Station metadata in wis2box

Data Plugins and wis2box station metadata

Data plugins transforming data to BUFR rely on wis2box station metadata:

- Prevent publishing data for stations not pre-configured by the wis2box administrator
- Ensure WIGOS station identifier (WSI) is encoded in all published data
- Add missing data and/or validate location for certain cases

The "Universal" and "CAP-Alert" plugin do not require station metadata

- No need to configure stations in wis2box if only these plugins are in use

Station metadata used in transformation to BUFR

FM-12 to BUFR (synop2bufr):

- **Add the WSI**, derived by matching with traditional station identifier in FM-12 input
- **Add the latitude, longitude**, altitude and barometer height above sea-level in the BUFR content

CSV to BUFR (csv2bufr):

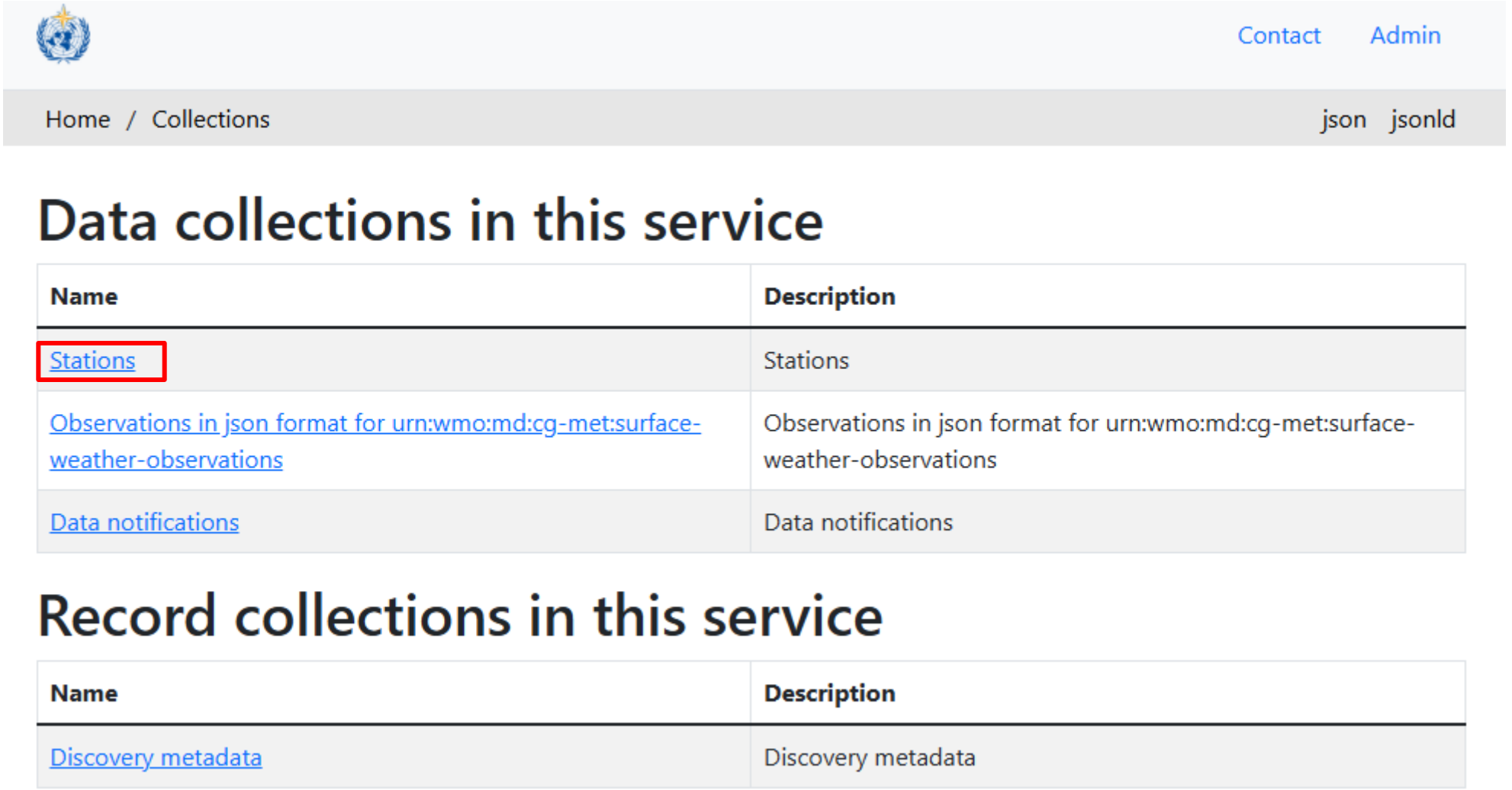
- Check **WSI** in input data is in the station list for associated topic
- For fixed land stations: check input data location is less than 1km from station metadata location

BUFR to BUFR (bufr2bufr):

- Splits by bulletin and **check WSI** in the station list for associated topic
- If the WSI missing add it (by matching with traditional station identifier)
- if the location or station elevation are missing in the input BUFR use values from station metadata

The wis2box station-collection

Station metadata is stored as a collection in the wis2box backend (Elasticsearch) and made available via the wis2box-api, see *http://<wis2box-host-address>/oapi/collections*



Contact Admin

Home / Collections json jsonld

Data collections in this service

Name	Description
Stations	Stations
Observations in json format for urn:wmo:md:cg-met:surface-weather-observations	Observations in json format for urn:wmo:md:cg-met:surface-weather-observations
Data notifications	Data notifications

Record collections in this service

Name	Description
Discovery metadata	Discovery metadata

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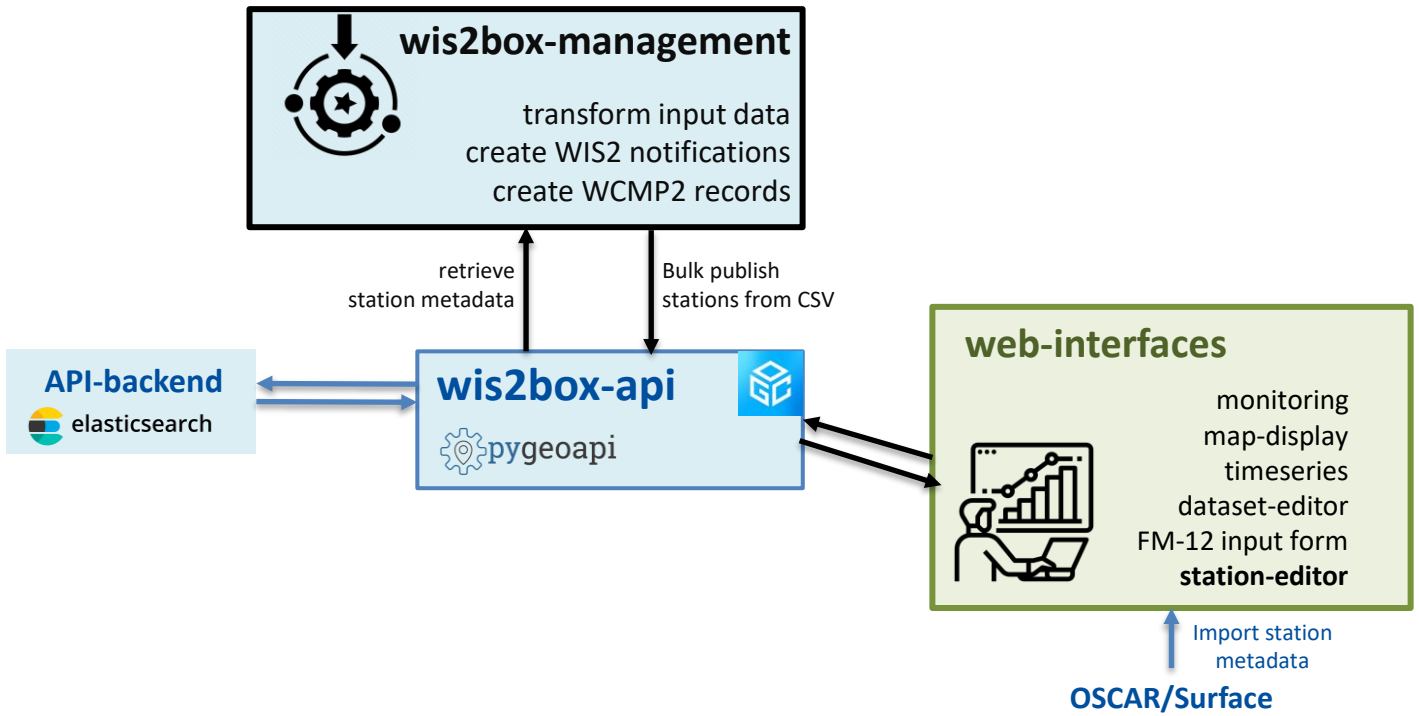
Station metadata in the wis2box



“stations” collection in wis2box-api can be populated in multiple ways:

- Provide station list as CSV and use command line inside wis2box-management container
- Interactively using the station editor inside the wis2box-webapp

Importing stations from the command line

Bulk-import stations from CSV to quickly configure a large number of stations:
docs.wis2box.wis.wmo.int/en/latest/user/setup.html#bulk-inserting-stations-from-csv

Edit `metadata/station/station_list.csv` in $WIS2BOX_HOST_DATADIR
Specify one line per station:

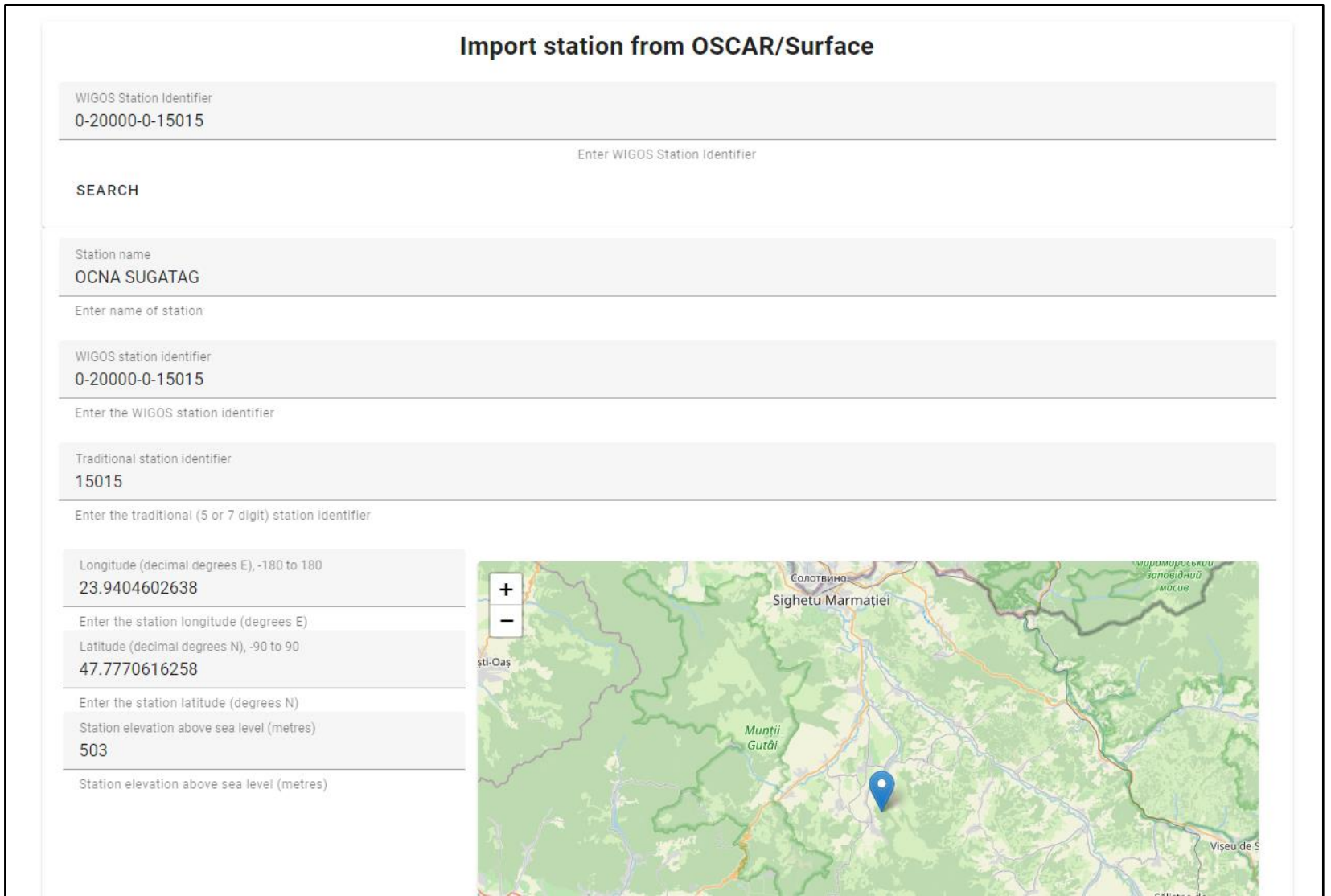
```
station_name,wigos_station_identifier,traditional_station_identifier,facility_type,latitude,longitude,elevation,barometer_height
,territory_name,wmo_region
BALAKA,0-454-2-AWSBALAKA,AWSBALAKA,landFixed,-14.983333,34.966666,618,,MWI,africa
MALOMO,0-454-2-AWSMALOMO,AWSMALOMO,landFixed,-13.14202,33.83727,1088,,MWI,africa
BENI-ABBES,0-20000-0-60602,60602,landFixed,30.12846,-2.14953,510,505.0,DZA,africa
IN-GUEZZAM,0-20000-0-60690,60690,landFixed,19.56388,5.74887,399,403.0,DZA,africa
```

Then login to the wis2box-container and run the command:

```
wis2box metadata station publish-collection --path /data/wis2box/metadata/station/station_list.csv
```

Station editor in wis2box webapp

You can update the wis2box station-list using the station editor in the wis2box webapp, importing data from OSCAR <wis2box-host-url>/wis2box-webapp/station



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Summary: station metadata in wis2box

Station metadata is used in wis2box by plugins transforming data to BUFR

Station metadata is stored in the **station collection** accessible via the wis2box-api :

- Data can be imported via **OSCAR/Surface** in the wis2box-webapp station editor
- ..or imported from a CSV via the command line

Thank you

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