SOLAS

Data Management Discussion—Has your SSC discussed and considered the recommendations of the data management meeting? If so, will the recommendations be implemented?
The SOLAS SSC discussed and approved the recommendations of the Liverpool data management meeting. These are, however, unlikely to be implemented in full in the near future. Although we do have a data management task team, which will meet and write the SOLAS data management policy this year, implementation of this will have to wait until we have funding for a data manger.

GOOS Discussion--Please provide any information from your project documents that specifies project plans to interact with GOOS and describe any interaction your SSC or IPO has had with GOOS activities. Have SSC members attended GOOS Steering Committee, OOPC, or COOP meetings? If so, what was their role at the meeting? Has your SSC discussed what is, or will be, available from GOOS and other observing systems? Has your SSC identified any specific observations to which your scientists would like access? Have you ever had a presentation about GOOS at an SSC meeting? What research observation systems would your project like to see become operational?
The SOLAS SSC has had very little contact with GOOS. One key area where we will need to work with GOOS is in atmospheric and seawater pCO_2 measurements. Plans for a global pCO_2 observing system are developing outside of SOLAS, but the more process-orientated research that SOLAS is interested in is vital to the effective design and implementation of such a system.

Southern Ocean Research--What activities has your project undertaken or planned for the Southern Ocean? Have you coordinated your Southern Ocean research with other projects?
SOLAS has done little on this topic to date. We would however like to make several contributions to the IPY (see below).

Do you have any special plans for the 3rd International Polar Year in 2007?
SOLAS and the IPY (a letter to the IPY Planning group)

SOLAS (The Surface Ocean - Lower Atmosphere Study, of IGBP, SCOR, WCRP and CACGP) strongly supports OASIS (The Ocean-Atmosphere-Sea Ice-Snowpack Interactions Program) and AICI (Air-Ice Chemical Interactions Task) as part of IPY activities. They are both component parts of SOLAS and would be important contributions to the IPY. They have already been submitted as potential activities for the IPY.
We would also like to propose that plans are made for an 'armada' of ships to collect pCO2 data in the Southern Ocean

during the IPY, both above and below the air-sea interface. The many ships that will be transiting to and from Antarctica during this period provide a rare opportunity to take a snapshot of the state of the carbon cycle in the Southern Ocean. A small investment in measurement equipment and alteration of cruise tracks could have a disproportionately large payoff in terms of a valuable and rare data set. We note several similar suggestions in the appendix to the IPY Outline Science Plan.
The Southern Ocean is shown as a large sink region for atmospheric CO2 in the most comprehensive climatology of net air-sea CO2 fluxes (Takahashi, 2002). However little is known about the interannual variability of this flux, mainly due to the paucity of data in the Austral winter. Longitudinal variation are also not well resolved. These factors combine to produce large uncertainty in the magnitude and even direction of the flux in current ocean carbon cycle models (see OCMIP-2). Without more data to constrain present day models, we can have little confidence in our ability to predict the effects of global change on this crucial component of the carbon cycle.
SOLAS, specifically its Implementation Group 3, has a strong interest in this issue and would be an enthusiastic partner in this effort.

Time-Series Stations—Will implementation of your project require observations from time-series stations? In what locations? How will such stations be supported?
The SOLAS Implementation Plans that are currently being prepared call for several time-series stations. These include:
Flux measurements (probably from towers) in high windspeed locations.
Direct flux measurements (of physical fluxes, CO_2) in coastal seas.
Biogeochemical observations in high latitudes.

The UK SOLAS project is developing plans for a monitoring station on the Cape Verde Islands, to complement ongoing German research there. It would be funded by UK SOLAS (a 5-year NERC directed programme) and would include atmospheric trace gas and particle measurements from a station on the island and possibly, the deployment of air-sea flux buoys upwind of the island (ASIS-type buoy).

Canadian SOLAS has a long term mooring at Station P, measuring biogeochemical and physical parameters including pCO_2, O_2, N_2, rain, windspeed and bubble spectra. This is funded for 3 years.

Environmental Assessments—Has your project been asked by any of the global assessment organizations for data, model results, and/or expert advice?

Only tangentially. We have been asked for emission data for some of the compounds covered by the Montreal protocol (and further agreements) and climate relevant compounds. We will work with GEIA in developing these.