

ANNOTATED PROVISIONAL AGENDA

1. ORGANIZATION OF THE SESSION

1.1 Opening of the Session

The Seventh session of the JCOMM Ship Observations Team (SOT-VI) will begin at 0900 on Monday, 22 April 2013, in Victoria, Canada. Mr Graeme Ball (Australia), Chairperson of the Ship Observations Team, 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 this presentation as well as the session will be held in English only. The Secretariat will review the documentation for the session, and should agree to a timetable and other necessary arrangements.

2. SCIENTIFIC AND TECHNICAL WORKSHOP, NEW DEVELOPMENTS

Immediately after discussing organizational matters, the Scientific and Technical Workshop will be opened by Paula Rychtar (USA), Chairperson of the Scientific and Technical Workshop. The workshop will be conducted in English only. The workshop is expected to conclude around lunchtime on Monday 22 April.

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 SOT TECHNICAL CO-ORDINATOR

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 (OPA) Coordinator

The OPA Coordinator, Ms Candyce Clark (USA), will present the Meeting with a report on the intersessional activities of the OPA.

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 the SOT Technical Co-ordinator

The Technical Co-ordinator of the SOT, Mr Martin Kramp (JCOMMOPS) will report on the support that he, and his predecessor Mr Mathieu Belbéoch, provided to the SOT and its component Panels during the last intersessional period.

4. REVIEW OF ACTION ITEMS FROM SOT-6

The Team will review action items raised at SOT-6, other than those directly relating to the Voluntary Observing Ship Scheme (VOS), the Ship of Opportunity Programme (SOOP) and the Automated Shipboard Aerological Programme (ASAP).

5. REPORTS ON ASSOCIATED PROGRAMMES AND REQUIREMENTS FOR SHIP-BASED OBSERVATIONS

5.1 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 Observation Panel for Climate (OOPC). The Team will also discuss the WMO Rolling Review of Requirements and how non-climate requirements can be addressed by the SOT.

5.2 Reports by associated ship-based observation 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 10 to enhance the cooperation with these programmes or projects.

6. REPORTS AND RECOMMENDATIONS BY TASK TEAMS

6.1 Task Team on Satellite Communication Systems (TT-SATCOM)

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.) work closely with the DBCP Iridium Pilot Project; (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 report by the Task Team and follow-up actions from SOT-6, including status on the development of the SOT Iridium Pilot Project. The Meeting will be further invited to consider the recommendations by the Task Team and make comments or suggestions as necessary.

6.2 Task Team on ASAP (TT-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 report by the Task Team and follow-up actions from SOT-6. 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 9.1.5; and (ii.) ASAP Trust Fund issues discussed under agenda item 13.3.

6.3 Task Team on VOS Recruitment and Programme Promotion (TT-VRPP)

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.) complete the generic pre-installation design standards that will eventually be available to ship builders and classification societies; (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 SOT or VOS publications or in national newsletters; (vii.) review the questionnaire used for the 2009 Marine Meteorological Services Monitoring Programme, and propose any amendments; and (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.

The acting Chair of the Task Team, Ms Sarah North (United Kingdom) will present a report by the Task Team and follow-up actions from SOT-6, including discussions with the World Ocean

Council (WOC). Noting that experience has clearly shown that capacity-building initiatives, such as training workshops, are an effective mechanism in encouraging those countries to actively participate in operational observing programmes, Ms North will particularly report on SOT Capacity Building activities, including the SOT “*Buddy Programme*”, and the plans for organizing the Fifth International Workshop of Port Meteorological Officers (PMO).

The Meeting will be further invited to consider the proposals by the Task Team and to develop plans and procedures for future cooperation in ship recruitment among the three ship-based observation programmes (VOS, SOOP, ASAP).

6.4 Task Team on Metadata for WMO-No. 47 (TT-Pub47)

The SOT Task Team on metadata for WMO Publication No. 47 is tasked to (i.) regularly review the WMO Publication No. 47 (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.

The Chair of the Task Team, Mr Graeme Ball, will present a report by the Task Team and follow-up actions from SOT-6. The Meeting will be further invited to consider the recommendations by the Task Team and make comments or suggestions as necessary.

6.5 Task Team on Instrument Standards (TT-IS)

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; and (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; and (iii.) prepare a JCOMM Technical Report containing this information, to be made widely available through relevant web sites (JCOMM, JCOMMOPS, VOS, DBCP, SOOP, and SOT); and (iv.) provide guidance on testing and the intercalibration of marine meteorological and oceanographic observing systems; and (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; and (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; and (vii.) perform inter-comparisons as required by SOT Sessions; and (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 report by the Task Team and follow-up actions from SOT-6. The Meeting will be further invited to consider the recommendations by the Task Team and make comments or suggestions as necessary.

6.6 Task Team on Call Sign Masking and Encoding (TT-MASKING)

SOT-IV established a Task Team on Call Sign Masking and Encoding to: (i.) oversee the implementation of MASK¹ and ENCODE² and develop guidelines as necessary; (ii.) review 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 vs. REAL³

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

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

3: REAL - Official ITU callsign of the ship.

database is kept up-to-date by NMSs implementing MASK; and (iv.) develop the ENCODE encryption strategy, as well as develop the encoding and decoding keys.

The Chair of the Task Team, Mr Graeme Ball, will present a report by the Task Team and follow-up actions from SOT-6. 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-LIX).

7. EIGHTH SESSION OF THE VOS Panel (VOSP-8)

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

7.1 Programme review

7.1.1 Report by the VOSP acting Chairperson

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

At SOT-6, the VOS Panel again reinforced the view that 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. Ms North will report on the status of PMO Global network. Port Meteorological Officers' Roles and Responsibilities will be annexed to the report presented to the Session.

Ms North will also provide an overview of the range of quality monitoring tools, and multi-recruit tools currently available to the programme, and may invite the VOSP to propose improvements or the development of new tools.

7.1.2 Report on VOS issues from the E-SURFMAR Expert Team

E-SURFMAR Expert Team will report on the VOS coordination activities under the EIG⁴ EUMETNET Surface Marine Operational Services (E-SURFMAR) .

7.2 Programme status and implementation

7.2.1 VOS status, trends and developments

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 integration of the VOSclim fleet in the wider VOS, and the increasing demand for high quality observations to serve the needs of the developing Global Framework for Climate Service (GFCS).

7.2.2 VOSclim status, and upgrading of ships to VOSclim standard

At SOT-6, recognizing that the VOS Climate (VOSclim) has been a good example of how research activities transitioned into an operational activity, the Team agreed that the TT-VOSclim should now come to an end. In order to support climate quality data, it was also agreed that it was important to keep the profile of VOSclim at a high level, and whilst the TT-VOSclim could be dispensed with, someone was still required to champion and promote the cause of VOSclim. This person is hereafter referred to as the VOSclim Focal Point (VOSclim FP). The Team agreed that

⁴ Economic Interest Grouping

including a VOSclim FP under the TT-VRPP would make good sense, as this TT is focused on recruitment and promotion.

The VOSclim Focal Point, Mr John Wasserman (USA), will present a report and recommendations on VOSclim activities and follow-up actions from SOT-6, in particular with regard to upgrading of ships to VOSclim standard.

The meeting will review current recruitment levels, and discuss Key Performance Indicators (KPI) and how to reach targets. The meeting will also discuss proposals for upgrading selected ships, and availability of delayed mode data, as well as using the E-SURFMAR database as the main VOSclim ship list.

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

7.2.3 Electronic logbook software

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 and SEAS developments. 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.

7.2.4 Status of VOS automation

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 collect information on Automated Systems from the VOS operators in advance and report on the present status of the VOS Automation and associated problems.

7.2.5 E-SURFMAR S-AWS developments

The Panel will be invited to comment on any initiatives for the enhancement of automation, including on the E-SURFMAR Shipboard Automatic Weather Station (AWS) (S-AWS) tender, and other AWS rollout systems/plans.

7.2.6 PMO activities and inspections - implications of automation

The Panel will discuss the role of the Port Meteorological Officers (PMO), and PMO activities and inspections, as well as the implications of VOS automation on their activities.

7.2.7 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-IV), 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.

7.3. Issues for the VOS

7.3.1 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. This document provides a description of the pilot project, and recommendations to the SOT in this regard.

8. TENTH SESSION OF THE SOOP IMPLEMENTATION PANEL (SOOPIP-10)

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

8.1 Programme review

8.1.1 Report by the SOOPIP Chairperson

The Panel Chairperson, Dr Gustavo Goni, will open the tenth 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.

The SOT-6 re-established a SOOP 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.

8.2 Programme Status and Implementation

8.2.1 Status of SOOP implementation, sampling scheme

The Technical Co-ordinator of the SOT will report on the results of the SOOP Semestrial Surveys for 2011 and 2012 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.

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 recommendations from the XBT Science Team, the Panel will be invited to discuss possible adjustments to the global sampling scheme.

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

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.

8.2.2 XBT Science Team and SOOPIP

Dr Goni will briefly report on the activities of the XBT Science Team, including outcome of the meeting that took place in Melbourne, Australia in July 2011, and the plans for organizing a second meeting of the Science Team in mid 2013. The Panel will be further invited to consider the recommendations by Dr Goni and make comments or suggestions as necessary.

8.3 Interactions with other Projects

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.

8.4 Issues for the SOOP

8.4.1 XBT data flow and GTS transmissions

The Panel will review the real-time data transmission systems being used for the collection of SOOP data, including XBT data in particular. It will address limitations, cost-effectiveness, format issues, the reporting of instrument/platform metadata, and make recommendations as appropriate. Data tracking and quality control issues will also be discussed under this agenda item.

8.4.2 Sippican Climate Quality XBT Probes

The Panel will discuss Ocean Probes manufactured by Sippican.

8.4.3 XBT Fall Rate Equation (FRE) experiments

The Panel will be presented by the test of XBT BUFR data at NOAA, and will discuss related issues.

8.4.4 Plans for the future XBT network

The Panel will discuss the future of the XBT network.

8.5 SOOP Science Presentations

The following scientific presentations will be provided during XBT Science sessions:

- 1) How the XBT Network Increases the Value of a Combined Observing System, J. Sprintall (USA)
- 2) XBT fall rate and temperature biases and planning for the future, R. Cowley (Australia)
- 3) The first meters of the XBT fall, F. Bringas (USA)
- 4) Ocean studies in enclosed seas: The Mediterranean, F. Reseghetti (Italy)
- 5) XBT studies in the Pacific Ocean, S. Kizu (Japan)
- 6) Variability of the upper North Atlantic Ocean, G. Reverdin (France)
- 7) Science results from the XBT network in the North Indian Ocean, V.V. Gopalakrishna

- (India)
- 8) Estimating meridional transport including error in the five subtropical boundary currents of the ocean, N. Zilberman (USA)
 - 9) South Pacific Ocean variability studies, B. Sloyan
 - 10) Meridional heat transport and heat budget in the South Atlantic, S. Dong (USA)
 - 11) The meridional heat transport in the North Atlantic Ocean, M. Baringer (USA)
 - 12) The design of an optimal XBT transect in the South Atlantic for MOC studies, M. Goes (USA)
 - 13) Variability of the Brazil Current, M. Mata (Brazil)
 - 14) Relationship of the eastward equatorial current system with the tropical Atlantic modes of variability, M. Goes (USA)
 - 15) A multiplatform study of the meridional heat transport in the South Atlantic, G. Goni (USA)
 - 16) Wireless XBT System developed by CSIRO, A. Thresher (Australia)

9. MONITORING, CODING AND DATA MANAGEMENT

9.1 Monitoring and data centre reports

9.1.1 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.

9.1.2 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 RTMC will report on the impact of the VOSClim integration in the wider VOS, and the result of the trial initiated in June 2010. The Team will be invited to advise the RTMC of any further project requirements, as appropriate or necessary.

9.1.3 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-XI), 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 LIX) - 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).

9.1.4 VOSclim Data Assembly Centre (DAC) report

The National Climatic Data Centre, acting as the DAC for the VOSclim 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.

9.1.5 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.

9.1.6 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.

9.1.7 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).

9.1.8 Global temperature data distribution by Coriolis

A report will be presented by its Representative on the development and activities of the Coriolis data centre (IFREMER, France) in particular regarding global temperature data distribution.

9.2 Operational Coding requirements

9.2.1 BUFR Template for VOS data

The Meeting will review the status of the BUFR template for VOS data and decide whether any further recommendations are needed for its evolution.

9.2.2 BUFR Template for XBT/XCTD/TSG data

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

The Meeting will also review the latest developments from the JCOMM Data Management Programme Area (DMPA) Task Team on Table Driven Codes (TT-TDC) regarding the introduction of ocean variable based BUFR sequences to include data and instrument/platform metadata to be reported in real-time.

9.3 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 a proposal for the

collection of ASAP metadata.

9.4 Marine Climate Data System (MCDS) development and SOT contribution

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. SOT IMPLEMENTATION STRATEGY

SOT-6 agreed on the need for an SOT Implementation Strategy, which would 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 it shall include an overarching implementation plan, and a detailed implementation plan with clear objectives, and some performance targets.

The meeting will review the draft SOT implementation strategy prepared by the SOT Chair, in the view to approve the first version of the Strategy during this Session.

11. SUPPORT INFRASTRUCTURE

11.1 JCOMM *in situ* Observations Programme Support Centre (JCOMMOPS)

The Technical Co-ordinator of the SOT will report on the operations and development of the 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.

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.

12. PROGRAMME PROMOTION, AND INFORMATION EXCHANGE

12.1 SOT Annual Report

The Team will be invited to review the content of the SOT Annual Report for 2010 and 2011. The WMO Secretariat will also report on the status of preparation of the 2012 SOT Annual Report.

The Team will be invited to make recommendations regarding the format and content of the 2012 and subsequent issues of the SOT Annual Report.

12.2 Websites

The Team will be invited to comment on the content and status of the SOT, VOS, VOSCLIM, SOOPIP, ASAP and JCOMMOPS websites.

12.3 Focal Point mailing lists

The Team will be invited to review, and where necessary, make comments, corrections or suggestions to the existing mailing lists for the SOT, VOS, VOSCLIM, PMO and SOOPIP.

12.4 Publications and brochures

Taking into consideration any proposals from the Task Team on VOS Recruitment and Programme Promotion, the Meeting will be invited to review all current publications and make recommendations regarding future publicity material.

13. ORGANIZATIONAL MATTERS

13.1 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 proposed changes to the JCOMM-5 for endorsement (to be reviewed again at SOT-8 prior to JCOMM-5).

13.2 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.

13.3 Funding issues (SOT Technical Co-ordinator, Ship Consumables Trust Fund, ASAP Trust Fund)

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 be invited to consider contributing 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.

14. NATIONAL REPORTS

Gerie Lynn Lavigne (Canada) will chair the National Reports Session, which will commence at 1630 hours on Thursday, 25 April and conclude by lunchtime on Friday, 26 April 2013.

Each country will be invited to present a consolidated national report, based on their national submission to the 2012 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.

15. 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.

16. REVIEW OF SOT-7 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.

17. CLOSURE OF THE SESSION

The Seventh Session of the Ship Observations Team is expected to close at 18h00 hours on Friday, 26 April 2013.
