WORLD METEOROLOGICAL ORGANIZATION

INTERGOVERNMENTAL OCEANOGRAPHIC
COMMISSION (OF UNESCO)

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

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FOURTH SESSION

ITEM V-3.1

GENEVA, SWITZERLAND, 16 TO 21 APRIL 2007

Original: ENGLISH

**SOOPIP-VII
MONITORING AND DATA MANAGEMENT**

Monitoring Activities for SOOPIP by JCOMMOPS

(Submitted by Hester Viola, Technical Coordinator of the SOT)

Summary and purpose of document

This document provides information about JCOMMOPS developments and
operations relating to SOOPIP during the last intersessional period. See also
document I 7.1 about the monitoring tools on websites related to JCOMMOPS.

ACTION PROPOSED

The Ship Observations Team is invited to:

(a)   Note and comment on the information provided as appropriate;

(b)   Advise the coordinator on additional actions required as necessary.

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Appendices: A.   SOOP Survey 2005 Summary

B.   Proposals for Consideration

DISCUSSION

1.   Introduction

Since the TC/DBCP&SOT position was vacant during the period February to June 2006, developments directly relating to JCOMMOPS, as a whole, slowed down during the end of the last intersessional period.

2.   JCOMMOPS developments and operations

New developments and ongoing tasks during the intersessional period include:

o   Making dynamic web site more reliable. Set up of an initial operational procedure with CLS to monitor main web applications' status to approach 24/7 services.

o   Proposal was prepared for the POGO research cruise database. This will actually be developed by SEADATANET project at IRD, France. JCOMMOPS met with the coordinator for this project and will contribute to the project.

o   Platform life-time application upgraded

o   SOOP Survey was been finalised for 2005 and data made available in the SOOP report and on the website at http://wo.jcommops.org/cgi-bin/WebObjects/SOOPIndicators. Metadata was provided by panels' members from Australia-BOM & CSIRO, USA -SEAS/AOML & SIO, Germany, Japan, Italy/Mediterranean, France – IRD Brest & Noumea. Some data is also available here for 2006 and SOOP Survey 2006 is in progress. Most metadata has been provided by panels' members from Australia-BOM & CSIRO, India, USA -SEAS/AOML & SIO, Germany, Japan, Italy/Mediterranean, France – IRD Brest. Some initial results will be presented at the SOOPIP-VII meeting.
See Appendix A or the SOOP Survey 2005 for further details.

o   Release of a new Argo Information Centre website. See report about Argo.

o   Metadata about SOOP Ships (and instruments onboard) has been manually entered into the JCOMMOPS database via reports from operators (and some automatically from the Argos System.) This data is however not fully up-to-date. Real time metadata for SOOP ship observations is now being considered under the scope of the Meta-T pilot project (see document I-6.2.1 for details)

o   Proposed BUFR template additions and changes for SOOP have not yet been presented to the Expert Team on Data Representation and Codes (ET/DRC), and will not be finalised in time to be presented to the next meeting of the 23-27 April 2007.

o   A web query form and import tool for BUFR tables was developed in the JCOMMOPS database and is accessible via the JCOMMOPS web site, http://www.jcommops.org, click on "Implementation", then "GTS", then "GTS code forms", then "BUFR tables query".

o   For reporting and monitoring from JCOMMOPS, several types of regular reports are issued by the Coordinator:
    - a monthly SOOP BATHY report (which used to be emailed out but is now only available at ftp://ftp.jcommops.org/SOOP/Reports/)
    - a monthly map of XBT profiles reported on the GTS,
    - a monthly map of sub-surface temperature profiles,
    - the semestrial SOOP resources survey, all available at the JCOMMOPS web site.
    - Additionally, some XBT reports come in with the old JJXX or JJYY formats and need to be upgraded to JJVV, so a report was generated for these during part of the intersessional period, but is not up to date.
    - Creation of Upper Ocean Thermal data maps by country. These should be produced biannually, but are currently not up to date.

    The monthly maps produced by JCOMMOPS have been standardised with respect to presentation and layout for consistency.

At the SOOPIP-VI meeting in 2005, the Technical Coordinator asked for feedback on the reports that he was creating, in particular on whether the reports were useful and appropriate. This feedback is sought again from Panel Members.

3.   Proposals

The panel is asked to consider the following proposals, which are detailed further in Appendix B.

1. *Annual SOOP Line Sampling Report instead of Semestrial SOOP Survey*
2. *Assess options for improving the efficiency of the SOOP Sampling report*

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Appendices: 2

APPENDIX A
SOOP SURVEY 2005 SUMMARY

SOOP Semestrial Survey - Summary of 2005

During the period January to December 2005, 21757 drops were committed to SOOP by the participants (other drops for which information was not provided to the SOOP Coordinator are not counted here). Number of probes committed to the programme is slightly lower than the same period last year (i.e. about 23244 probes for January-December 2004).

Of those, 16913 were assigned to Upper Ocean Thermal (UOT) review lines. Based on UOT recommended lines and proposed sampling, it is estimated that about 25500 probes are required per year in order to sample all UOT lines properly. 2240 Argo floats were operational on 31 December 2005 for a target of 3000 floats.

For a total of 45 FRX and HDX UOT lines (some of them operated in both modes) we had the following summarised results for the period:

For a total of 45 FRX and HDX UOT lines (some of them operated in both modes) we had the following summarised results for the period:

o   Well sampled lines: 15   (25 in 2004)
o   50% sampled lines: 2   (8 in 2004)
o   Oversampled lines: 2   (4 in 2004)
o   Undersampled lines : 15   (4 in 2004)
o   Not sampled: 11   (10 in 2004) The survey shows the lines which were not sampled

Figure 1: XBT drops by country for the period January to December 2005
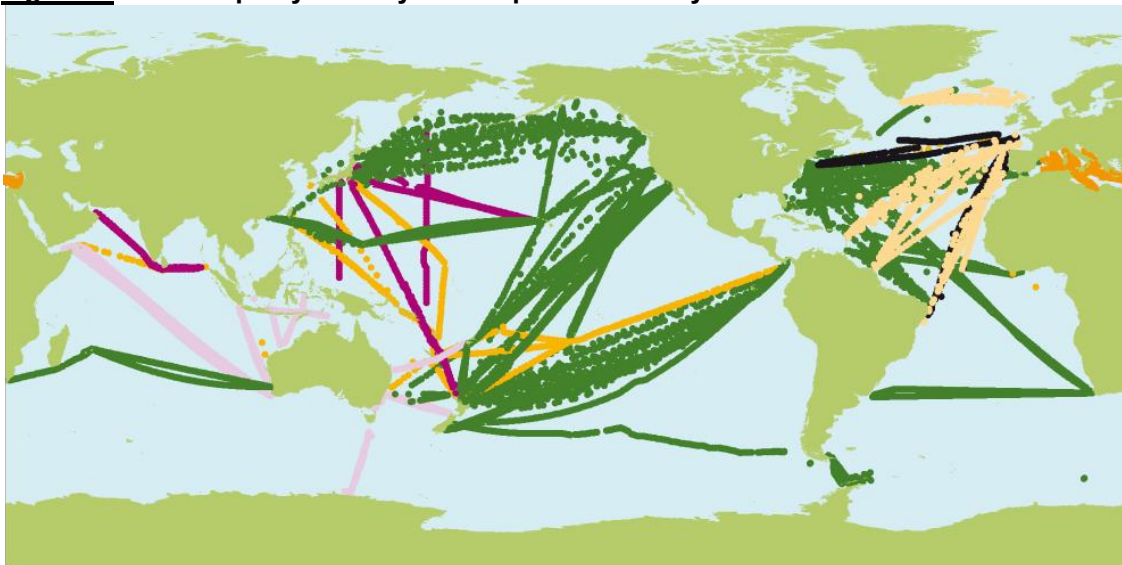
SOOP semestrial survey, January 2005 to December 2005

Total XBT profiles: 21434

● AUSTRALIA (2597)   ■ EUROPEAN UNION (1288)   ● FRANCE (715)
● GERMANY (589)   ● JAPAN (1172)   ● NEW CALEDONIA (784)
● UNITED STATES (14289)

Information on drops submitted to SOOP Coordinator.
Note: Number of XBT profiles in brackets

The success of sampling shown in these maps is determined by final results of analysis in the SOOP

Survey 2005, taking into account the interpreted metadata and also feedback by SOOP operators.

Table 1: Total number of drops during the period by SOOP operator and ocean basin.

	Atlantic	Indian	Pacific	Mediterranean	Global	Total
BOM		1834	241		40	2115
BSH	589					589
CSIRO		220	262			482
IRD (Brest)	715					715
IRD (Nouméa)		38	746			784
JMA			244			244
JMA/JAMSTEC		297	290			587
MFSPP				1288	299	1587
NIO						0
SEAS	4390	160	4057		93	8700
SEAS/SIO	1	261	4750			5012
SIO	427	162	12			601
TOHOKU-U			341			341
Total	**6122**	**2972**	**10943**	**1288**	**432**	**21757**

SOT III (action IV 1.3.1.5) discussed the monitoring of XBT data on the GTS in real-time, which did not contribute to the UOT implementation plan. In 2005 there were again discrepancies between what is reported as part of the Metadata provision for the SOOP Survey (and analysed for SOOP Sampling Report with respect to the UOT Implementation Plan) and the data actually reported on the GTS for the 12 months. This action item has not been addressed in the previous intersessional period but will be considered in the next period.

APPENDIX B

PROPOSALS FOR CONSIDERATION

1.   Annual SOOP Line Sampling Report instead of Semestrial SOOP Survey

Frequency of reporting
Based on discussions with many stakeholders of SOOPIP, the consensus seems to be, that an Annual SOOP Report would be sufficient, rather than production of the survey twice a year (Biannual/Semestrial).
A single report will be finalised as soon as possible after 31March of the following year. March 31 will remain the date that data must be submitted to the SOT coordinator in order for it to be considered. Any data provided before the cut off date (or data provided monthly or at other times during the year) can be uploaded as soon as is convenient and made available in the SOOP Survey reporting tool – SOOP Indicators
 at : http://wo.jcommops.org/cgi-bin/WebObjects/SOOPIndicators . This should allow draft reports to be produced for initial review in February/March of the following year.

Annual Summary Maps - There was also an additional requirement expressed, to have end-of-year maps summarising the success of sampling along SOOP (and UOT Review) lines via a visual classification of the SOOP lines. The classification should show the success of sampling completed by shading the lines in appropriate colours.

━━━Well Sampled ━━━50% sampled ━━━Oversampled ━━━Undersampled ───── Not sampled

This was implemented as part of the 2005 SOOP Report, for the first time (see figures below), so feedback is sought from panel members on the presentation of these maps.

Figure 2. Results of analysis (comments) for 2005 along all SOOP Lines
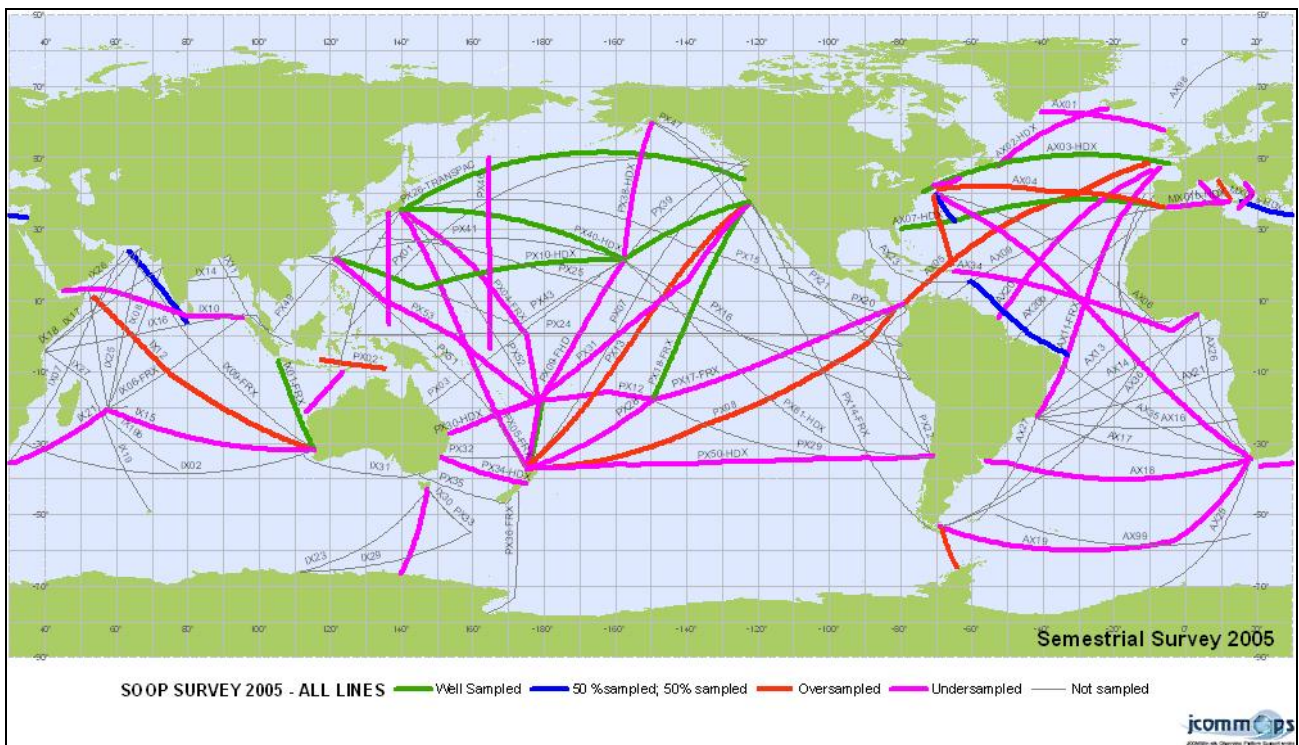
See: ftp://ftp.jcommops.org/SOOP/Maps/200512-12-SOOP_COMMENT.png

Figure 3. Results of analysis (comments) for 2005 along only UOT Review SOOP Lines
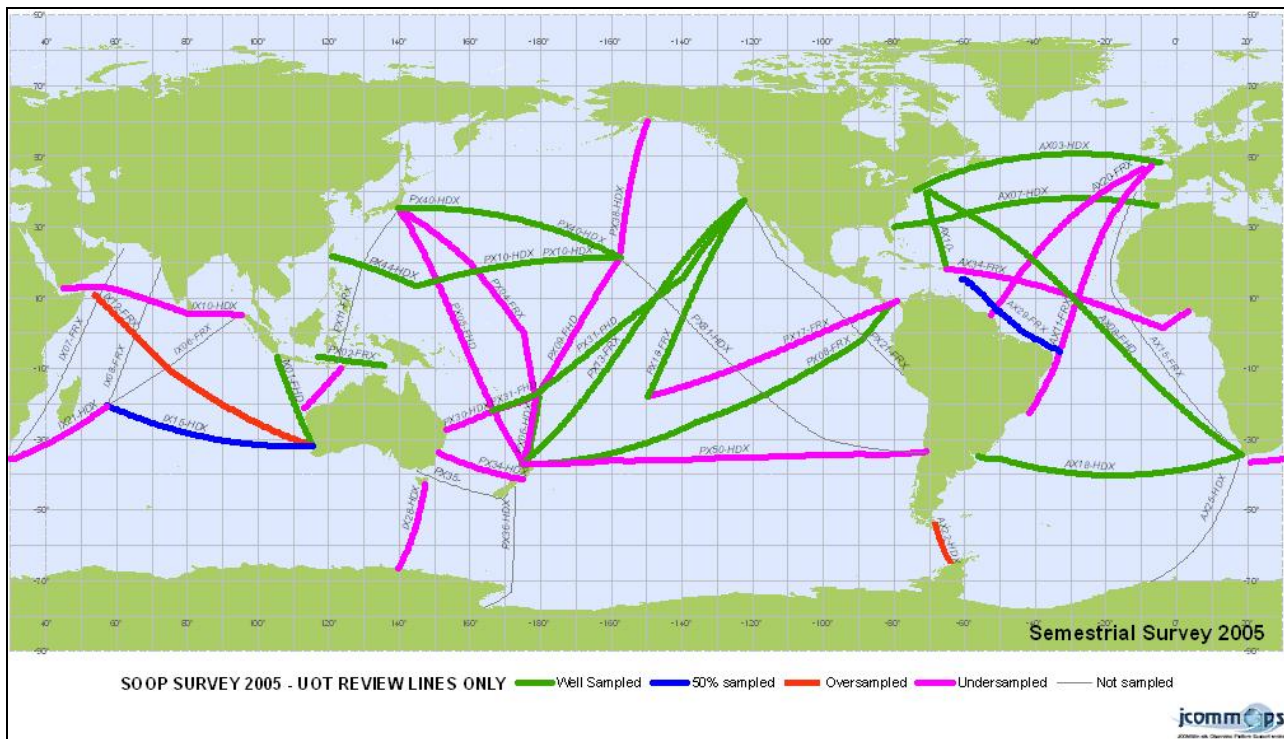
See: ftp://ftp.jcommops.org/SOOP/Maps/200512-12-SOOP_COMMENT_UOT.png

2. Assess options for improving the efficiency of the SOOP Sampling report

The SOOP Survey aims to address several different objectives.
In light of the fact that a large amount of time is spent generating a detailed report to describe how all of these objectives are being met, the SOOPIP Chair and panel Members are asked to assess whether this report fulfils its aims, in its current form.
This would involve considering

- how widely the report is used and for what purposes (ie does it warrant the large proportion of time allocated to it?)
- do all of its objectives remain current and of high priority?
- whether the report could be done differently in future for greater automation. eg
    a. Automatically inferring the line followed (line number) from the location of GTS data. This would address SOT III (action IV 1.3.1.5) which highlighted that XBT data is captured and is not reported by operators for the UOT review program.
    b. Automatically generating other metadata based on Operator: eg preset values for each operator within the year for Name of real time telecommunication system (e.g. Argos, Inmarsat..), Instrument type (Common Code Table C 3), Recorder type (Common Code Table C 4), Fall rate equation coefficients, coefficient a, Fall rate equation coefficients, coefficient b, Software version (we will standardise later) plus non-mandatory fields.

Examples of how to improve efficiency will be presented at the meeting.