

Report of the GCOS Implementation Project Manager

(Submitted by R. Thigpen)

Summary and Purpose of Document

This document presents an overview and status report by the GCOS Implementation Project Manager of recent initiatives to revitalize the GCOS upper air and surface networks and to improve the overall performance of these important baseline networks. These initiatives include direct renovation projects, Regional Technical Support Projects, the activities of the CBS Lead Centers for GCOS Data, and various training workshops. The document will also review funding and plans for the next round of renovation projects.

ACTION PROPOSED

The meeting is invited to note the information contained in this document for discussion under Agenda Item 4.8.

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GUAN Revitalization Projects:

Overall funding for renovation projects was somewhat higher than last year as contributions from the US increased slightly and additional contributions came from other members. Prices for some items, such as hydrogen generators increased substantially and procurement staff shortages at WMO delayed some projects. Some progress was still made in important areas.

Radiosondes were supplied to Vacoas, Mauritius and to Yerevan, Armenia and generators were provided to Mahe, Seychelles; Niamey, Niger; and Abidjan, Cote d'Ivoire.

The GUAN station at Lima, Peru was visited by the equipment supplier where an equipment upgrade was performed. This station is not operated by the Peruvian Met Service and internal bureaucracy has slowed our efforts to revive the station. A letter, drafted by GCOS and signed by the Secretary-General of WMO, has been sent to the permanent representative asking them to revive this important station but so far little real progress has resulted.

Generator problems continue to plague the operation at some stations with notably long outages at Dar es Salaam, Tanzania; Gan, Maldives; and Ivato, Madagascar.

One of the biggest initiatives taken this year was the GUAN Upper Air workshop held in Windhoek, Namibia. All 18 African GUAN stations were represented and several equipment suppliers participated. The workshop was organized by WWW/GCOS/CIMO and covered all aspects of upper air sounding including the safe handling of hydrogen and proper balloon inflation techniques. The basic workshop was taught by the team from the UK Met Office lead by Dr. John Nash. The vendors set up three ground stations and flights were made with multiple radiosondes so that students were shown the same radiosondes that they used at their home station. Performance reports were used to show the results of flights. The workshop was funded by the Met Service of the Netherlands, KNMI.

GSN Revitalization Projects:

The second phase of the renovation of the observatory at Bjelasnica, Bosnia and Herzegovina, the renovation of the interior, was nearly completed. The exterior of the building was replaced last year with modern, insulated aluminium siding to seal the building. Both phases of the work was done by a local construction company on contracts awarded directly by the WMO. This year the second phase, the renovation of the interior was placed under contract. Most of the work was completed before winter brought a halt to construction. The interior work will be completed in early spring 2008. A high performance ultrasonic wind sensor has been provided. This unit is supposed to be "ice free" and has a very high upper range of wind measurement of 75 meters/second. This high performance is needed because of the conditions at this mountain top location. The renovation of the building was funded by the US while the wind instrument was funded by Germany

Regional Technical Support Projects (TSP):

Although the TSP in the Caribbean and in Botswana are now completed, the project in the Pacific (PI TSP), hosted by the New Zealand Met Service, continues though bi lateral agreement with the US. This project continues to provide important support to the region

and this year is renovating the surface observing stations in Kiribati with funding provided by Australia.

Funding was received for the establishment of a TSP for the Americas which includes South America, Central America, and Mexico. After an extended process, the contract was competitively awarded to Internet LLC, the company that operated the Caribbean TSP. The contractor has already begun work. This project was originally funded by the US but recently Canada has contributed additional funds.

CBS Lead Centres for GCOS Data:

The full complement of 9 CBS Lead Centers for GCOS was completed and the first coordination meeting/workshop of the full group took place in Iran in November 2007. Only the representatives from Australia and the British Antarctic Survey were unable to attend. The meeting was very successful and is described in document 9, Item 4.6.

GCOS Cooperative Mechanism:

The Netherlands, KNMI, made a major contribution of 1 M € over a five year period for projects in Africa. Additional contributions were received last year from Spain, UK, US, and Germany. This made the overall level of contributions higher than last year but still not sufficient to permit the funding of some of the important larger projects such as the renovation of the GSN stations in Madagascar and the upper air station at Luanda, Angola. Further we need to find a means of continuous operational support to some of the stations, especially upper air stations. Some of the stations that we renovated are now self sufficient but some are not and continue to need support.

Miscellaneous:

No progress has been made this year with the Indian Meteorological Department to initiate upper air flights using improved radiosondes at some of their stations. The Director indicated that they would establish at least one station using improved radiosondes during 2007, but that apparently did not happen.

Last year NCDC discovered a data base containing daily data from 13 East African countries. This data base covers the period from the 1950's until the 1990's for 138 stations, 30 of which are GSN. Through direct contact with the GCOS focal point or the PR, all 13 countries have agreed to release the data so that it can be incorporated into the GSN archive.

Current and Future Projects:

Using funding provided by Spain, the renovation of the GSN stations in Ecuador is planned. Ecuador has 4 GSN stations which have not worked for some time. A survey mission to the stations will precede the actual purchase of equipment.

The renovation of the GSN stations in Angola is planned. This renovation must be preceded by observer training which Mozambique has agreed to provide. The directors of the two Met Services have met to discuss the details of the training and following that replacement instruments will be ordered. This project is funded by KNMI.

Another GUAN upper air observing workshop is planned for February 2008, possibly in India. This is the earliest that the instructor team will be available to conduct another. The workshop would cover as many of the GUAN station in the region as possible. Additional

emphasis will be placed on the support and safety of the hydrogen generators. The workshop will be organized by WWW and GCOS and funded by GCOS.

A CLIMAT/CLIMAT TEMP workshop will likely be held in Samoa in October 2008. This workshop will be organized and funded by WCP , Australia BOM, and GCOS.

Some of the renovation projects we would like to complete next year, if funding is received, include:

Renovation of the Luanda, Angola upper air as an additional GUAN station,

Renovation of the GSN stations in Madagascar,

Renovation of the GUAN station at Rarotonga by providing a replacement hydrogen generator,

Establishment of another TSP in Africa,

Establishment of a support contract for hydrogen generators in developing countries