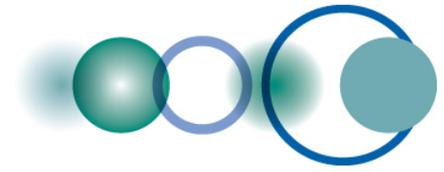


GEO Update

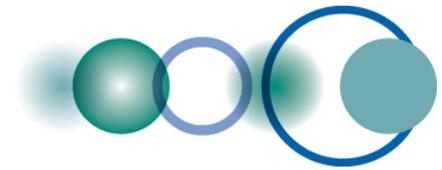
Osamu Ochiai
GEO Secretariat
38th CEOS WGCV
NCWCP, MD, USA
30 Sept. – 2 Oct. 2014





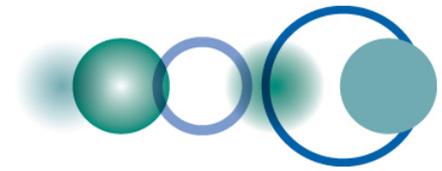
Contents

- GEO Updates since last WGCV
- Data Management Principles Task Force
- IPWG update
- Gabon Plenary



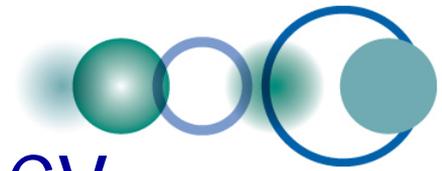
GEO Updates since last WGCV

- GEO Work Plan Symposium
 - focused on accelerating progress toward the 2015 Strategic Targets of the GEOSS, and preparing for the post-2015 era.
- GEO Appathon launched at Geospatial World Forum 2014
 - Global APP development competition open to any non-commercial
 - 246 participants (104 individuals, 31 teams, 49 countries)
 - Submission deadline is September 26th
 - Winner will be announced at Gabon Plenary
- GEOSS Asia Pacific Symposium adopted “Tokyo statement”
 - Welcome the emerging initiative to integrate Earth observations in tackling the challenges of monitoring the complexities of the water sector in the Post-2015 Development Agenda with WHO, UN-HABITAT, UNEP, and GEO participation.
- Barbara Ryan reappointed as GEO Secretariat Director



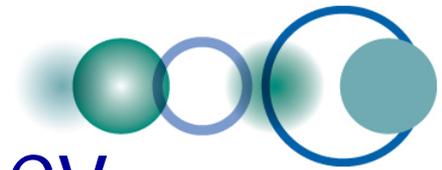
GEO Updates since last WGCV

- IN-01 Task (Earth Observation Systems)
 - Progress made of CEOS VCs
 - CEOS-CGMS WG on Climate developed ECV inventory including 200+ data records, planning a meeting at late 2014
 - AGEOS will establish ground stations in central Africa (23 countries) for CBERS, Landsat, SPOT and COSMO-SkyMed data
 - EEA finalized a catalogue of in-situ needs for Copernicus services and an inventory of in-situ issues faced by EU GEO projects
 - The GEO Director participated in the meeting of the ITU Joint Task Group on 21-31 July 2014 in Geneva (via WMO who is an ITU member) and introduced a GEO Position Paper "on behalf of the Earth Observations community" on the need to preserve the frequencies used by Earth Observation systems and networks, and in particular the frequencies used by the Sentinel-1 SAR and the Sentinel-3 altimeter



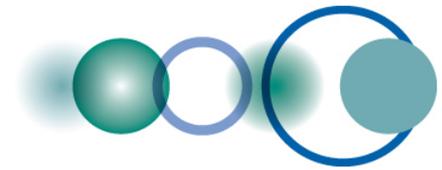
GEO Updates since last WGCV

- IN-02 (Earth Datasets)
 - Global DEMs released or being processed – SRTM 30m, ALOS 30m,,,
 - Produced continental mineral map (Australia) – now started to work for parts of South America and China
 - QA4EO - A showcase on Ozone was prepared. New case studies recently published to QA4EO website. Case studies repository needs to be expanded (i.e. level 1, atmosphere, terrestrial, and ocean)
 - Global Map data (national and regional version) were released for 110 countries and eight regions from the ISCGM website as of 1 September 2014 corresponded to 65% of the whole land area of the earth. Global Map Version 2, Global Land Cover and Percent Tree Cover, in July 2013, and Global Elevation in July 2014
 - A dialogue has been initiated between UN-GGIM and GEO during fourth session of the United Nations Committee of Experts on Global Geospatial Information Management, New York, in August 4-5



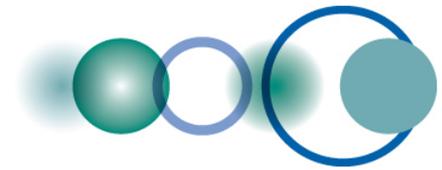
GEO Updates since last WGCV

- IN-03 Task (GEOSS Common Infrastructure)
 - Discoverable resources 65 to 72 million (51 million for Data-CORE)
 - The GCI requirements baseline reviewed and consolidated:
 - the Component and Service Registry (CSR) has simplified its resource pledge and registration process;
 - improved the GEO Discovery and Access Broker (DAB) search results ranking algorithm and
 - To be migrated the GEOSS Clearinghouse functions into the DAB
 - Satellite data assets contributing dominantly to the GEOSS resources through the CEOS WGISS Integrated Catalog (CWIC). CEOS International Directory Network (IDN) also provided the source of registered data collections from Space Agencies in CEOS
 - On-going test for establishing interoperability between WMO Information System (WIS) and GCI.
 - Development of a set of “GEOSS Community Portals Guidelines” and through some communities (e.g. GEO-BON, SAON).



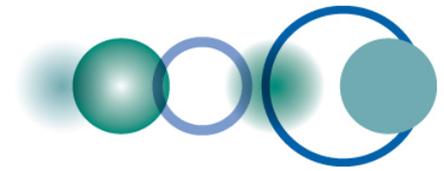
GEO Updates since last WGCV

- IN-04 (GEONETCast)
 - EUMETCast-Europe service is transitioning to DVB-S2. The DVB-S2 standard will give a more flexible and affordable implementation and allow the service to grow without disrupting the existing services for users due to frequent configuration changes.
 - Preparations were made to upgrade 110 existing EUMETCast-Africa stations and install about 50 new stations in in Africa, in context of EU funded Monitoring of Environment and Security in Africa (MESA) project. Equipment in training centres will also be upgraded. Following this project, there will be about 400 GEONETCast stations in Africa.
 - EUMETSAT and CMA have established joint user management process to handle user access for the data exchanged on each system. Two Asia-Pacific users (in Australia and Hong Kong) are receiving EUMETSAT satellite data through CMACast via this joint process.



GEO Updates since last WGCV

- IN-05 (GEOSS Design and Interoperability)
 - Phase 7 of the Architecture Implementation Pilot (AIP-7) was launched in early 2014 to develop and deploy easy-to-use online (Web and Mobile) apps that demonstrate the value of standards-based access to EO data and services registered with GEOSS.
 - Target areas include:
 - Flood and drought Monitoring, Food security and Energy management, Environmental monitoring using Mobile Sensors, Citizen Observatories, Crowd Sourcing, Wind and Solar Energy Potential Estimator, Earth cover change detection, and Ocean observations and commercial fisheries.
 - A Call for Proposals was launched and 23 proposals (representing 80 organizations) were received in response. This resulted in the formation of 14 AIP-7 Working Groups (e.g. Disaster Management & Agriculture, Land, Oceans, Health, Water, Data Sharing, System Design, Architecture, AppFramework, Crowdsourcing, Capacity Building, Tutorials)

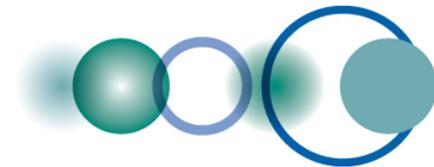


GEO Data Management Principles Task Force (DMP TF)

- GEO X Plenary agreed to setting up the DMP TF
- Terms of Reference
 - DMP TF will support GEO in the **definition and endorsement of common GEOSS Data Management Principles**
 - The principles initially drafted by the GEO Infrastructure Implementation Board will be reviewed and their feasibility assessed
 - Pending GEO-XI Plenary's approval of the Principles, DMP TF TOR may be extended and modified to include a mandate to develop **Implementation Guidelines** for these Principles.



NAME	AFFILIATION	POSITION
Alessandro Annoni	JRC, EC (Co-chair)	Co-chair GEO IIB, Technical Coordinator of the INSPIRE Directive
David Halpern	COSPAR (Co-chair)	Chair COSPAR Task Group ; co-chair GEO DSWG ; former co-chair GEO S&TC
Jeff De La Beaujardiere	NOAA, US	DM Architect and Chair of Environmental DM Committee
Garry Baker	BGS, UK	Head of National Geoscience Data Centre Chair of NRSC DM programmes
Albani Mirko	ESA	Programme Manager of the Long Term Data Preservation Programme
Ivan Deloatch	USGS, US	Executive director of FGDC, US NSDI, co-chair GEO IIB
Françoise Genova	CDS, France	Director Astronomical Data Centre, Member of RDA TAB and of the e-IRG
Richard Moreno	CEOS	Chair of the WG of Information Systems and Services (WGISS) of CEOS
Tony Boston	Australia	Australian Bureau of Meteorology, Environmental Information Management Head
Siri Jodha Khalsa	IEEE	Research Associate at National Snow and Ice Data Center, University of Colorado
Ryosuke Shibasaki	Japan	Director, Center for Spatial Information Science, The University of Tokyo
Florian Haslinger	EPOS, Switerland	Deputy Director, Head "Support & Special Projects" Swiss Seismological Service
Peiliang Shi	WMO	Director WMO Information System
Simon Hodson	ICSU/CODATA	Executive Director of CODATA
Reynaldo Mondragon	Mexico	Director de Geografía Regional del INEGI
Aboubakar Mambimba	Gabon	Gabon EO Ground Station Project Manager, AGEOS
Chan-ho Park	Republic of Korea	Senior Researcher, National Institute of Biological Resources (NIBR)
Won young Choi	Republic of Korea	Senior Researcher, National Institute of Biological Resources (NIBR)
Youg-gi Kim	Republic of Korea	Staff, Climate Policy Division, KMA
Osamu Ochiai	GEO Secretariat	
Wenbo Chu	GEO Secretariat	

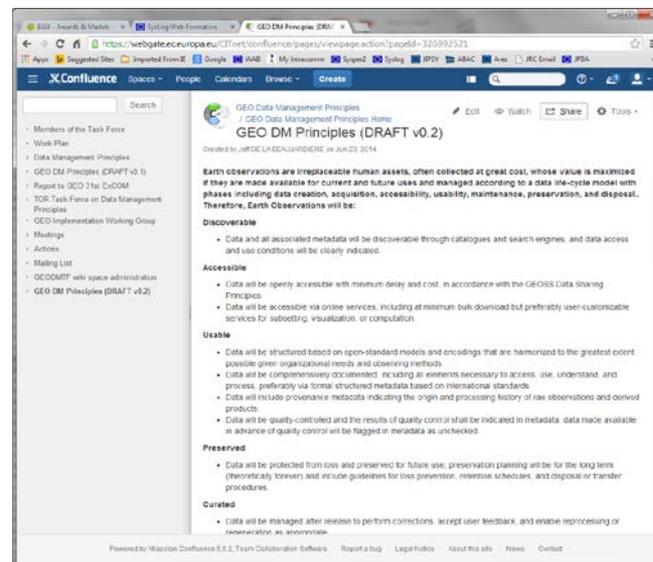


Principles (overview)

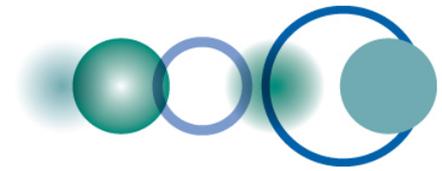
Each Earth observation is unique because the observation occupies a specific location and time in an environment that is continuously changing. No two Earth environmental observations are the same, making each Earth observation an irreplaceable asset to understand the past, describe the present, and forecast the future of the global integrated Earth system.

The value of each Earth observation is maximized through data life-cycle management, including the following foundational elements:

- Discoverability
- Accessibility
- Usability
- Preservation
- Curation



All information (members, comments, roadmap, ...) available in Wiki



Discoverability

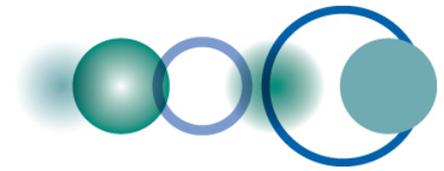
1. Data and all associated metadata will be discoverable through catalogues and search engines, and data access and use conditions will be clearly indicated.



Accessibility

2. Data will be openly accessible with minimum delay and cost.
3. Data will be accessible via online services, including, at minimum, direct download but preferably user-customizable services for visualization and computation.

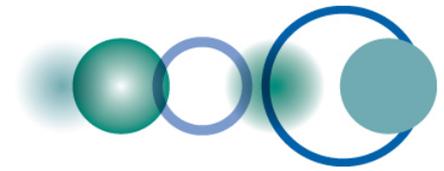




Usability

4. Data will be structured on open-standards and encodings that are harmonized to the greatest extent possible given organizational needs and observing methods.
5. Data will be comprehensively documented, including all elements necessary to access, use, understand, and process, preferably via formal structured metadata based on international standards.
6. Data will include provenance metadata indicating the origin and processing history of raw observations and derived products.
7. Data will be quality-controlled and the results of quality control shall be indicated in metadata; data made available in advance of quality control will be flagged in metadata as unchecked.





Preservation

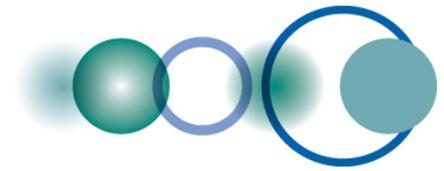
9. Data will be protected from loss and preserved for future use; preservation planning will be for the long term and include guidelines for loss prevention, retention schedules, and disposal or transfer procedures.
10. Data and associated metadata will be periodically verified to ensure integrity, authenticity and readability.



Curation

11. Data will be managed to perform corrections and updates in accordance with reviews, and to enable reprocessing as appropriate.
12. Data will be assigned persistent, resolvable identifiers to enable documents to cite the data on which they are based and to enable data providers to receive acknowledgement of use of their data.





ExCOM discussions and actions

- The Executive Committee to provide feedback on the Data Management Policy questions by 31 August 2014 directly to Alessandro Annoni, co-chair of the Data Management Principles Task Force (DMPTF), with a copy to all Executive Committee members and the Secretariat.
- Data Sharing and Data Management, should be coordinated with the Implementation Working Group (IPWG) and should be discussed by the Executive Committee and GEO-XI and GEO-XII Plenary, but any decisions should be finalized only at the end of 2015, as part of the next 10-Year Implementation Plan (2016-2025).
- On-going external consultation will be planned after GEO Plenary in Gabon.



IPWG developed in two phases

Phase 1

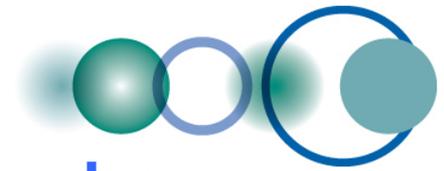
“reflective phase”
“fresh
perspectives”

- Brainstorm
- Collect, assess, compile input
- Interim Report to GEO ExCom (July 2014)

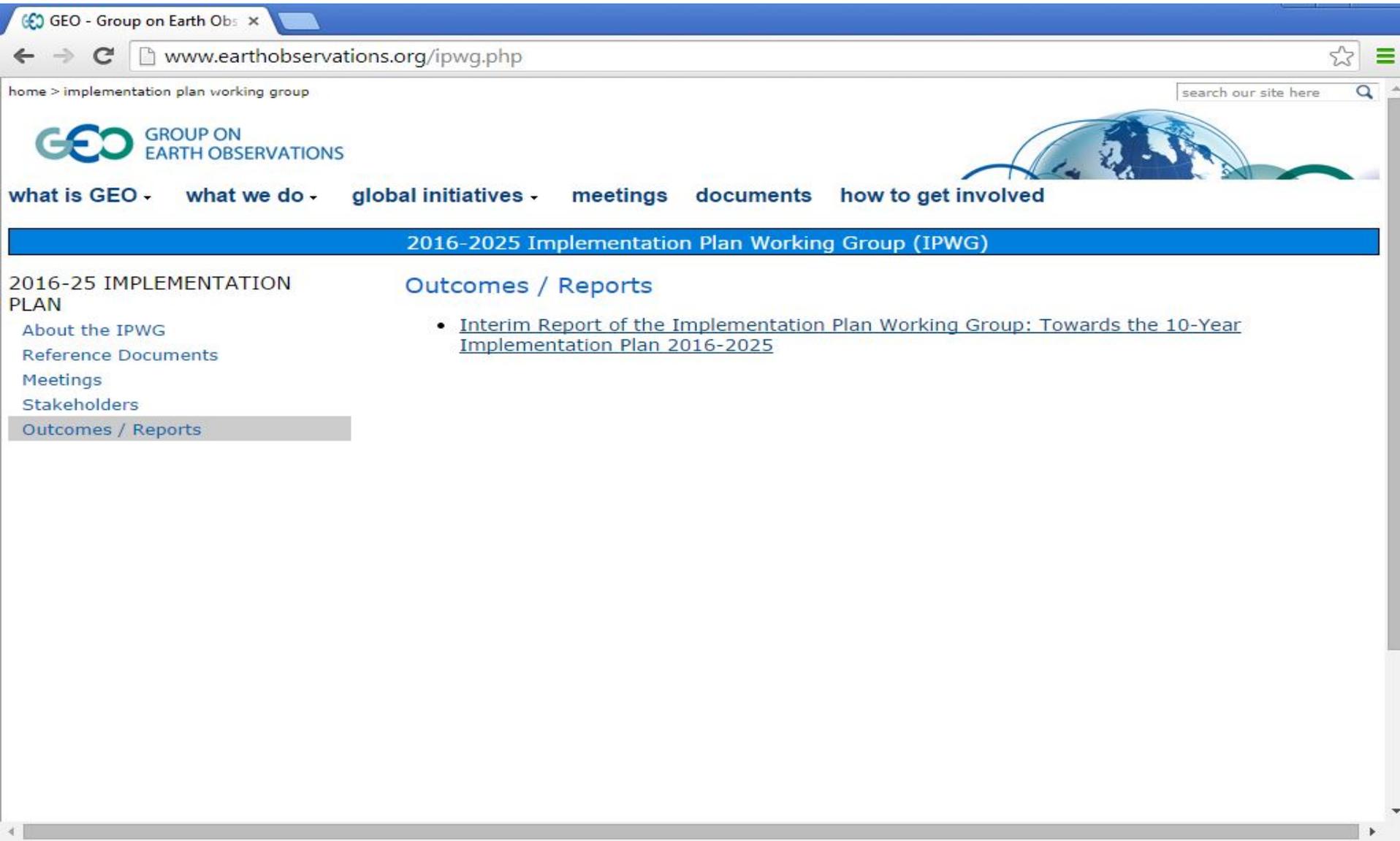
Phase 2

“synthesis and
formulation”

- Develop structure
- Synthesize input
- Formulate draft content
- Present outline IP to GEO-XI (Nov. 2014)
- Respond to guidance
- Develop, formulate, engage, ...
- Present final draft IP to GEO-XII for acceptance & subsequent endorsement at next Ministerial Summit (end 2015)

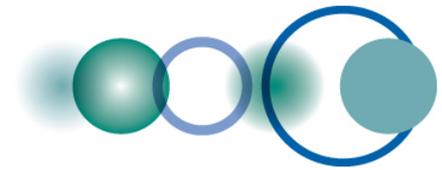


www.earthobservations.org/ipwg.php



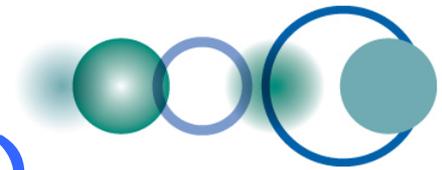
The screenshot shows a web browser window with the following content:

- Browser tab: GEO - Group on Earth Obs x
- Address bar: www.earthobservations.org/ipwg.php
- Page breadcrumb: home > implementation plan working group
- Search bar: search our site here
- GEO logo and name: GROUP ON EARTH OBSERVATIONS
- Navigation menu: what is GEO, what we do, global initiatives, meetings, documents, how to get involved
- Section header: 2016-2025 Implementation Plan Working Group (IPWG)
- Left sidebar: 2016-25 IMPLEMENTATION PLAN, About the IPWG, Reference Documents, Meetings, Stakeholders, Outcomes / Reports (highlighted)
- Main content: Outcomes / Reports
 - [Interim Report of the Implementation Plan Working Group: Towards the 10-Year Implementation Plan 2016-2025](#)



The Interim Report

- **Provides:**
 - an overview of stakeholders' expectations;
 - an analysis of the evolving context since the drafting of the first Implementation Plan;
 - lessons from the past; and
 - considerations for the future.
- **The IPWG has proposed guiding principles for the development of the Implementation Plan for the next ten years**
- **It recognizes that GEO will not change its overarching goal or vision, sets out some objectives and then outlines main areas of activity foreseen for the coming decade**

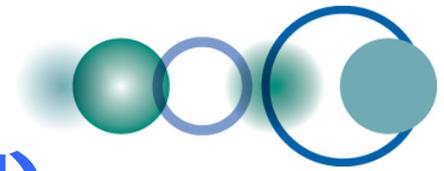


Interim Report (cont'd)

Through discussions during the first phase within the IPWG and through engagement with key stakeholders, some key considerations became evident which will help shape the development of the next Implementation Plan

Functions/activities to maintain and strengthen:

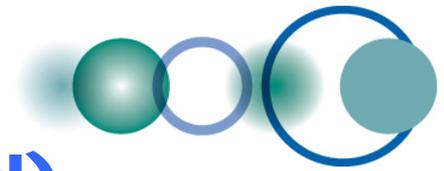
- **Inclusive nature of GEO**
- **A meeting point for technical and political stakeholders**
- **The agility of GEO to adapt to change**
- **The focus on interoperability**
- **A clearly stated position on data sharing**
- **A framework for intergovernmental/international cooperation**
- **Focus on capacity building and extending this to all members**
- **Focus on users**



Interim Report (cont'd)

Opportunities for improvement:

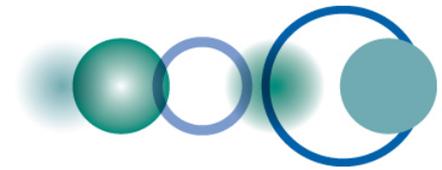
- Enhancing the Monitoring and Evaluation processes in order to create actionable recommendations at the task level.
- Clearly define the breadth and depth of GEO in connection with information delivery.
- Establishing a robust, steady resourcing mechanism within the voluntary framework of GEO.
- Fostering buy-in at a national level.
- Clearly define GEOSS and its vision.
- Proactively seek more geographically balanced contributions by all members (in particular developing countries and regional initiatives).
- Strengthen linkages between SBAs.
- Evolve GEO's engagement with key partners and stakeholders based upon jointly agreed objectives and roles.



Interim Report (cont'd)

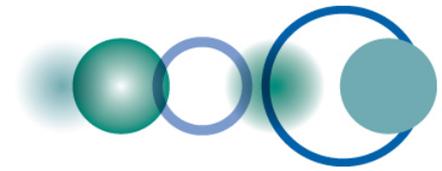
New action areas to explore – ‘Fresh Perspectives’:

- **GEOSS can be a Knowledge Broker for Earth Observations.**
- **Document and maintain observation and related information requirements for GEOSS.**
- **Integrate economic and social data into GEOSS.**
- **Explicitly develop decision support and model integration into GEOSS.**
- **Enhance GEOSS objectives to include economic benefits from the use of Earth Observations in decision making in both the private sector and at an individual level.**
- **Leverage new technologies and emerging approaches (e.g. citizen observations).**
- **Provide users sufficient information to judge GEOSS served data’s fitness for use.**
- **Facilitate the development of critical elements of GEOSS to a more operational status.**
- **Pursue free, open and timely access to Earth observation data.**



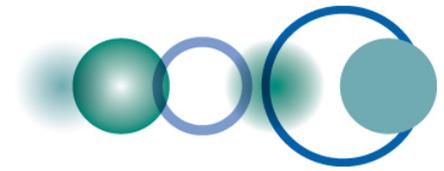
Current Status in 2nd phase

- **During two first months of the 'synthesis and formulation' phase the WG met virtually several times**
- **Met in Beijing 11-12 September in order to finalize an “outline” of the Implementation Plan**
- **In conjunction: Workshop on GEOSS Development (2016-2015) in Asia-Oceanic Region which aimed at collecting views from the GEO principals of the region**
- **Will submit the “outline” by end September to GEO XI Plenary**
- **IPWG Town Hall meeting at GEO XI Plenary allowing participating organisations to share their views and ask questions**



GEO-XI Gabon Plenary

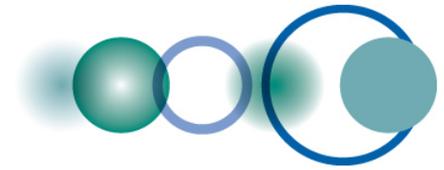
- Date and location:
 - 11-14 November 2014, Libreville, GABON
- Host:
 - Gabon, through the Gabonese Agency for Studies and Observation from Space, AGEOS
- Registration
 - Through GEO Member and Participating Organization
 - The online registration will open from 13 October through 31 October 2014
- Health concern
 - World Health Organization (WHO) and Gabon Health and Immigration Ministries' recommendations.
 - Risk assessment and mitigation measures are being discussed taking into account the latest information available from the United Nations Medical Services, WHO and Gabon authorities.



GEO-XI Plenary in Gabon

Provisional	8	9	10	11	12	13	14	15	16	17	18	19	20
Monday 10													
Tuesday 11		GEO Board Meetings (to be held at Hotel)											
Wednesday 12		GEO Executive Committee Meeting									Side Events		Visit to NKOK
Thursday 13		GEO-XI									Caucus meetings	GEO-XI Reception	
Friday 14		GEO-XI											

The Exhibition opens at 10h00 on Wednesday and closes at 14h00 on Friday



Contributions from WGCV

- Cross Cal/Val DEM products
- Continue QA4EO case studies
- DMP TF (cross cooperation with WGISS)
- Input to IPWG (through your country or CEOS)

[**http://www.earthobservations.org**](http://www.earthobservations.org)

[**oochiai@geosec.org**](mailto:oochiai@geosec.org)

[**GEO-XI Plenary, Gabon, Nov. 13-14 2014**](#)

