



**EARTH OBSERVATIONS IN  
DECISION SUPPORT PROJECTS**

---

**CALL FOR PROPOSALS**

**CFP Released: *13-February-2009***

**Concept Proposals Due: *4-June-2009***

**Final Proposals Due: *10-November-2009***

# Group on Earth Observations

## Call for Proposals: Earth Observations in Decision Support Projects

### Preface

The intergovernmental Group on Earth Observations (GEO) promotes the provision and use of Earth observations to improve decision making and deliver societal benefits.

This Call for Proposals (CFP) seeks project proposals to apply Earth observations to improve policy and management decisions. The CFP has a strong interest in indentifying projects focused on helping end users in developing countries apply Earth observations. The CFP also seeks to identify individuals and organizations interested in serving as advisors to projects.

The clear purposes of this CFP are to identify and promote practical applications of Earth observations to improve decision making and to call attention to specific examples in which Earth observations provide societal benefit. **This CFP does not offer funds for preparation or participation in a proposal or project. GEO may attempt to match the selected projects from developing countries with resource-providing organizations.**

The GEO User Interface Committee and Capacity Building Committee are managing this CFP. Projects selected under this CFP will likely draw on activities of all the GEO committees. This activity supports GEO Tasks US-09-01b (Communities of Practice) and CB-09-01 (Resource Mobilisation).

**This CFP requests projects for the following GEO Societal Benefit Areas: Agriculture, Energy, Human Health, and Water.**

This CFP is open to all types of organizations and teams of organizations. Every project should include at least one GEO Member or Participating Organization.

GEO welcomes the project proposals to apply Earth observations for improved decision making and showcase the value and societal benefits of Earth observations.

# **Call for Proposals: Earth Observations in Decision Support Projects**

## **Table of Contents**

Preface .....	i
Table of Contents .....	ii
1. Introduction .....	1
1.1 Group on Earth Observations	
1.2 GEO Committees	
1.3 GEO Decision Support Architecture	
1.4 Earth Observations	
1.5 CFP Purpose	
1.6 CFP Process and Schedule	
2. Decision Support Projects .....	5
2.1 Objectives	
2.2 Scope	
2.3 Project Types	
2.4 Project Topics	
2.5 Project Advisors	
3. CFP Terms and Conditions .....	8
3.1 Eligibility	
3.2 Limitations	
3.3 Proposal Submission	
4. Proposal Format and Content .....	10
4.1 Concept Proposals	
4.2 Full Proposals – Type I and Type II	
4.3 Full Proposals – Type III	
4.4 Project Advisors	
5. Proposal Review and Selection.....	12
5.1 Review	
5.2 Evaluation Criteria	
5.3 Selection	
5.4 Reports	
Appendices	
A. Acronyms .....	A-1

## 1 Introduction

This Call for Proposals seeks organizations to propose or participate in projects that incorporate Earth observations into decision making for societal benefit. The overall objective of these projects is the sustained use of Earth observations by end users in their decision-making activities to benefit their countries or communities.

All organizations interested in participating shall respond through a proposal. Section 4 provides instructions for submitting a proposal.

### 1.1 Group on Earth Observations

The Group on Earth Observations is an intergovernmental body that coordinates and promotes the provision and use of Earth observations. GEO provides an intergovernmental framework within which a voluntary partnership of governments and international organizations can develop new projects and coordinate their strategies and investments.

GEO is coordinating efforts to build a Global Earth Observation System of Systems (GEOSS)<sup>1</sup>. The purpose of GEOSS is to achieve comprehensive, coordinated, and sustained observations of the Earth system in order to improve monitoring of the state of the Earth, increase understanding of Earth processes, and enhance prediction of the behavior of the Earth system. GEOSS will meet the need for timely, quality long-term global information as a basis for sound decision making and will enhance delivery of benefits to society.

GEO is focused on enhancing the development and use of Earth observations in nine Societal Benefit Areas (SBA):

Agriculture	Biodiversity	Climate
Disasters	Ecosystems	Energy
Human Health	Water	Weather

### 1.2 GEO Committees

GEO has four permanent committees around transverse areas of user engagement, architecture, data management and capacity building to manage the implementation of GEO's 10-year Implementation Plan.

User Interface Committee. The User Interface Committee (UIC) engages users in the development, implementation, and use of a sustained GEOSS

---

<sup>1</sup> GEO 10-Year Implementation Plan: <http://www.earthobservations.org/documents.shtml>

that provides the data and information required by user groups on national, regional and global scales.

Capacity Building Committee. The Capacity Building Committee (CBC) supports GEO in strengthening the capability of all countries, in particular developing countries, to use Earth observation data and products in a sustainable manner and to contribute observations and systems to GEOSS.

Science and Technology Committee. The Science and Technology Committee (STC) engages the scientific and technological communities in the development, implementation and use of a sustained GEOSS in order to ensure that GEO has access to sound scientific and technological advice.

Architecture and Data Committee. The Architecture and Data Committee (ADC) supports GEO in all architecture and data management aspects of the design, coordination, and implementation of GEOSS.

The GEO UIC and CBC committees are managing this CFP. Projects selected under this CFP will likely draw on activities of all the GEO committees.

### 1.3 GEO Decision Support Architecture

GEO uses the figure below as a notional architecture to depict the contributions of Earth observations to organizations' decision-making activities that provide value and benefit to society.

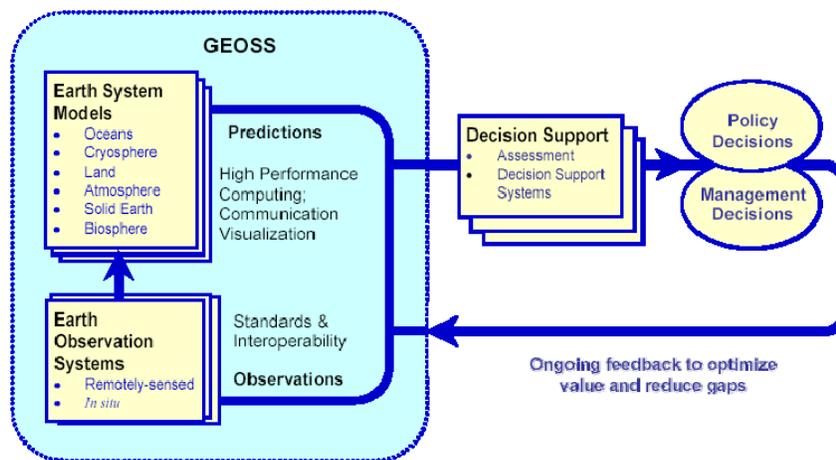


Figure 1. GEOSS Architecture

GEO promotes the assimilation of Earth observations and model predictions as inputs to decision making activities. The outcomes of this approach are manifest in an organization's enhanced policy and management decisions, and the

impacts are the resulting socioeconomic benefits from the improved decisions. The end-user organizations provide feedback to the observation systems on product efficacy, data access, new measurement needs, new applied research topics, societal benefits, and other factors to support the further development of GEOSS.

#### 1.4 Earth Observations

Earth observations span a wide range of data, information, and techniques from which to develop applications for decision support. Examples of Earth observations include:

- Measurements from ground-based, *in situ* monitors;
- Observations from Earth satellites;
- Products and predictive capabilities from Earth system models, often using the capabilities of high-performance computers;
- Scientific knowledge about the Earth system; and,
- Data visualization techniques.

GEO supports the full and open sharing and exchange of data and information. GEO is developing a GEOSS common infrastructure, including web portals to provide web-based interfaces for searching and accessing Earth observation data, information, imagery, and services available from GEOSS. GEO is also developing distribution methods to disseminate Earth observations. GEO encourages project proposal teams (hereafter, project teams) to use the GEO web portals and distribution systems in identifying and accessing Earth observations for use in their applications.

#### 1.5 CFP Purpose

GEO enables the use of Earth observations in decision support activities that organizations employ to serve their management and policy responsibilities. The overarching purposes of this Call for Proposals are to enable applications of Earth observations for improved decision making and to showcase the value and societal benefits of Earth observations through successful applications examples.

This CFP has a strong emphasis on projects focused on developing countries.

The GEO UIC and CBC committees are managing this CFP. These committees initiated this solicitation as an essential step to build capacity of end users, especially those in developing countries, to access and use Earth observations. The projects will demonstrate the value of GEOSS to improve decision making and provide societal benefits. The committees will interact with project teams to

identify key observation needs and improvements for access and use of Earth observations.

The UIC and CBC will provide a brokering role to match end-user organizations needing assistance to develop an application with organizations that have expertise in Earth observations and the use in decision making. This activity supports GEO Tasks US-09-01b (Communities of Practice) and CB-09-01 (Resource Mobilisation).

The CBC and UIC may attempt to mobilise resources for identified projects, particularly those involving developing countries, by engaging relevant resource-providing organizations. **GEO will not directly provide funding for projects identified through this CFP.**

## 1.6 CFP Process and Schedule

This CFP proposal request is the initial step in a process to identify and enable Earth observation applications projects. The process will include multiple stages.

### ***Stage 1: Concept Proposal Development, Review and Selection.***

In the first stage, GEO will announce and release this CFP. Interested organizations and teams of organizations may prepare and submit a short proposal of the project concept (Section 4 describes proposal content and format). GEO will convene an expert panel to review these Concept Proposals, assess their feasibility, and make recommendations. The UIC and CBC will contact the projects teams with the results of the review and plans to proceed. This review stage will be followed by an invitation to the selected project teams to then submit a Full Proposal.

### ***Stage 2: Full Proposal Development, Review and Selection.***

The selected project teams will develop their Concept Proposals into Full Proposals. If appropriate, the UIC and CBC may help project teams identify subject-matter experts and advisors to assist with Full Proposal development.

Project teams will submit Full Proposals by the deadline. Thereafter, GEO will convene an expert panel to review the Full Proposals and make recommendations. The UIC and CBC will determine appropriate ways to pursue the accepted projects and will contact the project teams with the results of the review and plans to proceed.

### ***Stage 3: Project Initiation.***

The GEO UIC and CBC committees will work with the accepted project teams to initiate their projects, including the incorporation of the panel's recommendations into the project. For appropriate projects, the UIC and CBC will make

introductions to potential resource-providing organizations. The UIC and CBC may also provide support to arrange expert assistance to project teams. GEO will conduct a kick-off meeting, including training sessions to help teams become more familiar with the access and use of Earth observations.

**Stage 4: Project Reviews and Development.**

GEO will review projects periodically to assess progress. GEO will conduct periodic, topic-specific applications-oriented workshops and training sessions, and GEO will invite participation by the relevant project teams.

**Stage 5: Project Demonstrations and Applications Showcase.**

The project teams will conduct demonstrations and will announce project results. Periodically, GEO will organize an Earth Observations “Applications Showcase” in association with a GEO Plenary, GEO workshop, or other events to highlight the projects and to demonstrate the uses and societal benefits of Earth observations.

Schedule for CFP:

CFP Issued	13-February-2009
Concept Proposals Due	4-June-2009
Review Concept Proposals Announce results and invite Full Proposals	12-August-2009
Full Proposals Due	10-November-2009
Review Full Proposals Announce results	15-January-2010
Kickoff Meeting	circa March 2010
Applications Showcases	Future GEO Plenaries and Workshops

## 2 Decision Support Projects

### 2.1 Objectives

This CFP requests organizations to propose or participate in projects that incorporate Earth observations into decision making for societal benefit. Projects

**GEO Decision Support Projects**

---

should be results-oriented and focused on the integration of Earth observations into decision support systems, assessments, decision processes, or other decision making activities. Projects need to focus on the use of Earth observations by the end users.

This CFP has a particular objective to increase the capabilities and capacity of end users in developing countries to use and apply Earth observations.

The overall objective of these projects is the sustained use of Earth observations by end users in their decision-making activities to benefit their countries or communities.

**2.2 Scope**

This CFP accepts proposals for projects at any stage of development, including the creation of a new decision support system or decision making activity. This CFP is flexible enough to accept application concepts at any stage of maturity.

Proposed projects may be local to international in scope. Projects may include any type or number of organizations. Projects should include one or more GEO Member or Participating Organization, and GEO encourages involvement of Observers.

Proposed projects shall include efforts to transition project results to enable and ensure the sustained use of the Earth observations by end users in their decision making after the completion of the project. Projects should be replicable by other organizations.

Projects are likely to be 6 months to 3 years in duration. Projects should be able to demonstrate concrete results within three years.

**2.3 Project Types**

The GEO UIC and CBC committees want to include a wide a range of possible project proposals in this solicitation to identify or improve applications of Earth observations. The UIC and CBC also want to identify and showcase successful applications projects, so other organizations can adopt and replicate the application.

This CFP seeks project proposals of the following three types.

**Type I: New Applications Projects**

Type I projects are for organizations with limited or no experience in applying Earth observations to decision making. This type includes organizations that may

have an idea to apply Earth observations to a specific decision making need but have limited knowledge, capabilities and/or resources to design, develop, and realize the application. Type I projects are primarily focused at supporting developing countries.

For Type I projects, UIC and CBC will seek to match project teams from developing countries with potential resource-providing organizations and match them with Earth observation experts that can support the project design and management.

#### Type II: Applications Improvements

Type II projects are for organizations that have some experience applying Earth observations to decision making and need some assistance with new types of Earth observations, such as new data products or model predictions, to incorporate in their applications. This type includes organizations that have specific applications ideas (including applications already in development) yet need help identifying, accessing, tailoring, or applying specific observations to their decision making.

For Type II projects, UIC and CBC will seek to match project teams with Earth observation distribution centers, communities of practice, and networks, including the GEO Portal, registries, ADC, and STC.

#### Type III: Applications Examples

Type III projects are for organizations that have successfully applied Earth observations to their decision making and want to demonstrate and share their application with other organizations. This type includes organizations that want an international forum to present their applications and help others to replicate their activities. (These organizations should also record their application with the GEO registries.)

For Type III projects, GEO will invite relevant project teams to applications-oriented meetings, events, and other fora to demonstrate their applications. GEO will organize special events, such as Applications Showcases, at which Type III project teams can explain their applications and advise others, especially end users from developing countries, on how to adopt the application.

## **2.4 Project Topics**

This CFP requests project proposals for the following societal benefit areas and specific sub-areas (proposals are not limited to the specific sub-areas listed):

*Human Health.* Within this SBA, GEO especially requests proposals related to use of Earth observations for decision making related to infectious diseases or air quality.

*Water.* Within this SBA, GEO especially requests proposals related to use of Earth observations for decision making related to water quality or drought management.

*Energy.* Within this SBA, GEO especially requests project proposals related to use of Earth observations for decision making related to renewable energy.

*Agriculture.* Within this SBA, GEO especially requests project proposals related to use of Earth observations for decision making related to forests.

## 2.5 Project Advisors

This CFP allows for individuals and organizations to identify themselves as volunteers to serve as advisors on projects, especially Type I projects. GEO strongly encourages individuals and organizations that have significant skills and experience with Earth observations, applications of Earth observations, project management, decision support, and/or other relevant topics to serve as project advisors. Project advisors will serve and advise on a *pro bono* basis.

Section 4.5 describes the information that individuals and organizations should submit to identify themselves.

## 3 CFP Terms and Conditions

### 3.1 Eligibility

Organizations of every type may submit proposals without restriction on the number of organizations on a proposal or teaming arrangements. Teams of organizations and collaborations spanning organizational sectors (e.g., academia, private, government, public, etc.) and expertise (e.g., technical, management, scientific, etc.) are strongly encouraged and recommended. End-user organizations shall be actively involved in the project teams, proposal development, and project design and execution. Proposed projects should include one or more GEO Member Country or Participating Organization, and GEO encourages involvement of Observers.

There is no restriction on the number of proposals that an organization may submit or participate in for this CFP. Each proposal shall be a separate, complete, stand-alone document for evaluation purposes.

### 3.2 Limitations

The GEO UIC and CBC committees will distribute documents submitted in response to this CFP to many organizations, and the documents may be posted on a publicly-accessible web site. Responders shall not include information in their responses for which they are not authorized to distribute. **Proprietary and confidential information shall not be submitted under this request. It will be assumed that CFP responses do not contain confidential information.**

This CFP does not offer compensation to individuals or organizations preparing a proposal in response to the CFP. This CFP does not offer funds to any individuals or organizations for participation in a proposal or project. The GEO UIC and CBC committees may attempt to match Type I projects with prospective resource-providing organizations. GEO does not guarantee any funding for projects.

### 3.3 Proposal Submission

Project teams and Project Advisors shall submit an electronic copy of their proposal(s) to the GEO Secretariat ([secretariat@geosec.org](mailto:secretariat@geosec.org)). Microsoft Word® 2000 for Windows, 2001 for Macintosh, or higher format is preferred; Portable Document Format and Rich Text Format are acceptable.

Proposals shall be in English-language text, formatted using one or two columns with single-spacing (or larger). Proposals shall use legible printer fonts and easily-read font size (typically 12-point font). Proposals shall use at least 2.5cm margins on all sides. Proposals may include figures and illustrations.

Concept Proposals and Final Proposals shall be received no later than the respective dates and times in the Master Schedule (Section 1.6). UIC and CBC may consider late proposals on a case-by-case basis. Project Advisors may submit their proposals at any time.

Questions and requests for clarification should be sent electronically to the attention of Fernando Ramos and Imraan Saloojee to the GEO Secretariat ([secretariat@geosec.org](mailto:secretariat@geosec.org)).

## **4 Proposal Format and Content**

### **4.1 Concept Proposals**

Concept proposals shall be 5 pages or less in length. Project teams may request help from the UIC and CBC to identify experts that can help them develop the short Concept Proposal (teams may request such help through the email address listed in Section 3.3). Concept Proposals should contain the following information:

- Project team leader's name and contact information;
- Implementing organizations and partners;
- Initial description of project concept, including description of the decision or problem needing improvement and the application of Earth observations, data, or model products;
- Intended beneficiaries and anticipated benefits and improvements;
- Anticipated duration of project;
- Level of experience with Earth observations and type of assistance requested (if any).

### **4.2 Full Proposals – Type I & Type II**

Type I and Type II Full Proposals shall be 20 pages or less in length. Full Proposals should contain the following information and adhere to the following outline.

- Cover page;
- Overview of proposal (approximately 250-word summary);
- Table of contents;
- Names and contact information for each project team member;
- Description of decision or problem needing improvement;
- Technical/Management section;
- Deliverables from project;
- Anticipated results, benefits, and beneficiaries;
- Specific roles of each project team member;
- Project budget (estimated); and,
- Project schedule.

Proposals should also contain the following information attached (these items are not counted in the 20-page limit):

- Curriculum vitae (two-page maximum) for each principal team member; and,
- References.

The Cover Page should include the Project Title, Names of the responding organization(s), and Project Type; it is encouraged that organizational logos are included on the cover page.

The Technical/Management section is the main body of the proposal. This section describes the main objectives of the project. It describes the proposed activities, technical approach, and methodology to apply Earth observations to improve the decision making. It describes efforts to transition results and ensure the sustained use of the Earth observations after the completion of the project. This section may contain illustrations and figures that amplify and demonstrate key points of the proposal.

The Project Budget section is an estimate of the financial resources needed for the project. This section explains and justifies the budget estimate. It specifies the level of funding already committed to the project and the funding the project team desires for the project.

### **4.3 Full Proposals – Type III**

Type III Full Proposals shall be 15 pages or less in length. Full Proposals should contain the following information and adhere to the following outline.

- Cover page;
- Overview of project (approximately 250-word summary);
- Table of contents;
- Names and contact information for principal project team members;
- Description of decision or problem that was improved;
- Earth observations used in project and applied in decision making;
- Technical/Management section;
- Project results and benefits; and,
- Project demonstrations.

The Technical/Management section is the main body of the proposal. This section describes the technical approach and methodology the project team used to apply Earth observations to improve the decision making. This section provides information and lessons learned from the project to help other organizations adopt the application. This section may contain illustrations and figures that amplify and demonstrate key points of the proposal.

The Project Results and Benefits section describes the main impacts and accomplishments of the project. The Project Demonstrations section describes the project team members' interest to demonstrate their applications to other organizations for them to emulate. This section describes ideas for possible workshops, publications, venues, etc. to showcase the application and demonstrate the use of Earth observations in decision making.

#### **4.4 Project Advisors**

Individuals and organizations interested in serving as Project Advisors shall submit their curriculum vitae and a proposal 5 pages or less in length. The proposal shall describe their interest, experience, expertise, accomplishments, and skills with Earth observations and applications to decision making. The proposal shall include specific examples of applications projects and related societal benefits. The proposal shall describe their availability and commitment to serve as an advisor as well as the number of projects they wish to advise at one time. The proposal shall include current and complete contact information.

Project Advisor proposals shall include letters of reference from organizations served (these letters are not counted in the 5-page limit). The GEO UIC and CBC committees may contact prospective Project Advisors for additional information.

## **5 Proposal Review and Selection**

### **5.1 Review**

The GEO UIC and CBC committees will organize panels to review the Type I and Type II proposals. The review panels will include experts familiar with technical and/or management aspects of applications of Earth observations to decision making. The review may be done via electronic distribution, teleconferences, physical meetings, or other means. UIC and CBC will conduct the reviews unique to the Project Types and Project Topics.

The reviews will assess the proposals according to the evaluation criteria. The reviewers will only read the portion of a proposal that falls within the page limits of the respective proposal type.

The reviewers will prepare a summary of their discussion, including recommendations and activities to improve each proposal. UIC and CBC will provide the respective teams with the panel's summary of the proposal.

The GEO UIC and CBC committees will review the Type III and Project Advisors proposals in their committees, including subject matter experts as needed. UIC and CBC will notify the selected Type III and Project Advisor proposals of specific opportunities to showcase their projects or advise Type I or Type II projects.

## **5.2 Evaluation Criteria**

The reviewers will assess each proposal on three factors: Importance, Technical Feasibility, and Project Design.

The Importance criterion includes the following factors:

- Significance of the topic, problem, or decision making addressed;
- Potential benefits and impact of the project;
- Ability for the project to be sustainable and replicable;
- Alignment with one or more of the SBAs for this CFP (Section 2.4);
- Appeal to multiple resource-providing organizations (Type I projects);
- Ability to support the sustainable development requirements of beneficiaries (Type I projects).

The Technical Feasibility criterion includes the following factors:

- Overall scientific or technical merit of the proposal;
- Qualifications, capabilities, and experience of the project team;
- Ability to access and apply proposed Earth observations to the problem or decision making;
- Ability to achieve the desired outcome with the proposed Earth observations.

The Project Design criterion includes the following factors:

- Ability to manage the project and achieve the stated objectives;
- Ability to quantify requested funding and realism of that request;
- Involvement of one or more GEO Member or Participating Organization;
- Likelihood to demonstrate results within 3 years;
- Ability to demonstrate the value of GEOSS and the quality of outreach activities.

## **5.3 Selection**

UIC and CBC will use the reviewers' recommendations to select projects to support and endorse. These committees may attempt to match selected projects with prospective resource-providing organizations and project advisors.

UIC and CBC will provide the respective teams with the panel's summary of the proposal and the recommendations. UIC and CBC will use the reviewers' comments and recommendations to help appropriate teams develop or improve project plans.

UIC and CBC will attempt to include as many projects as possible in the final selection.

#### **5.4 Reports**

Project teams selected in this CFP should plan to fully participate in the project development activities, including the kick-off meeting.

Selected projects shall prepare an interim and a final report for the UIC and CBC. GEO may post the summaries of the projects or the reports on the GEO website.

Selected projects will support GEO efforts to call attention to the societal benefits associated with the use of Earth observations in decision making.

## Appendix A: Acronyms

ADC	Architecture and Data Committee
CBC	Capacity Building Committee
CFP	Call for Proposals
GEO	Group on Earth Observation
GEOSS	Global Earth Observation System of Systems
SBA	Societal Benefit Area
STC	Science and Technology Committee
UIC	User Interface Committee