

WaterML2 Web Service

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Introduction

The WaterML2 service is hosted in a Tomcat service container. This service allows REST clients to interact with a WaterML2 service that is connected to a FEWS system through the FEWS [DataAccessComponent](#). With this API the REST client can retrieve data from the FEWS system. Before a client application can access the FEWS system there is some configuration work that needs to be done.

WaterML2 Service API

Get Capabilities request

```
http://localhost:8081/WaterMlService/waterml?request=GetCapabilities
```

The GetCapabilities request returns a document describing the operations supported by this webservice.

Get Capabilities response

```
<?xml version="1.0" encoding="UTF-8"?>
<sos:Capabilities xmlns:sos="http://www.opengis.net/sos/2.0" xmlns:oost="http://www.oostethys.org/schemas/0.1.0
/oostethys" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:ows="http://www.opengis.net/ows/1.1"
xmlns:xlink="http://www.w3.org/1999/xlink" xmlns:gml="http://www.opengis.net/gml" xmlns:swe="http://www.opengis.
net/swe/1.0.1" xmlns:ogc="http://www.opengis.net/ogc" xsi:schemaLocation="http://www.opengis.net/sos/1.0
http://schemas.opengis.net/sos/2.0.0/sosGetCapabilities.xsd" version="2.0.0">
  <ows:ServiceIdentification>
    <ows:Title></ows:Title>
    <ows:ServiceType>OGC:SOS</ows:ServiceType>
    <ows:ServiceTypeVersion>2.0.0</ows:ServiceTypeVersion>
    <ows:Fees>None</ows:Fees>
    <ows:AccessConstraints>None</ows:AccessConstraints>
  </ows:ServiceIdentification>
  <ows:ServiceProvider>
    <ows:ProviderName></ows:ProviderName>
    <ows:ProviderSite xlink:href="" />
    <ows:ServiceContact>
      <ows:IndividualName></ows:IndividualName>
      <ContactInfo>
        <ows:Address>
          <ows:DeliveryPoint></ows:DeliveryPoint>
          <ows:City></ows:City>
          <ows:PostalCode></ows:PostalCode>
          <ows:Country></ows:Country>
          <ows:ElectronicMailAddress></ows:ElectronicMailAddress>
        </ows:Address>
      </ContactInfo>
    </ows:ServiceContact>
  </ows:ServiceProvider>
  <ows:OperationsMetadata>
    <ows:Operation name="GetCapabilities">
      <ows:DCP>
        <ows:HTTP>
          <ows:Get xlink:href="http://localhost:8081/WaterMlService/waterml?request=GetCapabilities" />
```

```

        </ows:HTTP>
    </ows:DCP>
    <ows:Parameter name="service">
        <ows:AllowedValues>
            <ows:Value>SOS</ows:Value>
        </ows:AllowedValues>
    </ows:Parameter>
    <ows:Parameter name="version">
        <ows:AllowedValues>
            <ows:Value>1.0.0</ows:Value>
        </ows:AllowedValues>
    </ows:Parameter>
</ows:Operation>
<ows:Operation name="GetFeature">
    <ows:DCP>
        <ows:HTTP>
            <ows:Get xlink:href="http://localhost:8081/WaterMlService/waterml?request=GetFeature"/>
        </ows:HTTP>
    </ows:DCP>
    <ows:Parameter name="service">
        <ows:AllowedValues>
            <ows:Value>SOS</ows:Value>
        </ows:AllowedValues>
    </ows:Parameter>
    <ows:Parameter name="version">
        <ows:AllowedValues>
            <ows:Value>1.0.0</ows:Value>
        </ows:AllowedValues>
    </ows:Parameter>
</ows:Operation>
<ows:Operation name="GetObservation">
    <ows:DCP>
        <ows:HTTP>
            <ows:Get xlink:href="http://localhost:8081/WaterMlService/waterml?request=GetObservation"/>
            <ows:Post xlink:href="http://localhost:8081/WaterMlService/waterml?request=GetObservation"/>
        </ows:HTTP>
    </ows:DCP>
    <ows:Parameter name="service">
        <ows:AllowedValues>
            <ows:Value>SOS</ows:Value>
        </ows:AllowedValues>
    </ows:Parameter>
    <ows:Parameter name="version">
        <ows:AllowedValues>
            <ows:Value>1.0.0</ows:Value>
        </ows:AllowedValues>
    </ows:Parameter>
    <ows:Parameter name="request">
        <ows:AllowedValues>
            <ows:Value>GetObservation</ows:Value>
        </ows:AllowedValues>
    </ows:Parameter>
    <ows:Parameter name="featureId">
        <ows:AllowedValues>
            <ows:Value>0</ows:Value>
            <ows:Value>1</ows:Value>
            <ows:Value>2</ows:Value>
            <ows:Value>3</ows:Value>
            <ows:Value>4</ows:Value>
            <ows:Value>5</ows:Value>
            <ows:Value>6</ows:Value>
            <ows:Value>7</ows:Value>
        </ows:AllowedValues>
    </ows:Parameter>
    <ows:Parameter name="observedProperty">
        <ows:AllowedValues>
            <ows:Value>Parameter</ows:Value>
            <ows:Value>T.for</ows:Value>
        </ows:AllowedValues>
    </ows:Parameter>
    <ows:Parameter name="beginPosition">

```

```

        <ows:AllowedValues>
            <ows:AnyValue/>
        </ows:AllowedValues>
    </ows:Parameter>
    <ows:Parameter name="endPosition">
        <ows:AllowedValues>
            <ows:AnyValue/>
        </ows:AllowedValues>
    </ows:Parameter>
    <ows:Parameter name="analysisTime">
        <ows:AllowedValues>
            <ows:AnyValue/>
        </ows:AllowedValues>
    </ows:Parameter>
</ows:Operation>
</ows:OperationsMetadata>
</sos:Capabilities>

```

Get Feature request

```
http://localhost:8081/WaterMlService/waterml?request=GetFeature
```

The GetFeature request returns a document containing a list of feature members supported by the webservice. A feature member corresponds to what is known in FEWS as Location.

Get Feature response

```

<?xml version="1.0" encoding="UTF-8"?>
<wfs:FeatureCollection xmlns:wfs="http://www.opengis.net/wfs/2.0" xmlns:gml="http://www.opengis.net/gml/3.2"
xmlns:gsml="urn:cgi:xmlns:CGI:GeoSciML:2.0" xmlns:om="http://www.opengis.net/om/2.0" xmlns:sa="http://www.
opengis.net/sampling/2.0" xmlns:xlink="http://www.w3.org/1999/xlink" xmlns:xs="http://www.w3.org/2001
/XMLSchema" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:wml2="http://www.opengis.net/waterml/2.
0" xmlns:gmd="http://www.isotc211.org/2005/gmd" xmlns:sf="http://www.opengis.net/sampling/2.0" xmlns:sams="
http://www.opengis.net/samplingSpatial/2.0" xsi:schemaLocation="http://www.opengis.net/om/2.0 ../observation.
xsd http://www.opengis.net/gml/3.2 http://schemas.opengis.net/gml/3.2.1/gml.xsd http://www.opengis.net/sampling
/2.0 ../samplingFeature.xsd http://www.opengis.net/waterml/2.0 ../waterml2.xsd http://www.opengis.net/swe/2.0
http://schemas.opengis.net/sweCommon/2.0/swe.xsd">
  <wfs:member>
    <om:featureOfInterest>
      <wml2:WaterMonitoringPoint gml:id="0">
        <sf:parameter>
          <om:NamedValue>
            <om:name xlink:title="Location name"/>
            <om:value>0</om:value>
          </om:NamedValue>
        </sf:parameter>
        <sams:shape>
          <gml:Point gml:id="0">
            <gml:pos srcName="Rijks Driehoekstelsel">53.64671168116518 5.175518773508316</gml:pos>
          </gml:Point>
        </sams:shape>
      </wml2:WaterMonitoringPoint>
    </om:featureOfInterest>
  </wfs:member>
  <wfs:member>
    <om:featureOfInterest>
      <wml2:WaterMonitoringPoint gml:id="1">
        <sf:parameter>
          <om:NamedValue>
            <om:name xlink:title="Location name"/>
            <om:value>1</om:value>
          </om:NamedValue>
        </sf:parameter>
        <sams:shape>
          <gml:Point gml:id="1">
            <gml:pos srcName="Rijks Driehoekstelsel">53.3835058954904 4.560651062185197</gml:pos>
          </gml:Point>
        </sams:shape>
      </wml2:WaterMonitoringPoint>
    </om:featureOfInterest>
  </wfs:member>

```

```

        </sams:shape>
      </wml2:WaterMonitoringPoint>
    </om:featureOfInterest>
  </wfs:member>
<wfs:member>
  <om:featureOfInterest>
    <wml2:WaterMonitoringPoint gml:id="2">
      <sf:parameter>
        <om:NamedValue>
          <om:name xlink:title="Location name"/>
          <om:value>2</om:value>
        </om:NamedValue>
      </sf:parameter>
      <sams:shape>
        <gml:Point gml:id="2">
          <gml:pos srcName="Rijks Driehoekstelsel">52.48257667744973 4.283120419290973</gml:pos>
        </gml:Point>
      </sams:shape>
    </wml2:WaterMonitoringPoint>
  </om:featureOfInterest>
</wfs:member>
<wfs:member>
  <om:featureOfInterest>
    <wml2:WaterMonitoringPoint gml:id="3">
      <sf:parameter>
        <om:NamedValue>
          <om:name xlink:title="Location name"/>
          <om:value>3</om:value>
        </om:NamedValue>
      </sf:parameter>
      <sams:shape>
        <gml:Point gml:id="3">
          <gml:pos srcName="Rijks Driehoekstelsel">51.493692036021535 3.0541898956873954</gml:pos>
        </gml:Point>
      </sams:shape>
    </wml2:WaterMonitoringPoint>
  </om:featureOfInterest>
</wfs:member>
<wfs:member>
  <om:featureOfInterest>
    <wml2:WaterMonitoringPoint gml:id="4">
      <sf:parameter>
        <om:NamedValue>
          <om:name xlink:title="Location name"/>
          <om:value>4</om:value>
        </om:NamedValue>
      </sf:parameter>
      <sams:shape>
        <gml:Point gml:id="4">
          <gml:pos srcName="Rijks Driehoekstelsel">50.99065599128154 3.0796721627765615</gml:pos>
        </gml:Point>
      </sams:shape>
    </wml2:WaterMonitoringPoint>
  </om:featureOfInterest>
</wfs:member>
<wfs:member>
  <om:featureOfInterest>
    <wml2:WaterMonitoringPoint gml:id="5">
      <sf:parameter>
        <om:NamedValue>
          <om:name xlink:title="Location name"/>
          <om:value>5</om:value>
        </om:NamedValue>
      </sf:parameter>
      <sams:shape>
        <gml:Point gml:id="5">
          <gml:pos srcName="Rijks Driehoekstelsel">51.01107956492021 4.6177610376887515</gml:pos>
        </gml:Point>
      </sams:shape>
    </wml2:WaterMonitoringPoint>
  </om:featureOfInterest>
</wfs:member>

```

```

</wfs:member>
<wfs:member>
  <om:featureOfInterest>
    <wml2:WaterMonitoringPoint gml:id="6">
      <sf:parameter>
        <om:NamedValue>
          <om:name xlink:title="Location name"/>
          <om:value>6</om:value>
        </om:NamedValue>
      </sf:parameter>
      <sams:shape>
        <gml:Point gml:id="6">
          <gml:pos srcName="Rijks Driehoekstelsel">50.59113044096123 5.4719202115344</gml:pos>
        </gml:Point>
      </sams:shape>
    </wml2:WaterMonitoringPoint>
  </om:featureOfInterest>
</wfs:member>
<wfs:member>
  <om:featureOfInterest>
    <wml2:WaterMonitoringPoint gml:id="7">
      <sf:parameter>
        <om:NamedValue>
          <om:name xlink:title="Location name"/>
          <om:value>7</om:value>
        </om:NamedValue>
      </sf:parameter>
      <sams:shape>
        <gml:Point gml:id="7">
          <gml:pos srcName="Rijks Driehoekstelsel">50.58761564487022 6.290845285636415</gml:pos>
        </gml:Point>
      </sams:shape>
    </wml2:WaterMonitoringPoint>
  </om:featureOfInterest>
</wfs:member>
</wfs:FeatureCollection>

```

Get Observations Request

The GetObservations call supports two types of requests:

1. Firstly the HTTP-GET request where all request parameters are entered in the URL string.

The HTTP-GET option supports the following URL parameters

- request=GetObservations: Always required
- featureId=<location id>: Returns the observations for a given location. It is possible to enter multiple location ids separated by ','.
- observedProperty=<parameter id>: Returns the observations for a given parameter. It is possible to enter multiple parameters ids separated by ','.
- beginPosition=<date time, yyyy-MM-dd'T'HH:mm:ssZ>: Represents the start time of the period for which to return observations.
- endPosition=<date time, yyyy-MM-dd'T'HH:mm:ssZ>: Represents the end time of the period for which to return observations.
- analysisTime=<date time, yyyy-MM-dd'T'HH:mm:ssZ>: Optional value. Used to return forecast values. If omitted the values of the current forecast are always returned. Corresponds to the T0 of the forecast that produced the requested values.

```

http://localhost:8081/WaterMlService/waterml?
request=GetObservation&featureId=1&observedProperty=Parameter&beginPosition=2013-02-01T00:00:00%2B01:
00&endPosition=2013-03-01T00:00:00%2B01:00&analysisTime=2013-02-01T00:00:00%2B01:00

```

The HTTP-POST option is passed as a XML document containing the following elements:

- featureOfInterest = This corresponds to the 'featureId' of the HTTP-GET request. It is possible to enter multiple location ids by entering multiple instances of item featureOfInterest.
- observedProperty = This corresponds to the 'observedProperty' of the HTTP-GET request. It is possible to enter multiple parameter ids by entering multiple instances of item observedProperty.
- phenomenonTime = The phenomenonTime is a temporalFilter containing a During filter element in which both the begin- and endPosition are defined of the period for which to return observations.
- analysisTime= The analysisTime is a temporalFilter containing a TEquals filter element in which a timePosition is defined that represents the forecast Time Zero. If omitted then the current forecast values are returned.

```

<?xml version="1.0" ?>
<sos:GetObservation version="2.0.0" service="SOS"
  maxFeatures="3"
  xmlns:sos="http://schemas.opengis.net/sos/2.0.0/"
  xmlns:wfs="http://www.opengis.net/wfs"
  xmlns:ogc="http://www.opengis.net/ogc"
  xmlns:gml="http://www.opengis.net/gml/3.2"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns:om="http://www.opengis.net/om/2.0"
  xmlns:fes="http://www.opengis.net/fes/2.0"
  xmlns:xlink="http://www.w3.org/1999/xlink"
  xsi:schemaLocation="http://www.opengis.net/sos/2.0 http://schemas.opengis.net/sos/2.0.0/sos.xsd">
  <sos:featureOfInterest>0</sos:featureOfInterest>
  <sos:observedProperty>T.for</sos:observedProperty>
  <sos:temporalFilter>
    <fes:During>
      <fes:ValueReference>phenomenonTime</fes:ValueReference>
      <gml:TimePeriod gml:id="tp_1">
        <gml:beginPosition>2013-02-15T01:00:00.000+01:00</gml:beginPosition>
        <gml:endPosition>2013-03-01T01:00:00.000+01:00</gml:endPosition>
      </gml:TimePeriod>
    </fes:During>
  </sos:temporalFilter>
  <sos:temporalFilter>
    <fes:TEquals>
      <fes:ValueReference>analysisTime</fes:ValueReference>
      <gml:TimeInstant gml:id="ti_2">
        <gml:timePosition>2013-03-02T00:00:00.000+01:00</gml:timePosition>
      </gml:TimeInstant>
    </fes:TEquals>
  </sos:temporalFilter>
</sos:GetObservation>

```

Get Observations Response

```

<wml2:Collection xmlns:gml="http://www.opengis.net/gml/3.2" xmlns:wml2="http://www.opengis.net/waterml/2.0"
  xmlns:om="http://www.opengis.net/om/2.0" xmlns:xlink="http://www.w3.org/1999/xlink" xmlns:sf="http://www.
  opengis.net/sampling/2.0" xmlns:sams="http://www.opengis.net/samplingSpatial/2.0" xmlns:xsi="http://www.w3.org
  /2001/XMLSchema-instance" xsi:schemaLocation="http://www.opengis.net/waterml/2.0 ../waterml2.xsd">
  <gml:description>0</gml:description>
  <wml2:metadata>
    <wml2:DocumentMetadata gml:id="WaterMlServletResponse_WaterMlServlet">
      <wml2:generationDate>2015-03-16T17:40:35+01:00</wml2:generationDate>
    </wml2:DocumentMetadata>
  </wml2:metadata>
  <wml2:observationMember>
    <om:OM_Observation gml:id="timeseries_0">
      <om:phenomenonTime>
        <gml:TimePeriod gml:id="series_period">
          <gml:beginPosition>2013-02-20T00:00:00+01:00</gml:beginPosition>
          <gml:endPosition>2013-03-01T01:00:00+01:00</gml:endPosition>
        </gml:TimePeriod>
      </om:phenomenonTime>
      <om:resultTime>
        <gml:TimeInstant gml:id="series_available">
          <gml:timePosition>2015-03-16T17:40:35+01:00</gml:timePosition>
        </gml:TimeInstant>
      </om:resultTime>
      <om:parameter>
        <om:NamedValue>
          <om:name xlink:title="T0 (Time of analysis)" xlink:role="analysisTime"/>
          <om:value xsi:type="gml:TimePositionType">2013-03-02T00:00:00+01:00</om:value>
        </om:NamedValue>
      </om:parameter>
      <om:observedProperty xlink:href="http://nl.wldelft.waterml/parameters/T.for" xlink:title="

```

```

Temperature forecast"/>
  <om:featureOfInterest>
    <wml2:MonitoringPoint gml:id="0">
      <sf:parameter>
        <om:NamedValue>
          <om:name xlink:title="Location name"/>
          <om:value>0</om:value>
        </om:NamedValue>
      </sf:parameter>
      <sams:shape>
        <gml:Point gml:id="0">
          <gml:pos srcName="Rijks Driehoekstelsel">141000.0 629000.0</gml:pos>
        </gml:Point>
      </sams:shape>
      <wml2:timeZone>
        <wml2:TimeZone>
          <wml2:zoneOffset>+1</wml2:zoneOffset>
          <wml2:zoneAbbreviation>GMT</wml2:zoneAbbreviation>
        </wml2:TimeZone>
      </wml2:timeZone>
    </wml2:MonitoringPoint>
  </om:featureOfInterest>
  <om:result>
    <wml2:MeasurementTimeseries gml:id="timeseries_0">
      <wml2:temporalExtent>
        <gml:TimePeriod gml:id="timeseries_period_0">
          <gml:beginPosition>2013-02-20T00:00:00+01:00</gml:beginPosition>
          <gml:endPosition>2013-03-01T01:00:00+01:00</gml:endPosition>
        </gml:TimePeriod>
      </wml2:temporalExtent>
      <wml2:defaultPointMetadata>
        <wml2:DefaultTVPMeasurementMetadata>
          <wml2:uom uom="C"/>
          <wml2:interpolationType xlink:href="http://www.opengis.net/def/waterml/2.0
/interpolationType/Discontinuous" xlink:title="Discontinuous"/>
        </wml2:DefaultTVPMeasurementMetadata>
      </wml2:defaultPointMetadata>
      <wml2:point>
        <wml2:MeasurementTVP>
          <wml2:time>2013-02-20T00:00:00+01:00</wml2:time>
          <wml2:value>0.37933815</wml2:value>
        </wml2:MeasurementTVP>
      </wml2:point>

      <!-- ... skipped some values -->

      <wml2:point>
        <wml2:MeasurementTVP>
          <wml2:time>2013-02-28T22:59:59+01:00</wml2:time>
          <wml2:value>-0.38247958</wml2:value>
        </wml2:MeasurementTVP>
      </wml2:point>
      <wml2:point>
        <wml2:MeasurementTVP>
          <wml2:time>2013-03-01T00:00:00+01:00</wml2:time>
          <wml2:value>-0.23891993</wml2:value>
        </wml2:MeasurementTVP>
      </wml2:point>
      <wml2:point>
        <wml2:MeasurementTVP>
          <wml2:time>2013-03-01T01:00:00+01:00</wml2:time>
          <wml2:value>0.086797565</wml2:value>
        </wml2:MeasurementTVP>
      </wml2:point>
    </wml2:MeasurementTimeseries>
  </om:result>
</om:OM_Observation>
</wml2:observationMember>
</wml2:Collection>

```

Installing a WaterML2 Service

The file [DAC installation guide \(final\).doc](#) describes how to install a Tomcat instance containing a DataAccessComponent instance. Once these steps are completed the WaterMIService.WAR can be deployed using a context xml file such as [WaterMLService.xml](#)

Configuration

There are two levels of configuration. The first is the *DataAccessComponent* which is a FEWS client hosted as a GlobalResource in Tomcat. The *DataAccessComponent* uses the regular FEWS configuration which falls outside the scope of this documentation. The second level of configuration is what is used by the FewsPiService webservice which has been deployed in Tomcat. To deploy this webservice a context XML file is required which looks like this:

```
<?xml version="1.0" encoding="UTF-8"?>
<!--
Licensed to the Apache Software Foundation (ASF) under one or more
contributor license agreements. See the NOTICE file distributed with
this work for additional information regarding copyright ownership.
The ASF licenses this file to You under the Apache License, Version 2.0
(the "License"); you may not use this file except in compliance with
the License. You may obtain a copy of the License at

    http://www.apache.org/licenses/LICENSE-2.0

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distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and
limitations under the License.
-->

<!-- Location of specific AI war file. (Can be a symlink) -->
<Context docBase="${catalina.home}/fews/WaterMIService.war" antiJARLocking="true" crossContext="true" >
    <!-- 'clientConfigFileId' points to a FEWS configuration file in the FEWS configuration directory
    'PiClientConfigFiles'. -->
    <Parameter name="clientConfigFileId" value="WaterMIService.properties" override="false"/>
    <!-- resourceId must match the 'name' of 'ResourceLink' below -->
    <Parameter name="resourceId" value="DAC" override="false"/>
    <!-- Global 'fews_dac' must be the same as the DAC resource name in the file 'server.xml'-->
    <ResourceLink name="DAC"
        global="fews_dac"
        type="nl.wldelft.fews.system.data.dac.DataAccessComponent" />
    <Loader loaderClass="nl.wldelft.fews.system.data.dac.DacClassLoader" delegate="true"/>
</Context>
```

In the above configuration example you see two 'Parameter' values which will be explained below:

- *clientConfigFileId* = This is a reference to a FEWS configuration file. With this file it is possible to configure the webservice instance. We will discuss this file in more detail below. The field is optional. If omitted then the **defaultFilterId** must be configured in the **Filters.xml** FEWS configuration file.
- *resourceId* = Tells the webservice what Tomcat resource link to use.

FEWS Client Config File (clientConfigFileId)

This is a simple text configuration file that is located in the FEWS configuration in the directory:

```
%REGION_HOME%/Config/PiClientConfigFiles/WaterMIService.properties
```

In the above example the **clientConfigFileId** would be **WaterMIService.properties**.

This properties file can contain the following configuration items:


```

\# This file must be placed in the FEWS configuration folder Config/PiClientConfigFiles.
\# It is referenced by the FewsPiService webservice through the parameter 'clientConfigFileId' in the service
context.xml file.
\# Note that all id references are case sensitive.

\# This element defines the root filter id for the webservice (type = string).
\# If omitted the FewsPiService will try to retrieve the defaultFilterId from the Filters.xml.
FILTER_ID=My_FilterId

\# Identifier of the flag conversion file to use when extracting timeseries from the FewsPiService (type =
string).
\# If omitted no flag conversion takes place
EXPORT_FLAGCONVERSION_ID=My_Export_FlagConversion

\# Identifier of the unit conversion file to use when extracting timeseries from the FewsPiService (type =
string).
\# If omitted no unit conversion takes place
EXPORT_UNITCONVERSION_ID=My_Export_UnitConversion

\# Identifier of the id map file to use when extracting timeseries from the FewsPiService (type = string).
\# If omitted no id mapping takes place
\#EXPORT_IDMAP_ID=My_Export_IdMap

\# Identifier of the unit conversion file to use when writing timeseries to the FewsPiService (type = string).
\# If omitted no unit conversion takes place
IMPORT_UNITCONVERSION_ID=My_Import_UnitConversion

\# Identifier of the id map file to use when writing timeseries to the FewsPiService (type = string).
\# If omitted no id mapping takes place
IMPORT_IDMAP_ID=My_Import_IdMap

\# Export missing value. All internal NaN values will be mapped to this value (type = float).
\# If omitted the default value \-999 will be used.
MISSING_VALUE=-999

\# Option to skip the export of missing values when reading timeseries from the FewsPiService (type = true
/false).
\# If omitted the default value 'true' is used.
OMIT_MISSING_VALUES=true

\# Default time zone.
\# If omitted the computer time zone is used.
TIME_ZONE=GMT

```

Here follows a explanation of these parameters. By the way everything is case sensitive:

- **FILTER_ID** = This must be one of the filter ids from the *Filters.xml* file located in the *RegionConfigFiles* directory. Only the timeseries defined under this filter id will be visible to the FewsPiService. If this option is omitted then it is necessary to define a *defaultFilterId* in the filters configuration file, otherwise no timeseries will be visible to the FewsPiService.
- **EXPORT_FLAG_CONVERSION_ID** = This must be equal to the name of a flag conversion file located in the *FlagConversionsFiles* directory. All timeserie values have a '*flag*' assigned indicating the quality of the value. However the quality values outside of FEWS can be different that the values assigned by FEWS. With this option the FEWS flags can be translated to external flags. This option can be omitted resulting in no conversion.
- **EXPORT_UNITCONVERSION_ID** = This must be equal to the name of a unit conversion file located in the *UnitConversionsFiles* directory. Each timeseries represents a parameter variable such as water height or discharge. As is the case with the flags, the FEWS unit used to define the parameter variable can differ from the external unit. With this option the FEWS units can be converted to external units. This option can be omitted resulting in no conversion.
- **EXPORT_IDMAP_ID** = This must be equal to the name of a id map file located in the *IdMapFiles* directory. Each timeseries in FEWS is represented by a combination of; location id, parameter id and 0-n qualifier ids. FEWS again uses its own id values to define locations, parameters and such. In cases where the outside world ids differ this option enables one to translate the internal FEWS ids to external ids. This option can be omitted resulting in the export of the FEWS ids.
- **IMPORT_FLAG_CONVERSION_ID** = Identical to the export option except that with this option the external flags are mapped to FEWS flags. This option can be omitted resulting in no conversion. If the flags are unknown to FEWS they will not be imported.
- **IMPORT_UNITCONVERSION_ID** = Identical to the export option except that with this option the external units can be converted to FEWS units. This option can be omitted resulting in no conversion. If the units are unknown to FEWS then it is assumed that the values are in the same unit as the import parameter.
- ***IMPORT_IDMAP_ID** = *Identical to the export option except that with this option external id are translated to internal FEWS ids. This option can be omitted resulting in the export of the FEWS ids. If the external ids are unknown to FEWS then it will not be possible to map the timeseries and the values will be discarded.

