

## Item 7 –

# **Overview of CEOS Actions in Support of GEO Work Plan -**

Ivan Petiteville (ESA), CEO

# Plan

- Introduction
- Outcomes of 2009 Remapping Workshop
- Next Steps
- Conclusions



**SIT-23**  
**March 4-5, 2009**  
**Cocoa Beach, Florida**



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# Introduction

# CEOS Support to GEO (1/2)

- **Multifold support:**

- Coordination role

- CEOS is Point of Contact for 11 GEO Tasks (out of 15 co-led by CEOS)

- Support to GEO groups:

- GEO Committees, adhoc GEO groups (e.g. Target Team), GEO Task Teams

- Specific activities related to GEO Tasks

- e.g. generation of datasets accessible for free by the GO Community

# CEOS Support to GEO (2/2)

- **Strong involvement of CEOS Support Groups:**
  - 3 Working Groups, 6 Virtual Constellation teams, 8 CEOS SBA teams of experts, SEO
- **Many resources from CEOS Agencies**

# CEOS Groups

## CEOS SBA

SBA	NAME	AGENCY
DISASTER	Guy Seguin	CSA
HEALTH	Murielle Lafaye	CNES
CLIMATE	Mitch Goldberg	NOAA
WATER	Chu Ishida	JAXA
WEATHER	Paul Counet Rob Husband	EUMETSAT
ECOSYSTEMS	Alex Fortescue	CSIR
AGRICULTURE	Brad Reed	USGS
ENERGY	Richard Eckman	NASA
TRANSVERSE	Ivan Petiteville	CEOS

## VIRTUAL CONSTELLATIONS

CONSTEL.	NAME	AGENCY
Atmospheric Composition	Ernest Hilsenrath Claus Zehner	NASA ESA
Land Surface Imaging	Bryan G Bailey V. Jayaraman	USGS ISRO
Ocean Surface Topography	Stan Wilson Francois Parisot	NOAA EUMETSAT
Precipitation	Steven Neeck Riko Oki	NASA JAXA
Ocean Surface Vector Wind	Stan Wilson Hans Bonekamp B.S. Gohil	NOAA EUMETSAT, ISRO
Ocean Colour Radiometry	Hiroshi Murakami Nicolas Hoepffner  Jim Yoder (support)	JAXA EC/JRC  IOCCG/WHOI

## CEOS WORKING GROUPS

WG	NAME	AGENCY
WGCV	Pascal Lecomte	ESA
WGEdu	Gordon Bridge	EUMETSAT
WGISS	Martha Maiden	NASA

# GEO Tasks Led by CEOS

- 15 Tasks from GEO 2009-2011 WP led / co-led by CEOS
- 11 out of 15 GEO Tasks are coordinated by CEOS as POC
  - All 11 GEO Task Sheets have been generated.
  - Some Task Sheets are being consolidated with other co-Leads

only CEOS POC
both CEOS & GEO POC

	GEO 2009-2011 Task	CEOS Point of Contact
AR-09-02a	<i>Virtual Constellations</i>	Mary Kicza (NOAA, CEOS SIT Chair )
CB-09-05b	<i>CBERS</i>	Daniel Matsapola (CSIR)
DA-09-01a	<i>GEOSS Quality Assurance Strategy</i>	Pascal Lecomte (ESA, WGCV Chair)
DA-09-01b	<i>Data, Metadata and Products Harmonisation</i>	Ken McDonald (NOAA)
DA-09-03a	<i>Global Land Cover</i>	Pascal Lecomte (ESA, WGCV Chair)
DA-09-03d	<i>Global DEM</i>	Jan-Peter Muller (BNSC/UCL, WGCV)
CL-06-01a	<i>Sustained Reprocessing and Reanalysis of Climate Data</i>	Mitch Golberg (NOAA)
CL-06-01c	<i>Key Climate Data from Satellite Systems</i>	Mitch Golberg (NOAA)
CL-09-03b	<i>Forest Carbon Tracking</i>	Per Erik Skrovseth (NSC), Alex Held (CSIRO)
CL-09-03c	<i>Global Monitoring of Greenhouse Gases from Space</i>	Takashi Moriyama (JAXA)
DI-06-09	<i>Use of Satellites for Risk Management</i>	Guy Seguin (CSA)
DI-09-02b	<i>Regional End-to-End Disaster Management Applications</i>	Guy Seguin (CSA)
HE-09-03b	<i>Implementation of a Malaria Early Warning System</i>	Jabin Vahora (NOAA)
EN-07-01	<i>Management of Energy Sources</i>	Richard Eckman (NASA)
WA-06-07b	<i>Africa</i>	Diego Fernández Prieto (ESA)



# CEOS Activities in Support to GEO

- All activities related to 2009-2011 GEO Tasks
- Multiple sources for definition of 2009-2011 CEOS activities:

## CEOS GEO Actions table

- GEO task sheets in particular where CEOS is POC
- Proposals from CEOS Members (Jan. 09 - questionnaires)
- Virtual Constellations plans of activities
- Continuation of open CEOS Actions defined in 2008

- CEOS response to GCOS needs: 59 Actions

## CEOS GCOS Actions table

# GEO Priorities for 2009-2011 (1/2)

## Priorities for GEO Community:

- GEO Common Infrastructure to move from prototype to operational system
  - GEO Web Portals, GEOSS Clearinghouses and GEOSS Registries
- Water Resource Management, Forest and Climate Change (2008 Tokyo, G8 Declaration).
  - E.g. Forest Carbon Tracking, Greenhouse Gases Monitoring
- Coordination of the GEO activities in Africa
- Biodiversity Network (GEO BON).
  - CEOS not involved yet.
  - Requirement document to be issued in 2009; will be assessed by CEOS
- Data sharing principles

# GEO Priorities for 2009 (2/2)

## Additional priorities specific for CEOS as seen by GEO Secretariat:

- LSI constellation to evolve rapidly to offer a large volume of data (same format, free access, good quality, ...) to the GEO Community
- Production of a 30m Global DEM.



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# **Outcomes of 2009 Remapping Workshop**

# 2009 Remapping - History

- CEOS – GEO Secretariat coordination meeting (Dec. 3-4, 2008)
- Call for proposals (“questionnaires”) to CEOS (Dec. 15, 2008)
- 2009 remapping Telecon (Dec. 19, 2008)
- 2009 remapping Workshop (Jan. 27-28, 2009)

# **GEO Secretariat – CEOs Coordination Meeting, Geneva (December 3 & 4, 2008)**



# 2009 Remapping Workshop

- Participants:
  - SBAs Coordinators, Constellations Leads, WGs Chairs, CEOS Chair rep, the CEOS SIT team, SEO and CEO.
- 2nd part of the workshop dedicated to:
  - the definition of new CEOS Actions in support of GEO
  - the consolidation of the existing ones defined in 2008.

# CEOS Actions

- With respect to the 2008 remapping workshop:
  - Number of Actions divided by 2.
  - Actions much better formulated.
- CEOS Actions are of very different nature and the resources required for their execution vary a lot.



# Families of CEOS Actions

**3 types of Cat 1 actions may be distinguished:**

- 1. Data provision** (incl. data reprocessing), **data access** (incl. data interoperability, user portal)
- 2. Scientific and Calibration/Validation**
- 3. Programmatic** (planning of future missions/sensors, requirements/gaps analysis, funding, promotion)

# Characteristics of CEOS Actions

- Most of Cat 1 actions relies on activities either on-going or already planned by the CEOS Agencies.
  - However the level of efforts (financial, human, ..) overall is considerable and distributed equally between CEOS Agencies
- Actions are heterogeneous in terms of
  - financial implications, resources required,
  - nature (*e.g. political, technical, scientific, ..*),
  - status (*on-going or future activities*),

# CEOS Priorities

- CEOS top priorities are based on:
  - the top priorities from GEO Secretariat.
  - the GEO Tasks led / co-led by CEOS and associated actions
- “Forest Carbon Tracking” and the “Global Monitoring of Greenhouse Gases from Space” are among the top priority activities for CEOS in 2009 onwards

# CEOS Actions Categories

## CATEGORY

A  
C  
T  
/  
O  
N

	1	2	3	4
<b>GEO top priorities</b> or <b>GEO Task led by CEOS</b>	✓	✓		
<b>Completed before Oct. 09</b> or <b>with significant outcomes</b>	✓		✓	

# Actions Figures (Feb. 24, 2009)

- In 2009, CEOS will conduct activities related to 36 GEO Tasks (out of 115)
  - Focus on top priority CEOS Actions that will address 19 GEO Tasks incl. 9 co-led by CEOS
- 85 Actions (*related to 36 GEO Tasks*) + 59 “GCOS” Actions (*related to CL-06-01c “Key Climate Data from Satellite Systems”*)
  - 40 in Cat. 1 (top priority; to be completed before Nov. 09)
  - 23 in Cat. 2 (top priority)
  - 38 GCOS top priority Actions (, 21 from 2008 + 17 started in 2009)

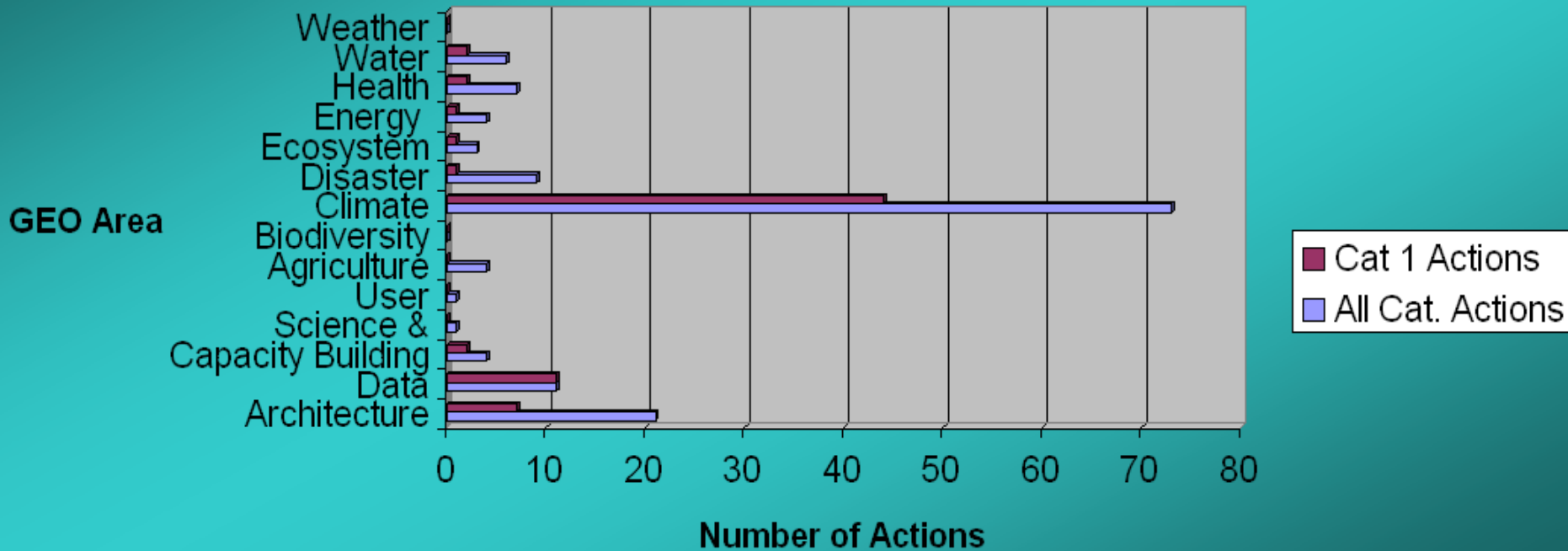
# CEOS Actions per GEO Area

GEO Area	All Cat. + GCOS	Cat.1 + top GCOS
Agriculture	4	
Architecture	20	7
Data	11	11
Capacity Building	4	2
Climate	14 + 59	13 + 38
Disaster	10	1
Ecosystem	3	1
Health	7	2
Science & Techno	1	
User	1	
Water	6	2
Energy	4	1
<b>GRAND TOTAL</b>	<b>85 + 59</b>	<b>40 + 38</b>

**GCOS** ←

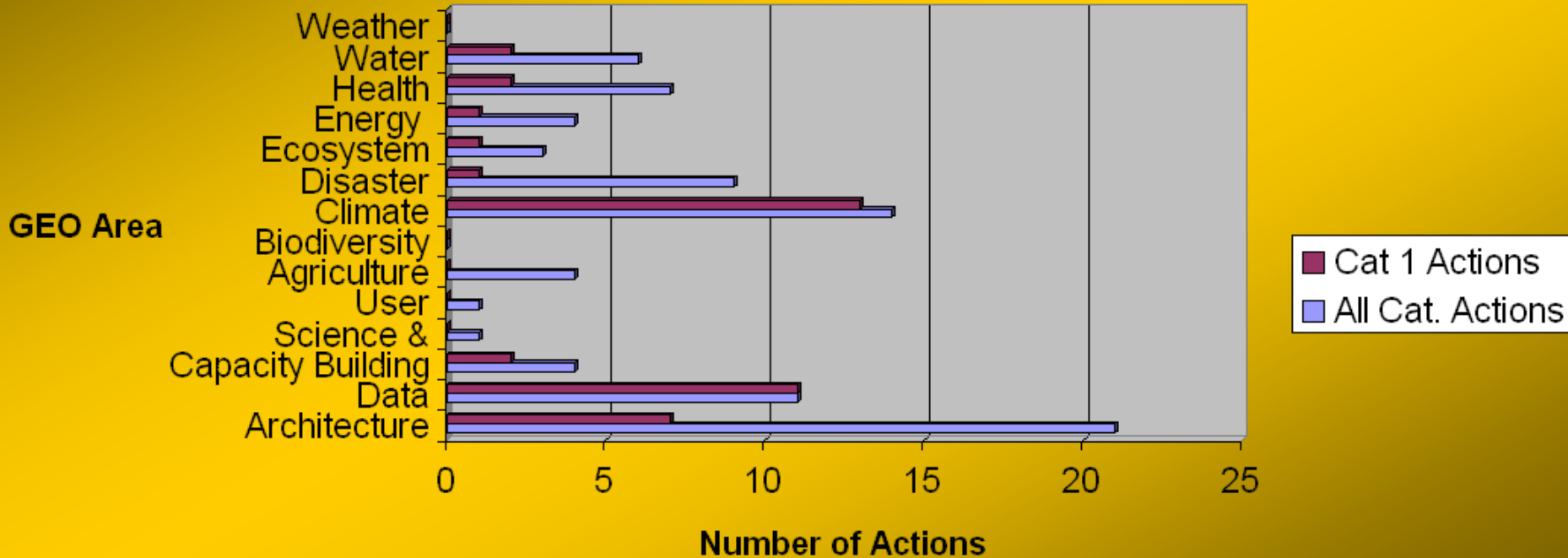
# CEOS Actions per GEO Area

CEOS Actions per GEO Area  
 (with GCOS Actions)



# CEOS Actions per GEO Area

CEOS Actions per GEO Area  
 (w/o GCOS Actions)







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# Next Steps

## Next Steps (1/2)

- Allocation of resources by CEOS Agencies top management (*SIT-23*)
- List of Actions to be finalized (*March 09*):
  - A few new actions might be added at any time (flexible process)
  - A few actions might need to be consolidated

## Next Steps (2/2)

- Actions to be shared with GEO Task POCs with GEO SEC cooperation (*March 09*):
  - Possible consolidation to better fit the GEO Task objectives
  - Inclusion into GEO Task Sheets
- Start working and deliver according to milestones & deliverables
  - Cat.1 CEOS Actions incl. GCOS top priority Actions, GEO Task Sheets, Virtual Constellations plans of activities
- CEOS IP v2 to be updated (*April 09*)



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# Conclusions

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- Large participation to Remapping exercise across CEOS Agencies. High motivation.
- Significant support from all CEOS Agencies
- More than in 2008, CEOS, as co-lead of 15 GEO Tasks and Contributor to several GEO Tasks, need to obtain concrete results in a timely manner