

Functional description of OSCAR/Surface

*... Supporting adequate use of observations
& rational network evolution*

Jörg Klausen, MeteoSwiss
Timo Pröscholdt, WMO



WMO OMM

World Meteorological Organization
Organisation météorologique mondiale

Learning objectives

- OSCAR contains information about observing stations
- OSCAR is a web-based tool
- OSCAR and its relation to the WIGOS metadata standard
- Why is OSCAR useful?
- How to get further information & help



Outline

- Introduction
 - WIGOS Metadata Standard vs OSCAR/Surface
- Basic functionality
 - View information
 - Add/edit information
- Summary

INTRODUCTION



WMO OMM

HTTP://OSCAR.WMO.INT/SURFACE

Quick access

Generate station report by:

Generate station lists by:

Find people by:

Filter map

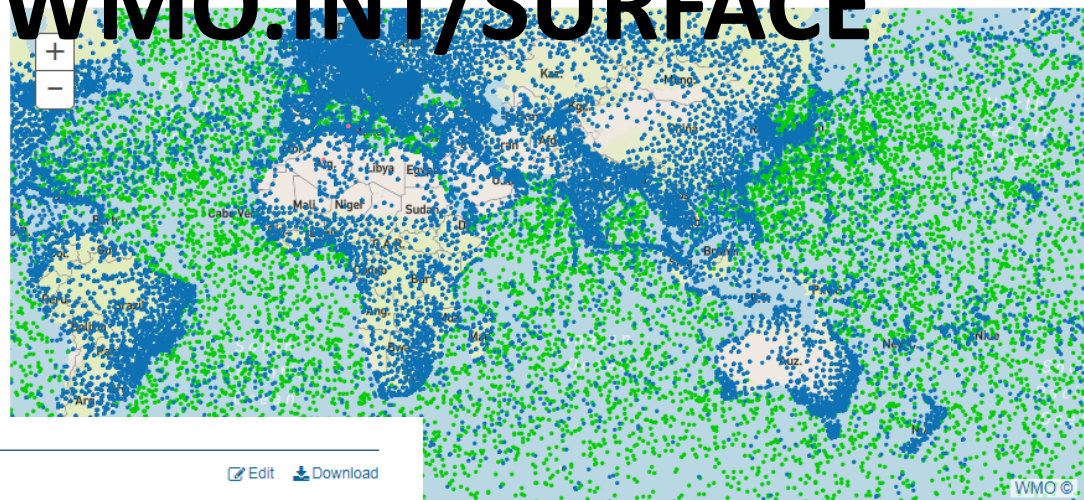
By program / network:

☒ WIGOS components☒ GOS

Homepage > Search > Station search > Station report details

Welcome to OSCAR/Surface

OSCAR/Surface is the World Meteorological Organization's official repository of WIGOS metadata for all surface-based observing stations and platforms. For more details on OSCAR, please visit the About section. For additional information about WIGOS, visit the WIGOS Homepage.



[Edit](#) [Download](#)

Last updated: 2016-04-28

● surface ● sub-surface ● lake or river

MWANZA (Tanzania, United Republic of)

in WMO Region I - Africa

Station characteristics

Name: MWANZA

Station alias:

Date established:

Station type:

Station class(es):

Land (fixed)

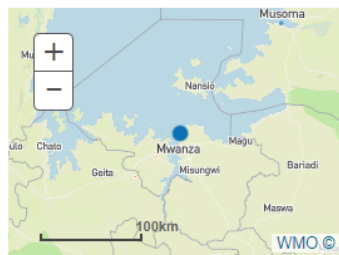
Class	From	To
-------	------	----

A (Aerodrome)	2016-04-29	
---------------	------------	--

WIGOS Station Identifier(s):

WIGOS Station Identifier	Primary
--------------------------	---------

0-20000-0-63756	<input type="checkbox"/>
-----------------	--------------------------



WMO region:

I - Africa

Country / Territory:

> Tanzania, United Republic of

Coordinates:

> 2.4666666667°S, 32.9166666667°E, 1139m

Time zone:

Supervising organization:

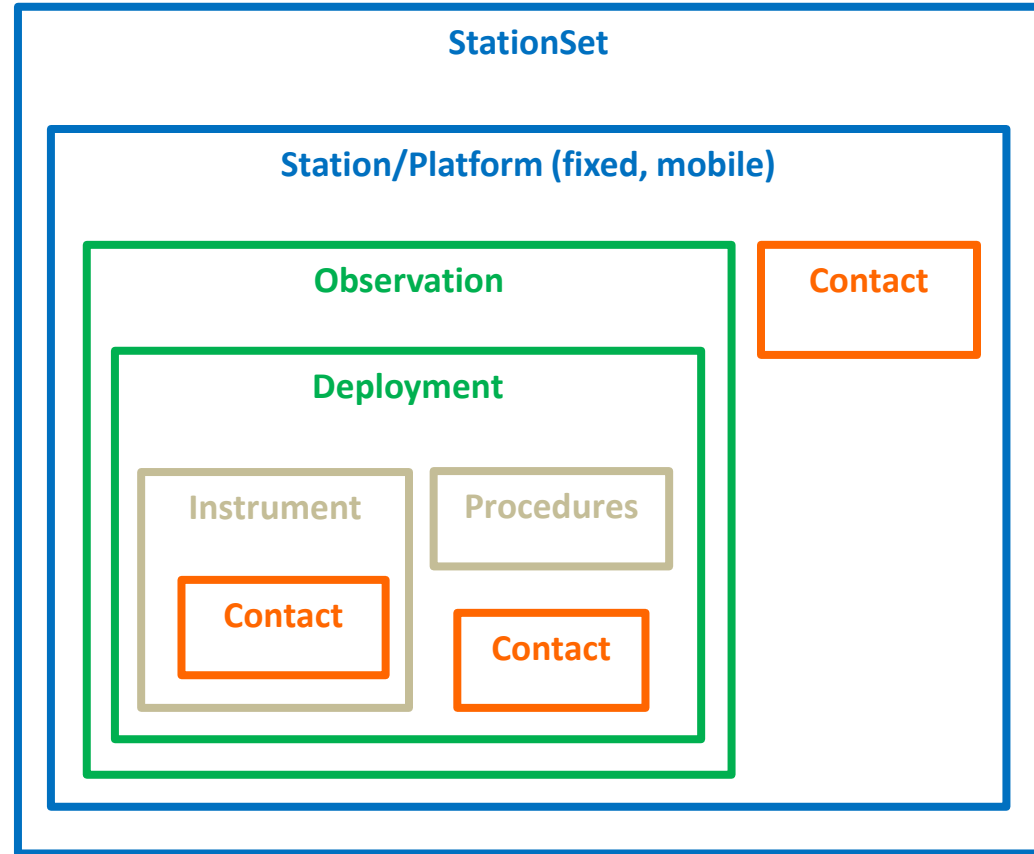
> TMA

Station URL:

WMDS vs OSCAR/Surface

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

Scope of OSCAR/Surface

- 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, ...



VIEW INFORMATION



WMO OMM

OSCAR quick access & reports

Quick access
&
Map filter

Quick access

Generate station report by:

Station name

WMO ID

Generate station lists by:

Country

Program

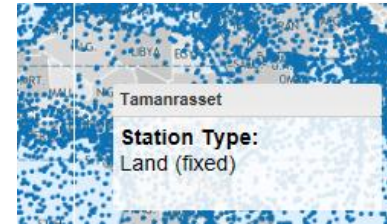
Find people by:

Contact name

Filter map

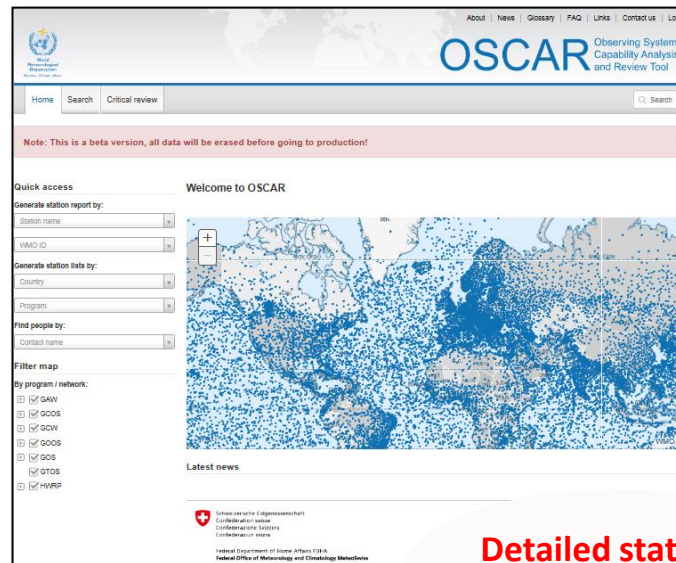
By program / network:

- ☐ ☒ GAW
- ☐ ☒ GCOS
- ☐ ☒ GCW
- ☐ ☒ GOOS
- ☐ ☒ GOS
- ☐ ☒ GTOS
- ☐ ☒ HWRP

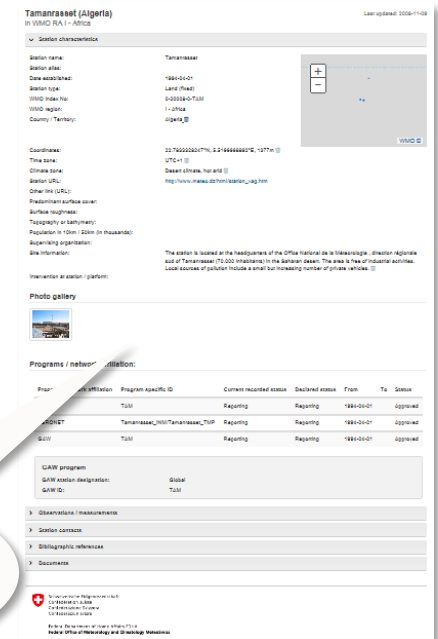


+ click

=



Detailed station
report



OSCAR/Surface Station Report (I)





World Meteorological Organization
Weather • Climate • Water

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OSCAR Observing Systems
Capability Analysis
and Review Tool



Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra
Swiss Confederation
Federal Department of Home Affairs FDHA
Federal Office of Meteorology and Climatology MeteoSwiss

Home | Search | Critical review

Station

Instrument

Contact

Bibliographic Reference

Homepage > Search > Station search > Station report details

[Edit](#) [Download](#)

CASA BLANCA, LA HABANA (Cuba)
in WMO Region IV - North America, Central America and the Caribbean

Last updated: 2016-04-28

[> Station characteristics](#)

[> Observations / measurements](#)

[> Station contacts](#)

[> Bibliographic references](#)

[> Documents](#)

OSCAR/Surface Station Report (II)

Homepage > Search > Station search > Station report details

CASA BLANCA, LA HABANA (Cuba)

in WMO Region IV - North America, Central America and the Caribbean

Last updated: 2016-04-28

Station characteristics

Station name: CASA BLANCA, LA HABANA

Station alias:

Date established: 1871-01-01

Station type:

Land (fixed)

Station class(es):

WIGOS Station Identifier(s):

WIGOS Station Identifier

Primary

0-20000-0-78325

WMO region:

IV - North America, Central America and the Caribbean

Country / Territory:

> Cuba

Coordinates:

> 23.166666667°N, 82.3500°W

Time zone:

Climate zone:

Station URL:

Other link (URL):

Predominant surface cover:

Surface roughness:

Topography or bathymetry:

Population in 10km / 50km (in thousands):

Supervising organization:

> IMC

Site information:

> The station was originally registered based on WMO Pu observation remarks: CLIMAT(C);GAW;GSN;RAD;RBCN explanations). These remarks imply the following addition automatically: Radiation measurements; Radar storm and

Event at station / platform:

Photo gallery

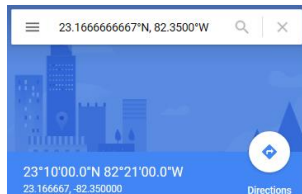
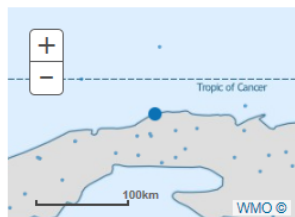
There are no photos available for this station.

Programs / network affiliation:

Program / network affiliation	Program specific ID	Current recorded status	Declared status
-------------------------------	---------------------	-------------------------	-----------------



Edit Delete Download



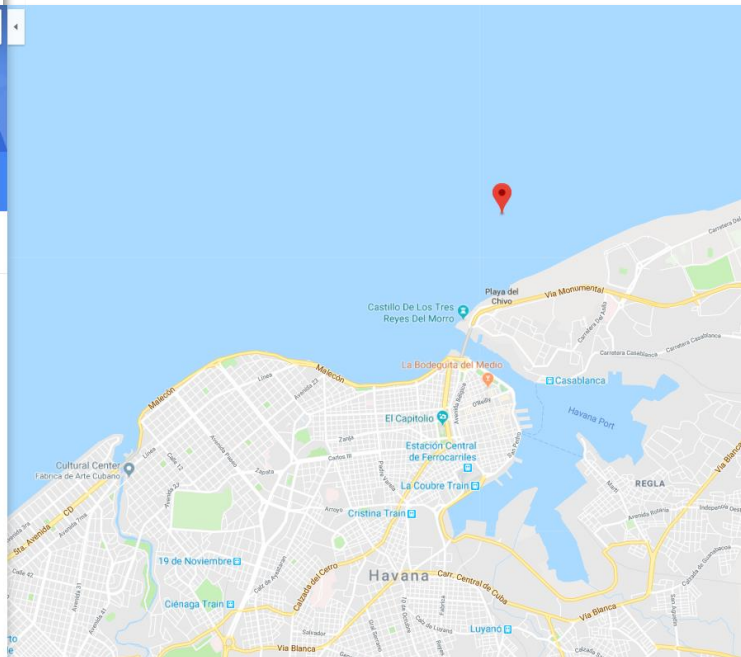
SAVE NEARBY SEND TO YOUR PHONE SHARE

Add a missing place Add a label

Program / network affiliation	Program specific ID	Current recorded status	Declared status	From	To	Status
GOS		Operational	Operational	1871-01-01		Approved
GSN		Operational	Operational	1871-01-01		Approved
CLIMAT(C)		Operational	Operational	1871-01-01		Approved
RBCN		Operational	Operational	1871-01-01		Approved
RBSN(S)		Operational	Operational	1871-01-01		Approved

Observations / measurements

- > Atmosphere > Clouds
- > Atmosphere > Humidity
- > Atmosphere > Past weather
- > Atmosphere > Present weather
- > Atmosphere > Pressure
- > Atmosphere > Temperature
- > Atmosphere > Visibility
- > Atmosphere > Wind



OSCAR/Surface Station Report (III)

Homepage > Search > Station search > Station report details

La Habana (Cuba)

in WMO Region IV - North America, Central America and the Caribbean

Last updated: 2013-01-30

Station characteristics

Station name: La Habana
Station alias:
Date established: 1962-07-01
Station type: Land (fixed)
Station class(es):
WIGOS Station Identifier(s):

WIGOS Station Identifier

0-20008-0-LHB

WMO region: IV - North America, Central America and the Caribbean
Country / Territory: Cuba
Coordinates: 23.1499996185°N, 82.349998474°W
Time zone: UTC-5
Climate zone: Equatorial savannah with dry winters
Station URL:
Other link (URL):
Predominant surface cover:
Surface roughness:
Topography or bathymetry:
Population in 10km / 50km (in thousands):
Supervising organization:
Site information:

> Havana station has some urban in meters on mean sea level and some potential industrial sources and urban although in certain meteorological

Event at station / platform:

Photo gallery



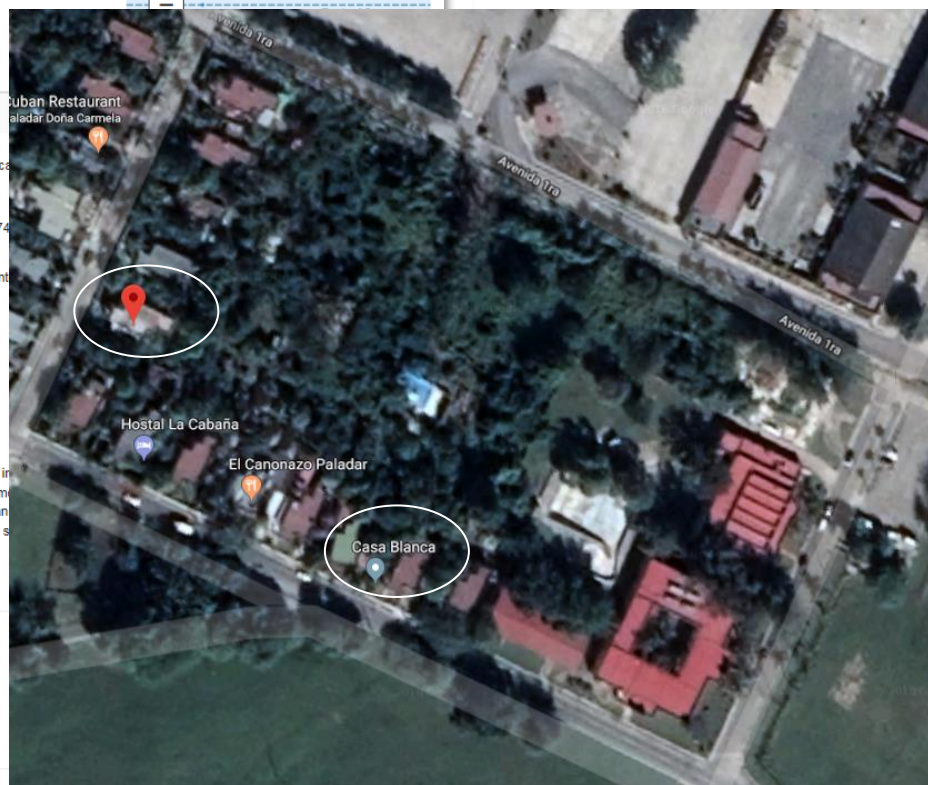
Programs / network affiliation:

Program / network affiliation	Program specific ID	Current recorded status	Declared status	From	To	Status
GAW Regional	LHB	Operational	Operational	1962-07-01		Approved

Observations / measurements

- > Atmosphere > Aerosol
- > Atmosphere > Gas
- > Atmosphere > Radiation

Station contacts



Download



View full-size/download



Program / network affiliation Program specific ID Current recorded status Declared status From To Status

Direction of view:

OSCAR detailed search

Various search targets

Station

Data

Contact

Bibliographic Reference

Instruments (soon)

OSCAR Observing Systems Capacity Analysis and Review Tool

Home Search Criteria Review

Note: This is a beta version, all data will be erased before going to production!

Station

Date

Contact

Bibliographic Reference

Search for stations

Search by station name

Station name:

Search using advanced criteria

Criteria matching: ☒ All ☐ Any

Search term:

Near Real Time: ☐

Station type:

☐ Air (fixed) ☐ Satellite (orbiting)

☐ Air (mobile) ☐ Sea (fixed)

☐ Land (fixed) ☐ Sea (mobile)

☐ Land (mobile) ☐ Underwater (fixed)

☐ Satellite (geostationary) ☐ Underwater (mobile)

Program / network affiliation:

WMO RA / Country:

Organization:

Variable:

More search options

Search Reset

Search for stations

Browse by station name

Station name:

Search using advanced criteria

Criteria matching:

☒ All ☐ Any

Search term:

Near Real Time:

☐

Station type:

☐ Air (fixed)

☐ Satellite (orbiting)

☐ Air (mobile)

☐ Sea (fixed)

☐ Land (fixed)

☐ Sea (mobile)

☐ Land (mobile)

☐ Underwater (fixed)

☐ Satellite (geostationary)

☐ Underwater (mobile)

Program / network affiliation:

RBSN(P), RBSN(SP), RBSN(ST), RBSN(T), WRO

WMO RA / Country:

China

Organization:

Variable:

Temperature, Air temperature (at specified distance from reference surface), Dew-point ten

More search options

Search

Reset

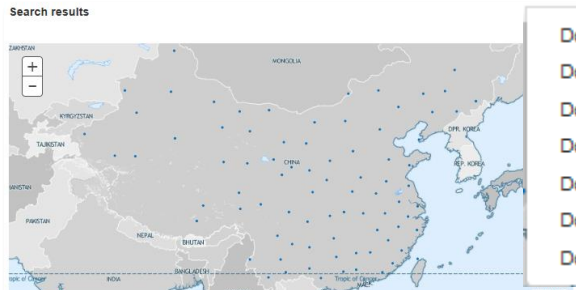
Select program / network affiliation

- ☐ GAW
- ☐ GCOS
- ☐ GCW
- ☐ GOOS
- ☐ GOS
- ☐ AMDAR
- ☐ ANTON
- ☐ ANTON(T)
- ☐ CLIMAT(C)
- ☐ CLIMAT(CT)
- ☐ CLIMAT(T)
- ☐ CTBTO
- ☒ OBCP
- ☐ EOS
- ☐ RBCN
- ☐ RBSN
- ☒ RBSN(P)
- ☐ RBSN(S)
- ☒ RBSN(SP)
- ☒ RBSN(ST)
- ☒ RBSN(T)
- ☐ RCSN
- ☐ SOT/ASAP
- ☐ SOT/VOS
- ☒ WRO
- ☐ GTOS
- ☐ HWRP

Finely tuned search

OSCAR search results

Search results



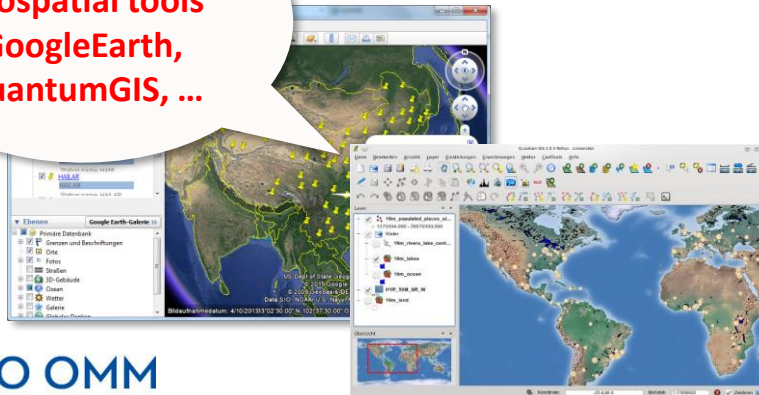
Download map as PNG
 Download map as JPG
 Download map as GIF
 Download map as EPS
 Download map as KML
 Download results as XML
 Download results as CSV

WMO RA	Country	Station	Coordinates	Actions
Asia	China	JINGHE	34.4333°N 108.6666°E Elevation: 0m	
Asia	China	HANYANG	33.1000°N 112.4633°E Elevation: 0m	
Asia	China	MENGZI	23.3833°N 103.3833°E Elevation: 0m	
Asia	China	ZHENGZHOU	34.7100°N 113.6000°E	

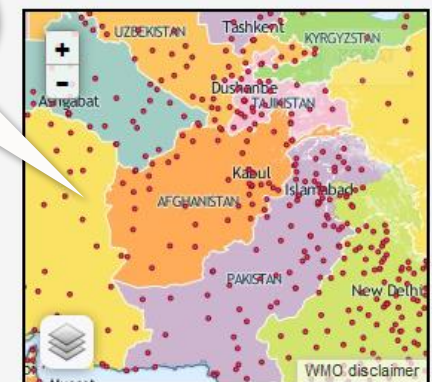
Download for further analysis

```
<?xml version="1.0"
- <list>
  - <Station>
    <wmoRa>Asia</wmoRa>
    <country>China</country>
    <station>SHANTOU</station>
    <latitude>23.35</latitude>
    <longitude>116.6666666667</longitude>
    <elevation>4</elevation>
    <wmoIndex>0-20001-0-59316</wmoIndex>
  </Station>
  - <Station>
    <wmoRa>Asia</wmoRa>
    <country>China</country>
```

Integrate with geospatial tools
 GoogleEarth,
 QuantumGIS, ...



Mashup for online maps



Click a country to view the country profile page.
 Click [here](#) for a fullscreen map.



WMO OMM

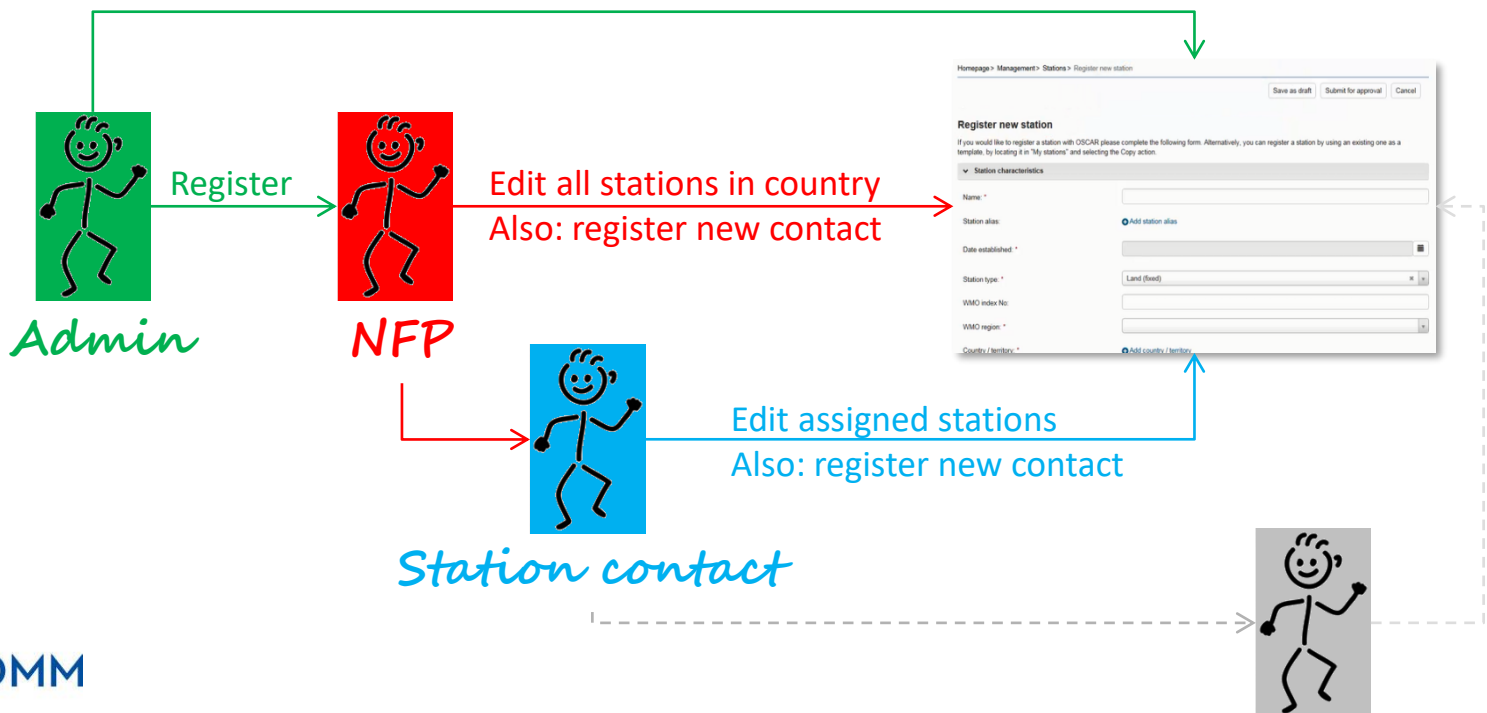
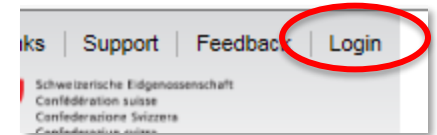
ADD/EDIT INFORMATION



WMO OMM

Security and user management

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



OSCAR management console

- Stations
 - Basic characteristics
 - Photos
 - History
- Observations
 - Location
 - Variable
 - Methods
 - Instruments
 - Quality and uncertainty
 - History
- Contacts
- Bibliographic references & documents

Homepage > Management > Stations > Register new station

Save as draft Submit for approval Cancel

Register new station

If you would like to register a station with OSCAR please complete the following form. Alternatively, you can register a station by using an existing one as a template, by locating it in "My stations" and selecting the Copy action.

▼ Station characteristics

Name: *

Station alias: [Add station alias](#)

Date established: *

Station type: *

WMO index No:

WMO region: *

Country / territory: * [Add country / territory](#)

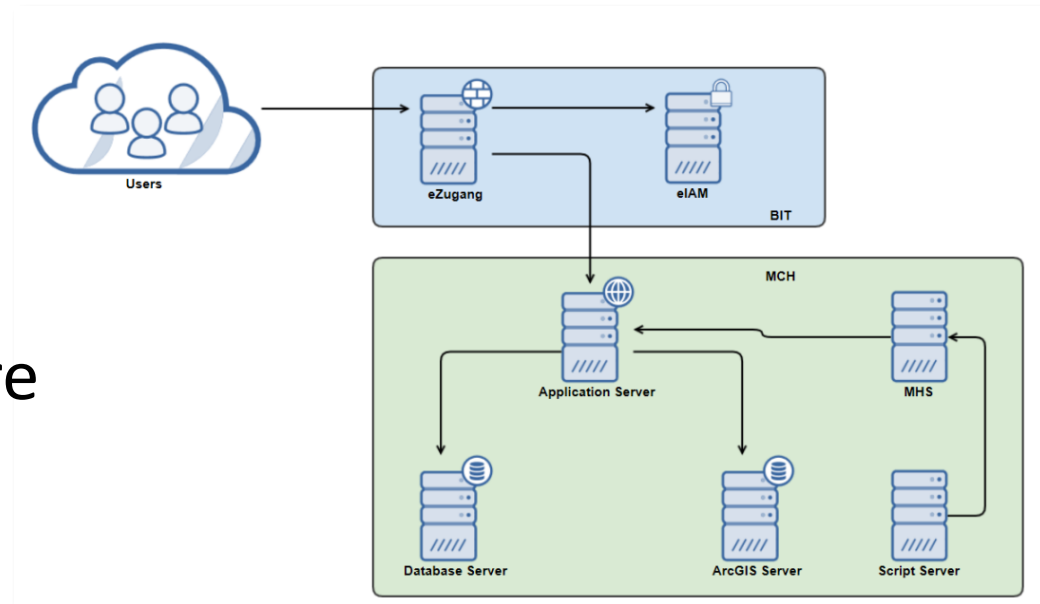
Country / Territory	From	Actions
Switzerland	1988-05-10	Edit Delete

Coordinates: * [Add latitude / longitude / elevation / geopositioning method](#)

Time zone: * [Add time zone](#)

24/7 Operations

- Industry tech stack & security architecture



- Support organization
 - 24/7 first level support
 - Office hours 2nd level support at MeteoSwiss & at WMO

Support and further help

- OSCAR/Surface helpdek
 - 1st and 2nd level support
 - Operated by MeteoSwiss
- OSCAR/Surface Learning Resources Portal on WMO Moodle site
 - Presentations
 - Videos
 - Discussion forums
 - OSCAR/Surface blog
- OSCAR/Surface User Manual
- WMO OSCAR team (oscar@wmo.int)

Why is OSCAR useful

- International exchange (GTS)
- Planning (RRR process)
- Get funding
 - Document that instruments are missing
 - Document impact of projects on network
- Better understand observations
- As a national DB
- Regulatory obligation



SUMMARY



WMO OMM

- OSCAR/Surface implements the WMDS by specializing many of the categories/elements
- GUI provides look-up, search filters, and a comprehensive management console
- Quality of metadata needs to be checked, completeness of metadata improved
 - Your NMHS and related organizations are needed for OSCAR/Surface to be of benefit for all, including yourself!



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- OSCAR contains information about observing stations
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- How to get further information & help



Thank you
Merci

Questions?
¿Preguntas?



WMO OMM

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