

Statement to the United Nations Framework Convention on Climate Change (UNFCCC) Conference of the Parties (COP) 14, Poznan, Poland, December 2008 delivered by Thailand, as the incoming Chair of CEOS, on behalf of the Parties supporting Earth Observation from Space.

Mr. Chairman, the Conference of the Parties (COP) of the U.N. Framework Convention on Climate Change (UNFCCC), by its decision 5/CP.10, in December 2004, invited Parties that support space agencies involved in global observations to request these agencies to provide a coordinated response to the needs expressed in the Global Climate Observing System (GCOS) implementation plan. The Subsidiary Body for Scientific and Technological Advice (SBSTA) at its twenty-third session (FCCC/SBSTA/2005/10, para. 92) welcomed and accepted the offer from the Committee on Earth Observation Satellites (CEOS), on behalf of the Parties supporting space agencies involved in global observations, to provide a detailed report to the SBSTA, at its twenty-fifth session (November 2006), on a coordinated response to the needs expressed in the GCOS implementation plan. The report (FCCC/SBSTA/2006/MISC.14) submitted by the United States of America on behalf of CEOS provided a response regarding the adequacy of past, present, and future satellite measurements in support of GCOS. It specifically responded to the UNFCCC needs for satellite observations as detailed in the GCOS Implementation Plan (IP). The report developed a CEOS climate action plan to provide governments throughout the world with the satellite-based climate information needed to help make informed decisions concerning responses to global climate change. The plan identifies 59 specific actions covering satellite observations of the atmosphere, oceans, and land surface, as well as a number of cross-cutting actions. The SBSTA subsequently invited CEOS to provide an updated progress report at its 29th session in December 2008.

Thailand, as Chair of CEOS, is pleased to introduce the progress report, on behalf of Parties that support space agencies involved in global observations.

Progress: The progress report, “**Coordinated Response from Space Agencies Involved in Global Observations to the Needs Expressed in the Global Climate Observing System (GCOS) Implementation Plan: Update on Climate Actions,**” outlines the importance of Earth observing satellites for determining the rate of climate change and for understanding, prediction, and attribution of causes of climate change. Both satellite observations – provided by the space-faring nations - and in situ measurements – supplied by all the countries of the world - are necessary to better monitor, characterize, and predict changes in the Earth system. While in situ measurements are essential and provide more direct and accurate information, Earth-observation satellites are the only realistic means to obtain the required global coverage and, with well-calibrated measurements, are an essential contribution to global climate observations.

The report describes how CEOS Members, working in close coordination with GCOS, established 1st, 2nd and 3rd Priorities within the 59 actions of the CEOS response to the GCOS Implementation Plan, and how CEOS organized an international effort to address these Actions. It then summarizes the current status of the 20 high priority Climate Actions selected for immediate implementation. Finally, the report concludes with the key accomplishments thus far and future plans.

In the Atmospheric Domain, CEOS agencies are improving information on clouds, precipitation, Earth Radiation Budget, Solar Irradiance, ozone profiles, and aerosols. Planning, led by Japan (JAXA) and the United States (NASA), has started on an international **Precipitation Constellation** of satellites, which will include both radar and passive microwave components. The United States (NOAA, NASA, DOD) has developed plans for flying key climate sensors – Clouds and the Earth's Radiant Energy System (CERES), Total Solar Irradiance Sensor (TSIS), Ozone Mapper and Profiler Suite –Limb (OMPS-Limb), and the Aerosol Polarimetry Sensor (APS). The United States (NASA) and the United Kingdom (NPL) have initiated planning of a satellite mission to obtain highly accurate benchmark measurements of the

Earth's reflectance and emission spectra to detect the slow changes in climate and serve as an orbiting calibration observatory for calibrating other earth observing satellite sensors.

In the Ocean Domain, CEOS agencies are generating more accurate climate data records for sea ice, sea level, and sea surface temperature. The Europe (EUMETSAT) and the United States (NOAA) are leading a CEOS team to establish the basis for an **Ocean Surface Topography Constellation** that could lead to operational sea level measurements. To ensure continuity with the Jason-2 (launched in June 2008) sea level measurements, Europe (EUMETSAT), the U.S. (NOAA), and France (CNES) have confirmed commitments on Jason-3 for 2013-2014. Europe (ESA) will use its Soil Moisture and Ocean Salinity Mission (SMOS) observations to monitor thin sea ice.

In the Terrestrial Domain, CEOS agencies are evaluating approaches to filling the current Landsat-class data gap and developing a **Land-Surface Imaging Constellation**, led by the United States (U.S. Geological Survey) and India (ISRO). CEOS agencies are also reprocessing the 30 year AVHRR data record. By using better satellite intercalibration methods, a more stable time series of AVHRR radiance measurements will be obtained leading to improved time series of land Essential Climate Variables (ECVs), including changes in vegetation and land cover.

The high priority Cross-Cutting actions are focused on improving international coordination mechanisms for space-based climate observations, developing and maintaining on-going working relationships with the Group on Earth Observations (GEO) and its Global Earth Observation System of Systems (GEOSS) as well as GCOS, assuring adherence to GCOS Climate Monitoring Principles, and improving the accuracy and intercomparability of satellite observations of the Earth. These actions have already led to the initiation of the **CEOS Plan for Virtual Constellations** in support of GEOSS, including co-leading appropriate climate-related GEOSS actions such as those addressing forest mapping and carbon tracking.

Much attention has been placed on issues of data access for all countries. In the past year, Brazil and China launched a new service that would make data of Africa from their CBERS satellite available free of charge to end-users throughout Africa. In addition, the United States agreed to make its 35 year archive of Landsat data available electronically on line at no charge.

The report emphasizes the importance of space observations for measuring changes in the climate system on a global basis. We are continuing to work with our observing system partners to provide these measurements, which we hope will provide governments throughout the world with information essential to developing mitigation and adaptation strategies. In addition, CEOS will, with GCOS and GEO, continue to strengthen this extremely productive communication and cooperation.

Thank you.