5 February 2013 Final

First(Kickoff) IGAS SAB Meeting, Jena, 29.1.2013

Present: Leonard Barrie (chair), James Butler, Toshinobu Machida, Andreas Volz-Thomas
Excused: Mette Mueller

Key points:

1) Leonard Barrie kindly agreed to chair the Scientific Advisory Board (SAB).

2) The SAB welcomed IGAS as a timely and well-structured project that has a very large potential to significantly enhance the operational aspects, the instrumental capabilities, and the documented data quality of IAGOS.

3) A large part of the discussion was about the strategy and requirement for real time data provision. It is the SAB's understanding that real time (within six hours) delivery of IAGOS data is mainly driven by the requirement to validate and evaluate the Copernicus (formerly GMES) service to be delivered by the ongoing MACC-2 project. It assumed that a broader group of users, including the global weather and environmental forecast/warning research and operations community, also have need of such rapid delivery. In the long term with a full fleet of twenty aircraft and developments in data assimilation, the observations will be actively assimilated in producing the Copernicus service. The SAB felt that it was important to address the following questions concerning real time delivery of IAGOS data from a cost-benefit perspective:
    i) Is there a pressing need for MACC-2 to get the data in real time when assimilation is not yet feasible and not likely to be feasible for a long time and the data are just needed for model validation? Would evaluation and validation be just as effective if the data were delivered after the flight lands?
    ii) If indeed real time (0-6 h) data delivery is needed. What is the benefit of RTTU in air data delivery versus GSM data transmission after the flight? GSM could deliver the descent profiles with little delay compared to RTTU (within 1-2 h) and about half the flight within 6h (i.e. 1 hour descent and five hours cruising level observations) at little or no additional costs.
    iii) Why are we targeting real time delivery of profiles only? Are observations at cruise level delivered rapidly not valuable as well?
    iv) Is there a real possibility that sometime in the next few years, aircraft internet connections will be made available replacing the need for costly expenditures for RTTU installation?

4) In WP2, the considerable effort to develop tools for users needs to be balanced by documented consultation with users and implementation of effective delivery of such tools.

5) Do IAGOS/IGAS data have clearly defined data levels (L0, L1…) with audiences (e.g. CONTRAIL, NOAA, WMO-GAW, EEA), targets, and delivery timelines set for each.

6) The SAB suggests that a statement be placed before the WMO Commission on Atmospheric Science (CAS) meeting in Autumn 2013 in Turkey (approximately 120 countries involved) along the lines of "*CAS recognizes the value of the Essential Climate Variables ozone, greenhouse gases, and aerosol properties observed from civil aircraft measurements in advancing understanding and services for climate, weather and environmental risk reduction (EXACT WORDING TO BE DETERMINED).* Jim Butler agreed to bring this forward with help of CAS members especially Oystein Hov Chair CAS Joint Scientific Committee of GAW and Gilbert Brunet Chair CAS Joint Scientific Committee for WWRP.

7) The SAB explored briefly the issue of handling observations in "sensitive" areas. Are there serious risks to in-service aircraft observations of atmospheric composition that require a strategy?