

WORLD METEOROLOGICAL ORGANIZATION

JOINT WMO/IOC TECHNICAL COMMISSION FOR
OCEANOGRAPHY AND MARINE METEOROLOGY
(JCOMM)

SHIP OBSERVATIONS TEAM (SOT)

SIXTH SESSION

HOBART, AUSTRALIA, 11-15 APRIL 2011

INTERGOVERNMENTAL OCEANOGRAPHIC
COMMISSION (OF UNESCO)

SOT-VI/Doc. 9.1.2
(15.03.2011)

ITEM: 9.1.2

ORIGINAL: ENGLISH

REAL-TIME MONITORING CENTRE (RTMC) FOR THE VOSCLIM PROJECT MONITORING REPORT

(Submitted by Colin Parrett, VOSClim RTMC)

Summary and purpose of the document

This document provides a status report on the progress made by the the VOSClim Real Time Monitoring Centre (RTMC) since SOT-V.

ACTION PROPOSED

The Team will review the information contained in this report, and comment and make decisions or recommendations as appropriate. See part A for the details of recommended actions.

- Appendices:**
- A. VOSClim suspect ships in January 2011
 - B. Monitoring criteria for VOSClim suspect ships

- A - DRAFT TEXT FOR INCLUSION IN THE FINAL REPORT

9.1.2 Real-Time Monitoring Centre (RTMC) for the VOSClim project monitoring report

9.1.2.1 Ms Sarah North reported on the activities of the Real-Time Monitoring Centre (RTMC) for the VOSClim project, which is operated by the Met Office, United Kingdom. The RTMC continues to produce monthly suspect lists and monitoring statistics for all project ships using the ship lists maintained on the VOSClim website and the criteria shown at *Appendix A*. The Team agreed that these values were set at the appropriate level.

9.1.2.2 The Team also agreed that the VOSClim suspect lists should be sent to the JCOMMOPS mailing lists (PMO and VOS).

9.1.2.3 The Team noted that the Met Office continued to transfer VOSClim ships' observations and the associated co-located model data to the VOSClim Data Assembly Center (DAC) for inclusion on the VOSClim website.

9.1.2.4 The Team noted that the Met Office has agreed to extend the BUFR data sent to the DAC to encompass all ship and buoy reports and their co-located model field values, with the work scheduled for 2011.

- B - BACKGROUND INFORMATION

1 The Met Office, as the VOSClim RTMC, continues to produce monthly suspect lists and monitoring statistics for all VOSClim ships and an example of the suspect list for January 2011 can be seen in *Appendix A*. The monitoring criteria are given in *Appendix B* and the Team is invited to confirm that these values are set correctly. Since SOT-IV the RTMC has continued to update its list of ships from that maintained on the VOSClim website.

2 The VOSClim suspect lists are currently sent to the DAC and to all VOSClim focal points, but the Team is asked to consider whether they should also be sent to the JCOMMOPS mailing lists (PMO and VOS).

3 The Met Office RTMC continues to transfer VOSClim ships' observations and the associated co-located model data to the DAC, including putting a backup copy of the daily VOSClim BUFR data onto the Met Office's FTP server so that it is available for the DAC to access in case of problems with the GTS data.

4 Agreement has recently been obtained at the Met Office to extend the BUFR data sent to the DAC (NCDC) to encompass all ship and buoy reports and their co-located model field values. The work at the RTMC to include this extra data is scheduled for 2011.

APPENDIX A

VOSCLIM SUSPECT LIST – JANUARY 2011

Monitoring centre: Met Office, UK.

All VOS-Clim ship data are monitored: against background 6-hour forecast fields for all variables except SST, for which analysed fields from the previous day are used.

Key to table below

 NumObs : number of observations from the ship during the month
 %GE : percentage of obs with gross errors (for GE limits see below)
 StdDvn : standard deviation of obs-background, excluding obs with gross errors
 Bias : mean obs-background, excluding obs with gross errors
 RMS : root mean square of obs-background, excluding obs with gross errors

Suspect selection criteria for each variable:

At least 20 observations from the ship and one or more of the following:-

%GE > 10%
 |Bias| > Bias limit (see below)
 StdDvn > StdDvn limit (see below)

Limits:	Press.	Wind Speed	Direct.	Air Temp.	Rel.Hum.	SST
-----	(hPa)	(m/s)	(deg)	(deg C)	(%)	(deg C)
Bias limit	2.5	5	30	2.0	12	2.0
StdDvn limit	5.0	10	60	4.0	20	4.0
GE limit	15.0	25	150	10.0	50	10.0

Callsign	Element	NumObs	%GE	StdDvn	Bias	RMS

GBQM	P	72	0	2.4	-3.6	4.3
MQEC7	P	22	0	1.3	-2.9	3.1
VRGM8	P	32	0	1.7	3.0	3.4
WCX7445	P	416	0	5.9	3.3	6.8
ZQDI9	T	25	0	1.5	2.1	2.6
CGBN	RH	45	0	4.2	16.7	17.2
MYSU5	RH	50	0	12.0	14.7	19.0
VCSZ	RH	339	0	7.7	15.5	17.3
ZCDA9	RH	114	0	8.5	12.9	15.4
ZCDN9	RH	43	0	11.2	-20.0	22.9
C6KD8	SPEED	34	0	2.3	6.8	7.2
2AKI2	DIRN.	21	0	59.0	31.8	67.0
C6JD7	DIRN.	31	0	89.0	13.3	89.9
C6KD8	DIRN.	31	0	97.7	-38.0	104.8
PCUI	DIRN.	39	0	80.2	-14.1	81.5
WBP3210	DIRN.	189	0	71.7	3.8	71.8
C6YT4	SST	64	0	1.8	2.8	3.3
CGDR	SST	76	0	1.4	4.0	4.2
DGTX	SST	20	0	1.3	3.4	3.6
MGSG6	SST	24	29	3.2	5.1	6.1
MGSM5	SST	33	36	3.2	4.2	5.3
PCAW	SST	68	0	2.2	-2.4	3.2
WFLG	SST	83	0	1.1	-2.6	2.8

APPENDIX B**MONITORING CRITERIA FOR VOSCLIM SUSPECT SHIPS**

1. For each ship and each variable there should be at least 20 reports during the period (if there are fewer reports the statistics may be unreliable and no action is needed).
2. Then, either:
 - a) The number of gross errors should exceed 10% of the number of observation reports (where the observation-background (o-b) limits for individual gross errors are shown in column 4 of the following table); or,
 - b) One of the limits shown in columns 2 and 3 in the table should be exceeded for either:
 - (i) the mean value of o-b over the period (absolute value), or
 - (ii) the standard deviation of o-b over the period

(1) Variable	(2) Mean o-b limit	(3) Std. Dev. o- b limit	(4) Gross error limit
Pressure (hPa)	2.5	5.0	15.0
Wind speed (m/s)	5.0	10.0	25.0
Wind direction (degrees)	30.0	60.0	150.0
Air Temperature (⁰ C)	2.0	4.0	10.0
Relative humidity (%)	12.0	20.0	50.0
Sea surface temp. (⁰ C)	2.0	4.0	10.0

3. If either of the limits on o-b statistics in columns 2 and 3 are exceeded the project ship's observations will be considered 'suspect' and corrective action will need to be taken (e.g. by the Port Met Officers). Column 4 contains the o-b limits for each ship observation beyond which the observation will be considered to be a 'gross error'.