

WORLD METEOROLOGICAL ORGANIZATION

**INTERGOVERNMENTAL OCEANOGRAPHIC
COMMISSION (OF UNESCO)**

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

SHIP OBSERVATIONS TEAM (SOT)

EIGHTH SESSION

CAPE TOWN, SOUTH AFRICA, 20-24 APRIL 2015

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ITEM: 1.2

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PROVISIONAL ANNOTATED AGENDA

(Submitted by the Secretariat)

Summary and purpose of the document

This document provides for the provisional annotated agenda of the SOT Session. The final agenda will be decided by the Session under agenda item 1.2 on the basis of the provisional agenda (doc 1.2(1)).

EIGHTH SESSION OF THE JCOMM SHIP OBSERVATIONS TEAM (SOT-8)
(Cape Town, South Africa, 20-24 April 2015)

PROVISIONAL ANNOTATED AGENDA

1. ORGANIZATION OF THE SESSION

1.1 Opening of the Session

The Eighth session of the JCOMM Ship Observations Team (SOT-8) will begin at 0900 on Monday, 20 April 2015, in the conference room of the Pepper Club Hotel & Spa, Cape Town, South Africa. Mr Johan Stander (South Africa), co-President of the Joint WMO-IOC Technical Commission for Oceanography and Marine Meteorology (JCOMM) will chair the Session.

1.2 Adoption of the Agenda

The Meeting will be invited to adopt an agenda based on the provisional agenda provided.

1.3 Working Arrangements

The documentation for the Session, as well as the Session itself will be held in English only. The Secretariat and local host will review the documentation for the Session and other necessary practical arrangements. The Team will agree on the meeting timetable.

2. SCIENTIFIC AND TECHNICAL WORKSHOP, NEW DEVELOPMENTS

Immediately after discussing organizational matters, the Scientific and Technical Workshop will be opened by Ms Paula Rychtar (USA), Chairperson of the Scientific and Technical Workshop. The workshop will be conducted in English only. The workshop will in principle conclude around lunchtime on Monday 20 April, but may be extended to the afternoon if necessary.

The workshop will introduce and review new initiatives and / or new developments in shipboard meteorological or oceanographic instrumentation, observing practices, data management procedures, and quality control and ocean products.

Members of the Team will be invited to report on systems and related technical developments relevant to SOT, either within their own services and operations or with which they have otherwise been directly involved.

The workshop may propose a number of recommendations to the SOT Meeting.

3. REPORTS BY THE SECRETARIAT, OPA COORDINATOR, SOT CHAIRPERSON, and JCOMMOPS

3.1 Report from the Secretariat (incl. relationship with IMO)

Recent developments relevant to ship observations within the WMO and the IOC, particularly in the context of the JCOMM, will be briefly presented by the Secretariat. The Secretariat will also report on WMO relationship with the International Maritime Organization (IMO) on issues of interest to the SOT.

3.2 Report from the Observations Programme Area Coordinator

The JCOMM Observations Coordination Group (OCG) Co-chairs, Dr David Legler (USA), and Prof David Meldrum (UK) will present the Meeting with a report on the intersessional activities of the OPA, and provide guidance from the OCG.

3.3 Report from the SOT Chairperson

The Chairperson of SOT will present the Meeting with a report on the intersessional activities of the Chairperson and the major activities of the Team.

3.4 Report from JCOMMOPS (incl. from the SOT Technical Coordinator)

The Ship Coordinator and Technical Co-ordinator of the SOT, Mr Martin Kramp (JCOMMOPS), will report on the operations and development of the JCOMM in situ Observations Programme Support Centre (JCOMMOPS) in general, and will highlight items of interest to the Team, including details on an integrated database and monitoring tools, deployment opportunities for buoys, floats and other oceanographic devices, as well as on the JCOMMOPS integrated database. He will also report on the role of the JCOMMOPS ship co-ordinator and tasks of interest to the SOT.

Mr Kramp will report on the support that he provided to the SOT and its component Panels during the last intersessional period.

The Team will be invited to discuss and agree on JCOMMOPS activities and, where possible, on areas of potential development during the next intersessional period. The Team will be providing further guidance to the SOT Technical Coordinator regarding the kind of support he can provide to the Team.

4. REVIEW OF PENDING ACTION ITEMS FROM SOT-7

The Team will review pending action items from the seventh Session of the SOT (SOT-7), and may delay the discussion of those related to the Voluntary Observing Ship Scheme (VOS), the Ship of Opportunity Programme (SOOP) and the Automated Shipboard Aerological Programme (ASAP) to the VOSP and SOOPIP sessions as appropriate.

5 REQUIREMENTS FOR SHIP-BASED OBSERVATIONS

The Meeting will be presented with reports on requirements for ship-based observations. The Team will be invited to review the requirements of the GCOS / GOOS / WCRP Ocean Observations for Physics and Climate (OOPC). The Team will also discuss the WMO Rolling Review of Requirements and how non-climate requirements can be addressed by the SOT.

6. REPORTS BY THE ASSOCIATED PROGRAMMES

The Meeting will be presented with reports from associated programmes or projects, including (i.) the International Ocean Carbon Coordination Project (IOCCP) and its relationship with the SOT; (ii.) the Shipboard Automated Meteorological and Oceanographic System (SAMOS); (iii.) the Global Ocean Ship-Based Hydrographic Investigations Programme (GO-SHIP); (iv.) the Group for High-Resolution SST (GHRSSST); (v) the World Ocean Council; (vi) the OceanScope; and (vii) the FerryBox project. Other associated programmes will be discussed as appropriate.

The Team will be invited to comment on these reports and then make recommendations during the plenary sessions of the VOSP and SOOPIP, and under agenda item 11 (SOT Implementation Strategy) to enhance the cooperation with these programmes or projects.

7. RECOMMENDATIONS BY THE TASK TEAMS AND PILOT PROJECTS

7.1 Task Team on Satellite Communication Systems

The SOT Task Team on Satellite Communications Systems is assigned to (i) evaluate the operational and cost-effective use of satellite data telecommunication systems for the real-time collection of VOS and SOOP data in support of the World Weather Watch, GOOS, and GCOS; (ii) design a new communication system for conventional VOS based on their future FleetBoardband GMDSS terminals to replace Inmarsat Code-41; (iii) continue to evaluate the operational use of Iridium Satellite data telecommunication technology for the real-time collection of VOS and SOOP data in support of the OBS, GOOS, GCOS, and Natural Disaster Prevention and Mitigation applications; (iv) continue to monitor the cost implications of Inmarsat satellite communications sent by Code 41; (v) review all relevant JCOMM Publications to ensure that they are kept up-to-date and comply with the Quality Management terminology; and (vi) report to the next SOT Session on any relevant issues/proposals.

The Chair of the Task Team, Mr Pierre Blouch (Météo France), will present a brief report by the Task Team and follow-up actions from SOT-7. The Meeting will be further invited to consider the recommendations by the Task Team and make comments or suggestions as necessary.

7.2 Task Team on ASAP

The Task Team on ASAP is coordinating the overall implementation of the ASAP, including recommending routes and monitoring the overall performance of the programme, both operationally and in respect of the quality of the ASAP system data processing. The Task Team is also tasked to arrange for and use funds and contributions in kind needed for the procurement, implementation and operation of ASAP systems and for the promotion and expansion of the programme, as may be required by some members. The Task Team is currently coordinating the exchange of technical information on relevant meteorological equipment and expendables, development, functionality, reliability and accuracy, and survey new developments in instrumentation technology and recommended practices. Finally, the Task Team is reviewing all relevant JCOMM Publications to make sure they are kept up to date and comply with Quality Management terminology, and preparing annually a report on the status of ASAP operations, data availability and data quality.

The Chair of the Task Team, Mr Rudolf Krockauer (DWD, Germany), will present a brief report by the Task Team and follow-up actions from SOT-7. The Meeting will be further invited to consider the recommendations by the Task Team and make comments or suggestions as necessary.

E-ASAP will report on its activities under this agenda item, except for: (i.) ASAP monitoring issues discussed under the VOS Panel session in agenda item 10.1.5; and (ii.) ASAP Trust Fund issues discussed under agenda item 12.3.

7.3 Task Team on VOS Recruitment and Programme Promotion

The Task Team on VOS Recruitment and Programme Promotion is tasked to (i) promote and monitor the upgrading of existing ships to VOSclim class standard (Action by DAC and VOSclim Focal Point); (ii) liaise with Scientific Advisors to monitor and report on compliance with VOSclim class requirements (Action by DAC and VOSclim Focal Point); (iii) progress the generic pre-installation design recommendations with a view to developing 'best practices' guidance that can be used by shipowners when ordering new ships, liaising with the ICS, WOC, IMO, WMO Secretariat, IACS etc., as appropriate; (iv) review existing promotional aids (flyer, certificate) and recommend new promotional aids; (v) promote the use of, and keep under review, the promotional

'SOT Recruitment Presentation'; (vi) establish a store of newsworthy articles for use in a SOT or VOS publications or in national newsletters; (vii) develop a new survey/questionnaire directed at the VOS observers and shipowners with a view to assessing the performance of VOS Scheme and identifying issues that need to be addressed by the SOT. Review proposed content of the 2013 Marine Meteorological Monitoring Survey, and propose amendments as necessary; (viii) review all relevant JCOMM Publications to ensure they are up to date (in particular with respect to the new VOS classes) and comply with Quality Management terminology; and (ix) promote the VOS Ancillary class and report on its implementation at SOT-8.

The Chair of the Task Team, Ms Sarah North (United Kingdom), will present a brief report by the Task Team and follow-up actions from SOT-7. The Meeting will be further invited to consider the recommendations by the Task Team and make comments or suggestions as necessary.

7.4 Task Team on Metadata for WMO Publication No. 47

The SOT Task Team on metadata for WMO Publication No. 47 (Pub47) is tasked to (i) regularly review the Pub47 metadata requirements and make recommendations as appropriate; (ii) monitor the receipt of regular Pub47 updates at WMO from participating VOS members; and (iii) review all relevant JCOMM Publications to ensure they are up to date and comply with Quality Management terminology.

On behalf of the Chair of the Task Team, Mr Graeme Ball (Australia), Ms Sarah North will present a brief report by the Task Team and follow-up actions from SOT-7. The Meeting will be further invited to consider the recommendations by the Task Team and make comments or suggestions as necessary.

7.5 Task Team on Instrument Standards

The SOT Task Team on Instrument Standards is tasked to (i) compile information on existing activities, procedures and practices within JCOMM relating to instrument testing, standardization and intercalibration, as well as the standardization of observation practices and procedures; (ii) using guidance contained in existing guides including the WMO Guides on Instruments and Methods of Observation (WMO-No.8) communicate with manufactures regarding new technologies and recognized equipment problems; (iii) prepare dedicated WebPages containing this information, to be made widely available through the JCOMM web site and linked from other relevant websites (JCOMMOPS, VOS, DBCP, SOOP, and SOT); (iv) provide guidance on testing and the intercalibration of marine meteorological and oceanographic observing systems; (v) liaise closely with WMO/CIMO, both in the compilation of the information and in assessing what additional work in this area might be required under JCOMM; (vi) liaise closely with IOC in the preparation of the wider compilation of existing instrumentation and observing practices standards in oceanographic observations in general, with a view to inputting an appropriate contribution from JCOMM; (vii) perform intercomparisons as required by SOT Sessions; (viii) review all relevant JCOMM Publications to make sure they are kept up to date and comply with Quality Management terminology; and (ix) work with the WMO Commission on Instruments and Methods of Observations for updating the WMO Guide No. 8 section dealing with ship-based observations.

The Chair of the Task Team, Mr Henry Kleta (Germany), will present a brief report by the Task Team and follow-up actions from SOT-7. The Meeting will be further invited to consider the recommendations by the Task Team and make comments or suggestions as necessary.

7.6 Task Team on Call Sign Masking and Encoding

The Task Team on Call Sign Masking and Encoding is tasked to: (i) oversee the implementation of MASK¹, SHIP² and ENCODE³ and develop guidelines as necessary; (ii) review

1: MASK - Unique, repeating identifier. The masking identifier is assigned by the NMS that recruited the ship.

and approve national MASK schemes to ensure they remain unique and do not impinge on (1) the ITU callsign series allocated to a country, or (2) any other marine or oceanographic identification scheme used by WMO, e.g. buoy identification numbers; (iii) ensure the MASK v REAL⁴ database is kept up-to-date by NMSs implementing MASK; and (ix) develop the ENCODE encryption strategy, as well as develop the encoding and decoding keys.

On behalf of the Chair of the Task Team, Mr Graeme Ball, the Secretariat will present a brief report by the Task Team and follow-up actions from SOT-7. The Team will be further invited to consider the recommendations by the Task Team and make comments or suggestions as necessary. The Meeting will particularly review the status of ship masking schemes implemented by Members in line with WMO Executive Council Resolution 27 (EC-59).

7.7 Task Team on Training

The Task Team on Training is tasked to: (i) develop global standards, practices and functions for Port Meteorological Officers; (ii) maintain Reference Guides for PMOs and national VOS, SOOP and ASAP Program Managers; (iii) coordinate international PMO Training Workshops; (iv) encourage the development of VOS programs in data-sparse areas; (v) encourage and promote the PMO Buddy Program to enhance the global PMO network; (vi) assist the TT-VRPP in the development of PMO resources; (vii) provide advice to Nautical Colleges about training syllabuses and assist with the training or the provision of training material; (viii) maintain User Manuals, Best Practices, and Reference Guides for ship riders collecting XBT data or performing drifter and Argo float deployments; and (ix) maintain a website with relevant training documents.

The Chair of the Task Team, Ms Paula Rychtar (USA), will present a brief report by the Task Team, including preparation for PMO-5 (Viña del Mare, Chile, 20-24 July 2015), and follow-up actions from SOT-7. The Meeting will be further invited to consider the recommendations by the Task Team and make comments or suggestions as necessary.

7.8 VOS Ancillary Pilot Project

Late in 2011 the VOS Panel developed an initiative to allow ships to join the VOS programme without some of the constraints of being part of a national VOS. The VOS Ancillary PP was formed in order to be able to react quickly to potential offers by shipping companies e.g. a sudden offer of 10 ships to join VOS, when a NMS may not have the personnel or met instruments to respond. The Team will review the status of the pilot project, and decide on future related activities.

8. NINTH SESSION OF THE VOS PANEL (VOSP-9)

The Ninth Session of the VOS Panel will be chaired by the VOSP chairperson, Ms Sarah North (United Kingdom).

8.1 VOS Programme activity reports

8.1.1 Report by the VOSP Chairperson

The Panel Chairperson, Ms Sarah North, will open the ninth session of the VOS Panel. She will report on activities undertaken during the intersessional period and review the structure of the Panel session.

2: SHIP - Letters "SHIP" used in place of the real ship identifier.

3: ENCODE - Unique, non-repeating identifier. The identifier is derived from encrypting elements in the message, e.g. callsign + latitude + longitude.

4: REAL - Official ITU callsign of the ship.

8.1.2 SOT Technical Coordinator report on VOS support activities

The Panel will discuss the kind of support and tasks of the SOT Technical Coordinator in support of VOS activities.

8.2 VOS Programme status reports

8.2.1 VOS status report

The Panel will review the status of the VOS fleet, including trends in recent years, and will make proposals for the evolution of the fleet, in particular taking into account the increasing demand for high quality observations to serve the needs of the developing Global Framework for Climate Service (GFCS).

The Panel will review current recruitment levels, and discuss Key Performance Indicators (KPI) and how to reach targets. The Panel will also review VOS data coverage, including availability of VOS data from polar and data sparse areas, and discuss how selected ships could be upgraded to VOSCLIM. It will review the status of ship metadata submissions to Pub47, and discuss proposals to improve this.

The Meeting will be further invited to consider his recommendations and make comments or suggestions as necessary.

8.2.2 E-SURFMAR Expert Team on VOS status report

The Panel will receive and discuss a status report from the E-SURFMAR Expert Team on VOS. It will also discuss the status of the E-SURFMAR Metadata database, and how it relates to Pub47, and the WMO Observing Systems Capability Analysis and Review Tool (OSCAR), which for the surface-based observing systems metadata in currently under development, and will eventually replace Pub47.

8.2.3 VOS Donation Programme

The Panel will discuss the status of the DBCP/SOT Drifter Donation Programme in support of the VOS Scheme for Developing countries (VOS-DP). This programme was proposed by the Fourth International Port Meteorological Officer Conference (PMO-4), and support to Global Ocean Observations using Ship Logistics (8-10 December 2010, Orlando, Florida, USA) to assist developing countries in setting up embryo national VOS Scheme programmes whereby the donated drifter would be installed onboard a newly recruited ship as an autonomous AWS to provide a low cost, quality observation solution. Some countries expressed interest in participating in this programme. The Programme was later confirmed and established by SOT-6 and SOT-7.

8.3 VOS Developments

8.3.1 Electronic logbooks

The VOS Panel has been working to increase the number of e-logbooks, and there has been a steady increase in the number of e-logbooks onboard ships in recent years.

The Panel will be invited to comment on any initiatives for the enhancement of e-logbook software, including report on TurboWin, TurboWeb, and TurboWin+.

8.3.2 VOS meteorological instruments

The Panel will also be invited to compile information on existing activities, procedures and practices within the JCOMM relating to instrument testing, standardization and intercalibration as well as the standardization of observation practices and procedures.

8.3.3 VOS automation status

The VOSP recognizes the importance of enhancing the automation of all aspects of shipboard procedures, from observation through to message transmission using readily available software and hardware. There has been a steady increase in the number of operational AWS onboard ships in recent years. The VOS Panel has recommended that Members should increasingly implement automated systems on their fleets, while at the same time recognizing the requirements expressed by the Expert Team on Marine Climatology (ETMC) that traditional variables which can only be observed manually should continue to be submitted.

The Panel Chairperson will have collected information on Automated Systems from the VOS operators in advance of the meeting and will report on the present status of the VOS Automation and associated problems.

The Panel will be invited to comment on any initiatives for the enhancement of automation, including on the E-SURFMAR EUCAWS developments, and other AWS rollout systems/plans such as AMOS.

8.4 PMO Status and activities

8.4.1 Role of the PMO

Port Meteorological Officers play an important role in all of the observing programs of the SOT. In terms of the VOS Scheme, they play a vital role in maintaining the strength of the VOS Scheme, as well as contributing to the volume and frequency of accurate observations. The Panel will review the status of PMO Global network, and discuss the role of the Port Meteorological Officers (PMO).

8.4.2 VOS & AWS inspection reports - implications of automation

The Panel will review the PMO activities and inspections, as well as the implications of VOS automation on their activities.

8.5 VOS Issues

The Panel will discuss the future composition of the international VOS fleets, how to upgrade ships to VOSClim standards, and how to consider third party data and non-VOS support ships in the VOS Programme. It will review the status of the VOS website, discuss the future hosting of the website, and agree on possible required changes or updates to the website.

9. ELEVENTH SESSION OF THE SOOP IMPLEMENTATION PANEL (SOOPIP-11)

The Eleventh Session of the SOOP Implementation Panel (SOOPIP) will be chaired by the SOOPIP chairperson, Dr Gustavo Goni (USA).

9.1 SOOP Programme activity reports

9.1.1 Report by the SOOPIP Chairperson

The Panel Chairperson, Dr Gustavo Goni, will open the eleventh session of the SOOP Implementation Panel. The Panel Chairperson will report on activities undertaken during the intersessional period and preview the structure of the Panel session.

9.1.2 SOT Technical Coordinator report on SOOP support activities

The Panel will discuss the kind of support and tasks of the SOT Technical Coordinator in

support of SOOP activities.

9.1.3 XBT Science Team

The SOT-7 re-established a SOOP XBT Science Team to (i.) provide scientific guidance to the SOOPIP on the implementation of the global XBT network; (ii.) receive advice from CLIVAR panels and from international scientific teams on scientific issues associated with the monitoring of the upper ocean thermal structure; (iii.) collaborate with the Argo Steering team, on the implementation of the upper ocean thermal network; (iv.) collaborate with other teams involved in sustained ocean observations (such as the Ocean Topography Science Team, the Global Ocean Surface Underway Data Pilot Project, the Tropical Atlantic Circulation Experiment, the Tropical Moored Buoy Implementation Panel, OceanSites, etc.); (v.) periodically meet to discuss and communicate scientific and operational results obtained using the XBT global network; (vi.) collaborate in the development of ocean systems experiments to evaluate and improve the design of the XBT network; and (vii.) provide regular reports to the SOT on its work.

Dr Goni will briefly report on the activities of the XBT Science Team. The Panel will be further invited to consider the recommendations by Dr Goni and make comments or suggestions as necessary.

9.2 Programme status and implementation

9.2.1 Status of SOOP implementation

The Technical Co-ordinator of the SOT will report on the results of the SOOP Semestrial Surveys for 2013 and 2014 and on the timely submission of data by SOOP participants for the survey. The Panel will identify the gaps with regard to programme implementation with the view to achieve optimal sampling using available resources.

9.2.2 XBT sampling transect occupation

The Panel will address requirements and implementation aspects for the XBT frequently repeated observations of the SOOP network.

The Panel will review the status of the current sampling programme. Due to the complementary nature of the XBT SOOP, Argo, Tropical Moorings, and OceanSITES, and considering the outcome of the OceanOBS'09 Conference, and the development of the Tropical Pacific Observing System 2020 (TPOS-2020) and the recommendations from the XBT Science Team, the Panel will be invited to discuss possible adjustments to the global sampling scheme.

9.2.3 Ship riders in High Density deployments

The Panel will review the role of the ship riders for high density observations deployments from ships of opportunity.

9.2.4 XBT Ship Recruitment

The Panel will discuss the recruitment of ships for making XBT measurements.

9.3 Interactions with other SOOP sampling programmes and activities

The Panel will review and discuss related issues concerning the use of other types of SOOP observation systems, including pCO₂ systems, and Thermosalinograph (TSG) operations.

9.4 Development and plans for the SOOP

9.4.1 XBT Fall Rate Equation (FRE) advancements

The Panel will discuss biases of XBT data, and how they can be estimated through Fall Rate Equation (FRE) experiments and studies.

9.4.2 Fall Rate Equation Experiments for Depth Offsets

The Panel will discuss the need for FRE experiments for depth offsets.

9.4.3 Review of the XBT network

The Panel will discuss the future of the XBT network. In particular, the last SOOPIP Meeting reviewed the line responsibilities assigned to participating agencies or countries. Line responsibility implies investigating ship opportunities for the line, and coordinating the logistics, training, and negotiations with shipping companies and ships.

The Panel will discuss international collaborations in the framework of the SOOP, will again review the line responsibilities and may recommend changes to the list that was adopted at the last Panel session.

9.5 Data management

9.5.1 XBT Data Flow and Transmission

The Panel will discuss the flow of XBT data and their transmission to end users.

9.5.2 Southern Ocean Data

The Panel will discuss the collection of SOOP data from the Southern Ocean region.

9.5.3 International Quality controlled Ocean Data Base (IQUOD)

The Panel will review status of the International Quality controlled Ocean Data Base (IQUOD), and discuss how SOOP data are contributed to and managed in this database.

10. MONITORING, CODING AND DATA MANAGEMENT

10.1 Monitoring and data centre reports

10.1.1 VOS Monitoring Report from the Exeter (UK) Regional Specialized Meteorological Centre (RSMC)

The Regional Specialized Meteorological Centre (RSMC), Exeter, is acting as a CBS Lead Centre for monitoring the quality of surface marine observations and is routinely producing a bi-annual report on such quality as well as providing essential feedback to the VOS operators regarding the quality of the data delivered by VOS ships. The United Kingdom Met Office quality monitoring activities for the VOS data are performed on real-time as well as on delayed-mode basis. It provides an independent source of quality information regarding ships operated by other countries.

The Team will be presented with a report by the RSMC Exeter on the quality and timeliness of the VOS observations and be invited to comment on the report.

10.1.2 Monitoring Report from the Real-Time Monitoring Centre (RTMC) for the VOS Climate (VOSClim) data

The Real-Time Monitoring Centre (RTMC) for the VOS Climate (VOSClim) data operated by the Met Office, United Kingdom, will report on the present status of its observation monitoring activities. The Team will be invited to advise the RTMC of any further project requirements, as

appropriate or necessary.

10.1.3 ASAP QC Monitoring report

The ECMWF (European Centre for Medium-Range Weather Forecasts) representative will report on their monitoring activities for ASAP. The representative from Météo-France will report on the status of the ASAP monitoring centre, as well as on future plans. The Team will be invited to: (i.) review the monitoring reports, noting in particular the operational performance and data quality of the ASAP; and (ii.) recommend future action.

10.1.4 Global temperature and Salinity Profile Programme (GTSP)

A report will be presented by its Representative on the development and activities of the Global Temperature and Salinity Profile Programme (GTSP), including GTSP data formats.

10.1.5 Global Ocean Surface Underway data Pilot Project (GOSUD)

A report will be presented by its Representative on the development and activities of the Global Ocean Surface Underway Data Pilot Project (GOSUD).

10.2 Marine Climate Data System (MCDS)

The Meeting will review the status of the development of the new Marine Climate Data System (MCDS) per Recommendation 2 (JCOMM-4). The MCDS is an outcome of the modernization of the Marine Climatological Summaries Scheme (MCSS) taking into account new sources of historical marine-meteorological and oceanographic climate data, as well as state of the art data management techniques. The goal is to develop a standardized international data management system across JCOMM, integrating collection, rescue, quality control, formatting, archiving, exchange, and access—for marine-meteorological and oceanographic real-time and delayed-mode data and associated metadata of known quality, and products that satisfy the needs of WMO and IOC applications. In particular, ocean data requirements for long term climate monitoring, and climate services are to be addressed.

The Meeting will review the implications of the MCDS development with regard to the activities of the SOT, and make recommendations accordingly.

10.2.1 Global Collecting Centres (GCCs) report on the VOS

Under the revised Marine Climatological Summaries Scheme (MCSS), adopted by the eleventh session of the Commission for Marine Meteorology (CMM) (Lisbon, Portugal, April 1993), through Recommendation 11 (CMM-11), the two Global Collecting Centres (GCCs) were established, in Germany and the United Kingdom, to: (i.) collect all marine climatological data observed worldwide; (ii.) ensure that minimum quality control procedures are applied; (iii.) generate complete and duplicate global data sets; and (iv.) provide these data sets to the Responsible Members under the MCSS. The Team will be presented with a consolidated report from the two GCCs. The report will include a status on the volume and frequency of delayed-mode data being forwarded to the VOSclim Data Assembly Centre. The GCCs will also report on how masking schemes implemented per WMO Executive Council Resolution 27 (EC-59) - both SHIP and MASK - had impacted on their operations.

The Team will be invited to consider the role of the GCCs in processing the delayed-mode IMMT (International Marine Meteorological Tape-format) data and the associated quality control standards, especially in the framework of the modernization of the MCSS and the development of the new Marine Climate Data System (MCDS) per Recommendation 2 (JCOMM-4).

10.2.2 VOSclim Data Assembly Centre (DAC) report

The National Climatic Data Centre, acting as the DAC for the VOSClm data, will report on the present status of the DAC activities in accordance with its Terms of Reference. The DAC will report on the status of the project website, including the collection and provision of real-time and delayed-mode observation data, metadata, ship listings and other project information. The Team will be invited to consider the display and availability of project data on the website and to advise the DAC of any further requirements, as necessary.

10.3 Operational Coding requirements

10.3.1 BUFR Template for VOS data

The Meeting will review the status of the migration to Table Driven Code (TDC) forms, and the status of the BUFR template for VOS data and decide whether any further recommendations are needed for its evolution.

10.3.2 BUFR Template and implementation for XBT/XCTD/TSG data

The Meeting will also review the latest developments from the JCOMM Data Management Programme Area (DMPA) Task Team on Table Driven Codes (TT-TDC).

The Meeting will review the status of the BUFR templates for XBT, XCTD, and TSG data and decide whether any further recommendations are needed for its evolution.

10.4 SOOP, GO-SHIP, and ASAP metadata requirements

The Meeting will review progress regarding the collection of SOOP, GO-SHIP, and ASAP metadata, in line with the recommendations from JCOMM-4. It will particularly discuss the JCOMMOPS metadata collection scheme for SOOP metadata, as well as recommendations for the collection of ASAP metadata.

11 SOT IMPLEMENTATION STRATEGY

SOT-7 reviewed a first draft of the SOT Implementation Strategy, which is meant to provide an overall framework for the Team's work, and at the same time enable it and its members to react appropriately to future developments. The strategy elaborates on the rationale and plans for implementation of the ship fleets under SOT's responsibility in the foreseeable future. It particularly includes an overarching implementation plan, and a detailed implementation plan with clear objectives, and some performance targets.

SOT-7 had requested the SOT Chair to finalize the Strategy on behalf of the Team in consultation with the VOSP and SOOPIP chairs, the OPA Coordinator, the Task Team Chair, and the Secretariat. The final version of the Strategy was published on the JCOMM website⁵ as JCOMM Technical Report No. 61.

The Team will review the SOT implementation strategy, and discuss whether publishing an updated version will be necessary.

12. ORGANIZATIONAL MATTERS

12.1 Review the Terms of Reference of the SOT, VOSP and SOOPIP

In light of the discussions and recommendations arising during the week, the Ship Observations Team will be invited to review its Terms of Reference with a view to submitting any

⁵ http://www.jcomm.info/index.php?option=com_oe&task=viewDocumentRecord&docID=9936

proposed changes to the JCOMM-5 for endorsement.

12.2 Review of the SOT Management Team (including the role of the SOT Technical Co-ordinator)

The Chairperson of the SOT will review the composition of the SOT Management Team, including the role of the JCOMMOPS ship coordinator who is also acting as SOT Technical Co-ordinator on a part-time basis. The Team will be invited to review the current working priorities of the Technical Co-ordinator.

12.3 Funding issues (SOT Technical Co-ordinator, Trust Funds)

The Meeting will be informed about the funding mechanism that sustains the post of SOT Technical Co-ordinator. SOT Members will be invited to contribute to the Trust Fund to support the Technical Co-ordinator post and thus ensure that current services are maintained while also allowing for future development in support of the VOS, ASAP and SOOP.

The Team will discuss whether there are opportunities to put in place common procurement arrangements for ship consumables, and thereby seek contributions to the JCOMM Trust Fund for Ship Consumables.

The Team will be invited to review and approve a statement of accounts for the ASAP Trust Fund, managed on its behalf by WMO. Future contributions to and expenditures from the Trust Fund should be addressed.

12.4 SOT ANNUAL REPORT FORMAT

The Team will be invited to review the content of the SOT Annual Report for 2012 and 2013. The WMO Secretariat will also report on the status of preparation of the 2014 SOT Annual Report.

The Team will be invited to consider recommendations regarding the format and content of the 2015 and subsequent issues of the SOT Annual Report.

13. NATIONAL REPORTS

Ms Rebecca Cowley (Australia) will chair the National Reports Session. Each country will be invited to present a consolidated national report, based on their national submission to the 2014 SOT Annual Report, that summarizes their objectives, planned activities, mechanisms for coordination between participating national agencies, instrumentation, new developments, data management, associated R&D and capacity-building. Countries operating a SOOP will also provide details about the sampling status on each XBT line.

14. NEXT SESSION OF THE SOT

The Team will be invited to: (i.) decide on the dates and place of its next session; and (ii.) make specific recommendations regarding changes to the organization / format of the next session of the SOT.

15. REVIEW OF THE SOT-8 SESSION REPORT, ACTION ITEMS AND RECOMMENDATIONS

Participants will be expected to review, modify as necessary and, approve the final report of the session, including action items and recommendations.

16. CLOSURE OF THE SESSION

The Eighth Session of the Ship Observations Team is expected to close at 18h00 hours on Friday, 24 April 2015.
