

UM Aquo Standard names

A working document for the mapping of Rijkswaterstaat DONAR parameters to [Um Aquo](http://www.umaquod.nl), CF and BODC/SeaDataNet is maintained in the OpenEarth repository: https://repos.deltares.nl/repos/OpenEarthTools/trunk/matlab/applications/Rijkswaterstaat/rws_waterbase_name2standard_name.xls (OpenEarth password required, register for free at <http://oss.deltares.nl>).

A presentation on this matter was presented in the joint Rijkswaterstaat-Deltares-KNMI SOS2012 project ([ppt](#), only for SOS2012 members).

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//// Working draft on how to encode UM Aquo semantics
//// into netCDF syntax. This will apply to Dutch government
//// data and model output in netCDF as present in:
//// OpenEarth: http://opendap.deltares.nl/thredds/catalog/opendap/rijkswaterstaat/waterbase/catalog.html
//// Matroos : https://opendap-matroos.deltares.nl/thredds/catalog.html (access registration required)
//// This is an example for in situ salinity data at one location.
//// The additions related to UM Aquo are indicated with ////

NetCDF id559-APPZK1.nc {

dimensions:
    time = 174 ;
    locations = 1 ;
    name_strlen1 = 6 ;
    name_strlen2 = 25 ;

//global Attributes:
    :title = " "
    :institution = "Rijkswaterstaat"
    :source = "surface observation"
    :history = "Source: http://live.waterbase.nl/wswaterbase/cgi-bin/wbGETDATA?
ggt=id559&site=MIV&lang=nl&a=getData&gaverder=GaVerder&from=164810240000&loc=APPZK1&to=201103020000&fmt=text,
tranformation to netCDF: $HeadURL: https://repos.deltares.nl/repos/OpenEarthTools/trunk/matlab/applications
/Rijkswaterstaat/rws_waterbase2nc.m $ $Revision: 4182 $ $Date: 2011-03-06 22:49:53 +0100 (zo, 06 mrt 2011) $
$Author: boer_g $"
    :references = "<http://www.waterbase.nl>,<http://openearth.deltares.nl>"
    :email = "<servicedesk-data@rws.nl>"
    :comment = "The structure of this netCDF file is described in: https://cf-pcmdi.llnl.gov/trac
/wiki/PointObservationConventions, http://cf-pcmdi.llnl.gov/documents/cf-conventions/1.5/cf-conventions.
html#id2867470"
    :version = " "
    :terms_for_use = "These data can be used freely for research purposes provided that the
following source is acknowledged: Rijkswaterstaat."
    :disclaimer = "This data is made available in the hope that it will be useful, but WITHOUT ANY
WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE."
    :Conventions = "CF-1.6; UMAquo 201x"
//// In global Conventions attribute indicate that we use UMAquo 201x IN ADDITION(!) to CF according to:
//// http://www.unidata.ucar.edu/software/netcdf/conventions.html

variables:
    single sea_water_salinity(locations,time), shape = [1 174]
        sea_water_salinity:long_name = "Saliniteit in oppervlaktewater"
        sea_water_salinity:units = "psu"
        sea_water_salinity:standard_name = "sea_water_salinity"
        sea_water_salinity:_FillValue = NaN f
        sea_water_salinity:cell_methods = "time: point area: point"
        sea_water_salinity:actual_range = 26.396 33.0996

//// UMAquo 201x should prescribe the names of the required and optional
//// attributes that contain contents from the tables. Here are preliminary names
//// after a discussion with Hinne Reitsma (IHW) and Gerben de Boer (Deltares)
//// Any netCDF client can count on these keywords to be present when UMAquo
//// 201x is part of the global attribute 'Conventions', see below.
////
//// required: code form tables, same status as mandatory CF standard_name and units
////
////
//// sea_water_salinity:aquo_grootheid_code = "SALNTT"
//// sea_water_salinity:aquo_grootheid_typering_code = "?"
//// sea_water_salinity:aquo_eenheid_code = "?"
//// sea_water_salinity:aquo_hoedanigheid_code = "?"
//// sea_water_salinity:aquo_compartiment_code = "?"
```

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//!!
//!! optional: human readable text (resolved RDF), same status as optional CF long_name
//!!
//!!         sea_water_salinity:aquo_grootheid_omschrijving = "?"
//!!         sea_water_salinity:aquo_grootheid_typering_omschrijving = "?"
//!!         sea_water_salinity:aquo_eenheid_omschrijving = "?"
//!!         sea_water_salinity:aquo_hoedanigheid_omschrijving = "?"
//!!         sea_water_salinity:aquo_compartiment_omschrijving = "?"
//!!
//!!         sea_water_salinity:donar_wnsnum = 559
//!!         sea_water_salinity:sdn_standard_name = "P011/185/ODSDM021"

char station_id(locations,name_strlen1), shape = [1 6]
    station_id:long_name = "station ID"
    station_id:standard_name = "station_id"
char station_name(locations,name_strlen2), shape = [1 25]
    station_name:long_name = "station name"
    station_name:standard_name = "station_name"
single lon(locations), shape = [1]
    lon:long_name = "station longitude"
    lon:units = "degrees_east"
    lon:standard_name = "longitude"
    lon:grid_mapping = "wgs84"
single lat(locations), shape = [1]
    lat:long_name = "station latitude"
    lat:units = "degrees_north"
    lat:standard_name = "latitude"
    lat:grid_mapping = "wgs84"
int32 wgs84([]), shape = [1]
    wgs84:name = "WGS 84"
    wgs84:epsg = 4326
    wgs84:grid_mapping_name = "latitude_longitude"
    wgs84:semi_major_axis = 6.37814e+006
    wgs84:semi_minor_axis = 6.35675e+006
    wgs84:inverse_flattening = 298.257
    wgs84:proj4_params = "+proj=longlat +ellps=WGS84 +datum=WGS84 +no_defs "
    wgs84:EPSG_code = "EPSG:4326"
    wgs84:projection_name = "Latitude Longitude"
single x(locations), shape = [1]
    x:long_name = "station x"
    x:units = "m"
    x:standard_name = "projection_x_coordinate"
    x:grid_mapping = "epsg"
single y(locations), shape = [1]
    y:long_name = "station y"
    y:units = "m"
    y:standard_name = "projection_y_coordinate"
    y:grid_mapping = "epsg"
int32 epsg([]), shape = [1]
    epsg:name = "Amersfoort / RD New"
    epsg:epsg = 7415
    epsg:epsg_name = "Oblique Stereographic"
    epsg:grid_mapping_name = " "
    epsg:semi_major_axis = 6.3774e+006
    epsg:semi_minor_axis = 6.35608e+006
    epsg:inverse_flattening = 299.153
    epsg:latitude_of_projection_origin = 52.0922
    epsg:longitude_of_projection_origin = 5.23155
    epsg:false_easting = 155000
    epsg:false_northing = 463000
    epsg:scale_factor_at_projection_origin = 0.999908
    epsg:proj4_params = "+proj=sterea +lat_0=52.15616055555555 +lon_0=5.38763888888889 +k=0.999908
+x_0=155000 +y_0=463000 +ellps=bessel +units=m +towgs84=565.4174,50.3319,465.5542,
-0.398957388243134,0.343987817378283,-1.87740163998045,4.0725 +no_defs"
    epsg:EPSG_code = "EPSG:7415"
    epsg:projection_name = "Amersfoort / RD New"
single z(locations,time), shape = [1 174]
    z:long_name = "station depth"
    z:units = "meters"
    z:standard_name = "height_above_reference_ellipsoid"
    z:positive = "up"

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        z.axis = "Z"
double time(time), shape = [174]
    time:long_name = "time"
    time:units = "days since 1970-01-01 00:00:00 +01:00"
    time:standard_name = "time"
    time:_FillValue = NaN
```

```
}
```