

***Ad hoc* Group on Earth Observations (GEO)**  
**Subgroup on Architecture**

**TERMS OF REFERENCE**

Recalling the GEO Terms of Reference adopted on 1 August 2003 at GEO-1, the GEO establishes a Subgroup on Architecture and sets forth the following legally non-binding Terms of Reference:

**1. Purpose**

The Subgroup on Architecture will seek to develop for the 10-year implementation plan the architecture for a comprehensive, coordinated, and sustained Earth observation system or systems, including *in situ*, airborne, and space-borne observations, taking into account existing activities, and building on existing systems and initiatives.

**2. Objectives**

Define the purpose, structure, scope, boundaries, and development strategy for the architecture of a comprehensive, coordinated, and sustained Earth observation system or systems.

**3. Approach and Functions**

- 3.1. Develop and provide a concrete, structured, end-to-end approach to addressing the architecture:
  - a. Identify architecture desired outcomes (e.g. flexibility, adaptability, modularity);
  - b. Identify architecture functional requirements that are free of assumed implementation approaches;
  - c. Assess current international Earth observation system capabilities; evaluate their strengths and shortfalls (gap analysis).
- 3.2. Consider concepts for the technical operation of the system or systems, including such features as data capture/collection, processing, dissemination, storage/archiving, exchange, products/services, and telecommunications, working with other GEO Subgroups and taking into account such matters as:
  - a. Cost and technical feasibility of the conceptual alternatives;
  - b. Capability of each concept to meet required functions.
- 3.3. Consider a set of alternative architecture solutions, taking into account such matters as:
  - a. Strengths and weaknesses of alternatives considered;
  - b. Desired outcomes and required functions.

- 3.4. Recommend for the 10-year implementation plan an architecture for a comprehensive, coordinated, and sustained Earth observation system or systems.

#### **4. Subgroup Organization and Reporting**

- 4.1. The Subgroup welcomes and is open to all interested GEO Members and participant organizations. The GEO Secretariat will maintain the list of current Subgroup Members and participants.
- 4.2. Representatives of Members and participant organizations may chair or co-chair this Subgroup. Subgroup chairs or co-chairs will be nominated to, and approved by, the GEO; additional co-chairs may be designated by consensus of Subgroup Members.
- 4.3. Additional technical experts may participate in Subgroup deliberations at the invitation of a GEO Member or participant organization.
- 4.4. The Subgroup will meet at such times and places as determined by its Members.
- 4.5. The Subgroup will work by consensus of its Members.
- 4.6. The co-chairs of this Subgroup will report progress to the GEO Secretariat at appropriate intervals, and deliver progress reports at each GEO meeting.
- 4.7. The Subgroup may set up Task teams to address particular issues under its mandate.
- 4.8. The co-chairs of this Subgroup are encouraged to share documents and coordinate with other Subgroups.

#### **5. Funding**

Unless otherwise agreed, any costs arising from activities under these Terms of Reference will be borne by the Member or participant that incurs them, and will be subject to the availability of funds, personnel, and other resources.

#### **6. Duration**

- 6.1. All activities under these Terms of Reference will commence upon adoption and will continue for the duration and life of the ad hoc Group on Earth Observations, unless otherwise terminated.
- 6.2. The terms of this document may be modified at any time by written agreement of the GEO Members.

**Architecture Subgroup Members and Participants**

*As of 1 October 2003*

Brazil\*  
European Space Agency (ESA)\*  
France\*  
Japan\*  
United States\*  
World Meteorological Organization (WMO)\*  
Argentina  
Australia  
Belgium  
Canada  
Committee on Earth Observation Satellites (CEOS)  
China  
Denmark  
European Commission  
European Organisation for the Exploitation of Meteorological Satellites (EUMETSAT)  
France  
Germany  
Greece  
Integrated Global Observing Strategy Partnership (IGOS-P)  
Intergovernmental Oceanographic Commission/Global Ocean Observing System (GOOS)  
Israel  
Italy  
Network of European Meteorological Services (EUMETNET)  
Netherlands  
Norway  
Russian Federation  
South Africa  
Spain  
Sweden  
Switzerland  
United Kingdom

*\*indicates Co-Chair*