Copernicus Climate Change Service - 311a Lot 2
Defining a common data model

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Table 1: Application area

Value	Description
1	Global numerical weather prediction (GNWP)
2	High-resolution numerical weather prediction (HRNWP)
3	Nowcasting and very short range forecasting (NVSRF)
4	Seasonal and inter-annual forecasting (SIAF)
5	General weather forecasting
6	Aeronautical meteorology
7	Ocean applications
8	Agricultural meteorology
9	Hydrology
10	Climate monitoring (as undertaken through the Global Climate Observing System, GCOS)
11	Climate applications
12	Space weather
13	Cryosphere applications
14	Energy sector
15	Transportation sector
16	Health sector
17	Terrestrial ecology
18	Operational air quality forecasting
19	Atmospheric composition forecasting
20	Atmospheric composition monitoring and analysis
21	Large urban complexes

Table 3: Automation status

Value	Description
0	Automatic observation.
1	Automatic, always supplemented by manual input.
2	Automatic, occasionally supplemented by manual input.
3	Automatic, supplemented by manual observations.
4	Manual observation.
5	Unknown.
6	Visual observation.

Table 5: Calibration status

Value	Description
0	No changes - in calibration.
1	No changes - out of calibration.
2	No changes - calibration unknown.
3	Recalibrated - in calibration.

Table 7: Communication method

Value	Description
0	Cellular (unspecified)
1	Meteosat DCP
2	Iridium (unspecified)
3	GOES DCP
4	VSAT (unspecified)
5	Landline telephone
6	Radio modem
7	E-mail (unspecified)
8	Voice (ship). The observation is sent to a NMS through the telephone network. The communication may use Inmarsat, Iridium, Vsat, VHF
9	Email (ship). The observation is sent to a NMS through an email. The WMO message is attached to this email. The satellite communication provider may be Inmarsat, Iridium, Vsat
10	Web (ship). The observation is sent through the Web (example: TurboWeb). The satellite communication provider may be Inmarsat, Iridium, Vsat
11	Inmarsat-C (FM13, SAC41). Standard procedure used to report observations (FM13 messages) from conventional VOS for many years. Collect call system: the NMS which receives the observations pays the communication costs
12	Inmarsat-C (FM13, other SAC). FM13 messages are sent to a dedicated SAC (other than SAC41) established at one, or more LES. In general, communications are paid by the country who recruited the ship
13	Inmarsat-C (EUHC). Text messages containing compressed data (E-SURFMAR format) are sent ashore through Inmarsat-C to a dedicated SAC and LES. Communications are paid by the country who recruited the ship
14	Inmarsat-C (SEAS). SEAS binary messages sent through Inmarsat-C Data Mode to a dedicated SAC and LES. Communications are paid by NOAA/NWS
15	Automated Identification System (direct or through satellite)
16	Argos system
17	Cellular (Dial-up). Dial-up communication using terrestrial wireless networks (GSM, GPRS)
18	Cellular (SMS). SMS sent through terrestrial wireless networks (GSM, GPRS)
19	Globalstar communication system
20	GMS (DCP). Data Collecting Platform of Geostationary Meteorological Satellites
21	Iridium (SBD). Short Burst Data service of Iridium communication system
22	Iridium (Email). Email sent through Iridium (e.g. Easymail)
23	Iridium (Dial-up). Dial-up communication using Iridium
24	Inmarsat-C (Data Mode). Data Mode service of Inmarsat-C used by S-AWS. See above for SEAS which also uses this service for conventional VOS
25	Inmarsat-C (Email). Email sent through Inmarsat-C
26	Orbcomm communication system
27	Vsat (Email). Email sent through Vsat
28	Vsat (Dial-up). Dial-up communication using Vsat
29	Delayed Mode only
30	Other (specify in footnote).

Table 9: Conversion factor

	Value	description	Implementation
0		farenheit to degrees celsius	Tcelsius = (TFarenheit - 32) / 1.8

Table 11: Data policy licence

	Value	name	Description
1		wmo essential	WMO Essential Data: free and unrestricted international exchange of basic data and products.
2		wmo additional	WMO Additional Data: free and unrestricted access to data and products exchanged under the auspices of WMO to the research and education communities for non-commercial activities. A more precise definition of the data policy may be additionally supplied within the metadata. In all cases it shall be the responsibility of the data consumer to ensure that they understand the data policy specified by the data provider which may necessitate dialogue with the data publisher for confirmation of terms and conditions.
3		wmo other	Data identified for global distribution via WMO infrastructure (GTS / WIS) that is not covered by WMO Resolution 25 neither WMO Resolution 40 e.g. aviation OPMET data. Data marked with WMOOther data policy shall be treated like WMOAdditional where a more precise definition of the data policy may be additionally supplied within the metadata. In all cases it shall be the responsibility of the data consumer to ensure that they understand the data policy specified by the data provider which may necessitate dialogue with the data publisher for confirmation of terms and conditions.

Table 13: Duplicate status

Value	Description
0	Unique observation, no known duplicates
1	Best duplicate
2	Worst duplicate
3	Unchecked

Table 15: Events at station

Value	Description
1	Grass-cutting
2	Snow clearing
3	Tree removal
4	Construction activity
5	Road work
6	Biomass burning
7	Dust storm
8	Storm damage
9	Wind storm
10	Flood
11	Fire
12	Earthquake
13	Land slide
14	Storm surge or tsunami
15	Lightning
16	Vandalism

Table 17: Id scheme

Value	Description
0	ICOADS: ID present, but unknown type
1	ICOADS: ship, Ocean Station Vessel (OSV), or ice station callsign
2	ICOADS: generic ID (e.g., SHIP, BUOY, RIGG, PLAT)
3	ICOADS: WMO 5-digit buoy number
4	ICAODS: other buoy number (e.g., Argos or national buoy number)
5	ICOADS: Coastal-Marine Automated Network (C-MAN) ID (assigned by US NDBC or other organizations)
6	ICOADS: station name or number
7	ICOADS: oceanographic platform/cruise number
8	ICOADS: fishing vessel psuedo-ID
9	ICOADS: national ship number
10	ICOADS: composite information from early ship data
11	ICOADS: 7-digit buoy ID (proposed)
12	WIGOS ID
13	GRUAN ID
14	IMO Number

Table 19: Instrument exposure quality

Value	Description
1	Class 1 - Exposure of instrument allows reference level measurements
2	Class 2 - Exposure of instrument has small or infrequent influence on measurement
3	Class 3 - Exposure of instrument leads to increased uncertainty or occasional invalid measurements
4	Class 4 - Exposure of instruemnt leads to high uncertainty or regular invalid measurements
5	Class 5 - Exposure of instrument leads to invalid measurements

Table 21: Location method

Value	Description
0	Argos
1	ARGOS DOPPLER
2	ARGOS Kalman
3	Argos-3
4	Argos-4
5	From map
6	GALILEO
7	GOES DCP
8	GPS
9	INMARSAT
10	Iridium
11	Iridium and GPS
12	IRIDIUM DOPPLER
13	LORAN
14	Meteosat DCP
15	Orbcomm
16	Reserved
17	Surveyed

Table 23: Location quality

Value	Description

Table 25: Meaning of time stamp

Value	name	Description
1	beginning	Time stamps indicate the beginning of a period covering the range up to but excluding the following time stamp.
2	end	Time stamps indicate the end of a period covering the range up to but excluding the preceding time stamp.
3	middle	Time stamps indicate the middle of a period beginning at the middle of the range described by this and the preceding time stamp and ending right before the middle of the range described by this and the following time stamp.

Table 27: Measuring system model

Value	Description

Table 29: Method of estimating uncertainty

Value	Description

Table 31: Observation value significance

Value	Description
0	Maximum value over indicated period
1	Minimum value over indicated period
2	Mean value over indicated period
3	Median value over indicated period
4	Modal value over indicated period
5	Mean absolute error over indicated period
6	Best estimate of standard deviation (N-1) of observed parameter over indicated period
7	Standard deviation (N) of observed parameter over indicated period
8	Harmonic mean of observed parameter over indicated period
9	Root mean square vector error of observed parameter over indicated period
10	root mean square of observed parameter over indicated period
11	Vector mean of observed parameter over indicated period
12	Instantaneous value of observed parameter
13	Observed tendancy: Increasing, then decreasing; Observed parameter the same or higher than three hours ago
14	Observed tendancy: Increasing, then steady; or increasing, then increasing more slowly
15	Observed tendancy: Increasing (steadily or unsteadily)
16	Observed tendancy: Decreasing or steady, then increasing; or increasing, then increasing more rapidly
17	Observed tendancy: Steady; Observed parameter the same as three hours ago
18	Observed tendancy: Decreasing, then increasing; Observed parameter the same or lower than three hours ago
19	Observed tendancy: Decreasing, then steady; or decreasing, then decreasing more slowly
20	Observed tendancy: Decreasing (steadily or unsteadily)
21	Observed tendancy: Steady or increasing, then decreasing; or decreasing, then decreasing more rapidly