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JOINT WMO/IOC TECHNICAL COMMISSION FOR
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(JCOMM)

SHIP OBSERVATIONS TEAM (SOT)

SEVENTH SESSION

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ITEM: 8.3

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INTERACTION WITH OTHER PROGRAMMES OR PROJECTS

(Submitted by Gustavo Goni)

Summary and purpose of the document

This document provides information on interactions with other programmes or projects, and in particular concerning pCO₂ systems, and the Thermosalinograph (TSG) network.

ACTION PROPOSED

The Team will review the information contained in this report, and comment and make decisions or recommendations as appropriate. See part A for the details of recommended actions.

- A - DRAFT TEXT FOR INCLUSION IN THE FINAL REPORT**8.3.1 Thermosalinograph Network**

8.3.1.1 The Panel recalled that the SOOP coordinates the implementation of additional oceanographic observations with ship-of-opportunity, including thermosalinograph (TSG) operations. TSG data is distributed under Global Ocean Surface Underway Data (GOSUD) Project (GOSUD) and Shipboard Automated Meteorological and Oceanographic System (SAMOS) standards. The direct use of TSG data in models and in science applications is being evaluated. The greatest barrier for use of TSG data is the lack of calibration of some instruments against bottle data, which may reduce its accuracy. Many TSG instruments are associated with pCO₂ underway measurements.

8.3.1.2 TSG data are distributed mainly through GOSUD and the U.S. National Oceanographic Data Center (NODC). TSG data are also distributed as TRACKOB¹ messages to the Global Telecommunication System (GTS).

8.3.1.3 The Panel noted that the number of ships contributing data to GOSUD has increased during the last 12 years from less than 15 ships to about 86 ships in average during 2011 and 2012. NOAA contributes to these data transmissions with 7 ships of the SOOP and 10 ships of the NOAA fleet. TSG from ships of the SOOP operated by NOAA collect and transmit the TSG data using AMVERSEAS².

8.3.1.4. The meeting made the following recommendations:

- (i) To recognize the importance of regular complementary bottle data for absolute calibration of TSG salinity data;
- (ii) To promote the use of TSG data for sea surface salinity applications, in support of satellite missions; and
- (iii) To encourage the development, testing, and implementation of new technologies for measuring parameters underway or in the water-column, as well as new development for data transmission.

7. The meeting decided on the following action items:

- (i) To increase the number of bottle samples for direct comparison and calibration (**action; SOOP members; SOT-8**);
- (ii) If budget allows, to increase the number of ship collecting TSG data (**action; SOOP members; SOT-8**); and
- (iii) To support scientific programs and projects that require TSG observations, such as satellite missions and observational projects (e.g. SPURS³, pCO₂, ...) (**action; SOOP members; SOT-8**).

8.3.2 pCO₂ systems

8.3.2.1 The Panel noted that TSG observations are very often carried in support of the pCO₂ operations to provide critical information to determine frontal regions and mixed layer depths for ocean acidification assessments and pCO₂ inventories.

Appendix: None

¹ FM 62–VIII Ext. TRACKOB: Report of marine surface observation along a ship's track

² AMVER: Automated Mutual-Assistance Vessel Rescue System - <http://www.amver.com/>; SEAS: Ship Environmental Acquisition System

³ Salinity Processes in the Upper Ocean Regional Study