

IAF EARTH OBSERVATION SYMPOSIUM (B1)
International Cooperation in Earth Observation Missions (1)

Author: Dr. Werner R. Balogh
World Meteorological Organization (WMO), Switzerland, wbalogh@wmo.int

IMPLEMENTATION AND EVOLUTION OF THE SPACE-BASED COMPONENT OF THE WMO
INTEGRATED GLOBAL OBSERVING SYSTEM**Abstract**

The World Meteorological Organization (WMO) is the United Nations systems authoritative voice on weather, water, climate and related environmental services. The space-related activities of WMO originated from discussions within the United Nations General Assembly and the Committee on the Peaceful Uses of Outer Space in response to a proposal made by United States President John F. Kennedy in 1961, to launch “cooperative efforts between all the nations in weather prediction and eventually in weather control”. In 1963, just two years later, this led to the establishment of the World Weather Watch (WWW) and its Global Observing System (GOS). Presently, WMO and its members are working on extending the successes of the World Weather Watch to a wide-range of environmental application areas, including climate monitoring, hydrology, ocean applications, atmospheric observations and space weather, by evolving the Global Observing System into the WMO Integrated Global Observing System (WIGOS). WIGOS integrates surface- and space-based observing system components. Its design is informed by a systematic process called the “Rolling Review of Requirements” (RRR) which gathers observing system requirements from the users of the application areas. The technology-free observing requirements are then stored in a database and matched against the existing surface and space-based observing system capabilities to help identify gaps and to provide guidance on how to close them. Several next-generation meteorological satellites have been launched by WMO members over the recent years and are now operationally deployed as part of the space-based component of WIGOS. Data and products are made available under open data policies to all WMO members who are also provided with receiving equipment and training, as one of the best examples of international space cooperation and of the sharing of space benefits. WMO together with the Coordination Group for Meteorological Satellites (CGMS) and with the Committee on Earth Observation Satellites (CEOS) is working on the further development of the space-based observing system with the aim to implement future observing system requirements in line with the Vision for WIGOS in 2040.