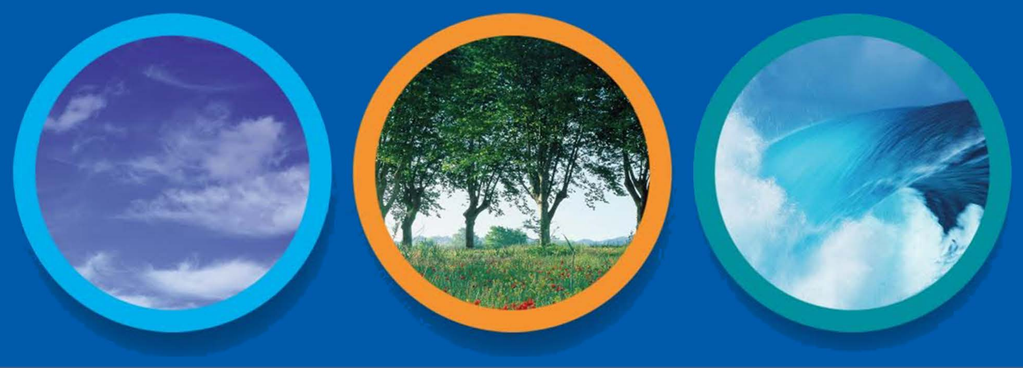
GCOS

GLOBAL CLIMATE OBSERVING SYSTEM



# Capacity Development - GCOS Cooperation Mechanism

## Practical support for Parties to improve their observations through equipment, people and communications.

The GCOS Cooperation Mechanism (GCM) was established to identify and make the most effective use of resources available for improving climate observing systems in developing countries, particularly to enable them to collect, exchange, and utilize data on a continuing basis in pursuance of the UNFCCC. In recent years, several countries have provided funds and participated on the Donor Board. The GCOS sponsors (WMO, IOC, UNEP, and ICSU) are seeking additional countries willing to participate towards the goal of improved climate observing networks in developing countries.

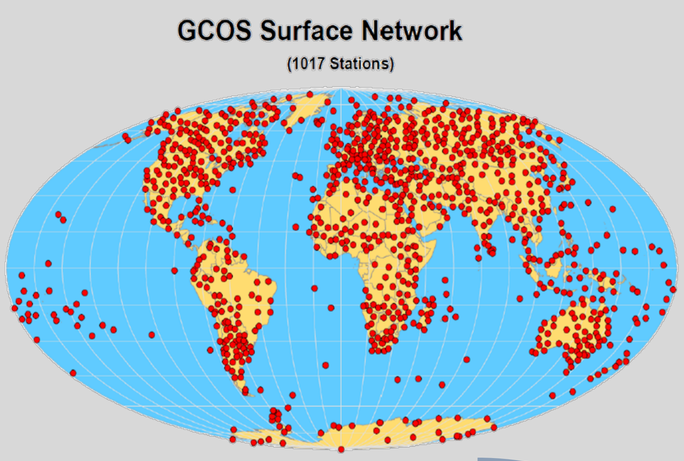
Since 2005, the GCM has received and distributed over 3 million USD in support of the GCOS networks, primarily in the atmospheric domain through the GCOS Surface Network (GSN) and GCOS Upper-Air Network (GUAN). As is evident from the examples below, the support provided has been wide-ranging and covers all aspects of the observing system life-cycle.

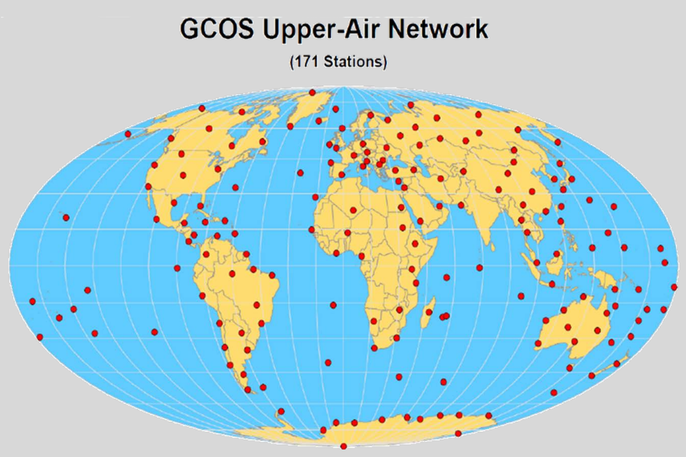
## CONSULTATION AND REQUIREMENTS

The GCOS Implementation Manager plays an important role in managing the GCM and providing a link between the sponsors and the recipients. Consultation and climate requirements are key to the decision process, not only for defining priority areas/activities but also for promoting a clear and consistent message about the importance of the GCOS networks.


## DESIGN AND PLANNING

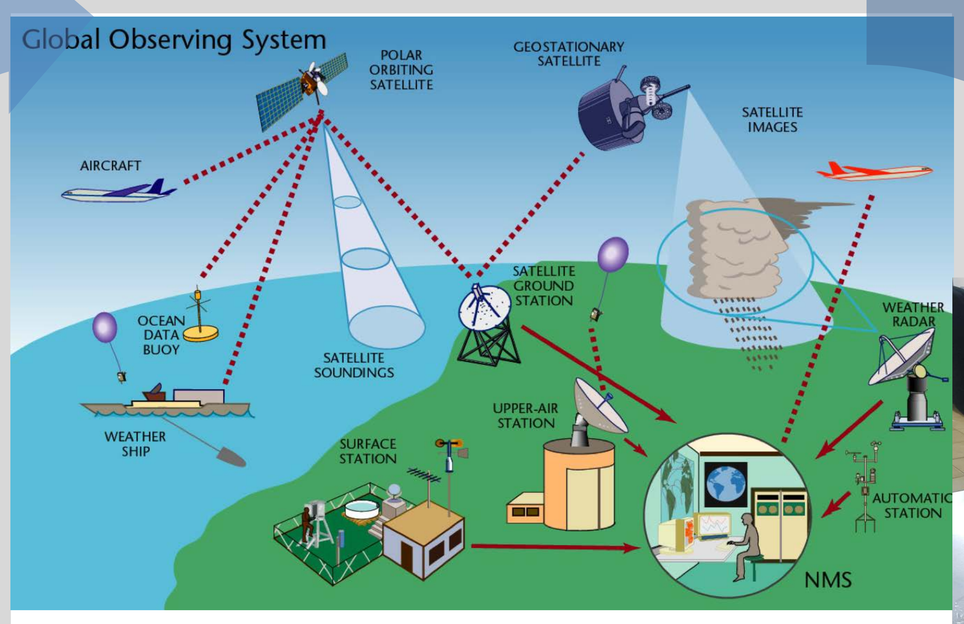
Surface and upper-air networks designed to meet the minimum climate requirements are actively managed and used to identify priority areas for GCM support.




## CAPACITY DEVELOPEMENT

All GCM projects and work include an element of capacity development, through meetings, workshops or direct manufacturer/expert engagement at the observing station. For example in Windhoek, Namibia (2007), a radiosonde training workshop took place for Region 1, attended by 30 participants, representing 19 African countries. Training covered all aspects of radiosonde operations, data monitoring and the user benefits of high-quality upper-air data.




## OBSERVING SYSTEM LIFE CYCLE

## IMPLEMENTATION

Nairobi, Kenya (2016) – New radiosonde ground equipment installed and operational as a component of a two-year supply of consumables.

## REVIEW

The performance of the GCOS networks are monitored on a regular basis and reported back to the observational panels and other WMO bodies. This ensures that the networks remain 'fit for purpose' and that their owners are aware of and understand their responsibility.

AOPC Atmospheric Observation Panel for Climate GCOS • WCRP

OOPC Ocean Observations Panel for Climate GCOS • GOOS • WCRP

TOPC Terrestrial Observation Panel for Climate GCOS • GTOS • WCRP

## QUALITY MANAGEMENT

Bi-annual workshop for the CBS lead centers for GCOS, supported by GCM. The primary aim of the workshop is quality management training, focusing on network monitoring, fault diagnostics, communication and data benefits.

## DATA ROUTING AND STORAGE

The international exchange of observations is fundamental requirement to ensure the full benefit of the data. In Zambia (2012) a GCOS project helped improve the national data communications so that more surface observations were made available on the GTS. (Below) Demonstration on sending observations by SMS using the GSM Desktop Phone at Kabwe Station.

## OPERATIONS AND MAINTENANCE

Madagascar (2012) – Project to install Automatic Weather Stations (AWS) at 11 existing climate sites, including procurement, installation, management of network and use of data.

(Below) Training local engineers in the configuration and maintenance of the equipment.


And it doesn't stop here! There is an ongoing and increasing need for support to the climate observing networks. We need a greater focus on sustainable, multi-purpose observations at the national level, covering all the Essential Climate Variables.