

Report by CAS President*(submitted by Michel Béland)*

Purpose of Document and Major Decision(s) Requested

This document provides a brief report on the President's CAS related activities since the last management group meeting in Oslo, Norway, 24-26 September 2007.

Summary of Activity

Over the last year since September 2007, most of my efforts as CAS President have been devoted to three issues: 1) moving forward the concept of "integrated environmental prediction", or/and "seamless prediction", 2) pushing forward a tighter integration between WCRP, WWRP-THORPEX, and OPAG-EPAC, and between the work of other WMO Commissions, and 3) obtaining final approval by EC LX for the weather modification WMO statement .

On the first issue, at the GEO meeting held in Cape Town in November 2007, the concept was presented under the title "The socio-economic and environmental benefits of a revolution in weather, climate and Earth system analysis and prediction" by Mel Shapiro, and a number of co-authors, including myself. The paper was well received, and some healthy criticisms were offered on how to improve it. Dr Shapiro and myself, with the help of others, developed a time line that would eventually bring members of WMO, and other institutions to support the concept, and contribute to make it a reality over a decade or so. A further related paper, focussing on weather and climate, was developed under the leadership of Dr Gilbert Brunet, Chair of the WWRP: "Toward a Seamless process for the Prediction of Weather and Climate: the advancement of sub-seasonal to seasonal prediction." A process was set up that engaged a number of scientific committees and WMO working groups and advisory committees. This finally culminated in the submission of a resolution to EC LX that requested support by EC-LX of many of the ideas expressed in the GEO Paper, and other related documents, and the setting up of the Executive Council Task Team on Research Aspects of an Enhanced Climate, Weather, Water and Environmental prediction Framework. This task team, chaired by Dr. John Mitchell is to report to EC LXI, on how to move R&D activities coordinated by WMO and other bodies so that eventually this concept can be made into an operational reality for the benefits of WMO members. It will actually have its second meeting following this CAS Management Group meeting. I would like to acknowledge in particular the contributions of Drs. Len Barrie, Ghassem Asrar, David Burridge, and Dave Parsons in making this a success.

On the second issue, which is closely related to the first issue, I encouraged the development by WWRP and WCRP of a so-called white paper that would identify concrete scientific issues where scientists of both communities could benefit from closer collaborations. THORPEX was also encouraged to push ahead with PARC, YOTC and TIGGE, where science (and operational) issues of interests to both climate and weather would be tackled. I also expressed some of these ideas at the recent World Summit on Climate Modelling, and circulated a short piece on a possible future climate modelling operational framework. I have encouraged and pushed for a tighter integration between some atmospheric chemistry activities under OPAG-EPAC, and under the WCRP and WWRP; in particular, the application of variational data assimilation methods (such as in the EU GEMS project, but also in other similar projects in the Americas) to chemical space-based (and surface-based) observations offers great promises, not only for a better understanding of the atmospheric changing composition, but also for operational air quality prediction services, and policy making activities related to pollution regulation. Also, through the interactions between the physics and the chemistry of global climate and weather models, there will be important benefits for short, medium and extended range forecasts, as well as climate change scenarios. Another powerful and successful example is the SDS project. Finally, it is still my hope that the SERA working group, will eventually build up its capacity, and be able to reach out and attract the support of the socio-economic scientific community. In that respect, a recent initiative by ICSU, on "A Science Plan for Integrated Research on Disaster Risk", addressing the challenge of natural and human-induced environmental hazards, and where WWRP-THORPEX and WCRP have been explicitly identified, offers some interesting opportunities. Again I would like to acknowledge the leadership and contributions of the chairs of EPAC and WWRP, and as well Drs. Len Barrie, Ghassem Asrar, S. Nickovic and Dave Parsons.

On the third issue, working with Dr A. Mokssit, S. Nickovic, Len Barrie, Jean Pierre Chalon and D. Terreblanche, we have successfully finalized the WMO statement on weather modification, and it was officially endorsed, as is, at the last EC LX meeting in June 208, in Geneva.

I believe this has been a very productive and active year for CAS, and that CAS is now much better positioned to not only benefit from the recent reorganization of WMO, but also influence and optimize it for the future, and for the benefits of the WMO members.