



**GROUP ON
EARTH OBSERVATIONS**

**GEO User Interface Committee
Status of Task US-09-01**

**UIC Member Task Lead:
Lawrence Friedl, USA-NASA**

**UIC Co-Chair Task Lead:
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**Task Coordinator:
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***UIC Meeting • Sophia Antipolis, France
26-February-2009***



Sections of Presentation

- **Quick Review of Task US-09-01**
- **Activity Since Last Report**
- **SBA User Types**
- **Schedule & Risks**
- **Discussion**
- **Recommendations/Decisions**



GEO Task US-06-01/US-09-01:

Establish a GEO process for identifying critical Earth observation priorities common to many GEOSS societal benefit areas, involving scientific and technical experts, taking account of socio-economic factors, and building on the results of existing systems' requirements development processes.



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Task US-09-01

GEO UIC US-09-01 Process: Nine Steps

- The process lists the steps serially, yet some of them can be done in parallel.
- Analyst and Advisory Group for each SBA will develop a detailed schedule

Step 1: UIC Members identify Advisory Groups and Analysts for each SBA

Step 2: Determine scope of topics for the current priority-setting activity

Step 3: Identify existing documents regarding observation priorities for the SBA

Step 4: Develop analytic methods and priority-setting criteria

Step 5: Review and analyze documents for priority Earth observations needs

Step 6: Combine the information and develop a preliminary report on the priorities

Step 7: Gather feedback on the preliminary report

Step 8: Perform any additional analysis

Step 9: Complete the report on Earth observations for the SBA

When all SBA analyses complete, UIC will compare across them.



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Task US-09-01

Task Guidelines:

- Harvest information expressed in existing, publicly-available documents; avoid duplication of efforts of GEO Members & Participating Organizations
- Task must be conducted in a way so the completed product will be credible and acceptable to GEO Members & Participating Organizations
- Representative of GEO Members (regions, developed/developing countries)
- Documents need to span a range of User-Types
- Focus is more on the “demand” side of Earth observations
- Focus is on “observation priorities” – *not* “user requirements”

Key Tenets of the task:

- Transparency
- Inclusive
- Credibility
- Thorough (yet representative)



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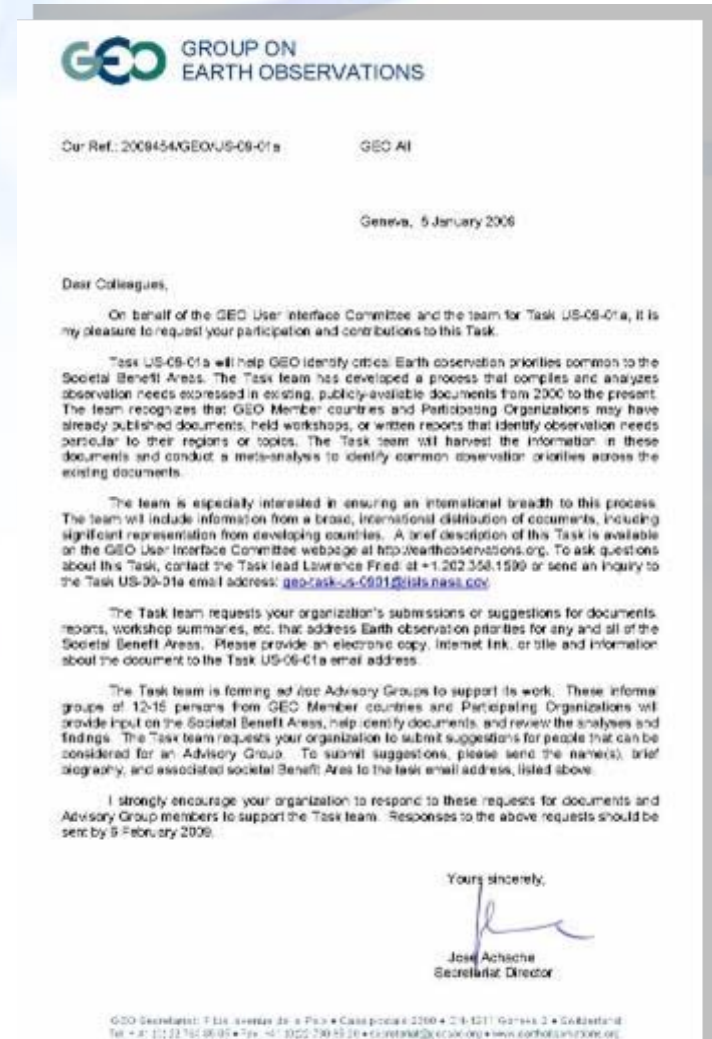
Task US-09-01

GEO Secretariat released letter on 8-January-2009

- Notification of task
- Description task
- UIC leadership of task
- Request for documents
- Request for Advisory Group members

Task received some responses by deadline (6-Feb-2009)

CEOS offered its SBA POCs to help with Advisory Groups.
Some countries gave documents.





Resources to Support Task & Analysts

- Website: <http://sbageotask.larc.nasa.gov/>
 - Analysts contact information
 - Lists of documents
 - Lists of Advisory Groups
 - Task overview & descriptive
- Email Address: `geo-task-us-0901@lists.nasa.gov`



Analysts Meeting – Feb. 4, 2009

Held an in-person meeting in Washington, DC.

Purposes of meeting:

- 1) Enable Analysts to interact and coordinate on the task
- 2) Discuss methods, approaches, and challenges amongst the Analysts
- 3) Review progress and schedules to complete GEO Task US-09-01a

The meeting was a forum for Analysts to discuss the task in depth, including document analysis, priority-setting criteria, advisory group involvement, etc.



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Task US-09-01 – Analysts Meeting

Major Topics of Discussion

- Document identification & analysis
- Advisory-group involvement
- Priority-setting methodology and Meta-analysis techniques
- Earth observations (parameters & characteristics)
- SBA reports (e.g., level of detail, use by GEO, etc.)
- Citation principles
- User Types



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Task US-09-01: User Types

Agriculture: User Types

- Global Change Science
- Timber, Fuel and Fiber (incl. agro forestry)
- Watershed Protection
- Biodiversity and Conservation
- FCCC and other Environmental Agreements
- Recreation and Tourism
- Sustainable Forest Management
- Forest Perturbations and Protection (fire, insects, disease)

Biodiversity: User Types

- **Fish & Wildlife Biologists/Managers**
- **Forest Managers**
- **Protected Area Managers**
- **Botanists**
- **Taxonomists**
- **Conservationists**
- **Ecologists**
- **Land Use Planners, Land Use Managers**
- **Land Developers**
- **Natural Resource Extraction (Loggers, - Miners, Oilman)**
- **Policy Makers (National, State, and Local Governments; NGOs)**
- **Academicians**
- **Researchers**
- **Community-Based Monitoring Groups**
- **Concerned Citizens (e.g., bird watchers)**
- **Private Land Owners**



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Task US-09-01: User Types

Climate: User Types

- Climate modelers
- Integrated assessment modelers
- Meteorologists
- Insurance companies

Policy makers, Infrastructure managers, planners and investors, speculators & financial markets

Use of Climate products in resource Science and Management

(Marine biologists, Hydrologists, Ecologists, Energy managers, Geographers, Earth system scientists, Environmental scientists, Conservationists, etc.)

Disasters: User Types

- Emergency Management & Public Outreach
Risk Mitigation Manager, Emergency Planners, Weather Service Providers, Media, local law enforcement, fire dept.

- Research and Forecasting
Academia, Researchers, flood/landslide/ earthquake modelers & forecasters, seismologists, geologists, hydrologists

- Infrastructure
Civil Engineers, Earthquake Engineers
Environmental Engineers, Water Resource Managers, Regional Planners, Insurance Assessors, Risk Assessors, City Planners and Zoners



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Task US-09-01: User Types

Health-AQ: User Types

None provided

Health-Disease: User Types

None provided



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Task US-09-01: User Types

Ecosystems: User Types

- Water resources managers
- Natural resources managers
- Wildlife managers
- Coastal planners and developers
- Land use planners
- Agricultural managers
- Policymakers (local, state, national, Environmental Protection Departments)
- Researchers (climate, ecosystem function, biological invasion, disease, future change)
- Climate impacts analysts

Energy: User Types

- Researchers
- Energy Policy Developers
- Energy Regulators
- Electric Grid Operators
- Energy Facility Developers and Operators
- Private Users
- Building Designer or Engineer



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Task US-09-01: User Types

Water: User Types

Managers & Planners:

Fire Prevention, Fire Fighting, Envir. Protection, Nat. Disaster, Land use, Drought mitigation, Flood control manager, flood control planner, water quality, water resource manager and allocator,

Forecasters & Assessors

Nat. Haz. Risk Assessor, Insurance purveyor, Epidemiologists, Disease Outbrk Forecstr, Pollution Forecaster, City Development Zoner, Env. Imapct Assessor, hydropower engineer, irrigation scheduler, flood forecaster, drought forecaster, weather forecasters

Scientists & Other

Climate Scientist, Hydrologist, farmer, ecologist, forest conservationist

Weather: User Types

Public organizations

Civil protection agencies, warning systems operator, emergency managers; Risk manager, Fire/Police, Weather forecaster
Meteorologist, flood modeller/forecaster; Water resource manager, scientist

Private companies

Airport operator, Air traffic controller, pilot, building engineer, commercial shipping, offshore industry captain, nautical engineer, offshore facility engineer, ship owner, energy project manager

Private users

Farmer, Pilot, Balloonist, Yachtsman

Other

Health resort manager, Health clinic manager
Media, Weather forecaster, Meteorologist,
Telecommunication engineer; Tourism industry,
hotel keeper, Travel agent, Event manager



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Task US-09-01 – Status

GEO User Interface Committee: Progress in Task US-09-01 by Societal Benefit Area

Societal Benefit Area	Analyst	# in Advisory Group	# of Documents	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	Oct-09	Nov-09
				Major Steps in Process							
Agriculture	Michael Brady	10	15	0	1	2	2				
Biodiversity	Greg Susanke	0	17	0	1	3	3				
Climate	Molly Macauley	4	22	0	2	4/5	4/5				
Disasters	Stephanie Weber	13	40	0	3	4/5	4/5				
Energy	Erica Zell	14	27	1	3	7	7				
Ecosystems	Thomas Gulbransen	9	68	0	2	4/5	4/5				
Human Health: Air Quality	TBD	0	5	0	0	0	1				
Human Health: Infectious Disease	Montira Pongsiri	0	4	1	1	1	1				
Water	Sushel Unninayar	0	42	0	1	2	2				
Weather	Michael Nyenhuis	3	32	0	1	3/4	3/4				



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Task US-09-01 – Schedule

Task Schedule – Current Plan (18Dec2008 Task Sheet)

Formation of Advisory Groups:	January 2009
Lists of Documents (for each SBA):	April 2009
Nine preliminary reports (for each SBA):	May 2009
Analysts report preliminary findings to UIC: - <i>UIC Meeting at ISRSE Symposium</i>	May 2009
Nine final reports (for each SBA): - <i>UIC Meeting at TBD</i>	October 2009
Initial US-09-01 findings across SBAs: - <i>Presentation to GEO Plenary VI</i>	November 2009
Final Task report and recommendations:	January 2010
UIC Assessment of US-09-01 process:	March 2010



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Task US-09-01 – Schedule Analysis

GEO User Interface Committee: Task US-09-01 Schedule Analysis (Preliminary & Final Reports)

SBA	Analyst	Feb-09	Mar-09	Apr-09	May-09	Jun-09	Jul-09	Aug-09	Sep-09	Oct-09	Nov-09	Dec-09	Jan-10	Feb-10
Agriculture	Michael Brady										Prelim.			Final??
Biodiversity	Greg Susanke					Prelim.					Final			
Climate	Molly Macauley			Prelim.		Final								
Disasters	Stephanie Weber			Prelim.		Final								
Ecosystems	Tom Gilbransen			Prelim.		Final								
Energy*	Erica Zell	Prelim.								Final				
Health	Pending	None provided to date												
Water	Sushel Unninayar	None provided to date												
Weather	Michael Nyenhuis				Prelim.					Final				



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Task US-09-01

Findings & Analysis

- Some variance in conduct of process
- Substantial risk to schedule exists
- Unable to meet Nov. 2009 goal for all 9 SBAs
- Health SBA: Poses serious risk to schedule.
Biggest overall threat to task
- Biodiversity: Significant uncertainty for ability to deliver product using US-09-01 process
- Water: Significant delays however substantial progress in Feb. to form Advisory Group

Almost certain UIC will need to modify the schedule given in the Dec.2008 Task Sheet



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Task US-09-01

Recovery Options

- A. Identify alternate Analyst for Health
- B. Drop either Health-AQ or Health-Disease to reduce workload
- C. Identify support people to help Biodiversity Analyst manage to US-09-01 process
- D. Modify GEO expectations & schedule goals
- E. Keep schedule & drive Analysts to meet schedule goals

Recommendation:

- One month notice for Health to make substantial progress (form AG, deliver schedule & User Types, initial document list)
 - UIC to seek other Analyst if progress not sufficient
 - UIC to begin seeking Health Analysts, if needed
- Modify schedule to expect 4 of 9 SBA reports by Plenary
- Report progress at Plenary VI; expect full task delivery in 2010



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Task US-09-01 – Schedule Analysis

GEO User Interface Committee: Task US-09-01 Schedule Analysis (Preliminary & Final Reports)

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Agriculture	Michael Brady										Prelim.			Final??
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Ecosystems	Tom Gilbransen			Prelim.		Final								
Energy*	Erica Zell	Prelim.								Final				
Health	Pending	None provided to date												
Water	Sushel Unninaray	None provided to date												
Weather	Michael Nyenhuis				Prelim.					Final				
Revised Schedule - Proposed	4 of 9 SBAs				4 Prelim.				4 Final					UIC Analysis
	Other 5 SBAs							5 Prelim.				5 Final		



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Task US-09-01

Task Schedule – Revised

Formation of Advisory Groups:	Early 2009
Lists of Documents (for each SBA):	April 2009
Preliminary reports from 4 of 9 SBAs: - <i>Those Analysts report preliminary findings to UIC (ISRSE Symposium)</i>	May 2009
4 Final reports & other 5 SBA Prelim. reports: - <i>Analysts report findings to UIC (UIC Meeting)</i>	September 2009
US-09-01 Presentation to GEO Plenary VI: - <i>Present findings from 4 Final reports</i>	November 2009
Other 5 SBA Final reports: - <i>Other Analysts report findings to UIC (UIC Meeting)</i>	Jan.-Feb. 2010
Initial US-09-01 findings across SBAs: - <i>UIC Report/Presentation to C4</i>	March 2010
Final Task report and recommendations:	June 2010



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Task US-09-01

UIC Discussion & Decisions



Back-up Slides



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Task US-09-01

Current & Future States of Critical Earth Observation Priorities

Critical Earth Observation Priorities		Currently Available	
		Yes	No
Available in Future	Planned	Good situation	In waiting
	No Plan	Possible crisis	Major gap