Global Collecting Centres Report on VOS & VOSClim

Nicky Scott 19th May 2009

Overview

This presentation covers the following areas

- Introduction to MCSS & GCCs
- Highlights of GCC Report 2008
- VOSClim Data
- Masked Callsigns
- Developments & Future Plans
- IMMT & MQCS Changes
- Questions and Answers

Current MCSS

- MCSS initiated in 1963 and GCCs in 1993
- **Data Flow**: Currently CMs received data from VOS – CMs send data to GCCs – GCCs process and ensure MQCS – GCCs provide data to RMs quarterly
- Data is archived by 8 RMs worldwide
- Climatological Summaries may be requested & generated from this data
- Quarterly data sent to VOSClim DAC who extract VOSClim ships records and then archive

GCC Report 2008

- 2008 was the 15th year of GCC operations
- 878,886 observations submitted by 16 CMs

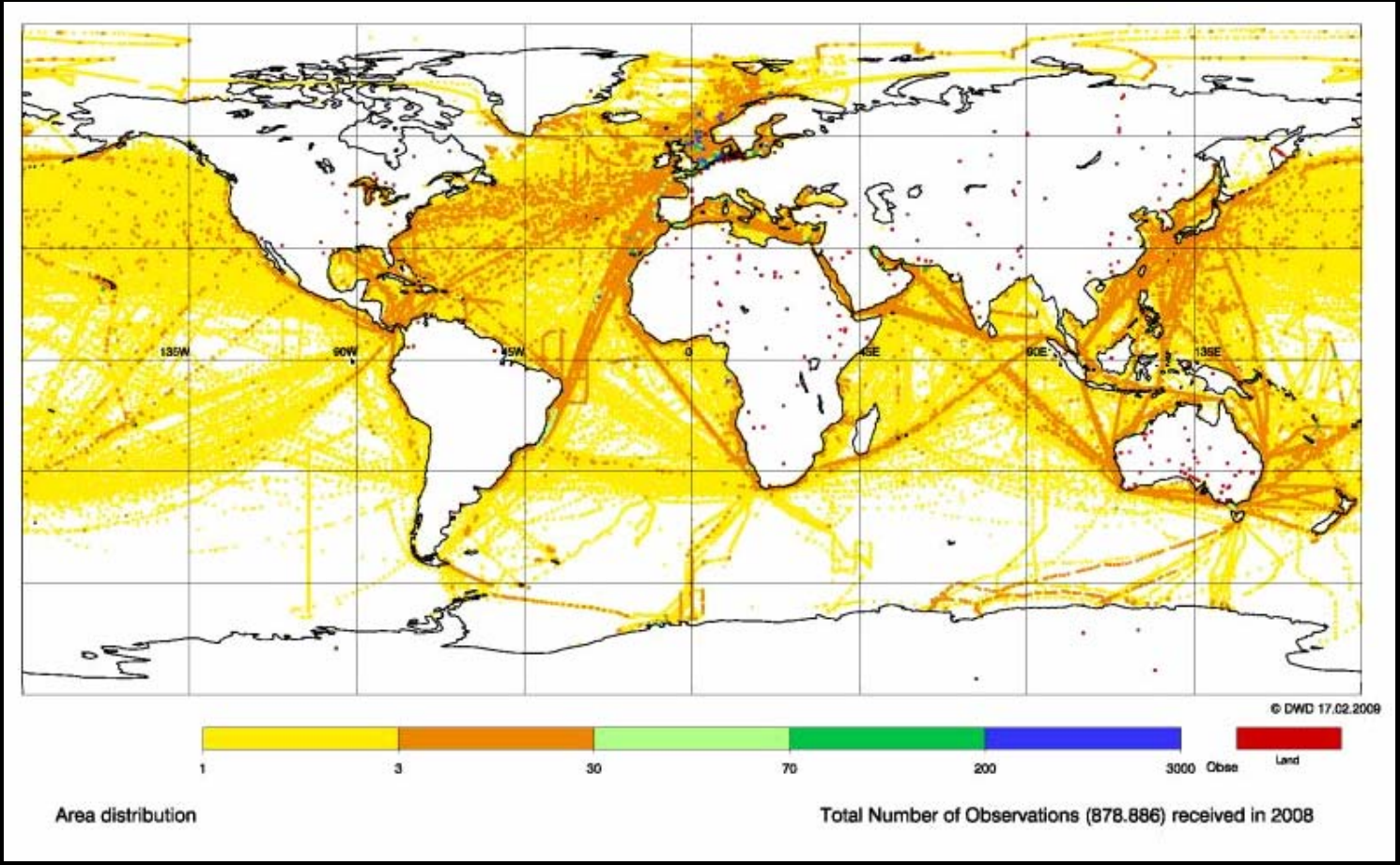
Country Name	1st Q	2nd Q	3rd Q	4th Q	Total
Argentina	0	0	2	0	2
Australia	14,314	21,663	11,671	12,637	60,285
Brazil	0	0	0	0	0
Canada	0	0	0	0	0
Croatia	0	0	0	0	0
France	0	12,820	0	0	12,820
Germany	146,216	150,062	163,510	128,890	588,678
Greece	0	0	0	0	0
Hong Kong, China	630	587	523	788	2,528
India	1,981	0	659	0	2,640
Ireland	0	0	0	0	0
Israel	0	0	0	0	0
Japan	5,961	0	9,099	6,015	21,075
Kenya	0	0	0	0	0
Malaysia	475	1,282	0	741	2,498
Netherlands	18,895	0	21,409	0	40,304
New Zealand	0	0	0	7,061	7,061
Nigeria	0	0	0	0	0
Norway	24,222	11,468	0	0	35,690
Poland	0	0	0	1,104	1,104
Russian Federation	12,009	12,031	12,054	12,028	48,122
Singapore	0	0	0	0	0
South Africa	214	444	0	0	658
Sweden	0	0	0	0	0
United Kingdom	17,978	2,027	0	4,234	24,239
USA	0	18,791	8,346	4,045	31,182
16/26 Countries	**242,895**	**231,175**	**227,273**	**177,543**	**878,886**

GCC Report 2008

- 50% from automated/fixed stations and buoys
- 90% submitted in IMMT-III format
- Data spanned 20 years – some from 1988 (RU)
- Many duplicates reported in different quarters are not identified by GCC processing
  - GCC processing identified 605 dregs (same quarter)
  - RMs identified over 18,000 (different quarters)
  - VOSClim: 4 by GCCs and over 2,000 by RMs

GCC Report 2008

- 405 Obs on land (a lot less than 2007)



VOSClim Data

- Data received from 9 out 10 CMs now registered with VOSClim project
- 48,583 obs from VOSClim registered ships
- Only 35,987 obs with VOSClim additional elements
- VOSClim have notably more ‘blank’ elements than VOS?

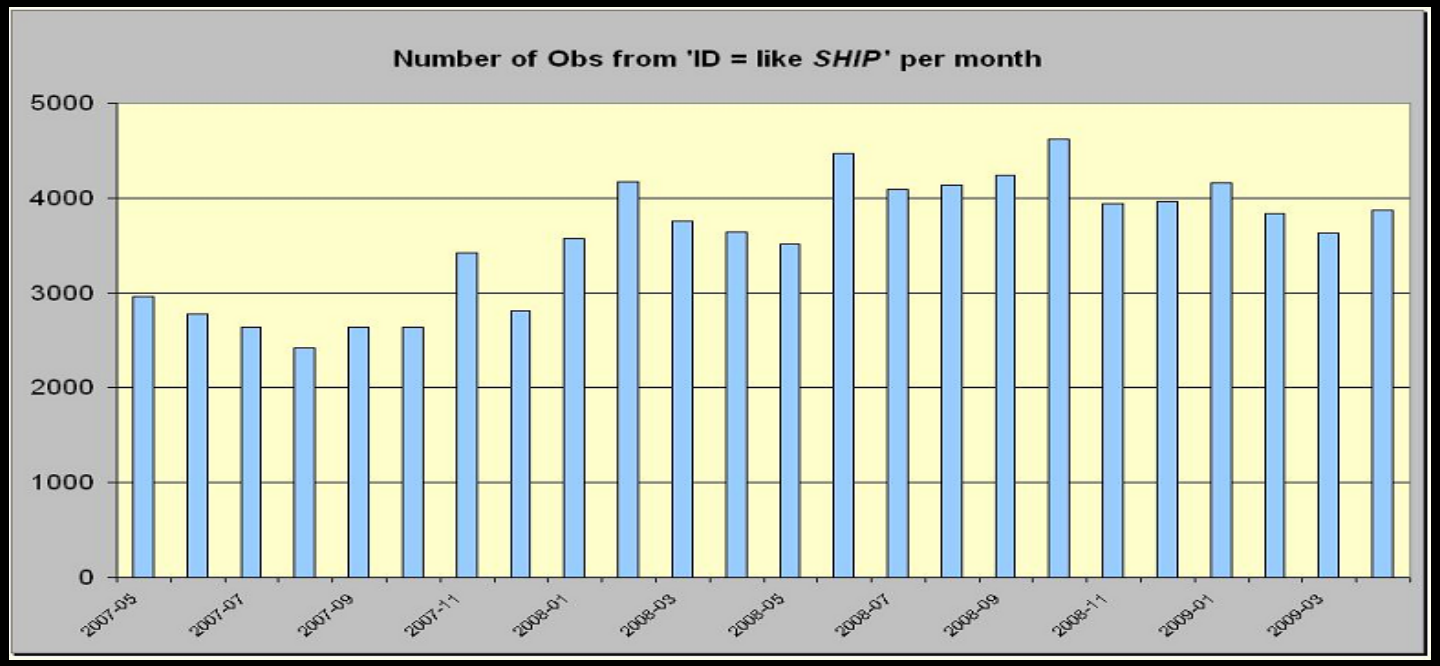
Observations from VOSClim Ships / Observations with VOSClim Elements (2003 - 2008)

Country Name	2003		2004		2005		2006		2007		2008	
Australia	2078	0	3,397	0	3,928	0	0	0	27,431	18,519	8,419	3,422
Canada	0	0	0	0	0	0	0	0	0	0	0	0
France	0	0	30,637	0	17,619	0	18,567	0	9,512	0	12,275	12,275
Germany	5675	5166	5,345	5,176	6,474	6,377	9,552	8,771	10,364	9,959	14,026	11,945
India	1332	0	3,077	0	4,269	0	2,679	792	1,773	465	1,524	0
Japan	0	0	818	0	4,439	0	0	0	3,026	3,026	1,029	1,029
Netherlands	215	0	603	0	2,161	1,899	2,011	1,117	5,254	4,928	9,272	6,853
New Zealand	0	0	0	0	0	0	0	0	455	342	464	463
United Kingdom	0	0	1,017	0	0	0	51,204	42,779	8,902	7,486	1,528	0
USA	278	0	0	0	0	0	0	0	198	0	46	0
	9578	**5166**	**44,894**	**5,176**	**38,890**	**8,276**	**84,013**	**53,459**	**66,915**	**44,725**	**48,583**	**35,987**

Masked Callsigns

Callsign masking is still a problem in delayed mode.

- Cannot verify positions
- Cannot link to metadata
- Cannot provide data to VOSClim project



Developments

- TT-DMVOS & TT-MOCS have been established with some work done:
- Agreed that GCCs can be proactive in collections
- Questionnaire confirmed up-to-date CM membership of 26
- 10 CMs did not contribute in 2008 but GCCs will investigate if help can be provided to enable more CM contributions in 2009
- Another questionnaire confirmed RMs would still like to be involved in a future modernised MCSS
- Both GCCs have been nominated as DCPC (data collection or production centres) for WIS

Developments

Since 1993 the GCCs have been responsible for the International Maritime Meteorological Tape (IMMT) and Minimum Quality Control Standards (MQCS) format.

These have undergone a number of changes, mostly associated with the VOSClim project.

There is now a proposal to move to next version of IMMT to IMMT-IV and of MQCS to MQCS-VI.

Changes seem minor but are important.

To be formally agreed at JCOMM-III (Nov ’09)

MQCS & IMMT Changes

IMMT-IV

- ‘Source of Observation’ to allow paper or electronic logbook to be recorded

Element Number	Character Number	Code	Element	Coding procedure	
40	70		Source of observation	0 - Unknown	
				1 - Logbook (paper)	National
				2 - Telecommunication channels	
				3 - Publications	
				4 - Logbook (electronic)	International data exchange
				5 - Telecommunication channels	
				6 – Publications	

- Possible changes in element 41 ‘Observation Platform’ (being discussed)
- Quality control indicators to include details of GCC flagging values
- VOSClim ‘Departure of Ref Level from Actual Sea Level’ indicator to be separated from the element (in line with VOS elements)

MQCS & IMMT Changes

MQCS-VI

- Adjusted to account for small changes to IMMT
- Change to VOSClim SLL upper tolerance (max ht deck cargo above summer load line) from 32 to 40m – allow larger new generation ships

90	SLL ≠ 00-99	Correct manually and $Q_{25} = 5$, otherwise $Q_{25} = 4$
	SLL = ΔΔ	$Q_{25} = 9$
	SLL > 40	Correct manually and $Q_{25} = 5$, otherwise $Q_{25} = 3$
91	$s_L \neq 0,1$	Correct manually and $Q_{27} = 5$, otherwise $Q_{27} = 4$
92	hh ≠ 00 – 99	Correct manually and $Q_{27} = 5$, otherwise $Q_{27} = 4$
	hh = ΔΔ	$Q_{27} = 9$
	hh >= 13	Correct manually and $Q_{27} = 5$, otherwise $Q_{27} = 3$
	hh < -01	Correct manually and $Q_{27} = 5$, otherwise $Q_{27} = 4$
93	RWD ≠ 000 - 360, 999	Correct manually and $Q_{28} = 5$, otherwise $Q_{28} = 4$
	RWD = ΔΔΔ	$Q_{28} = 9$
94	RWS ≠ 000 - 999	Correct manually and $Q_{29} = 5$, otherwise $Q_{29} = 4$
	RWS = ΔΔΔ	$Q_{28} = 9$
	RWS > 110 kts	Correct manually and $Q_{29} = 5$, otherwise $Q_{29} = 3$

Modernisation

TT-DMVOS are proposing many changes to modernise the current MCSS

Including:

- New data flow incorporating real-time data
- Single accessible archival point
- HQCS

Scott Woodruff's presentation (next) on MCSS will cover these points in more detail.

Met Office

Questions?