INTERNATIONAL FRAMEWORK FOR CLIMATE-RELATED TERRESTRIAL OBSERVATIONS

by Josef Cihlar, Reuben Sessa and John Latham

NEED FOR GLOBAL HARMONIZED DATA

The GCOS Second Adequacy Report noted that the many difficulties encountered in regards to terrestrial observations, including the lack of homogeneous observations, could be resolved by the creation of an intergovernmental technical commission for terrestrial observations, similar to those that exist for the Atmospheric and Oceanic domains. Such a body would prepare guidance materials; establish common standards for observations and data management; and would seek hosts for International Data Centres that would deal with the Essential Climate Variables (ECVs).

SUPPORTING THE REQUIREMENTS OF THE UNFCCC

It is evident that such a framework mechanism is vital for generating the tools, methodologies, data, information and support required by the UNFCCC in meeting its long-term objective to stabilize greenhouse gas concentrations in the atmosphere, and for assisting member countries in meeting their needs when confronting the effects of climate change. Realizing the need for the development of appropriate policies to deal with climate change and based upon the GCOS Implementation Plan, the Conference of Parties in its 9th Session invited GTOS and its Sponsors *"to develop a framework for the preparation of guidance materials, standards and reporting guidelines for terrestrial observing systems for climate, and associated data and products".* At the 23rd Session of SBSTA/COP in Montreal, November 2005, progress reports were submitted by GTOS, and SBSTA welcomed the efforts and asked that the work be continued.

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ESSENTIAL REQUIREMENTS OF A TERRESTRIAL FRAMEWORK

GTOS has examined existing mechanisms employed by intergovernmental or international organizations for similar purposes, including those of its Sponsors (FAO, ICSU, UNEP, UNESCO and WMO), as well as other mechanisms such as those used by the International Organization for Standardization (ISO). The desired framework is one which: serves a multi-purpose role, with an initial focus on terrestrial climate variables; follows an existing successful model if possible; facilitates inputs by users and producers of observational data; and is broadly acceptable and adopted by countries. In addition, the framework should: act as an international coordination mechanism; generate international scientific and technical consensus; accommodate satellite as well as *in situ* observations; be flexible to meet new observational requirements; be able to attract extra-budgetary resources; and — most importantly — ensure national endorsement and implementation.

FRAMEWORK OPTIONS

Based on the above criteria, three candidate framework mechanisms have been identified.

- Option A (intergovernmental): A "Terrestrial Joint Commission" would be established as a subsidiary body of intergovernmental organizations that deal specifically with primary observations.

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- Option B (ISO): A "Terrestrial Committee" would adapt the approach used by the ISO to establish international standards. A new group (Technical Committee, subcommittee or new working group) would be formed in agreement with the ISO Technical Management Board (TMB) and the entity coordinating the work.
- Option C (international): This option refers to other organizational frameworks that could achieve the results desired by the COP. For example, the UNFCCC COP could decide to extend the mandate of the Intergovernmental Panel on Climate Change (IPCC).

SELECTION OF THE PREFERRED OPTION

To allow stakeholders to evaluate the different framework options, the advantages and disadvantages of each have been identified in terms of: (i) their characteristics; (ii) costs of establishment and operation; (iii) required approval and adoption of the resulting products; (iv) the likely suitability for the tasks identified; (v) the likelihood of meeting the required criteria; and (vi) the critical challenges involved in implementing each option.

NEXT STEPS

The three options have different strengths and weaknesses but, if implemented appropriately, should satisfy the needed requirements. The selection of a preferred solution requires careful weighing of the specific characteristics of each option, and of the likelihood that its weaknesses will be overcome or mitigated during or after implementation.

After receiving guidance and recommendations from SBSTA at its 27th Session, in Bali, regarding its preferred option, GTOS will collaborate with its partners in developing a final framework proposal. Political, technical and financial support for its implementation will then be required from national governments and international organizations. Due to these additional discussions and negotiations, the final form of the selected framework may differ from the above outlined options.

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