WMO Executive Council 64th Session (EC-64) Summary -- Agenda Item 4.5, Enhanced capabilities of members to contribute to and draw benefits from the global research capacity for weather, climate, water, and the related environmental science and technology development

World Climate Research Programme (WCRP), World Weather Research Programme (WWRP), and Global Atmosphere Watch (GAW)

For the most part, the EC-64 agenda items were non-controversial for the United States. Specific items of interest relative to WWRP and WCRP were the Sand and Dust Storm Warning Advisory and Assessment System (SDS-WAS), where the US intervened to include in the General Summary an EC endorsement of US sponsorship of the Pan American Centre for this activity; the need for coordination between WWRP and WCRP in improving sub-seasonal to seasonal predictions; various laudatory items on the success of THORPEX activities and the potential for leveraging improvement made by THORPEX in other areas; and endorsement of a Polar Prediction Project. WCRP linkages to GFCS were acknowledged and the decision to establish a new WCRP working group on Regional Climate Science and Information (WGRC) was welcomed. Specific items of interest relative to GAW were the recent closure and potential future closure of key long-term monitoring sites around the world, owing to economic constraints; interaction between the WIS system and GAW research institutes; reinforcement of the need for research and information on climate forcing by greenhouse gases, ozone-depleting gases, aerosols, black carbon, and ozone; and the need for more climate research related to (1) agriculture and (2) megacities as they influence and are influenced by climate change.

WCRP-WWRP

Following US intervention, the SDS-WAS center was included in the final EC-64 General Summary with the proposed US text modified by other members to include activities of other such centers. Although the US initially had prepared text for a possible intervention on the role of WWRP in improving sub-seasonal to seasonal predictions, it was decided among US representatives, and eventually agreed to by the US supporting scientists and managers, that the scope and relative contributions of WWRP to this effort were not appropriate for decisions at this level, but should be worked out among experts in weather and climate research, as already intended and identified in Resolution 4.5/2 (EC-64) – Sub-Seasonal to Seasonal Prediction Project, under WCRP. Thus, no intervention was made. Specific areas where THORPEX accomplishments could be put to use were noted by the EC, including contributions to severe weather forecast demonstration projects, the new sub-seasonal to seasonal prediction project with WCRP, disaster risk research, nowcasting research, mesoscale forecasting research, polar predictions, and a summer school for delivering advancements to operational practices. Contributions from THORPEX will be highlighted at the WWRP/THORPEX
Open Science Conference scheduled for 2014. Finally, EC approved the establishment of a polar prediction project with strong links to the WCRP polar climate predictability initiative and urged members to consider hosting a project office and make voluntary contributions to a trust fund to implement the project. While supporting this effort, the US has no plans to offer up an office, nor, at this time, to contribute to a trust fund. The US position on trust funds currently is that we would rather see these kinds of activities funded through the WMO general budget.

**GAW**

Relative to GAW activities, the EC requested members to support tasks in the GAW Strategic Plan Addendum, to continue their long-term series’ of measurements, and to establish new stations in data-sparse regions. This support by the EC highlights an emerging issue of concern, not just to GAW, but to the research communities of WCRP and WWRP as well, that good climate research and the services that ultimately emanate from that research (e.g., GFCS) depend heavily upon sustained, high-quality observations. Many of these sites have been threatened by recent reductions in support in several countries around the world. The US is a major contributor to these observing systems, be they ground-based, in-situ, or satellite. The EC further requested GAW and the agricultural sector to form closer ties, to which the US noted two programs within USDA that could be brought to bear, and for NMS’s to provide GAW research institutes access to WIS and vice versa. Finally, the EC requested members to consider hosting a facility to deal with Megacity issues and to donate funding to the newly established Megacity-GURME Trust Fund. Again, while the US supports this effort, we do not currently plan to donate to the trust fund.

**Issues Requiring Further Attention**

Looking to the future and in support of the actions taken at EC-64, the US needs to keep an eye on the productivity and value of the SDS-WAS center at Orange Coast College; support and monitor the collaboration between weather and climate research in improving sub-seasonal to seasonal predictions; find ways to ensure continued observations of atmospheric composition at US sites and at sites operated by partnering members of WMO; and continue or enhance research and observing activities in the arctic. It also might be of value for the US to consider initiating a dialog within WMO regarding the use, benefits, and consequences of funding components of WMO research through trust funds. While such activities provide opportunities for certain nations or groups of nations to enhance funding in areas of regional or specific interest, they also have the potential to become unwieldy and disrupt WMO planning and budgeting processes. It might be beneficial for WMO to have a stated policy that could ensure the benefits and limit the risks of such funding mechanisms. Such a policy may ultimately lead to better and swifter research enhancements and enhanced and sustained delivery of weather and climate services.