Lineage:

- Initial version prepared by Radim and Rashid, Aug 2016
- Substantial edits – Bruce and Denis, Nov 2016

User Story

Observation data

Version: 0.4

==== User Story ==== 4.1

A NMHS requires to store and manage a wide variety of Observations data as a collection of time-series observations in order to maintain an official record of historical climatic conditions. This official record is a part of the Global Climate Record.

This official record is required to:

- Monitor variations in climatic conditions
- Underpin a wide variety of authoritative climate services for societal benefit
- Provide historical data to interested parties

Each change to an observation's estimated result, its quality and temporal constraints must be retained for future reference, together with data provenance details relevant to the change.

An observation comprises many facets including that it:

- Has an observed property. This may also be known as the observed variable, or the observed phenomena. The CDMS must be able to manage observations from a wide variety of phenomena, e.g. the GCOS Essential Climate Variables;
- Occurs somewhere. Typically this is at a sensor. The sensor may be static at a meteorological station, or in transit such as an airborne sensor. The location of the observation must be recorded, together with the spatial reference system that the location is based on;
- Has temporal constraints, including the time that the result was observed, the time that the result is valid for, and the time that the result was made available;
- Has an observation context defining why the observation is made and which observations network the sensor is part of;
- Has a result, which is an estimate of the value of the observation. This

Bruce Bannerman 17/1/2017 13:21
Comment [1]:

Define in glossary

Bruce Bannerman 17/1/2017 13:21
Comment [2]:

For BB :

Check the WIGOS Standard for appropriate definition of precision, accuracy, and representation of the location.

estimate may change following subsequent data quality activities;

- Has quality represented by one or more quality flags. Each quality flag is from a corresponding ordered list that indicates the result of a quality control process that has been applied to the observation. More that one definition of quality may be required for a given observation. This quality flag (together with the result) may change following subsequent data quality activities;
- Has an observation process that defines how the result was obtained; and
- Has context such as:
    - that defined by WIGOS Observations Metadata;
    - Intellectual Property that may define constraints on the use of the observation; and
    - Data provenance relevant to the changes that have occurred to the observation through its data lifecycle.

===== end ====

Reference: WMO 1131