**Perspectives of CAgM for WIGOS implementation**

by Byong Lee, CAgM President, March 22, 2013

1. CAgM has benefited from diverse observations on weather, climate and water, which have been coordinated and sponsored by WMO, in facilitating service enhancement in the field of agricultural meteorology. Meanwhile, CAgM believed that WMO should place additional efforts to strengthen existing observation systems and to incorporate newly emerging observation elements/requirements like soil moisture, particularly to enhance supporting services for better climate change monitoring,, inter alia, phenology, GHG fluxes. All these elements are very critical in terms of climate change monitoring for better mitigation and adaption through the enhancements of gap-filling of legacy observing system, especially as a way of contribution to LDAS by providing ground truth information to RS application and development for its calibration and validation as well.

2. WIGOS is emerging in a timely manner in this sense, and its framework is expected to provide an overarching platform not only for enhancing existing observing systems, but also for triggering the establishment of a national coordinating mechanism as a new governance structure through joint collaborations among institutions/entities. These are associated with domestic agrometeorological observations/services within the Member countries, by facilitating national integration of agrometeorological observation networks over institutions through joint operation/maintenance/governance activities. As a core observation part of GFCS, WIGOS could bring a momentum of accelerated inter-disciplinary collaborations in agrometeorological observation and related services since GFCS should cover other disciplines, especially for sustainable agriculture & global food security issues, beyond weather, climate and water.

3. CAgM also noted that WIGOS will be able to provide valuable outputs to user community via its own WIR, on which CAgM can develop new services that requires near-/real time nowcasting for agrometeorological weather risks/hazards such as frost/hail/torrential/gusts/storms etc. Then, it will be also complementary to upcoming climate services under the GFCS umbrella, with each improving agrometeorological services to the user communities.

4. CAgM suggested that it should be necessary to establish or to supplement another level of an agrometeorological station at the national level over the current three categories of agrometeorological stations – Principal, Ordinary, and Extraordinary stations. According to CAgM guide. These stations should be capable of accommodating new agrometeorological elements, including soil moisture, phenology and GHG flux together with important ground truth information such as radiation reflectance corresponding to available RS could be tentatively named as Core Agrometeorological Reference Station (CARS). It should also secure wide fetch on target area with homogeneous land surface, diverse vegetation types including routine managements of staple crops, specific plants/trees for climate indicators, jointly with national authorities in charge of those biomes. (Joint National Center for AgroMeteorology as coordination governance among institutions at national level. – case of NCAM of Korea by KMA/KFS/RDA/SNU)

5. With regard to external collaborations for WIGOS implementation CAgM has been working on a mechanism of communication channels with potential partners/sponsors, inter alia, FAO (GTOS), GEOSS (GEO-GLAM), UNCCD, GWP(IDMP), NASA(NEX), ESRI(GIS-Online), ISBM(CP) so far. There has been some progress made in establishing new communications with these partner/sponsor institutions, but merely limited to case by case discussions/collaborations. In order to facilitate future cooperation/collaboration between entities, CAgM is considering adding an Observation Theme to its structure.

6. As an effort to meet all these emerging/pending requirements in terms of WIGOS implementation to CAgM, CAgM is considering restructuring its management group and OPAG into an OPAME structure at the CAgM XVI session in March 2014. This will provide more flexibility in allocating/mobilizing human resources which are currently limited. High level members will be nominated as coordinator for WIGOS implementation within CAgM, hopefully the Vice President of CAgM.

7. In addition, CAgM will try to encourage the next generation agrometeorological experts through Global Center of Excellence in Research and Education in AgroMeteorology (GCREAM) including graduate programmes under the framework of GENRI as a governing hub of Global Initiatives in AgroMeteorology (GIAM of CAgM), but also attracting/mobilizing more scientists from diverse disciplines into the field of agrometeorology through global federation of agrometeorological societies (GFAMS) that will be associated with TECO during CAgM sessions. KMA/NIMR showed its willingness to provide secretariat supports to these global initiatives through a form of international project coordination office (TIGERS), especially as a way of its contribution to successful GFCS implementations at initial stage.

**ACRONYMS**

ESRI : Arc-GIS S/W company

GENRI : Global Environment and Natural Resource Institute, George Mason University, USA

GMU : George Mason University, Fairfax, Virginia, USA

KMA/KFS/RDA/SNU : Korea Meteorological Administration, Korea Forest Service, Rural Development Administration, Seoul National University, respectively.

NEX : NASA data Exchange program

NIMR : National Institute of Meteorological Research of KMA

OPAG : Open Panel of Area Group / current CAgM structure

OPAME : Open Panel of AgroMeteorological Expert / proposed CAgM structure (proposed)

TECO : Technical Conference / convened prior to or in parallel with TC sessions

TIGERS : Trans-disciplinary Implementation Governance for Environment and Resource Sustainability