

WORLD METEOROLOGICAL ORGANIZATION

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

SHIP OBSERVATIONS TEAM (SOT)

FIFTH SESSION

GENEVA, SWITZERLAND, 18-22 MAY 2009

**INTERGOVERNMENTAL OCEANOGRAPHIC
COMMISSION (OF UNESCO)**

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ITEM: I-1.2

ORIGINAL: ENGLISH

ANNOTATED PROVISIONAL AGENDA

I(a). SOT-V COMMON SESSION I(a)

1. ORGANIZATION OF THE SESSION

1.1 Opening of the Session

The fifth session of the JCOMM Ship Observations Team (SOT-V) will begin at 0900 on Monday, 18 May 2009, at WMO headquarters, Room C, in Geneva, Switzerland. Mr Graeme Ball, Chairperson of the 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.

II. SOT-V SESSION II - SCIENTIFIC AND TECHNICAL WORKSHOP, NEW DEVELOPMENTS

Immediately after discussing organizational matters, the Scientific and Technical Workshop will be opened by Mr Michail Myrsilidis (Hellenic National Meteorological Service), 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 18 May.

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 the 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.

I(b). SOT-V COMMON SESSION I (b)

Mr Graeme Ball, the SOT Chairperson, will chair the Session.

2. REPORTS BY THE SECRETARIAT, OPA COORDINATOR, SOT CHAIRPERSON AND SOT TECHNICAL CO-ORDINATOR

2.1 Report from the Secretariat

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.

2.2 Report from the Observations Programme Area Coordinator

The OPA Coordinator on the intersessional activities of the OPA will present the Meeting with a report.

2.3 Report from the SOT Chairperson

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

2.4 Review of Action Items from SOT-IV

The Team will review action items raised at the SOT-IV, other than those directly relating to the VOSP, SOOPIP and ASAPP.

2.5 Report from the SOT Technical Co-ordinator

The former and the new Technical Co-ordinator of the SOT will report on the support they have respectively provided to the SOT and its component Panels during the last intersessional period.

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

3.1 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), as well as the use of, and requirements for, VOS reports in climate data. The Team will also discuss the WMO Rolling Review of Requirements and how non-climate requirements can be addressed. The Team will then discuss requirements for platform and instrument metadata, and discuss how it can further cooperate with the Water Temperature Instrument/Platform Metadata Pilot Project (META-T).

3.2 Reports by 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 High-Resolution SST Pilot Project (GHRSSST); (iv.) the Ferrybox Project; (v.) the SeaKeepers Society; (vi.) the Alliance for Coastal Technologies (ACT); (vii.) the joint Scientific Committee on Oceanic Research (SCOR) / International Association for the Physical Sciences of the Oceans (IAPSO) "OceanScope" Working Group on the use of merchant marine vessels for instrumented oceanographic

surveys and its relationship with the SOT; and (viii.) the Oceanoscientific Campaign for instrumented race sailing boats.

The Team will be invited to comment on these reports and then make recommendations during the plenary sessions of the VOSP and SOOIP to enhance the cooperation with these programmes or projects.

4. REPORTS AND RECOMMENDATIONS BY TASK TEAMS

4.1 Task Team on Satellite Communication Systems

The SOT-IV renamed its Task Team on Satellite Communications System Costs by removing the word “costs” from its name. The Task Team is assigned to: (i) evaluate the operational and cost-effective use of satellite data telecommunication systems for the real-time collection of VOS data in support of the World Weather Watch, GOOS, and GCOS; (ii) work closely with the Task Team on SOT Iridium and the DBCP Iridium Pilot Project; (iii) continue to monitor the cost implications of Inmarsat satellite communications sent by Code 41; (iv) review all relevant JCOMM Publications to make sure they are kept up to date and comply with Quality Management terminology; and (v) report to this SOT Session on any relevant issues / proposals. The Task Team is chaired by Ms Sarah North (Met Office, United Kingdom).

The Meeting will be presented with a report by the Task Team and will be invited to consider these proposals and make comments or suggestions as necessary.

4.2 Task Team on SOT Iridium Pilot Project

SOT-IV established a Task Team on SOT Iridium Pilot Project to guide, in close cooperation with the Task Team on Satellite Communications System, the SOT Iridium Pilot Project in evaluating and demonstrating the operational use of Iridium Satellite data telecommunication technology for the real-time collection of VOS and SOOP data in support of the WWW, GOOS, GCOS and Natural Disaster Prevention and Mitigation applications. Ms Gerie Lynn Lavigne (Meteorological Services Canada) chairs the Task Team.

The Meeting will be presented with a report by the Task Team and will be invited to consider these proposals and make comments or suggestions as necessary.

4.3 Task Team on ASAP

SOT-IV, amongst other things, decided to establish a Task Team on ASAP to coordinate 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 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 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. Mr Rudolf Krockauer (DWD, Germany) chairs the Task Team.

The Meeting will be presented with a report by the Task Team and will be invited to consider these proposals 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 III-3; and (ii.) ASAP Trust Fund issues discussed under agenda item I-7.2.

4.4 Task Team on VOS Recruitment and Programme Promotion

The SOT-IV re-established the Task Team on VOS Recruitment and Programme Promotion, which was tasked to: (i.) further, develop the generic pre-installation design standards that will eventually be available to ship builders and classification societies; (ii.) review existing promotional aids (flyer, certificate) and recommend new promotional aids; (iii.) promote the use of, and keep under review, the promotional presentation "The Partnership between the Maritime Industry, Marine Forecasting and Science"; (iv.) establish a store of newsworthy articles for use in a SOT or VOSCLim Newsletter or in national newsletters; (v.) review the questionnaire used for the Marine Meteorological Services Monitoring Programme, and propose amendments, which should be reflected in the questionnaire survey to be conducted in 2008; and (vi) review all relevant JCOMM Publications to ensure they are up to date and comply with Quality Management terminology. The Task Team is chaired by Ms Julie Fletcher (MSNZ, New Zealand).

The Meeting will be presented with a report by the Task Team and follow-up actions from the SOT-IV. The Team 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 panels.

In particular, the Team will discuss the issue of an SOT certificate of appreciation for ships participating in the various voluntary observing programmes, and to be delivered by agencies operating ships as they see fit: (i.) in recognition of the valuable service that participating ships provide; and (ii.) as a means of further encouraging and promoting participation in the VOS Scheme, VOSCLim, SOOP or ASAP.

4.5 Task Team on Metadata for WMO-No. 47

The SOT-IV re-established the Task Team on WMO Publication No. 47, which was tasked amongst other things to: (i.) regularly review the Pub. 47 metadata requirements and make recommendations, as appropriate; (ii.) monitor the receipt of regular Pub. 47 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. Mr Graeme Ball (BOM, Australia) chairs the Task Team.

Version 3 of the WMO Publication No. 47 was implemented on 1 July 2007, and a consolidated list of ship routes was proposed at SOT-IV. Members will be invited to report on the progress of modifications to their national VOS metadata database to meet Pub. 47 requirements.

The Meeting will be presented with a report by the Task Team and will be invited to consider these proposals and make comments or suggestions as necessary.

4.6 Task Team on Coding

The SOT-IV re-established its Task Team on Coding to: (i.) compile table driven coding requirements for ship based observations, for all relevant applications, and submit them in a consolidated way to the DMPA Task Team on Table Driven Codes; (ii.) in collaboration with ocean forecasting system operators (GODAE) including ecosystem modelers, and other appropriate user communities, establish a core set of ship based bio-geo-chemical variable definitions for the BUFR Master Table No. 10 (MT10); (iii.) review and revise the draft MT10 BUFR code table; (iv.) review all relevant JCOMM Publications to make sure they are kept up to date and comply with Quality Management terminology; and (v.) report to SOT-V. Dr Craig Donlon (European Space Agency) chairs the Task Team.

The Meeting will be presented with a report by the Task Team and will be invited to consider these proposals and make comments or suggestions as necessary.

4.7 Task Team on Instrument Standards

- (i.) The SOT-IV re-established its Task Team on Instrument Standards, which was tasked to: 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 Guide to Meteorological Instruments and Methods of Observation* (WMO-No.8) communicate with manufactures regarding new technologies and recognized equipment problems,
- (iii.) prepare a JCOMM Technical Report containing this information, to be made widely available through relevant websites (JCOMM, 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.) conduct an intercomparison study of electronic logbooks;
- (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-No. 8 section dealing with ship-based observations. Mr Robert Luke (NOAA/NDBC, USA) chairs the Task Team.

The Meeting will be presented a report describing the current or proposed updates to electronic logbook software, including: (i.) TurboWin; (ii.) SEAS; and (iii.) ObsJMA. Discussion on any existing problems or changes sought by operators will be invited.

The Meeting will also be presented with a progress report by the Task Team and will be invited to these consider proposals and make comments or suggestions as necessary.

4.8 Task Team on Call Sign Masking and Encoding

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 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. Mr Graeme Ball (BOM, Australia) chairs the Task Team.

The Team will review the status of ship masking schemes implemented by Members in line with WMO Executive Council Resolution 27 (EC-LIX). The Meeting will also be presented with a report by the Task Team and invited to consider these proposals and make comments or suggestions as necessary.

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.

4.9 Task Team on VOSClim

The SOT-IV re-established a Task Team on VOS Climate Project (VOSClim) which was tasked to: (i.) coordinate, maintain, promote and enhance the VOS Climate project, monitor its performance and encourage increased participation; (ii.) revise the VOS Climate project document to reflect the current procedures and to clarify and revise where necessary the responsibilities of the VOSClim data centres; (iii.) review all relevant JCOMM Publications to make sure they are kept up-to-date and comply with Quality Management terminology; and (iv.) prepare a report to SOT-IV on, inter-alia, the following over-arching VOSClim issues:

- (a) Should VOSClim be continued as a project, or developed into a separate long-term operational programme? If so, what form should this programme take?
- (b) Is the high-quality dataset a valuable resource? If so, how should it be updated operationally?
- (c) How can the lessons of VOSClim be used to improve data quality in the wider VOS?

A report and recommendations by the Task Team will be presented to the Meeting. Ms Sarah North (Met Office, United Kingdom) chairs the Team,

III. SOT-V SESSION III - SIXTH SESSION OF THE VOS PANEL (VOSP-VI)

1. PROGRAMME REVIEW

1.1 Report by the VOSP Chairperson

The Panel Chairperson, Ms Julie Fletcher, will open the sixth session of the VOS Panel. The Panel Chairperson will report on activities undertaken during the intersessional period and preview the structure of the Panel session.

1.2 Review of Action Items from the VOSP-V

VOSP-V Action Items will be reviewed under this agenda item.

2. PROGRAMME IMPLEMENTATION

2.1 VOS automation and electronic logbook software

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. The VOSP-V noted the steady increase in the number of e-logbooks (nearly 2000 at that time) and in the operational AWS onboard ships (204 AWS being used at that time). The Panel agreed that it should continue to work to increase the number of e-logbooks and recommended that Members should increasingly implement automated systems on their fleets, while at the same time recognizing the requirements expressed by the ETMC that traditional variables that 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. The Panel will be invited to comment on any initiatives for the enhancement of automation, 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.

2.2 Report on the E-SURFMAR VOS Technical Advisory Group (VOS-TAG)

E-SURFMAR VOS Technical Advisory Group (VOS-TAG) will report on the VOS coordination activities under EUCOS. It will also present its plans for AWS expansion.

2.3 Port Meteorological Officers (PMOs)

At SOT-IV, 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.

The Panel will review the status of PMO Global network. Port Meteorological Officers Roles and Responsibilities will be annexed to the report presented to the Session.

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. The Panel will be invited to consider organizing a fourth International Workshop of Port Meteorological Officers in 2010 in light of the successful results from past workshops.

2.4 Monitoring tools

The Panel will review the range of quality monitoring tools, and multi-recruit tools currently available to the programme, and may propose improvements or the development of new tools.

2.5 Metadata and Reporting tools

The Panel will review WMO Publication No. 47 metadata-reporting tools developed nationally and discuss how VOSP members may benefit from those developments.

3. MONITORING AND DATA MANAGEMENT

3.1 Regional Specialized Meteorological Centre (RSMC), Exeter, VOS monitoring report

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 Met Office quality monitoring activities for the VOS data are performed on real-time as well as on delayed-mode data. It provides an independent source of quality information regarding ships operated by other countries.

The Panel will be presented with a report by the RSMC on the quality and timeliness of the VOS observations and be invited to comment on the report. The RSMC will also report on how masking schemes implemented per WMO Executive Council Resolution 27 (EC LIX) - both SHIP⁴ and MASK - had impacted on its operations.

3.2 Real-Time Monitoring Centre (RTMC) for the VOSclim project monitoring report

The Real-Time Monitoring Centre (RTMC) for the VOSclim Project operated by the Met Office, United Kingdom, will report on the present status of its observation monitoring activities.

At SOT-IV, the Panel noted that based on almost five years of monitoring, the RTMC considered that most of the criteria for the real-time monitoring had been set at approximately the correct levels. The Panel will be invited to consider whether the monitoring criteria remain acceptable. Project participants will be invited to confirm the extent to which the monitoring information is used to identify and resolve observing errors.

4: SHIP - Non-unique identifier. The call sign is unilaterally replaced by the letters SHIP.

The RTMC will also report on the transfer of observation datasets and associated model field values to the Data Assembly Centre, in accordance with its Terms of Reference. The RTMC will also report on how masking schemes implemented per WMO Executive Council Resolution 27 (EC LIX) - both SHIP and MASK - had impacted on its operations.

The Panel will be invited to advise the RTMC of any further project requirements, as appropriate or necessary.

3.3 ASAP QC Monitoring report

The ECMWF 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 Panel will be invited to: (i.) review the monitoring reports, noting in particular the operational performance and data quality of the ASAP; and (ii.) to recommend future action.

3.4 Global Collecting Centres (GCC) report on the VOS and VOSCLim

Under the revised Marine Climatological Summaries Scheme (MCSS), adopted by the eleventh session of the Commission for Marine Climatology (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 Panel 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 Project 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 Panel will be invited to consider the role of the GCCs in processing the delayed-mode IMMT data and the associated quality control standards.

3.5 Review of the Marine Climatological Summaries Scheme (MCSS)

At SOT-IV, the Panel reviewed proposals for the modernization of the Marine Climatological Summaries Scheme (MCSS), and agreed with the Terms of Reference for a cross-cutting Task Team on Delayed-Mode VOS Data (TT-DMVOS). At its third session, Ostend, Belgium, 26-28 March 2008, the JCOMM Data Management Coordination Group (DMCG-III) endorsed the proposals from the ETMC and the SOT, and adopted the Terms of Reference of the TT-DMVOS. The DMCG-III also adopted the Terms of Reference for a new Task Team on Marine Meteorological and Oceanographic Climatological Summaries (TT-MOCS) that will identify existing and potential users of, and review requirements for, marine climatological summary products and their dissemination, particularly for climate change detection, monitoring and indicators of climate trends on appropriate time scales. The TT-MOCS will also consider the potential for integrated products (e.g., meteorological, oceanographic, sea-ice), and explore linkages between marine and coastal land based products; develop accordingly a list of potential products; and consider production and delivery mechanisms, and their appropriate structure. It will develop metrics for the marine climatology products and their delivery (including documentation and standardization of QC, data and products usage, data adequacy for product quality). The Task Team will liaise with the TT-DMVOS for updating the MCSS, review its organizational structures and responsibilities, including the definition of the role and functions of the RMs concerning generation of marine climatological products, and propose changes to the *Manual on and the Guide to Marine Meteorological Services* accordingly. Finally, the TT-MOCS will also contribute to the development of internationally agreed Higher-level Quality Control Standards (HQCS).

The Chairperson of the Expert Team on Marine Climatology (ETMC) will report on plans to modernize the MCSS as part of the work of the TT-MOCS and TT-DMVOS, respectively. The Panel will be invited to comment on the report, and endorse the MCSS modernization plan accordingly.

3.6 VOSclim Data Assembly Centre (DAC) report

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

4. ISSUES FOR THE VOS

4.1 VOSclim – project status – results / implications for the wider VOS

The Panel will review the status of the VOS Climate Project (VOSclim) as compared to the project's targets (250 ships, recording of the additional elements), assess the results and lessons learned and address implications for the wider VOS.

4.2 IMO – report on WMO / IMO actions, progress on MSC circular, etc.

The Secretariat will report on activities undertaken in liaison with the International Maritime Organization (IMO). This includes, in particular, the revision of MSC No. 1017.

4.3 Proposed Ship ID for SOT

The Panel will be invited to consider a proposal for a unified Ship ID to replace the ship's ITU callsign in real-time and delayed-mode observations. VOS Operators have long had to contend with not being forewarned when a ship changes callsign and the impact this has on quality monitoring and performance monitoring. Monitoring Centres and Data Assembly Centres also face challenges when callsigns change unexpectedly. Replacing the ship's callsign, (this is subject to change when a ship changes owner and flag) with an alternative and permanent Ship ID, will assist a range of users and applications.

4.4 Technology challenges

The Panel will address technology challenges for the VOS, including SOT's participation in the IMO Correspondence Group on Automatic Identification System (AIS) binary messages, Long Range Identification and Tracking (LRIT), and implications of the European Union's restrictions on the use and transportation of Mercury (replacing Mercury-in-glass thermometers).

The Panel will be invited to discuss the issue and recommend solutions to address the lack of floppy drive in Inmarsat terminals.

4.5 Review of VOS Classes

WMO Publication No. 471, "Guide to Marine Meteorological Services", describes the WMO VOS Scheme and clearly explains the classification of ships in the scheme, as namely, Selected, Supplementary and Auxiliary. In order for the correct assumptions to be made regarding the quality of the instrumentation on ships, it is important that ships are assigned the correct classification upon recruitment. The Panel will discuss this and recommend that the categories be adhered to, and be invited to agree to the new class definitions for VOSclim and the AWS sub-classes.

5. FUTURE WORK PROGRAMME AND IMPLEMENTATION ISSUES

5.1 Partnerships and the integration of other programmes with the VOS

The Panel will be presented with reports from numerous associated ship-based observing programs under agenda item I-3.2.

The Panel will be invited to discuss enhanced partnerships with these programmes and the possible integration with the VOS Scheme.

5.2 Action items

The Panel will review the Action Items raised in the discussion.

6. ORGANIZATIONAL MATTERS

6.1 Review the Terms of Reference of the VOSP

The Panel will be invited to review the Terms of Reference of the VOSP and recommend changes, as necessary.

IV. SOT-V SESSION IV - EIGHTH SESSION OF THE SOOP IMPLEMENTATION PANEL (SOOPIP-VIII)

1. PROGRAMME REVIEW

1.1 Report by the SOOPIP Chairperson

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

1.2 Review of Action Items from SOOPIP-VII

SOOPIP-VII Action Items will be reviewed under this agenda item.

2. PROGRAMME IMPLEMENTATION

2.1 Status of the current sampling programme

The Panel will review the status of the current sampling programme.

2.2 Review of real-time and delayed-mode data transmissions

The Panel will review the real-time and delayed-mode data transmission systems being used for the collection of SOOP data, including XBT data in particular. It will address limitations, cost-effectiveness, format issues, and make recommendations as appropriate.

2.3 Review of XBT transect responsibilities

The last SOOPIP Meeting reviewed the line responsibilities assigned to participating agencies or countries, noting in particular the lines with no sampling in 2005 or 2006. Line responsibility implies investigating ship opportunities for the line, and coordinating the logistics, training, and negotiations with shipping companies and ships.

The Panel will again review the line responsibilities and may recommend changes to the list

that was adopted at the last Panel session.

2.4 JCOMM / SOT pool of XBT probes

The JCOMM-II agreed to establish a common fund for ship consumables. This will provide Member States with a mechanism to pool financial resources for international programmes and thereby take advantage of increased purchasing power to deliver: (i.) better prices for consumables, and (ii.) increased quantity of consumables, thus enabling developing programmes to take advantage of any surplus consumables. Whilst the Trust Fund will initially focus on XBT probes, other expendables could be added in the future.

At the last SOOPIP Meeting, the Panel agreed to work in the intersession to set priorities and a Workplan for the XBTs that could be purchased by the Trust Fund, should donations be received. However, no contribution has been made to the Trust Fund since SOT-IV.

The Panel will be invited to comment on the issue and indicate whether they will contribute to the Trust Fund.

The Panel will also be invited to discuss the operation of the Trust Fund under agenda item I-7.2.

2.5 Operational XBT systems and development

The Panel will be invited to discuss the results and recommendations from the XBT fall rate equation workshop (Miami, Florida, USA, 10-12 March 2008).

The Panel will also be invited to discuss other equipment-related matters including the use, and further development of XBT auto-launchers.

2.6 Report on the Argo Project

The representative of the Argo Pilot Project will present the status of the Argo Pilot Project and the challenges it faces. The Panel will be invited to note and comment on the report as necessary and appropriate.

Discussions regarding an enhanced partnership with Argo, including assisting wherever possible with deployment opportunities, will take place during agenda items IV-4.1 and IV-5.1.

2.7 Recruitment issues

The Panel will address the issue of ship recruitment for SOOP operations and make recommendations in this regard.

2.8 Thermosalinograph (TSG) Operations

The Panel will review Thermosalinograph (TSG) operations and related issues.

3. MONITORING AND DATA MANAGEMENT

3.1 JCOMM in situ Observing Platform 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 Panel and the Team, including details on integrated database and monitoring tools, deployment opportunities for buoys, floats and other oceanographic devices, as well as on the JCOMMOPS integrated database. The Technical Co-ordinator will report on the results of the SOOP Semestrial Survey for 2007 and on the timely

submission of data by SOOP participants for the survey.

The Panel will be invited to consider how the provision of data and metadata to the JCOMMOPS could be improved or facilitated.

3.2 Metadata and coding

The Technical Co-ordinator of the SOT will report on the development and operations of the SOOP metadata (ship and equipment) database.

The Panel will be invited to: (i.) address instrument/equipment metadata requirements, including for the Water Temperature Metadata Pilot Project (META-T); (ii.) review the SOOP metadata database and its relationship with the WMO Publication No. 47; (iii.) review any recommendations from the Technical Co-ordinator for the SOT to improve the database; and (iv.) review results from the testing of BUFR encoding of XBT and TSG data at AOML.

3.3 Monitoring Centre reports

Reports will be presented by their Representatives on the development and activities of the Global Temperature and Salinity Profile Programme (GTSP), the Coriolis data centre regarding global temperature data distribution, as well as of the Global Ocean Surface Underway Data Pilot Project (GOSUD). The individual reports will also provide a status of the programmes as well as the monitoring reports for the programmes.

4. ISSUES FOR THE SOOP

4.1 Future global requirements

Due to the complementary nature of the XBT SOOP, Argo, Tropical Moorings, and OceanSITES, and the planned discussions for the OceanOBS'09 Conference, the Panel will be invited to discuss the evaluation of the XBT network and the future global requirements (e.g., OOPC).

4.2 Observing other ocean variable

The Panel will be invited to consider opportunities to include other ocean variables within the SOOP, especially in regards to salinity (ThermoSalinoGraphs and XCTDs).

4.3 Transmitting XBT data by a common communications platform

The goal of SOOP is to have all transmissions in real-time. Under this item, the three major telecommunication networks used for data transmission will be discussed and their pros and cons evaluated, including costs comparison. How programs that are currently not transmitting in real-time can start implementing real-time transmissions using one of these networks will also be discussed.

4.4 Other communications issues

The Panel will discuss other satellite data telecommunication issues including latest developments by (i) NOAA/AOML, and (ii) CSIRO for Devil XBT Iridium Operations.

5. FUTURE WORK PROGRAMME

5.1 Partnerships and integration of other programmes with SOOP

The Panel will be presented with reports from associated ship-based observing programs under agenda item I-3.2 as well as a report on the Argo Pilot Project as agenda item IV-2.6.

The Panel will be invited to consider how other programmes such as the Oleander Project,

the IOCCP (pCO₂ transects), and Argo (the latter also discussed at IV-4.1), could cooperate with the SOOP in terms of: (i.) information exchange on common issues such as satellite data telecommunication, GTS, instrumentation and best practices; and (ii.) programme implementation such as logistics, ship recruitment and assistance with deployment opportunities.

5.2 Other issues

The Panel will discuss any other issue of interest to SOOP, including (i) explanation of the depth and temperature biases in the XBT data, and suggestion of a new correction scheme based on the analysis of the global data set; and (ii) results from 3 XBT/CTD comparison tests in the Bay of Bengal and Arabian Sea.

5.3 Action Items

The Panel will review the action items raised in the discussion.

6. ORGANIZATIONAL MATTERS

6.1 Review the Terms of Reference of the SOOPIP

The Panel will be invited to propose any revision of the Terms of Reference of the Panel, if appropriate.

6.2 Review the membership of the SOOPIP

The Panel will review its current membership and examine possibilities and procedures for adding new members.

I(c). SOT-V COMMON SESSION I(c)

The SOT Chairperson, Mr Graeme Ball, will chair the Session.

5. SUPPORT INFRASTRUCTURE

5.1 JCOMM in situ Observing Platform Support Centre (JCOMMOPS) and future Observing Programme Support Centre (OPSC)

The Technical Co-ordinator of the SOT will present a report on the JCOMMOPS activities.

The Team will be presented with up-to-date information regarding the process for developing an Observing Programme Support Centre (OPSC) to develop the capabilities and safeguard the future of the current JCOMMOPS. The Team will also be invited to consider / investigate the optimal way for the future development of the SOT through its Technical Co-ordinator in the context of this development.

The Team will be invited to: (i.) discuss and agree on JCOMMOPS activities, and where possible, areas of potential development during the next intersessional period; (ii.) make recommendations to the OCG regarding the future OPSC; and (iii.) review the recommendation to use JCOMMOPS as a portal for ship metadata.

5.2 Telecommunication facilities

The Meeting will be presented with reports by the INMARSAT, IMSO, Argos, EUMETSAT and Iridium on the status and operational use of channels allocated for data transmission via meteorological satellites. The DBCP Chairperson on commercial satellite communication systems will also provide the Meeting with a review document. The EUMETSAT representative will be invited to report on the status of its monitoring activity and of the geostationary meteorological satellites in

general.

The Team will be invited to review the reports and to recommend future action, as appropriate.

5.3 WMO Integrated Global Observing Systems (WIGOS)

The Team will discuss the development of the WIGOS Pilot Project for JCOMM and the role that the SOT should play in this framework. In particular, the SOT will review the Project Plan; its role with regard to establishing closer links with the WMO Commission on Instruments and Methods of Observations (CI-MO), and make recommendations to the Pilot Project Steering Group, as appropriate.

The Team will be invited to discuss quality-management and best-practices issues and make recommendations for improving them. The Team will also consider how existing documents and publications, including those on websites, could be integrated within existing or new JCOMM Technical Documents, including the *JCOMM Catalogue on Best Practices and Standards*. The Secretariat will report on the WMO's working arrangements with the International Organization for Standardization (ISO) and the SOT will discuss issues of interest to the Team in this regard (e.g., ISO TC 8, *Ships and Marine Technology* and consideration of ISO/DIS 10596 Marine wind vane and anemometer).

6. PROGRAMME PROMOTION, AND INFORMATION EXCHANGE

6.1 SOT Annual Report

The Team will be invited to review the content of the SOT Annual Report for 2007. The WMO Secretariat will also report on the status of preparation of the 2008 SOT Annual Report.

The Team will also be invited to make recommendations regarding the format and content of the 2008 and subsequent issues of the SOT Annual Report.

6.2 Websites

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

6.3 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.

6.4 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.

7. ORGANIZATIONAL MATTERS

7.1 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 SOT Technical Co-ordinator.

Recognising the ongoing discussion on the JCOMMOPS development (agenda item I-5.1), the Team will be invited to: (i.) review the current working priorities of the Technical Co-ordinator; and (ii.) review the current arrangements regarding supervision and guidance.

7.2 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 position of SOT Technical Co-ordinator. SOT Members will be invited to contribute to the Trust Fund to support the Technical Co-ordinator position 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 how the JCOMM Trust Fund for Ship Consumable, introduced at IV-2.4, will be administered.

At the last ASAP Panel session, it agreed that no additional contributions were needed at this point and to use the residual money in the Trust Fund for the design, editing, printing and distribution of the new ASAP brochures. The Panel will be invited to review and approve a statement of account for the ASAP Trust Fund, managed on its behalf by WMO. Future contributions to and expenditures from the Trust Fund should be addressed.

7.3 Review the Terms of Reference of the SOT

In light of the discussions and recommendations arising during the week, the Team will be invited to review its Terms of Reference with a view to submitting any recommended changes to the JCOMM-III for endorsement.

7.4 Status of ASAP Panel

At the last ASAP Panel session, considering the efforts required to run the ASAP, it was agreed that it would be more effective if it would operate as a Task Team under the SOT and that the Task Team would eventually replace the ASAP Panel. The Panel noted that the ASAP Panel would still formally exist until decided otherwise by JCOMM and until JCOMM-III in 2009 at the earliest. Considering the agreement made at the last ASAP Panel session, and the outcome of the discussion under agenda item 7.3, the Panel will be invited to propose that JCOMM-III removes the ASAP Panel Terms of Reference from the SOT Terms of Reference. The Panel will be further invited to update the Terms of References for the Task Team on ASAP if necessary.

8. 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.

V. SOT-V SESSION V - NATIONAL REPORTS

Ms Gerie Lynn Lavigne (Meteorological Services Canada) will chair the National Reports Session, which will commence at 1630 hours on Thursday, 21 May and conclude by lunchtime on Friday, 22 May 2009.

Each country will be invited to present a consolidated national report, based on their national submission to the 2008 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.

I(d). SOT-V COMMON SESSION I(d)

9. REVIEW OF THE SOT-V 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.

10. CLOSURE OF THE SESSION

The fifth session of the Ship Observations Team is expected to close at 18h00 hours on Friday, 22 May 2009.
