two ways to get an account:

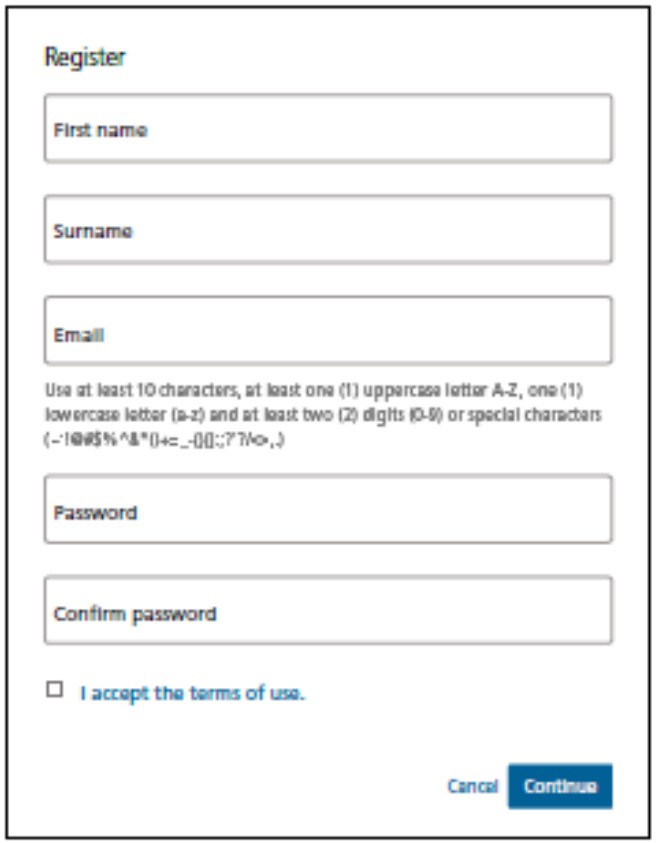
1. Designation as National Focal Point (NFP) for OSCAR/Surface by Permanent Representative
2. NFP, or other delegee, creates a user in OSCAR/Surface

To complete the **Registration** procedure,
Step 1: Click on the Login button in the top right corner of the page and then on
Step 2: Click on Create Account

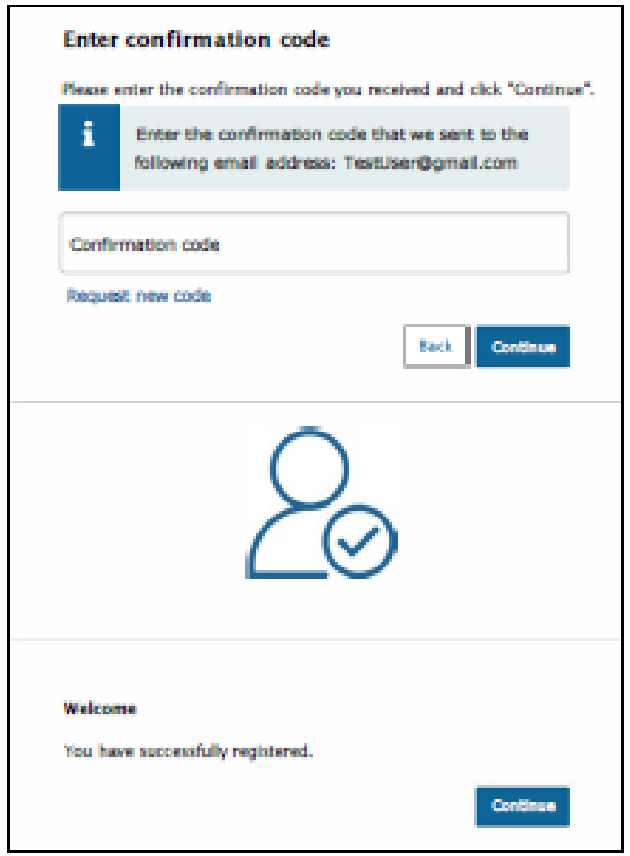


How to register and login in OSCAR/Surface

Step 3: Fill out the user registration form

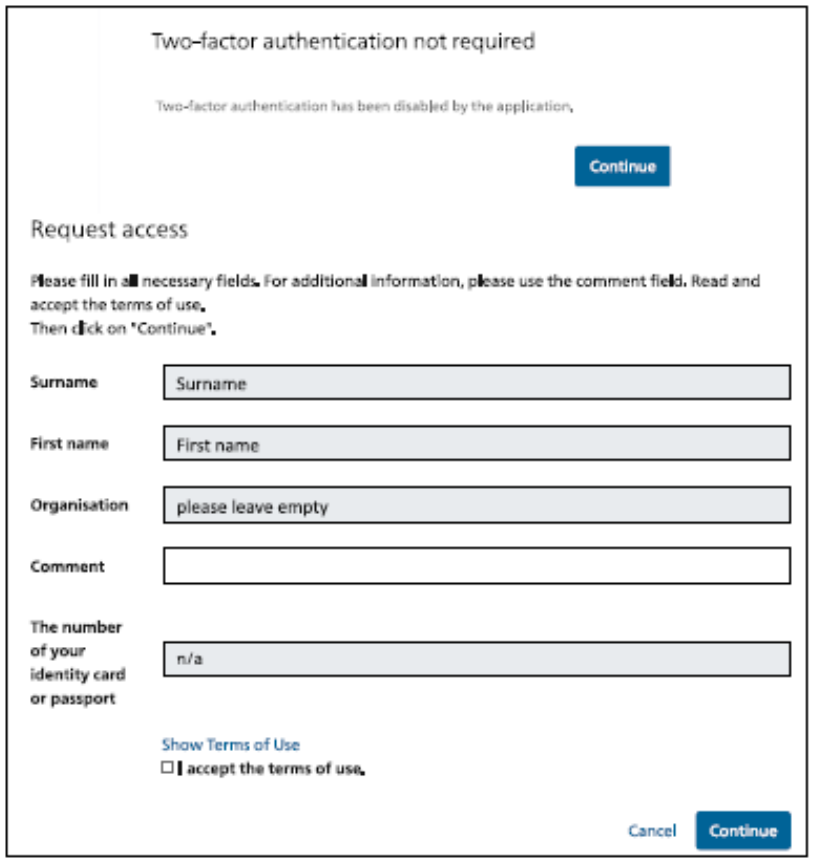


Step 4: Verification of email account



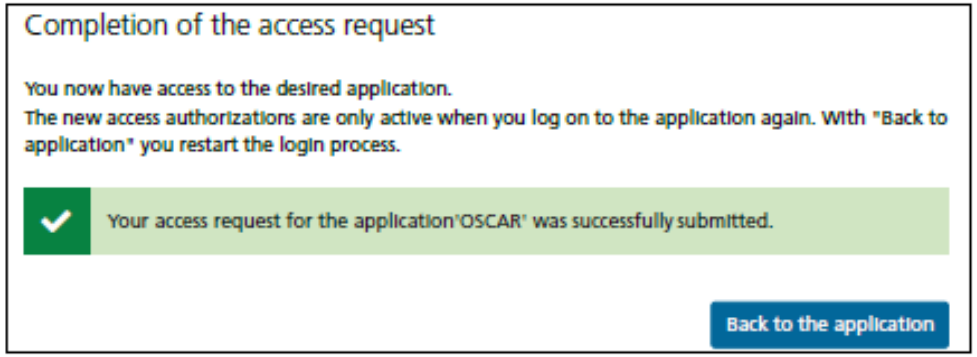
How to register and login in OSCAR/Surface

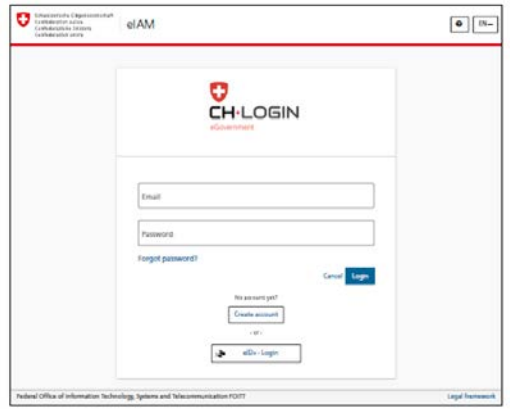
Step 5: Fill out the form to request access with the new user account



Step 6: Registration complete.

You may now log in to OSCAR using your email and password





User roles and Access rights

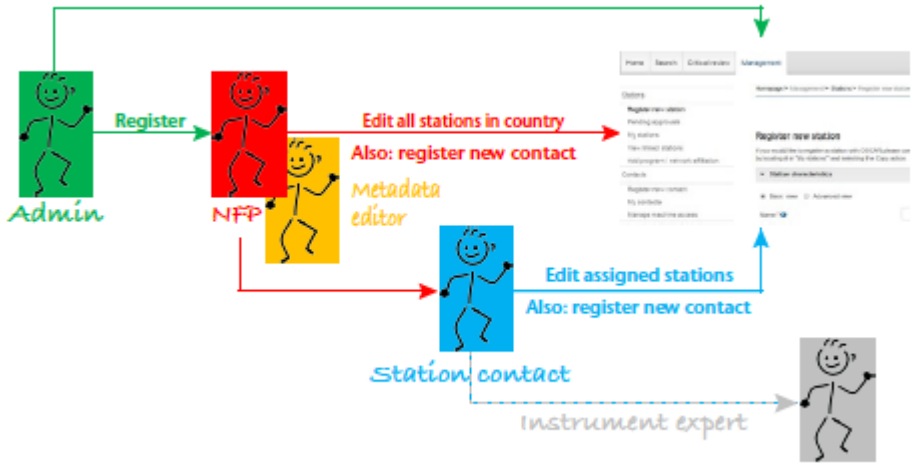
Only registered and authorized users can change information in OSCAR/Surface.

- The **national focal point** can then create and delete additional users and associate them with stations within his/her country, edit all and register new stations in their country, and add contacts to a particular station, granting them editing rights for that station.

- National focal points can delegate the role of **metadata editor** to another contact who will then be able to perform the same functions as the national focal point, without the formal title.

- **A registered user** who is not assigned a specific user role is considered to be a regular OSCAR/Surface user and is authorized to register stations and users for his or her country but only authorized to edit stations assigned to him/her.

Role	*Register station*	*Delete station*	*Edit station*	*Create user*	*Delete/ deactivate user*	*Other functions*
Administrator	Everywhere	Everywhere	Everywhere	Everywhere	Everywhere	Make a program subject to approval; Change Station name
National focal point	For their country	Request deletion for their country	All stations in their country	For their country	For their country	Delegate their rights to metadata editors; Change Station name
Metadata editors	For their country	Request deletion for their country	All stations in their country	For their country	-	Change Station name
Regular user (station contact)	For their country	-	Only own stations	For their country	-	
Network focal point	Everywhere, only if affiliated with own network	-	All stations affiliated with their network	For their country	-	Affiliate existing station to their network



How to assign WIGOS Station Identifier (WSI)

WIGOS Station Identifier is used to uniquely identify WMO observing stations and platforms.

- Each observing station must have at least one WIGOS identifier (WSI), A WSI can only be associated with one observing station, The station WIGOS identifier(s) link(s) the station to its WIGOS metadata.

The WSI consists of four blocks:

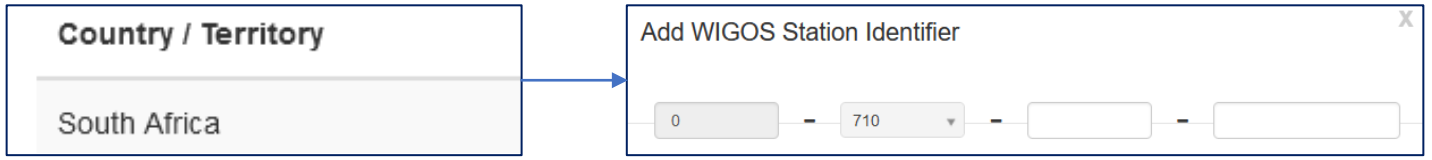
1. **The WIGOS identifier series (number):** For observing facilities, the number is "0". This is entered automatically by the system;

2. **The issuer of the identifier (number):** The ISO 3166-1 numeric country code is used (for example, the Republic of Türkiye: 792). This is entered automatically by the system depending on the country/territory that was chosen.

3. **The issue number:** Define your own procedure or use "0";

4. **The local identifier (a set of characters, maximum 16):** Define your own procedure.

Example: 0 – 792 – 0 - XXXXXXXXXXXXXXXX



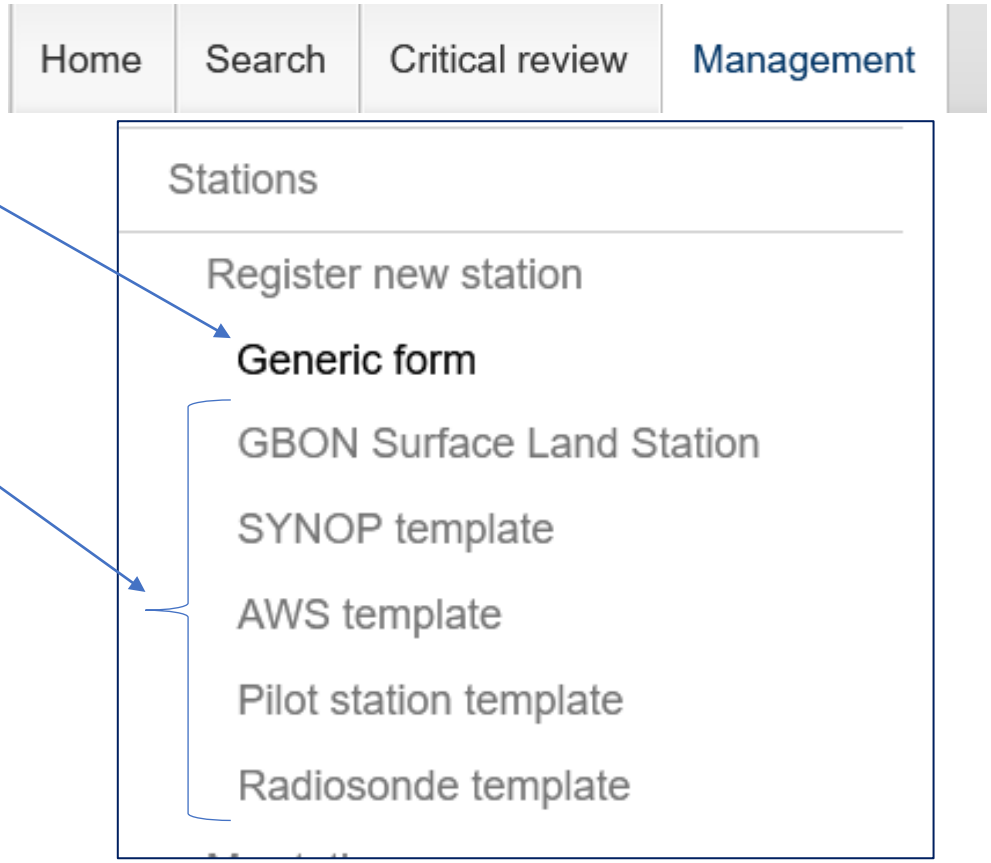
Observing stations allocated with WMO station identifiers before the introduction of WSIs (that is, before 1 July 2016) may continue to use those identifiers. These stations use "20000" as the value for the issuer of the identifier and the old WMO ID as the local identifier. For example, Incheon station is recorded as "**0-20000-0-47112**".

How to register a new station

A new station can be registered either by using the

1. **Generic form:**. The Generic form offers the possibility to see and manually edit all fields in OSCAR/Surface and is intended for advanced users who want to have full control.

2. **Station template forms** make the registration of a station easier and are intended for users who are new to OSCAR/Surface or who want to quickly register a station. The station template forms only show fields relevant to the station type.



The results will be exactly the same no matter which form is used

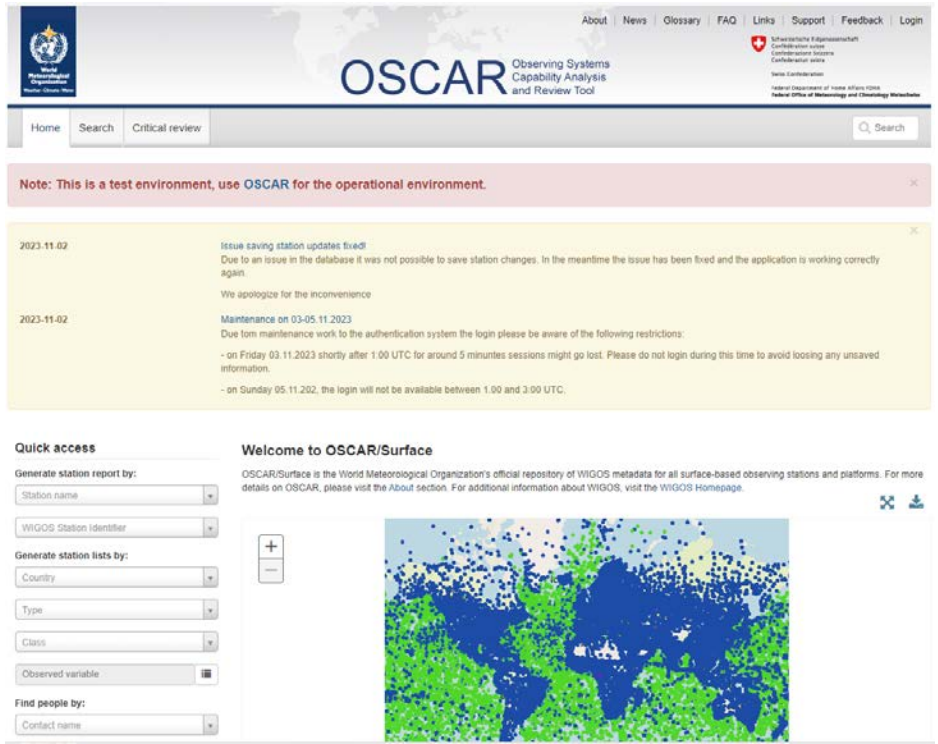
Registration of Stations by Generic Form

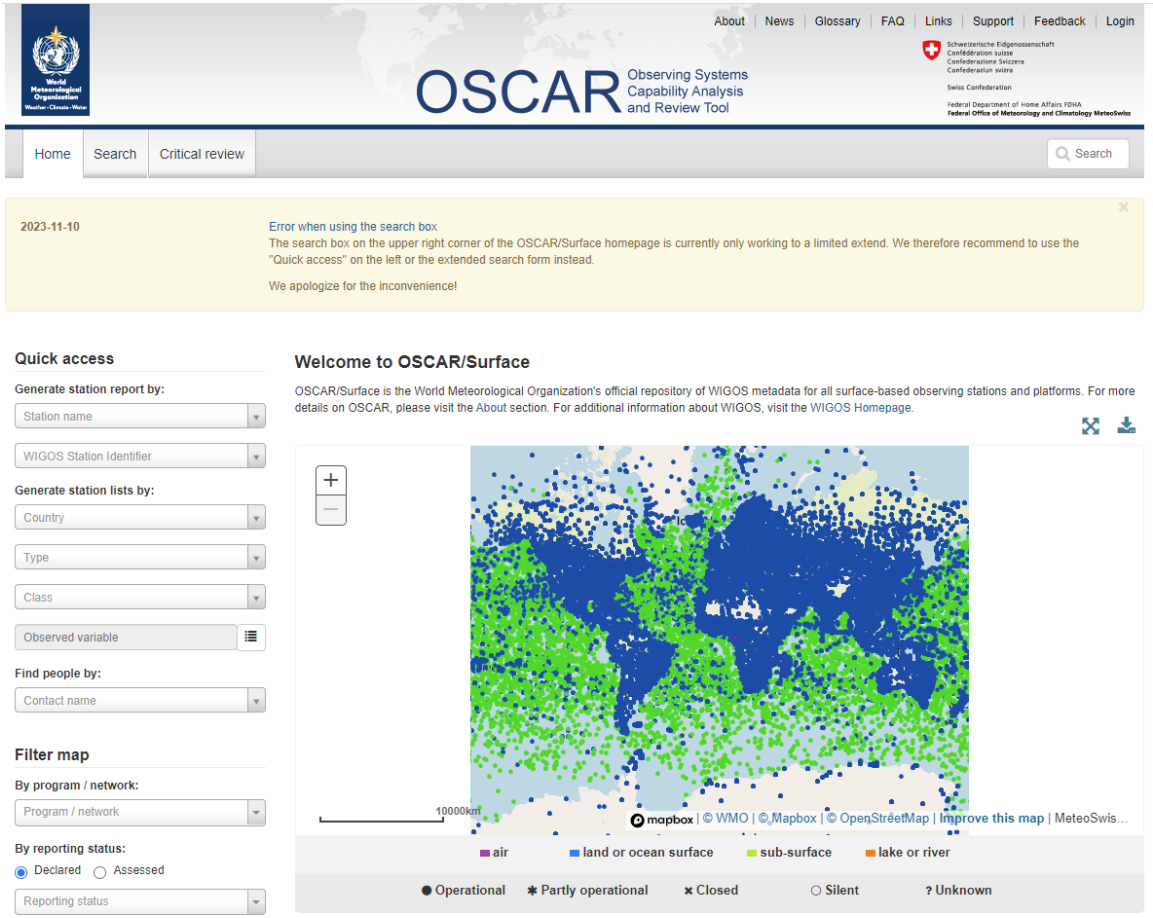
Go to OSCAR/Surface main page:

https://oscar.wmo.int/surface/#/

For test purposes use test platform:

https://oscardepl.wmo.int/surface/#/





How to register a new station: Generic form

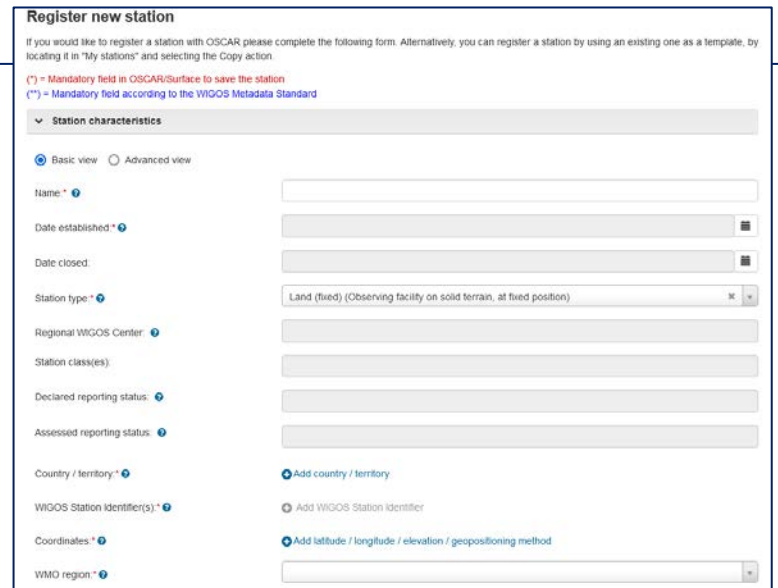
The Generic form is divided into the same five sections as the station report page:

1. station characteristics,
2. observations/measurements,
3. station contacts,
4. bibliographic references and
5. documents.

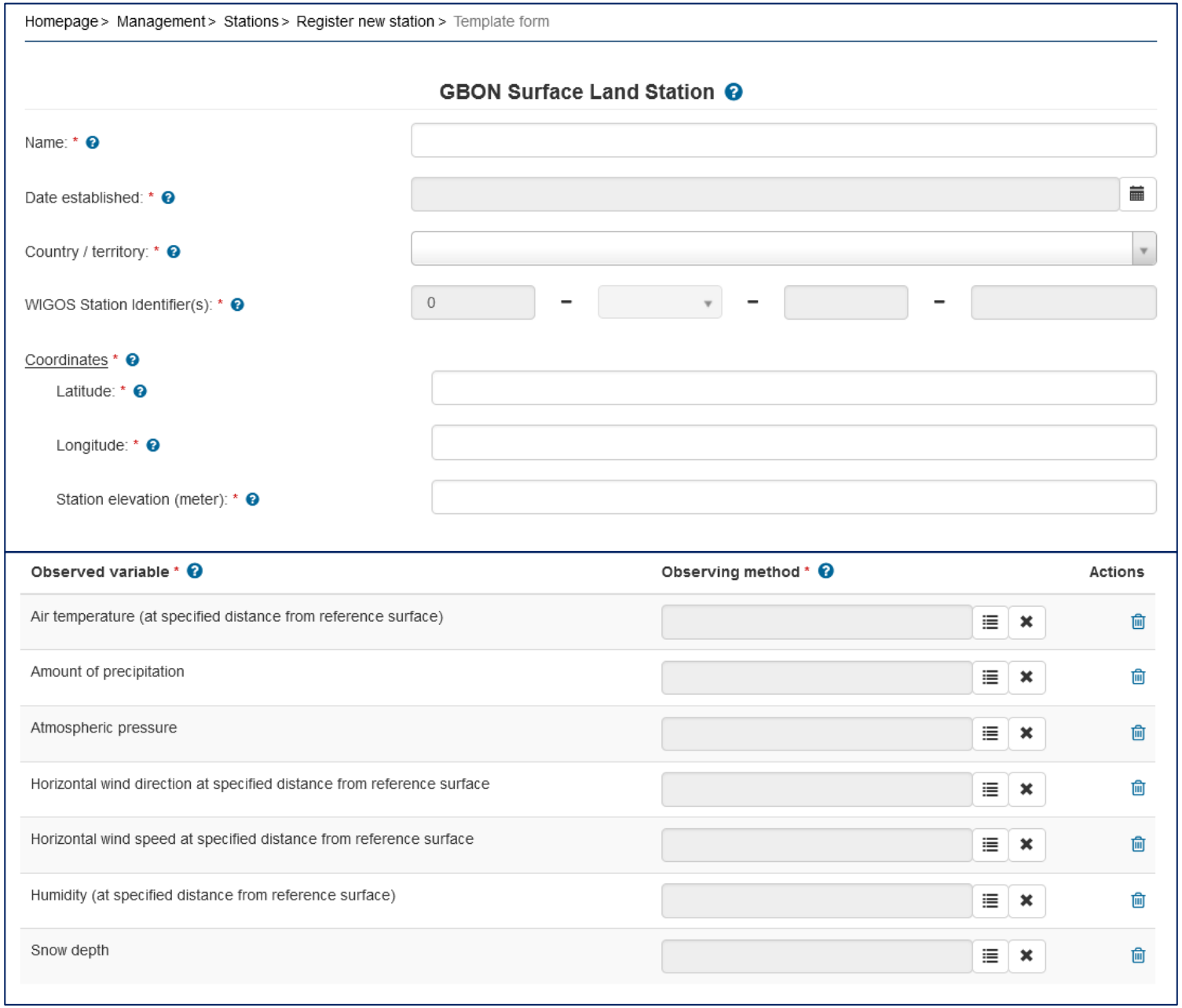
Some elements (marked with a single red asterisk). , such as the name of the station, are mandatory to save a station in OSCAR/Surface. The station cannot be registered unless all the OSCAR/Surface mandatory elements have been provided.

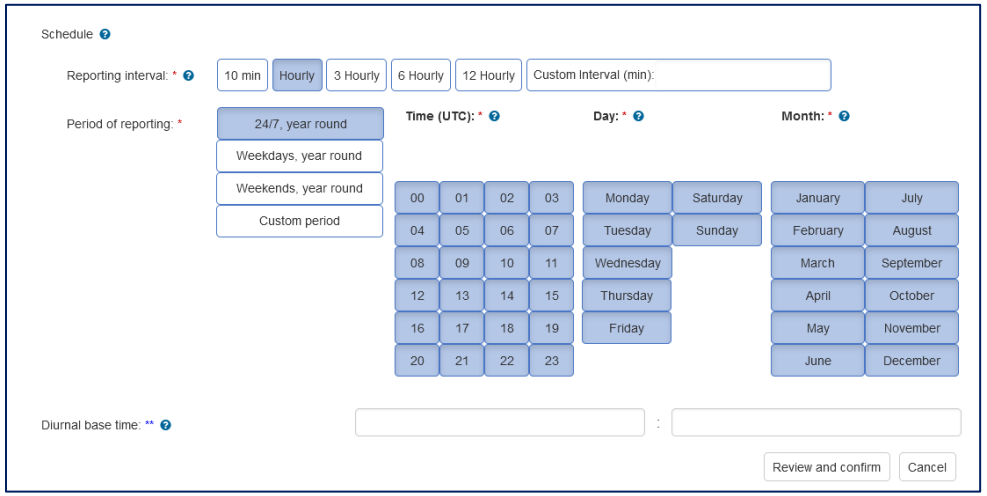
If the information is incomplete, an error message appears when the user tries to submit the form, indicating that some elements are missing, and the missing fields and section headers are highlighted in red.

The elements (marked with double blue asterisks) are mandatory according to the WIGOS Metadata Standard but saving station information is possible without providing values possible to save the station information already provided as a draft for later editing (only the station name is mandatory to save your draft).



How to register a new station: Station template forms

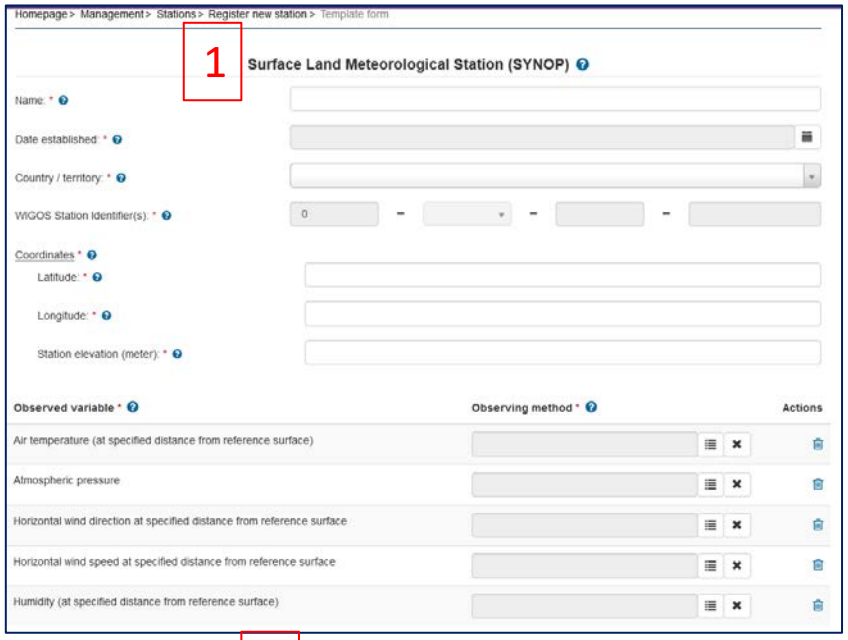


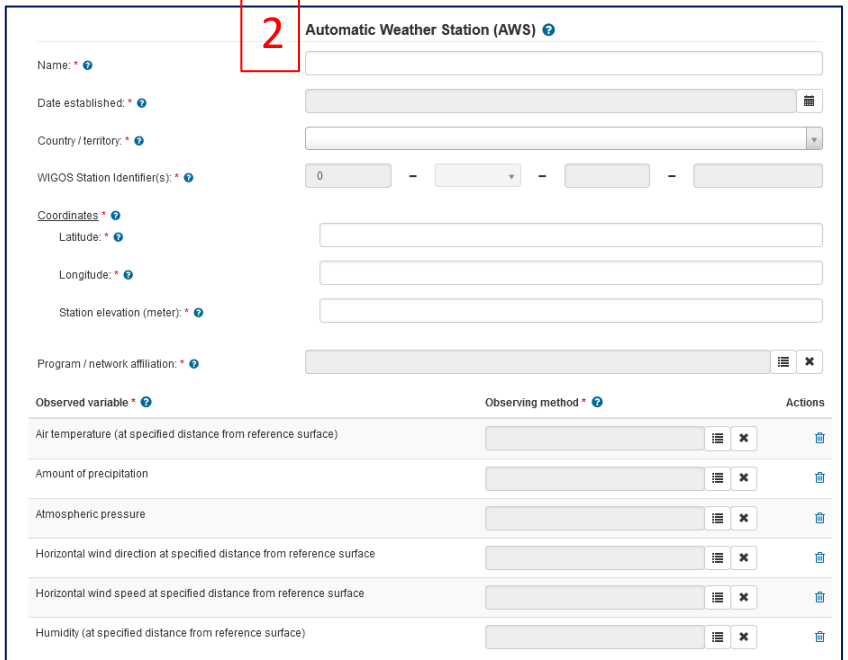


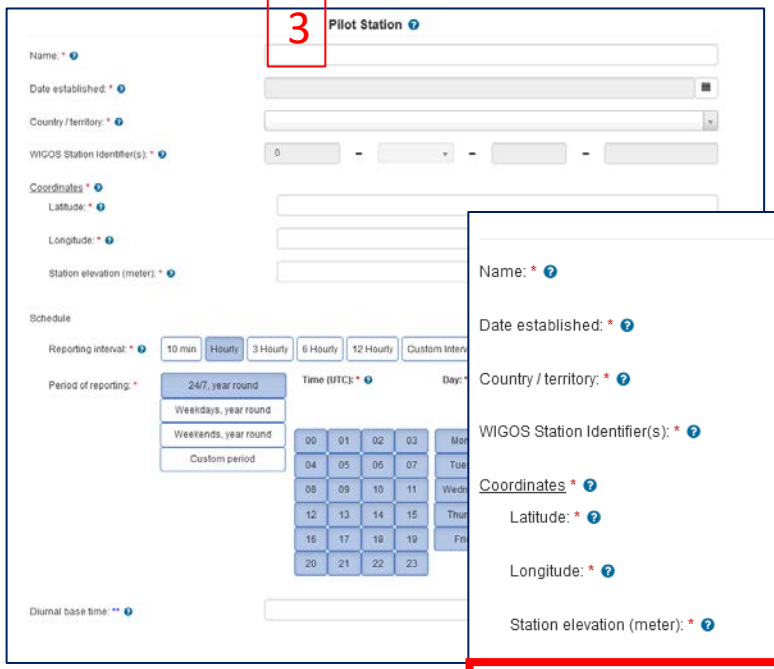
The GBON Surface Land Station template

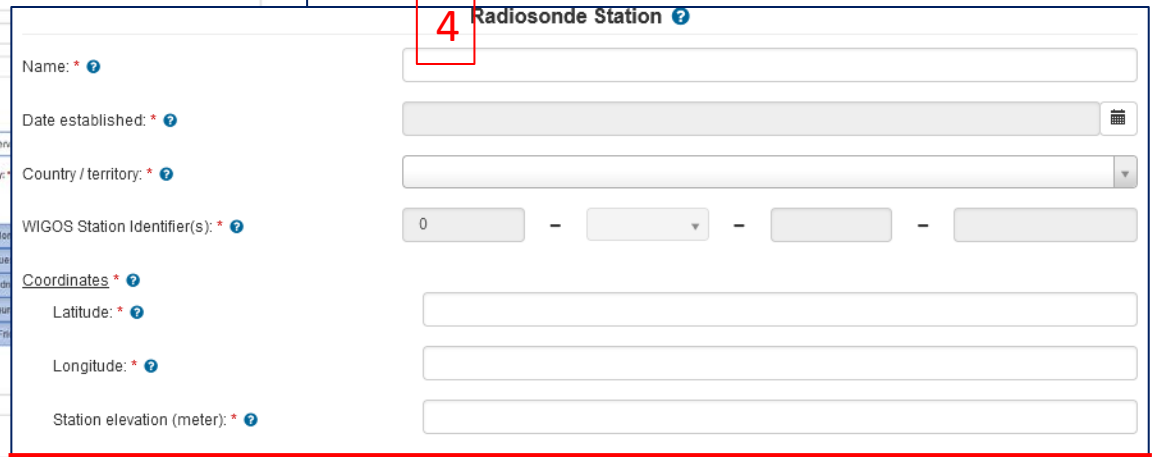
- **Mandatory observations: Preselected with Snow depth being an optional observed variable.**
- **Reposting schedule: Set for hourly reporting, 24/7, year-round.**

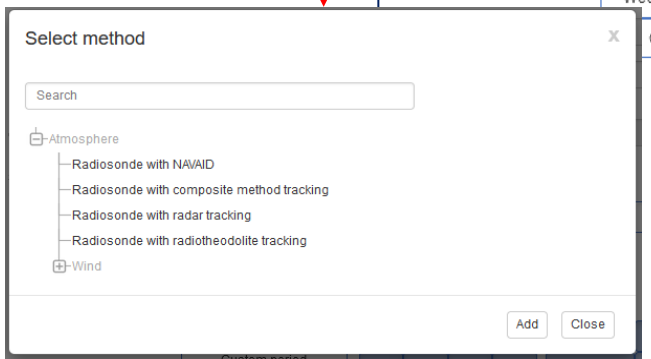
How to register a new station: Other station template forms









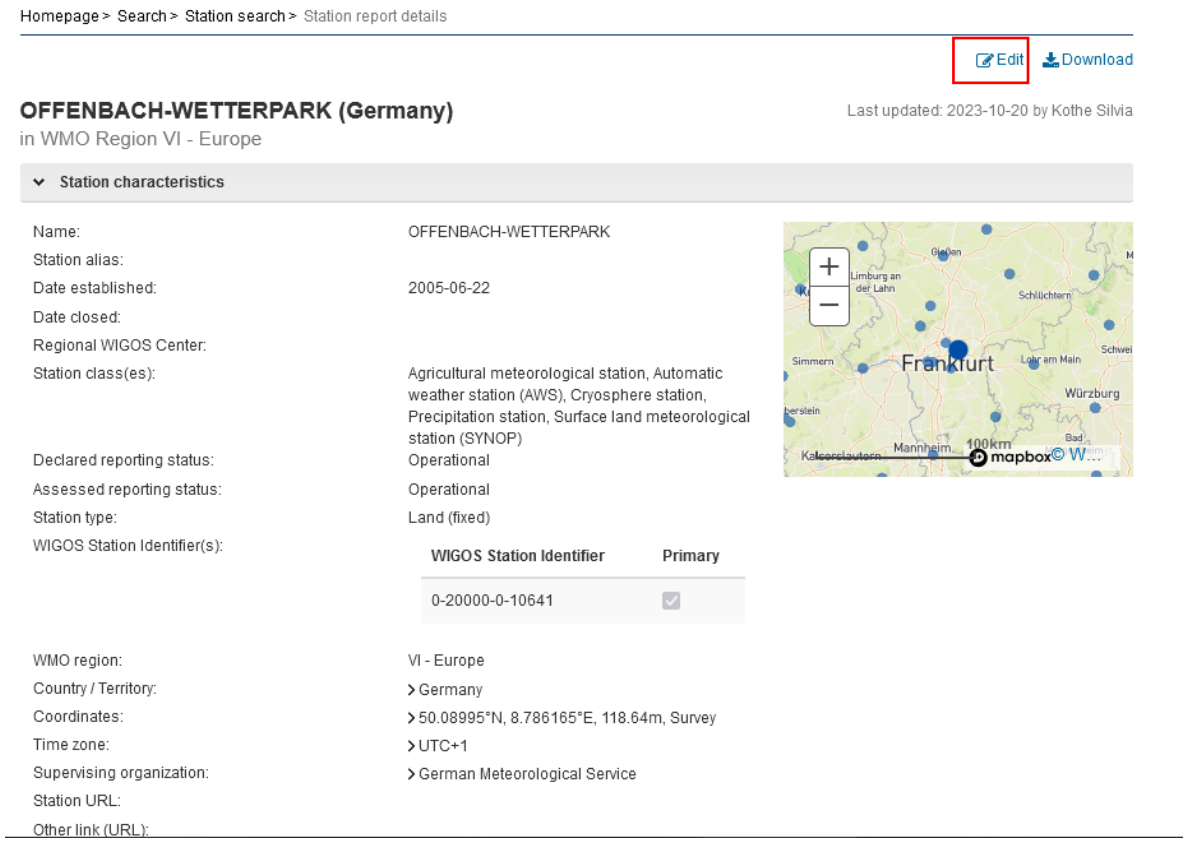


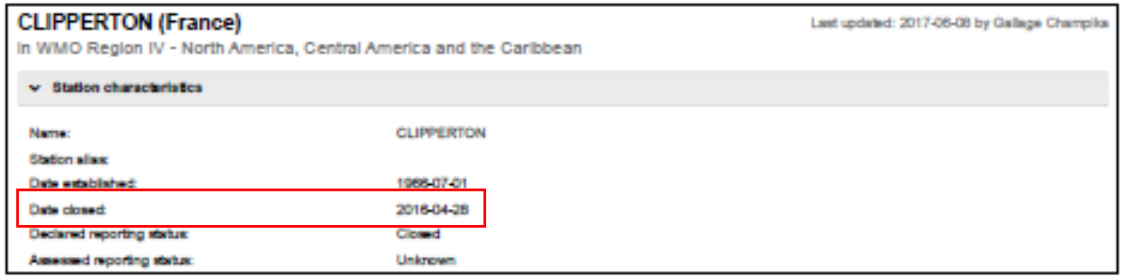
How to edit/update existing station metadata

To edit the station information, click on the Edit button, which shows on the station report. To get to the station report, any of the quick access, search or map filter methods can be used.
It is important to remember that the **date of the date of the actual change must be documented in OSCAR/Surface**. Almost all changes of the information are recorded to keep **track of the station history and the development of its capabilities over time.** Therefore, most fields in the form have a date input field.

Examples: Information can be updated:

1. **Change of elevation of station or instruments:** When the elevation of a station is changed, the new elevation of the installed instruments must be entered also.
2. **Missing information:** the system will not save the changes if not all mandatory fields were entered. This situation is especially likely with stations that are being edited for the first time as the station may have been registered with incomplete information when the system was first populated.
3. **Reporting:** a) Reporting interval: Hourly/3hourly b) Period of reporting: Custom or 24/7 year-round, Used for international reporting
4. **Completely or partly close a station**: If a station needs to be closed completely, a date must be set in the Date closed field to trigger the close station functionality. By clicking on “Continue”, all open-ended Program affiliations, deployments, and data generations of the station will be closed.





How to register or edit a station using XML upload

A station can be registered (new station) or edited via web forms on the graphical user interface (GUI) of OSCAR/Surface or **via the submission of a WMDR XML representation of the station (WMDR XML file)**.
The WMDR XML file for a station can be uploaded by national focal points using the XML submission of the Management tab or by the WMDR XML upload REST API.

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<wmdr:WIGOSMetadataRecord xmlns:gml="http://www.opengis.net/gml/3.2" xmlns:xlink="http://www.w3.org/1999/xlink" xmlns:wmdr="http://def.wmo.int/wmdr/2017" xmlns:gco="http://www.isotc211
    <gml:boundedBy xsi:nil="true"/>
    <wmdr:headerInformation>
        <wmdr:Header>
            <wmdr:fileDateTime>2023-01-01T00:00:00Z</wmdr:fileDateTime>
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    </gmd:electronicMailAddress>
    <gmd:electronicMailAddress>
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</gmd:CI_Address>
                            </gmd:address>
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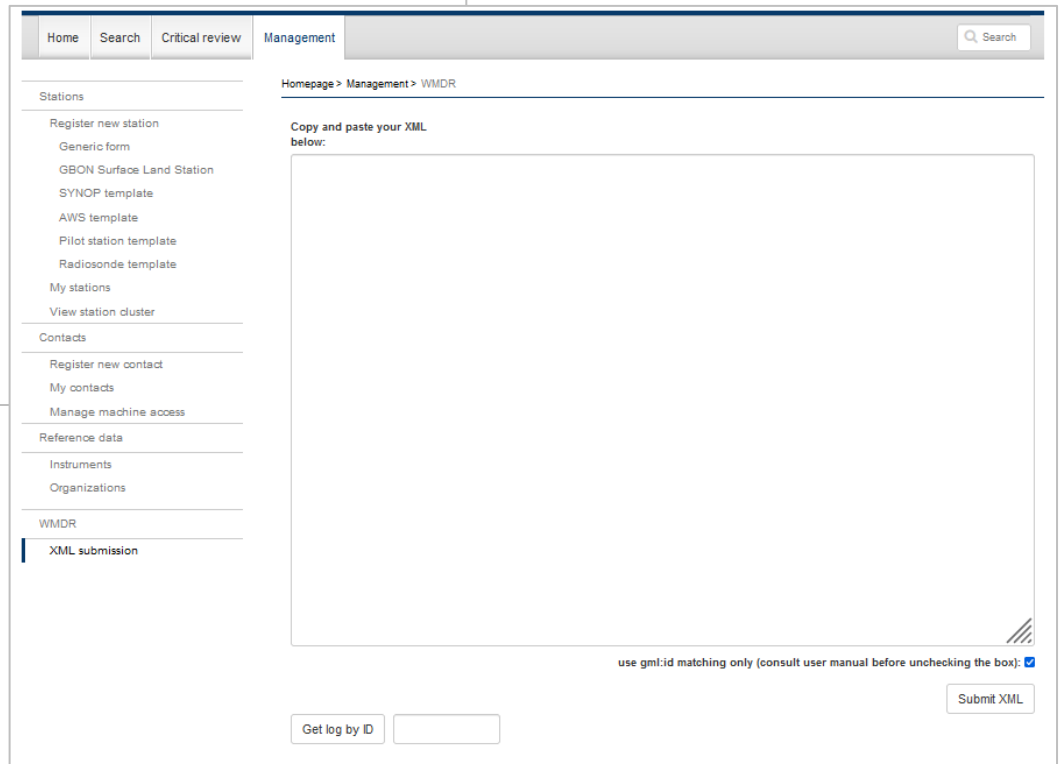
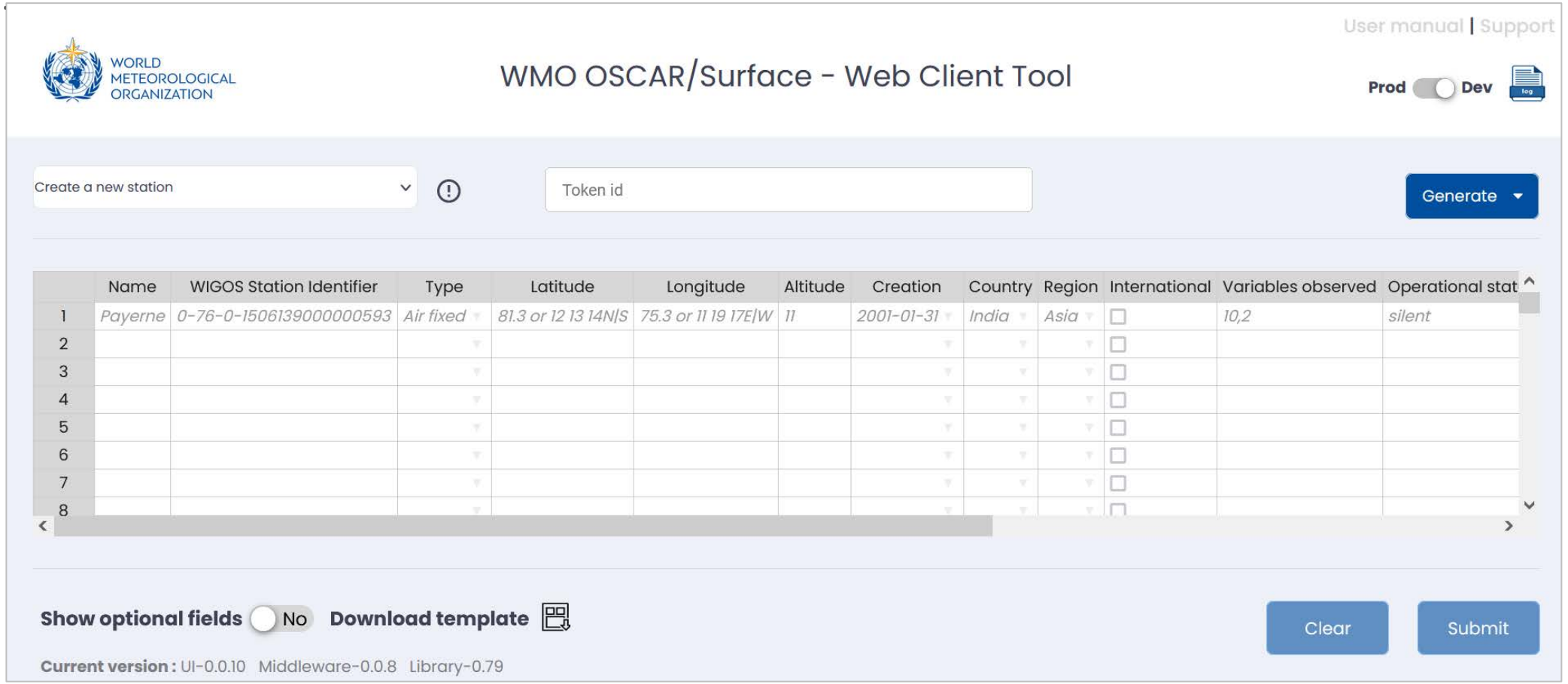


How to register or edit a station using OSCAR/Surface web client tool

The OSCAR/Surface Web Client Tool (https:// oscar .tools .wmo .int/ web -client) is an external application that allows **for batch operations**. This means that operations in OSCAR/Surface **can be applied to several stations at once so that the user does not have to manually enter the information one station at a time**. The tool makes changes to the XML stations file and uploads them again through a queuing system. **The current version supports the creation of stations, changing WSIs, changing schedules, and adding affiliations**. When performing changes through the Web Client, the WSI is used to identify a station.



Help and additional resources

- **OSCAR/Surface User Manual, 2023 edition, release 1.9.1:** https://library.wmo.int/viewer/56451?medianame=OSCAR_1.8.3_en_#page=1&viewer=picture&o=bookmark&n=0&q=

- **The OSCAR/Surface Moodle platform:** https://etr .wmo .int/course/view.php?id=146

  - This platform contains all presentations from training events, the OSCAR/Surface blog, the interactive forum, and the recordings of OSCAR/Surface webinars, which take place once a month.

- **The OSCAR/Surface FAQ on the OSCAR/Surface website**: https://oscar.wmo.int/surface//index .html#/faq/

- **The OSCAR/Surface helpdesk**, which can be contacted via the contact form (accessed via the **Support** button) on the OSCAR/Surface website: https://oscar.wmo.int/surface//index .html #/ support.
  - Requests submitted through this form are tracked and answered by the OSCAR/Surface operating team and the WMO Secretariat.

Thank you

WORLD METEOROLOGICAL ORGANIZATION

wmo.int