THE GSICS IMPLEMENTATION PLAN
In response to CGMS Action 33.15

NOAA Response to CGMS XXXIII Action 33.15

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1   INTRODUCTION

Action 33.15 CGMS Members to establish a Task Force lead by NESDIS (Mr. Mitch Goldberg) with participation by EUMETSAT (Dr Johannes Schmetz), JMA (Mr. Toshiyuki Kurino), CMA (Academician Xu Jianmin) and assisted by the WMO Space Programme to prepare a draft Implementation Plan

2   The GSICS Implementation Plan

The GSICS Implementation Plan (IP) was completed ahead of schedule and below is the schedule. The GSICS IP was approved by CGMS in May, 2006.

Timetable of Actions to Implement GSICS

Action	Responsibility	Target Date
Submit GSICS Implementation Plan to CGMS heads of delegation for approval.	WMO	4/15/06
Approval of GSICS IP	CGMS	5/15/06
Transmit invitations to CGMS satellite agency members to attend GSICS implementation meeting (at the same time of WMO EC LVII meeting) with the aim to receive commitments for participation and nomination to the GSICS Executive Panel (EP).	WMO	5/15/06
Convene GSICS Executive Panel (establish working groups, terms of reference) and GSICS organizational workshop	WMO	10/11-14/06
Convene GSICS Data Management WG	GSICS	12/1/06
Construct first draft of GSICS Annual Operating Plan	GSICS	2/1/07
Approval of GSICS AOP at second Meeting of GSICS Executive Panel	GSICS	2/15/07
Begin GSICS Initial operations	GCC & GPRCs	4/1/07

The concept and strategy for a Global Space-based Inter-calibration System were submitted by WMO and endorsed by the Coordination Group of Meteorological Satellites (CGMS) at its 33rd meeting (CGMS-XXXIII) held in Tokyo, Japan, on 1-4 November 2005. The goal is to achieve operational inter-calibration of the space component of the World Weather Watch's Global Observing System (WWW's GOS) that addresses the climate, weather forecasting and other environmental needs of WMO Members.

This Implementation Plan describes the components of GSICS, the roles of participating agencies, a timetable for implementing the program, and coordination with other international programs.

The GSICS consists of a GSICS Executive Panel, GSICS Coordination Centre (GCC), and GSICS Processing and Research Centers (GPRCs). GSICS also includes critical calibration support segments (CSS). Some CSS are performed directly by GSICS participating agencies while others are performed by external contributing entities.

The GSICS Executive Panel, chaired by Mitch Goldberg (NESDIS) will be responsible for Monitoring and Evaluation of GSICS and will conduct annual progress reviews of the program. To assist in the coordination, planning and implementation of the research and data management activities of GSICS, the WMO will also form a GSICS Research Working Group and a GSICS Data Working Group.

The GSICS Coordination Centre (GCC) will be co-located in NESDIS Office of Research and Applications. The GCC will coordinate the specifications for collocated data requirements (satellite-to-satellite, satellite-to-reference sites), specifications on collocation criteria, sampling frequency, formats, reporting times, methodology for instrument intercomparisons, and archiving and access of collocated data. The GCC will transmit satellite collocation times and locations to satellite operators, it will receive intercalibration results and reports from satellite agencies and reference sites and will maintain a central archive for the intercalibration collocations. All data will be accessible by the GPRCs.

A GSICS Processing and Research Center (GPRC) will be located at each operational satellite agency. The GPRC will have access to all data collected by the GCC. The GPRCs will conduct instrument calibration and validation activities, which includes pre-launch characterization. Each GPRC will focus on calibration activities based on priorities established by their respective satellite agencies. Inter-satellite calibration will use collocated satellite observations and overlapping satellite records to achieve comparability of sensors on different satellites. Pre-launch characterization and calibration will engage the national standard laboratories of participating countries to insure that pre-launch calibrations are traceable to the accepted international standards. Each GPRC will also support research activities in the framework of the distributed research component of GSICS, coordinated by the GSICS Research Working Group (GRWG)

The GSICS Calibration Support Segments (CSS) will be carried out by participating satellite agencies, national standards laboratories, major NWP centers, and national research laboratories. CSS activities are:

Earth-based reference sites, such as stable desert areas, long-term specially equipped ground sites, and special field campaigns, will be used to monitor satellite instrument performance.
Extra-terrestrial calibration sources, such as the sun, the moon, and the stars, will provide stable calibration targets for on-orbit monitoring of instrument calibration
Model simulations will allow comparisons of radiances computed from NWP analyses of atmospheric conditions with those observed by satellite instruments
Benchmark measurements of the highest accuracy by special satellite and ground-based instruments will help nail down satellite instrument calibrations

WMO, CGMS, satellite agencies, national standards institutes, national data centers, major NWP centers, and national research laboratories will carry out the GSICS.

The WMO will organize a number of implementation planning activities – including obtaining commitment from participating agencies - that will culminate with the first GSICS Annual Operating Plan in March 2007 and the initiation of GSICS operations in April 2007.

Successful implementation of GSICS will result in substantial benefits to the ultimate user communities of operational environmental satellite observations – the weather and climate communities – in the form of more accurate weather forecasts and reliable climate monitoring