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**EXPERT TEAM ON
OBSERVATIONAL DATA REQUIREMENTS AND
REDESIGN OF THE GLOBAL OBSERVING SYSTEM**
Seventh session

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**RELEVANT ACTIVITIES OCCURRING AT THE
WMO CONSULTATIVE MEETINGS ON HIGH-LEVEL POLICY ON
SATELLITE MATTERS, CGMS AND GEO**

(Submitted by the Secretariat)

Summary and Purpose of Document

To inform the Expert Team of relevant activities related to the WMO Consultative Meetings, CGMS and GEO.

Appendix: Res. 13.4/1 (EC-LVI) - Global Earth Observation System of Systems (GEOSS)

DISCUSSION

1. Since the sixth session of the CBS OPAG IOS Expert Team on Observational Data Requirements and Redesign of the GOS (November 2003), there have been several meetings and related activities where decisions relevant to the work of the Expert Team have occurred. The meetings are the fourth session of the WMO Consultative Meetings on High-level Policy on Satellite Matters, and the ad hoc intergovernmental Group on Earth Observations (GEO) and associated Earth Observation Summits (EOS). Pertinent results are summarized in the following sections.

Fourth session of the WMO Consultative Meetings on High-level Policy on Satellite Matters

Establishment of a new CBS OPAG IOS Expert Team on Satellites

2. CM-4 recognized in order to provide institutional constituent body support with appropriate satellite expertise for the various space-based components of observing systems throughout WMO Programmes that CBS consider as a matter of urgency the following restructuring:

- The present Open Programme Area Group on Integrated Observing Systems (OPAG IOS) Expert Team on Satellite Systems Utilization and Products should be renamed the Expert Team on Satellite Utilization and Products (ET-SUP) and maintain its present Terms of Reference;
- A new OPAG IOS Expert Team on Satellite Systems (ET-SAT) should be established that would provide the necessary satellite expertise (both for operational and Research and Development satellites) to ensure an integrated WMO global observing system that would encompass all present observing systems. The Expert Team would be comprised solely of representatives from space agencies contributing to the space-based component of the GOS. The Chairman of the new Expert Team would ensure that a member would be designated to represent the Expert Team to each of the various other WMO Programme expert groups. Representatives from the Expert Team would also serve as regional rapporteurs for the various Implementation and Coordination Teams thus ensuring regional influence reflecting WMO needs as well as those of the space agency. While working within the CBS structure, the new Expert Team would support all WMO Programmes as well as provide for direct feedback through the CBS President to the WMO Consultative Meetings providing overall guidance to the WMO Space Programme. The WMO Space Programme Office would serve as the WMO Secretariat for the new Expert Team as it already did for the present Expert Team on Satellite Systems Utilization and Products. Such a structure would provide the nucleus of satellite expertise towards the integration of the space components described above into a single integrated WMO global observing system.

3. A letter has been sent to the Acting President of CBS seeking his approval of the establishment of the new Expert Team and draft Terms of Reference (TOR) on an interim basis pending its review and confirmation at the forthcoming thirteenth session of the CBS in 2005. In the meantime, the Secretariat has written to space agencies and satellite operators participating in the WMO Consultative Meetings with regard to nominations of experts for membership of the new Expert Team with a view to constituting the new Expert Team. To date, three space agencies have nominated experts for ET-SAT as follows: (ESA - Dr E. Oriol-Pibernat, EUMETSAT - Mr Lorenzo Sarlo, JMA - Mr Yoshiaki Takeuchi). As soon as a sufficient number of experts have been identified, the WMO Space Programme will initiate a first planning meeting. With regard to the proposed restructuring of the CBS Expert Team structure, CM-4 strongly supported the core group of satellite expertise approach.

Towards the space component of an integrated WMO global observing system

4. CM-4 recommended a proposal towards the development of the space component of an integrated WMO global observing system as described in the following nine paragraphs. CM-4 recalled that at earlier Consultative Meetings the space agency representatives had encouraged WMO to move towards a more integrated framework for the space-based components of the observing systems of the various WMO programmes.

5. CM-4 was pleased, therefore, to learn that Cg-XIV had specifically assigned as an overall objective of the WMO Space Programme "To review the space-based components of the various observing systems throughout WMO Programmes and WMO-supported Programmes, e.g., WWW's GOS, AREP's GAW, GCOS, HWR's WHyCOS, JCOMM's Implementation of GOOS, etc., with a view towards the development of an integrated WMO global observing system that would encompass all present observing systems."

6. CM-4 agreed that the development of an 'integrated WMO global observing system' was particularly timely in the context of the initiative now underway, through the ad hoc GEO mechanism to achieve high-level international (intergovernmental and inter-agency) commitment to the implementation, over a ten-year period, of a "comprehensive, coordinated and sustained Earth observation system or systems". An effectively integrated WMO global observing system covering the atmosphere and those aspects of the ocean and land surface that fall within the WMO mandate would go a long way towards providing the nucleus of the more comprehensive earth observation system that is the goal of the GEO initiative.

7. CM-4 recognized that the responsibilities of the Consultative Meetings extended only to the space-based component of such an integrated WMO global observing system. It felt satisfied, however, that, given the long history of effective integration of the surface-based and space-based sub-systems of the WWW GOS, a similar level of coordination and integration between the surface-based and space-based components of an integrated WMO Global Observing System would follow naturally from the WMO Processes.

8. CM-4 considered that the basic architecture of the space-based sub-system of the WWW GOS would extend logically to the space-based sub-system of an integrated WMO global observing system, and it would consist of three constellations and their associated ground segments based on the WWW sub-system of:

- operational meteorological polar orbiting satellites;
- operational meteorological geostationary satellites; and
- environmental Research and Development satellite constellations.

9. CM-4 agreed that the main challenge for WMO in giving effect to the decision of Cg-XIV would be putting in place effective coordination and integration mechanisms across the various WMO observing systems serving the needs of the wide range of user communities represented by the individual programmes in areas such as agriculture, water resources, oceanographic and marine meteorological services, weather prediction and climate research and so on. It considered, however, that this process would be greatly facilitated by the fact that the WMO Space Programme has been constituted not just as a Major WMO Programme but also as a cross-cutting programme with the resulting requirement to take a comprehensive view of the space aspects of all other WMO programmes.

10. While recognizing that the detailed arrangements for cross-programme coordination and integration, including those relating to the staffing of the WMO Space Programme Office for this purpose, had still to be worked out, CM-4 lent its support to the concept of the space-based component of an integrated WMO global observing system composed of the space-based

components of the observing systems of the various WMO and WMO-cosponsored programmes, grouped in terms of the major user communities they serve.

11. Given that, while WMO was responsible for almost all aspects of the observation and information/service provision for the atmosphere, it shared the responsibility for the ocean and land surface (including water resources) with many other international agencies and conscious, in particular, of the cross-cutting nature (ocean atmosphere, ocean and land surface) of the observation needs for natural disaster reduction and climate, the session agreed on the importance of careful and sensitive design of the integrated WMO observing system structure. It welcomed the fact that, in line with its long established role in coordination of the WWW GOS, the WMO Commission for Basic Systems (CBS) had been assigned the responsibility of WMO lead Technical Commission for the WMO Space Programme.

12. CM-4 looked forward, therefore, to CBS development in consultation with all other relevant WMO and co-sponsored bodies, of the space-based component of the integrated WMO global observing system on the basis of *space-based observation components for three earth-system domains and two cross-cutting sets of requirements as follows:

- (1) the atmosphere, including sub-components meeting the needs of:
 - (a) the operational WWW and the various weather, climate and related applications and services based on it, including those of aviation meteorology (articulated through the Commission for Aeronautical Meteorology) and agricultural meteorology (articulated through the Commission for Agricultural Meteorology);
 - (b) weather research such as for the World Weather Research programme as articulated through the Commission for Atmospheric Sciences;
 - (c) atmospheric chemistry, such as for the Global Atmosphere Watch, as articulated through the Commission for Atmospheric Sciences;
- (2) the ocean, to meet the needs of the Global Ocean Observing System (GOOS) and the oceanographic and marine meteorological services and research based on it, as articulated through the joint WMO-IOC Joint Technical Commission on Oceanography and Marine Meteorology (JCOMM);
- (3) the land surface and fresh water, to meet the needs of:
 - (a) the World Hydrological Cycle Observing System (WHyCOS) and the Hydrology and Water Resource Programme (HWR) as articulated through the Commission for Hydrology (CHy),
 - (b) the WMO-co-sponsored Global terrestrial Observing System (GTOS),
 - (c) agricultural meteorology as articulated through CAgM,

* An alternative "sub-system" structure would be:

- (1) Operational meteorology (CBS, CAeM, CAgM)
- (2) Operational Oceanography (JCOMM)
- (3) Operational Hydrology (CHy)
- (4) Atmospheric Research (CAS-AREP)
- (5) Climate (including Climate Research) (GCOS, CCI, WCRP)
- (6) Natural Disaster Reduction

- (4) climate, incremental to, and integrating across, the domain-based observing systems, as coordinated through the Steering Committee for the WMO co-sponsored Global Climate Observing System(GCOS) to meet the needs of:
 - (a) climate research, articulated through the WCRP,
 - (b) climate policy, articulated through the IPCC, SBSTA, COP, etc.,
 - (c) climate monitoring and services, articulated through the Commission for Climatology (CCI), (CAgM), (CHy);
- (5) natural disaster reduction, incremental to, and integrating across, the domain-based observing systems and composed of those space-based instruments and missions providing geophysical and related information needed to support the WMO Natural Disaster Prevention and Mitigation Programme.

13. CM-4 noted that the practical implementation of the proposed integration would pose significant challenges in matrix management but it was confident that WMO and the entire space-based earth observation stakeholder community would benefit from WMO taking a more integrated and coordinated approach.

GEO and EOS

Earth Observation Summit Follow-up

The Ad Hoc Intergovernmental Group on Earth Observations (GEO) Status and Plans

14. Since July 2003, a number of countries and organizations have been working towards the development of a comprehensive, coordinated and sustained Earth observation system or systems covering various sciences, disciplines and related issues facing our planet. This activity has been conducted by the ad hoc intergovernmental Group on Earth Observation (GEO) within which WMO is a participating organization. As of March 2004, there were forty-three countries and the European Commission (GEO members) and twenty-six participating organizations represented in GEO. Within the list of principals representing a country, there are nine WMO Permanent Representatives.

15. WMO Members and the Secretariat have been extremely active in the GEO process. For example, the WMO Bureau at its January 2004 meeting was informed about recent GEO developments. The fourth session of the WMO Consultative Meetings on High-level Policy on Satellite Matters (January 2004) also discussed GEO with regard to spatial activities as did the meeting of the Presidents of Technical Commissions. WMO's efforts in GEO have been guided by two strategic goals: first to make all efforts to strengthen relevant WMO Member national observing systems, as well as national support for them; and secondly to make the most effective contribution to the resulting observing system components within WMO mandate.

16. As of 1 March 2004, there have been three sessions of GEO and one Earth Observation Summit.

The first Earth Observation Summit (EOS-I)

17. The fifty-sixth session of the WMO Executive Council (EC-XLVI) was informed that at the invitation of the United States of America, on 31 July 2003 in Washington DC, thirty-three nations, and the European Commission, joined together at the first Earth Observation Summit (EOS-I) to adopt a Declaration that called for action in strengthening global cooperation on Earth observations. The stated purpose of the Summit was to:

Promote the development of a comprehensive, coordinated, and sustained Earth observation system or systems among governments and the international community to

understand and address global environmental and economic challenges; and begin a process to develop a conceptual framework and implementation plan for building this comprehensive, coordinated, and sustained Earth observation system or systems.

18. To this end, the Summit participants launched an ad hoc Group on Earth Observations (GEO), with the goal of furthering the creation of a comprehensive, coordinated, and sustained Earth observing system or systems. The group, co-chaired by the United States, the European Commission, Japan, and South Africa, and joined by more than 21 international and intergovernmental organizations, began its work by organizing five Sub-Groups, as well as a secretariat to support its activities. In order to promote the development of the now named Global Earth Observing System of Systems (GEOSS), GEO decided that a document describing the GEOSS framework and an associated 10-Year Implementation Plan would be developed.

19. EC-XLIV noted that the document describing the GEOSS framework (referred to as the Framework Document) for the 10-Year Implementation Plan was presented for adoption at the second Earth Observation Summit (EOS-II) attended at the ministerial-level, in Tokyo, Japan on 25 April 2004, and the 10-Year Implementation Plan itself would be presented for adoption at the third Earth Observation Summit (EOS-III) hosted by the European Commission to be held February 2005 in Brussels.

20. Building on these efforts, EC-XLIV noted that the GEO process would:

- cover the full spectrum of *in situ* and remotely sensed (space-based and aircraft) observations;
- provide an opportunity for all nations and international organizations to work together for a common cause, under a commonly agreed approach, framework, and methodology;
- actively involve developing countries in making improved observations within their national territories, and access and use observations made by others;
- provide a means to build on the efforts of these international efforts to assess user requirements, identify gaps in global observations, improve communication among nations and organizations with common interests in similar observation capabilities;
- provide high-level (ministerial) recognition of the universal need for improved Earth observation;
- promote consensus-building among participants about the highest priority observation needs, which are unmet or require significant increase in resources to provide comprehensive solutions.

21. In the long-term, implementation of the 10-Year plan should result in:

- commitment of nations to make more complete long-term collection of high-priority Earth observations;
- filling of the gaps in observing capabilities;
- attention to capacity-building in both developing and developed countries;
- greater interoperability and connectivity among individual component observing systems for improved exchange and appropriate sharing of data and information to commonly agreed standards.

GEO-1 (August 2003)

22. EC-XLIV noted that the first session of GEO (GEO-1) occurred immediately following EOS-I. Following GEO-1, WMO Secretariat personnel were nominated to participate in the work of each of the five Sub-Groups. Furthermore, two Sub-Groups were co-chaired by Permanent Representatives and WMO became one of three entities with Co-Chair responsibilities for the Sub-Group on Architecture.

GEO-2 (November 2003)

23. GEO-1 requested each Sub-Group, with assistance from the GEO Secretariat, to develop a Framework Document for review at GEO-2.

24. GEO-2 met in Baveno, Italy, 28-29 November 2003, reviewed the work of each Sub-Group and made two important decisions relevant to WMO Members.

25. EC-XLIV noted that GEO-2 had agreed with the following recommendation from the Sub-Group on Architecture:

GEOSS should be a system of systems supplemented by new observing components as and where required. This architecture would allow existing individual observing systems, e.g., WMO's WWWW GOS, to remain within their mandates as well as providing for new observing components. The architecture would require a new interface between individual observing components as well as a new component to exchange and disseminate observational data between those components. GEO members and participating organizations would need to agree upon a global interoperability specification to which all individual observing components would adhere. GEOSS would contain the necessary network structure to make available all required observations to satisfy the Data Utilization Model.

A possible high-level functionality that would address the advantages identified in the above discussion while mitigating the disadvantages could be based on the following description.

High-Level Functionality

GEOSS shall be a comprehensive, coordinated, and sustained virtual observing system of systems. It shall address all observations required within the application areas necessary to make informed analyses, products, forecasts and related decisions by members and participating organizations. User observational data requirements shall include all those of the individual component observing systems, e.g., those of WMO, as well as those mutually agreed upon by members and participating organizations.

GEOSS will include the system components required to exchange and disseminate observational data and information as well as the systems required to acquire the observations. GEOSS will provide access to all required observations in order to make informed analyses, products, forecasts and related decisions by members and participating organizations at local, national, regional and global entities. The GEOSS component required to exchange and disseminate observational data and information will provide interoperability between individual component observing systems.

GEOSS shall be a system of systems. For existing individual observing system components, and their associated telecommunications services, their responsibility including technical operations, shall remain with those entities having national, regional and/or intergovernmental ownership, e.g., WMO would maintain responsibility for the

WWW GOS. For required new observing components, GEO members and participating organizations shall establish, or encourage their establishment as appropriate, or find an organizational entity already existing to assume the new responsibility, while following the high level functionality. Each individual component shall provide for the necessary interfaces following an appropriate global interoperability specification to allow full exchange of observations. This would be a new task for WMO to implement for the GOS if the GOS became one of the GEOSS existing systems. The global interoperability specification will be agreed upon and adhered to by all members and participating organizations. The global specification will provide for full interoperability between all individual systems including all necessary metadata and the system component required to exchange and disseminate observational data. Individual components will declare and adhere to their observing standards.

26. EC-XLIV also noted that GEO-2 had agreed that GEOSS should encourage an end-to-end process of transforming data into information. This implied that a World Weather Watch-like structure, including telecommunication and data processing should be developed for each of the end user communities.

GEO-3 (February 2004)

27. EC-XLIV noted that GEO-3 was hosted by the government of South Africa in Cape Town from 23 to 27 February 2004. There were four major accomplishments at GEO-3: approval of a draft Communiqué; approval of a draft Framework Document; agreement on Terms of Reference for an Implementation Plan Task Team (IPTT) and approval of the report from all five Sub Groups. The Council was pleased to note the prominence given to WMO's mandate in the draft Framework Document as well as the universally recognized contributions made by the World Weather Watch in the draft Communiqué.

28. Copies of the draft Communiqué, draft Framework Document, Terms of Reference for the Implementation Plan Task Team and the report from Sub Groups are available on the GEO home page at <<http://earthobservations.org/>>.

29. **Communiqué** – It should be noted that the last paragraph in the Communiqué invited the governing bodies of international and regional organizations sponsoring existing Earth observing systems to support GEO actions. This is a significant recognition of the role intergovernmental organizations will play in not only providing observation but also in the governance of the GEOSS. The WMO mandate is also prominent in the list in the fourth paragraph.

30. **Framework Document** (FD)- Section 2 of the FD describes nine major areas where GEOSS should provide societal benefits. The FD also notes WMO achievements in section 3.1 and the need for advancements in other areas including WCRP, GOOS, ISDR, GCOS and the IGOS Themes (that will be implemented by those governing council and members responsible for GOS, GAW, GOOS, GTOS and GCOS – all either completely or co-sponsored by WMO). The FD also confirms the concept of a system of systems and building upon existing structures.

31. **Section 7 points to the way forward.** While GEO-3 did not agree on detailed specifics for the governance of GEOSS, the FD states “the implementation of the “10-Year Implementation Plan” will require a ministerial-guided successor mechanism with maximum flexibility—a single intergovernmental group for Earth observations drawing on the experience of the ad hoc GEO, with membership open to all interested governments and the European Commission, and with representatives of relevant international organizations taking part.

32. **IPTT** – GEO-3 agreed to its Terms of Reference to be constituted by one person from each of the GEO Co Chairs (USA, Japan, the European Commission and South Africa). IPTT will prepare the 10-Year Implementation Plan. It has already submitted a high-level draft outline of the

Implementation Plan to the full GEO community on 5 April. It was anticipated that the Task Team would depend heavily on input from the GEO Sub Groups.]

33. EC-XLIV noted that a Communiqué stating approval of the Framework Document, pointing the way forward in the GEO effort, and encouraging broad participation in and support for the GEO effort, was approved at EOS-II on 25 April 2004. Also agreed at EOS-II was a Framework Document consisting of: a high-level synopsis of the GEO effort for senior policymakers; a description of the GEOSS purpose and expected benefits; and a broad framework for developing the 10-year Implementation Plan. The Framework Document was prepared by the GEO Secretariat with substantive input from GEO Sub-Groups, GEO Co-Chairs, and high-level experts within GEO.

34. EC-XLIV noted that the EOS-II Communiqué had invited the governing bodies of international and regional organizations sponsoring existing Earth observing systems to support GEO actions. The Council was strongly of the opinion that WMO and its associated uniquely sponsored observing systems should participate in GEOSS. Additionally, the Council encouraged other sponsoring organizations for jointly sponsored observing systems to join with WMO in supporting GEO actions. The Council recognized the need to fully analyze the 10-Year Implementation Plan for GEOSS once it was available in order to be able make the most effective contribution possible but confirmed that it was WMO's intention to be part of GEOSS. In so doing, the Executive Council approved Resolution 13.4/1 (EC-LVI) as contained in the Appendix.

35. The fourth session of the ad hoc Group on Earth Observations (GEO-4) and the second Earth Observation Summit (EOS-II) were held in Tokyo, Japan on 22-23 April 2004 and 25 April 2004, respectively.

EOS-II

36. EC-XLIV noted that the second Earth Observation Summit (EOS-II) had been opened by Mr Junichiro Koizumi, Prime Minister of Japan. The Council was informed that the Secretary-General made two statements at EOS II, the first describing WMO's experience in observations and its commitment and potential contribution towards the goal to establish a comprehensive, coordinated and sustained Global Earth Observing System of Systems (GEOSS). The second was a joint statement on behalf of the Executive Heads of FAO, UNEP, UNESCO, including its IOC, and WMO to identify modalities for increased integration and coordination of a resulting enhanced UN-based observing system, and to seek approval from their respective governing bodies. The Executive Heads had also offered to work within the GEO process and resulting intergovernmental coordination mechanism in order to ensure the success of GEOSS. The Council agreed that the joint statement was unprecedented in the field of observations by the four organizations. The Council noted that EOS-II culminated with the agreement of a Framework Document for GEOSS, as well as a Communiqué, endorsed at ministerial level.

GEO-4

37. EC-XLIV was informed that at the fourth session of the ad hoc Group on Earth Observations (GEO-4), a draft 10-Year Implementation Plan Outline was reviewed. However, the initial proposed timeline to develop the Implementation Plan was rearranged to allow governments sufficient time to comment and approve it. GEO-4 also agreed to prepare three tiers of documentation for the 10-Year Implementation Plan: a Communiqué, an Executive Summary of the 10-Year Implementation Plan (to be called the 10-Year Implementation Plan) and the Implementation Plan Technical Blueprint.

38. EC-XLIV noted that a major discussion area at GEO-4 concerned international cooperation. While significant progress had been made, agreement could not be reached on the successor mechanism to GEO. However, GEO-4 agreed on 8 principles (key considerations and strategy) towards such a successor mechanism. Further, it agreed to meet again on 27-28

September 2004 in Brussels as a Working Session of GEO to discuss comments by GEO Members on the 8 principles. GEO-4 had requested those intergovernmental organizations with observing systems, especially those countries that are not within the GEO membership, to provide their views on the 8 principles. GEO-4 agreed that a successor mechanism must be identified in the near future to allow it to be inserted into the Executive Summary of the 10-Year Implementation Plan and the Implementation Plan Technical Blueprint as required in the Framework Document.

39. The eight key considerations and strategy towards a successor mechanism to GEO are:

- A high-level, GEO-like, successor mechanism is needed to provide overall leadership and guidance for the implementation of GEOSS and ongoing coordination of its operation.
- Governments should have primacy in the successor mechanism (with only governments and the EC [European Commission] having voting rights) but representatives of all international organizations with earth observation mandates should be encouraged to take part in its sessions and its work.
- Membership should be open to all countries who are Members of the UN system and all should be encouraged to contribute to its work.
- It should meet in plenary at senior officials level but with explicit provision for periodic Ministerial sessions.
- It should foster, facilitate and coordinate, but not duplicate or compete with, the work of the existing mechanisms used by the UN system and other international organizations for managing the component system of GEOSS.
- It should draw fully on the international scientific community through ICSU.
- It should not be a new international organization but it should have clearly defined terms of references, agreed working methods and a small international secretariat funded by member governments and international organizations on a voluntary basis.
- It should evolve incrementally from the present GEO, following the guidelines identified in the Framework Document.]

40. EC-XLIV discussed the eight key considerations and strategy and felt it appropriate to provide GEO with the points for its consideration.

Res. 13.4/1 (EC-LVI) - GLOBAL EARTH OBSERVATION SYSTEM OF SYSTEMS (GEOSS)

THE EXECUTIVE COUNCIL,

NOTING:

- (1) The Declaration from the First Earth Observation Summit held in Washington, DC on 31 July 2003 for improved coordination of observing systems towards a comprehensive, coordinated and sustained Earth Observing System of Systems,
- (2) The *Communiqué* from the Second Earth Observation Summit held in Tokyo, Japan on 25 April 2004 adopting the Framework Document that describes principal benefits of Earth observations to a broad range of user communities and the fundamental elements to be included in the 10-Year Implementation Plan for what will henceforth be called a Global Earth Observation System of Systems (GEOSS); and the invitation to the governing bodies of international and regional organizations sponsoring existing Earth observing systems to support GEOSS.

CONSIDERING:

- (1) The rapid pace at which the process to define and prepare a 10-Year Implementation Plan for GEOSS has progressed,

RECOGNIZING:

- (1) The critical importance of GEOSS to perceive and understand the Earth system—its weather, climate, oceans, land, geology, natural resources, ecosystems, and natural and human-induced hazards and the vast experience and expertise represented by the World Meteorological Organization,

AWARE of the WMO mandate and conscious of those of other intergovernmental organizations with mandates relevant to GEOSS,

DECIDES to endorse and support GEOSS to the maximum extent possible within WMO's mandate,

URGES Members to engage in GEOSS at the national level;

FURTHER URGES Technical Commissions, as well as the WMO Consultative Meetings on High-level Policy on Satellite Matters to consider GEOSS and especially its 10-Year Implementation Plan when organizing its work, objectives and goals,

INVITES participating international and intergovernmental organizations that either individually or collectively sponsor observing systems to support GEOSS,

REQUESTS the Secretary-General within available budgetary resources:

- (1) To continue a strong WMO presence in the development of GEOSS in order to strengthen relevant WMO Member national observing systems, as well as national support for them;
 - (2) To maintain high visibility for WMO Members' contributions to GEOSS;
 - (3) To keep WMO Members informed of relevant GEOSS activities.
-