



3rd Assessment of Progress against the GEOSS 2015 Strategic Targets

Implementation Boards

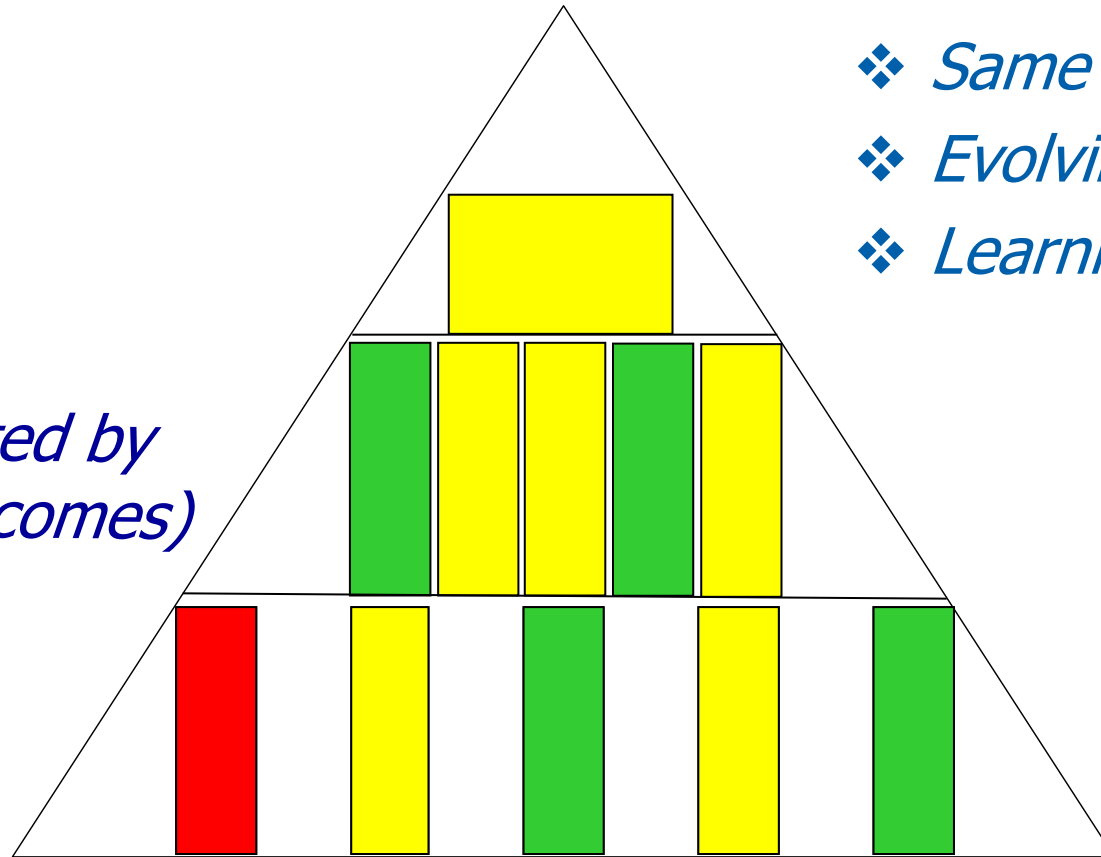




*Strategic
Target*

*Demonstrated by
bullets (Outcomes)*

*Work Plan
Tasks*



- ❖ *Same Structure*
- ❖ *Evolving Process*
- ❖ *Learning by doing*

G	Green: Expected to be achieved. Some actions/intervention may be required
Y	Yellow: At risk of not being achieved without additional actions/intervention
R	Red: Not expected to be achieved without significant actions/intervention

➤ Refer to GEO-XI Document no. 9 for details



Assessment Process: Information Sources

In a qualitative Assessment Process, all 3 Boards used:

- Query tool and reports from Task Sheets, where available
- Presentations & discussions at GEO Work Plan Symposium

“Institutions and Development” Board used invited presentations during Board Meetings

“Societal Benefits” Board used information from:

- Contributing activities e.g. participation in the GEO BON network, Sustainable Development Goals, etc
- Workshops and scientific sessions at conferences



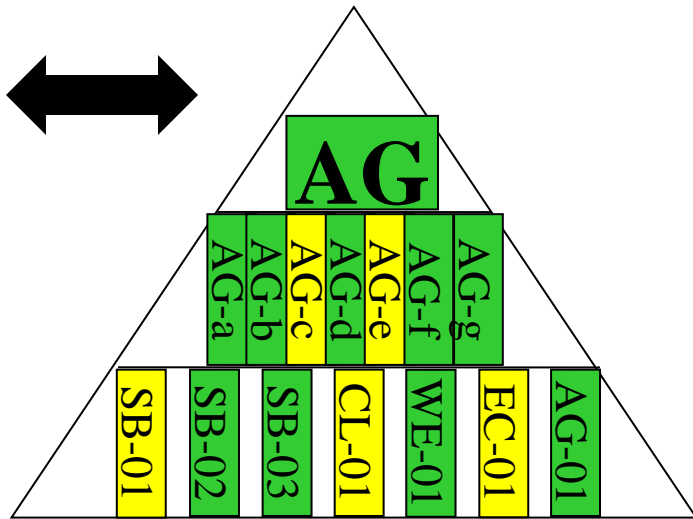
Assessment Process: Information Sources

“Infrastructure” Board used various additional inputs:

- Workshops on GEOSS future products and Architecture
- Independent assessment of GEOSS Portal
- Survey of GEOSS Data CORE awareness in GEO Community
- Testing of data access for Essential Climate Variables



Agriculture



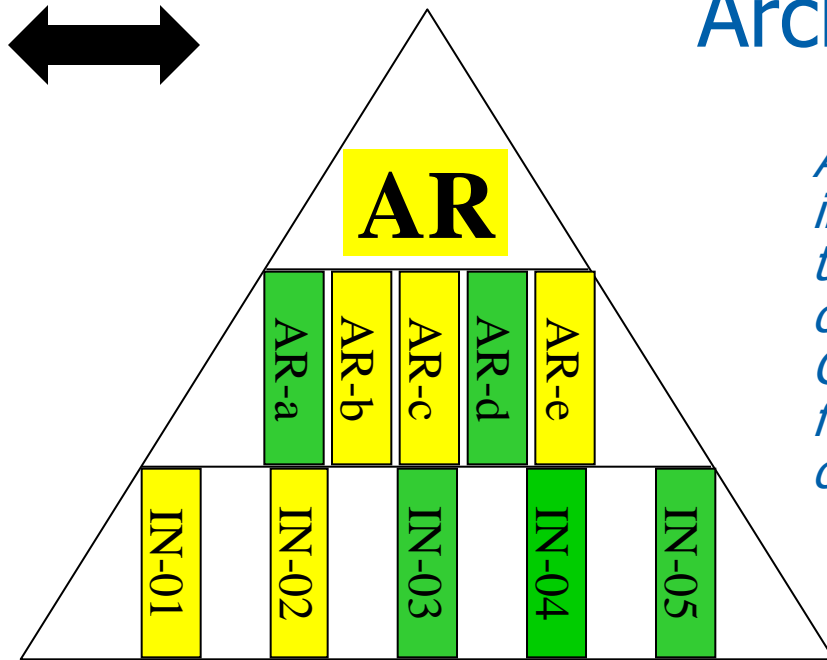
Improve the utilization of Earth observations and expanded application capabilities to advance sustainable agriculture, (aquaculture, fisheries and forestry) in areas including early warning, risk assessment, food security, market efficiency, and, as appropriate, combating desertification.

AG1. Support the implementation of the GEOGLAM program, incl:

- funding projects that contribute to achieving the GEOGLAM Program goals (*such as JECAM, AsiaRiCE, IKI-VEGA, Early Warning Crop Monitor*)
- providing financial and technical support to reinforce the GEOGLAM coordination office
- hosting targeted regional and thematic workshops supporting GEOGLAM implementation
- provide commercial data (in particular SAR and Very High Resolution) as in-kind contributions to GEOGLAM
- identifying additional agencies/institutions to expand the national/international network for agricultural resource management and food security



Architecture

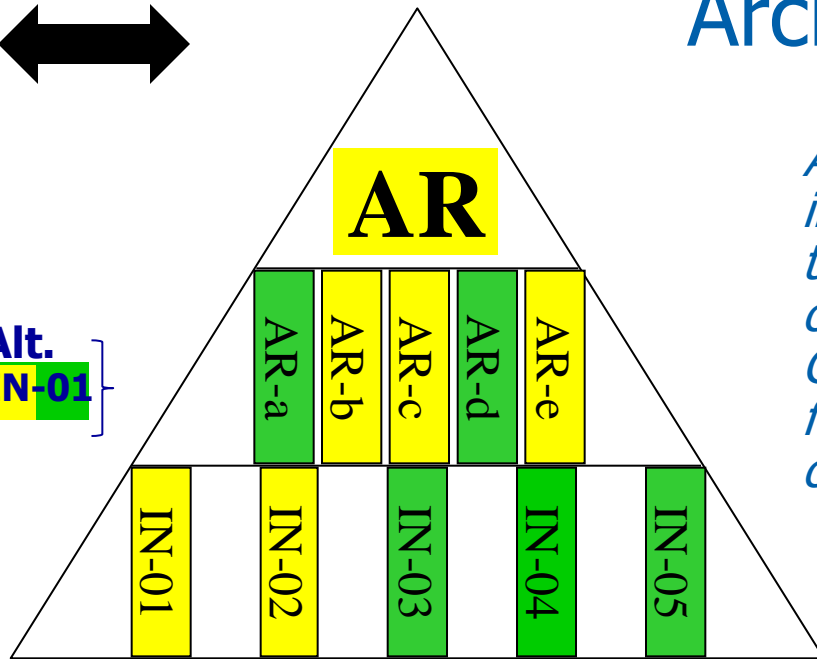


Achieve sustained operation, continuity and interoperability of existing and new systems that provide essential environmental observations and information, including the GEOSS Common Infrastructure (GCI) that facilitates access to, and use of, these observations and information.

- **AR1. Sustain the operations and evolution of the GEOSS Common Infrastructure (GCI), and assess continuity of commitments from GCI providers beyond 2015 (GCI providers include: ESA for the GEOSS Portal, Italy (CNR) for the Discovery and Access Broker, and the USA (USGS/George Mason University) and IEEE for the Registries)**
- **AR2. Increase efforts to coordinate the provision, and improve the integration, of space-based and in-situ data at global, regional, and national levels. In-situ data system coordination should be encouraged**



Architecture

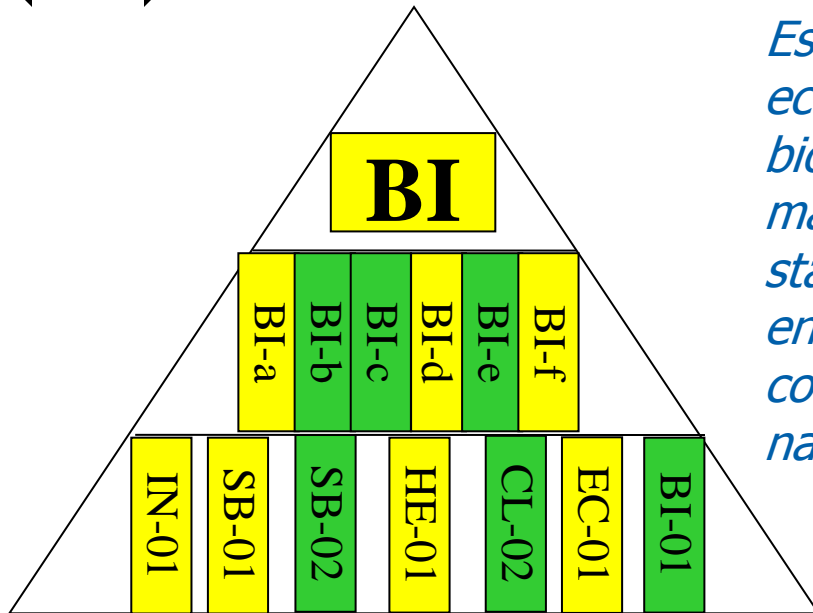


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Biodiversity

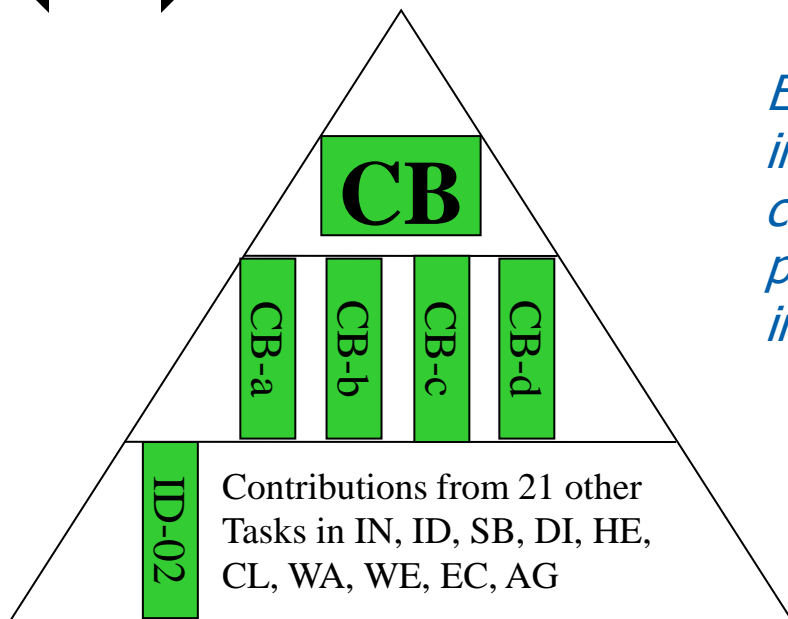


Establish, in conjunction with a comprehensive ecosystem monitoring capability, a worldwide biodiversity observation network to collect, manage, share and analyze observations of the status and trends of the world's biodiversity, and enable decision-making in support of the conservation and improved management of natural resources.

- **BI1. Support development of national or regional Biodiversity Observation Networks (BONs);** these will help countries meet their decision-making and reporting requirements, e.g. under the Convention on Biological Diversity (CBD)
- **Provide national contacts for Biodiversity**

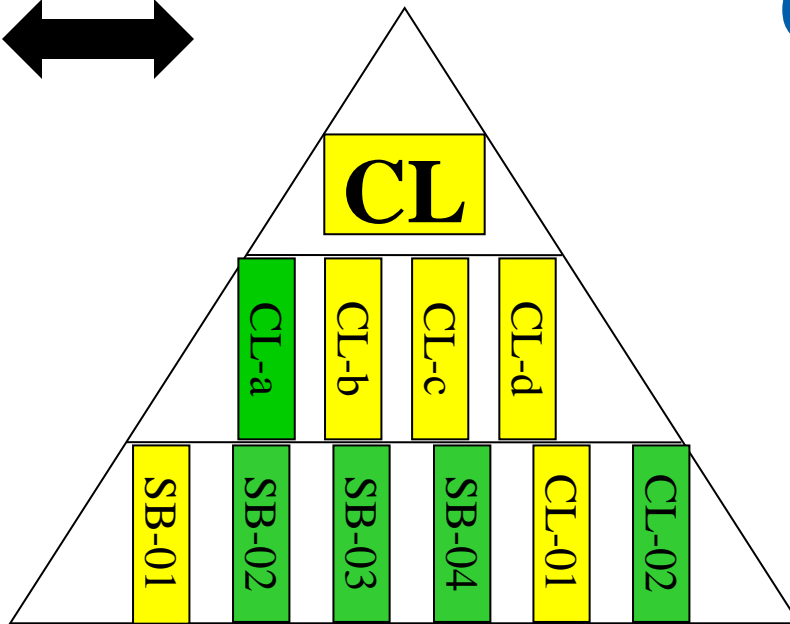


Capacity Building



Enhance the coordination of efforts to strengthen individual, institutional and infrastructure capacities, particularly in developing countries, to produce and use Earth observations and derived information products.

- **CB3. Provide capacity building resources, material and information to populate the Global Earth Observation Capacity Building (GEOCAB) Portal and CEOS Inventory (that will be incorporated into GEOCAB)**



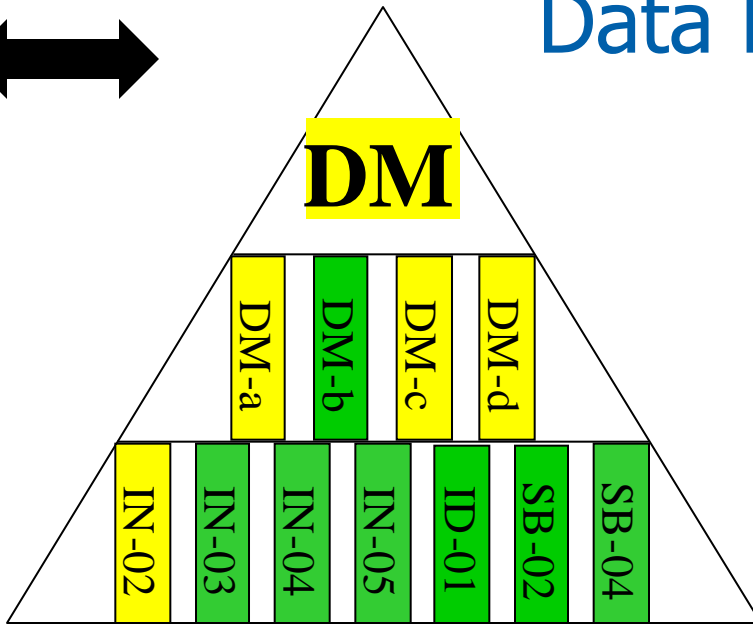
Climate

Achieve effective and sustained operation of the global climate observing system and reliable delivery of climate information of a quality needed for predicting, mitigating and adapting to climate variability and change, including for better understanding of the global carbon cycle.

- **CL3. Advance architectures for climate monitoring using guidelines outlined in “A Strategy towards an Architecture for Climate Monitoring from Space”** (Joint CEOS, CGMS, WMO); a foundation for the observation/monitoring pillar of the Global Framework for Climate Services (GFCS)
- **CL8. Support the development and maintenance of carbon monitoring networks**, especially in **less developed regions** (e.g. Africa, South-East Asia)

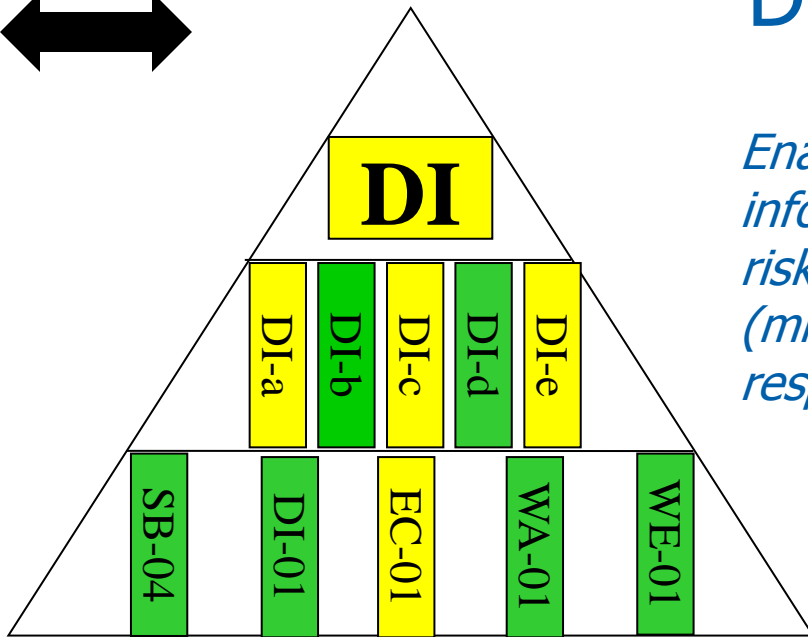


Data Management



Provide a shared, easily accessible, timely, sustained stream of comprehensive data of documented quality, as well as metadata and information products, for informed decision-making.

- **DM2.** Awareness and use of both, the GEOSS Common Infrastructure and the GEOSS Data CORE, are still low in the user community. **More effort is needed to bring data users from the Societal Benefit Areas (the demand side) together with data providers via the GEOSS Common Infrastructure, and Data CORE. Data providers should also be encouraged to further improve the quality of the data sets made accessible through GEOSS.**



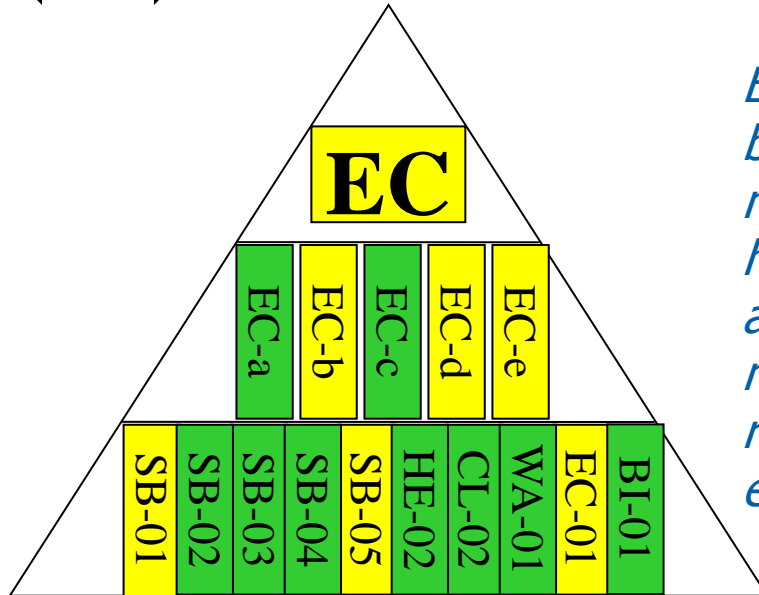
Disasters

Enable the global coordination of observing and information systems to support all phases of the risk management cycle associated with hazards (mitigation and preparedness, early warning, response, and recovery).

- **DI5. Support the implementation of the Hyogo Framework and the upcoming post-2015 DRR (Disaster Risk Reduction) framework with concrete activities and pilot projects involving national and local users**

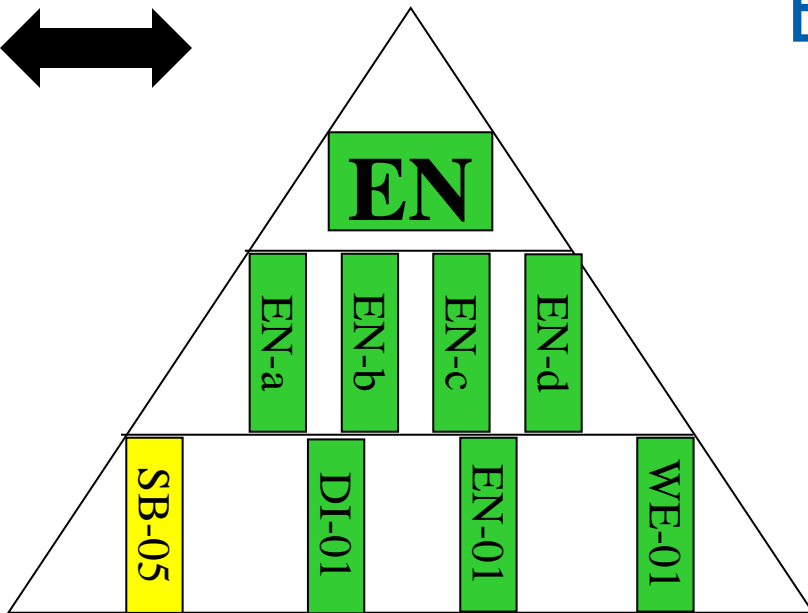


Ecosystem



Establish, in conjunction with a comprehensive biodiversity observation network, a wide-ranging monitoring capability for all ecosystems and the human impacts on them, to improve the assessment, protection and sustainable management of terrestrial, coastal and marine resources and the delivery of associated ecosystem services.

- **EC6. Contribute to the development of the Global Network for Observation and information in Mountain Environments (GEO-GNOME) through pilot projects in the mountainous areas of the world.** Support from the Italian Project NextData and synergy with the Mountain Research Initiative (MRI)



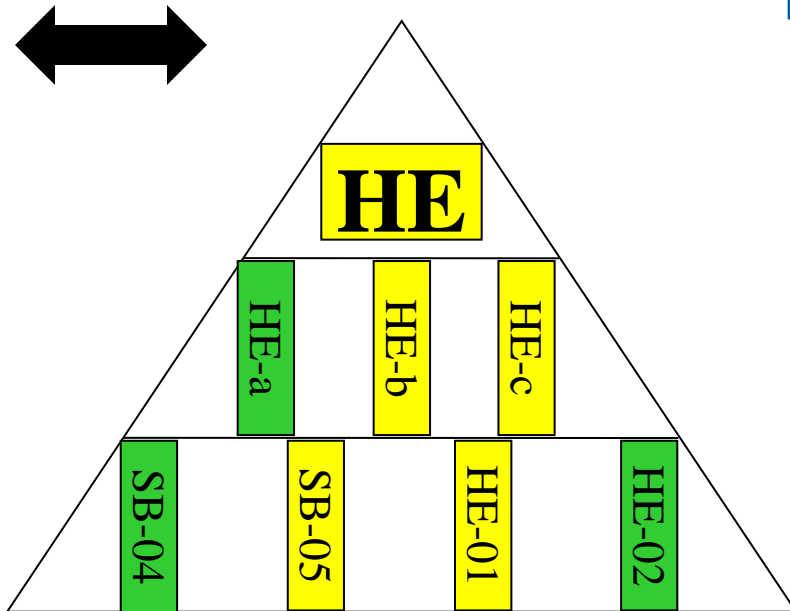
Energy

*Close critical gaps in energy-related Earth observations and increase their use in all Energy sectors in support of energy operations, as well as energy policy planning and implementation, to enable affordable energy with minimized environmental impact while moving towards a low-carbon footprint.
(From 2012 Task also includes minerals)*

- **EN4. Improve result dissemination for all energy types** by developing services and providing easy access for all stakeholders
- **EN5. Improve links and partnerships with the private sector**



Health

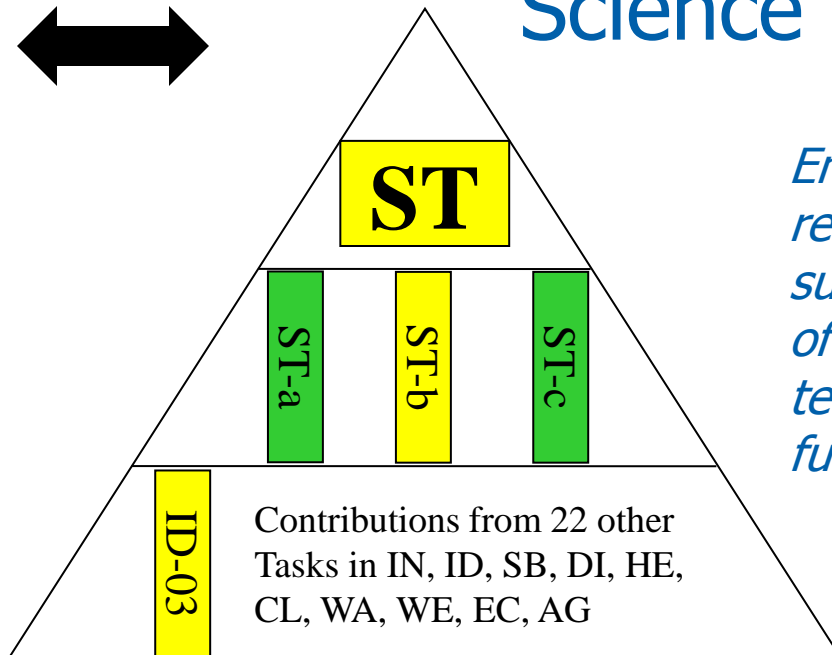


Substantially expand the availability, use, and application of environmental information for public health decision-making in areas of health that include allergens, toxins, infectious diseases, food-borne diseases, and chronic diseases, particularly with regard to the impact of climate and ecosystem changes.

- **HE3. Support in-country capacity building for the sustainable use of Earth observation information in health decision-making** and integrate such efforts in the monitoring activities connected to global goals and targets in **post-2015 development agenda**



Science & Technology

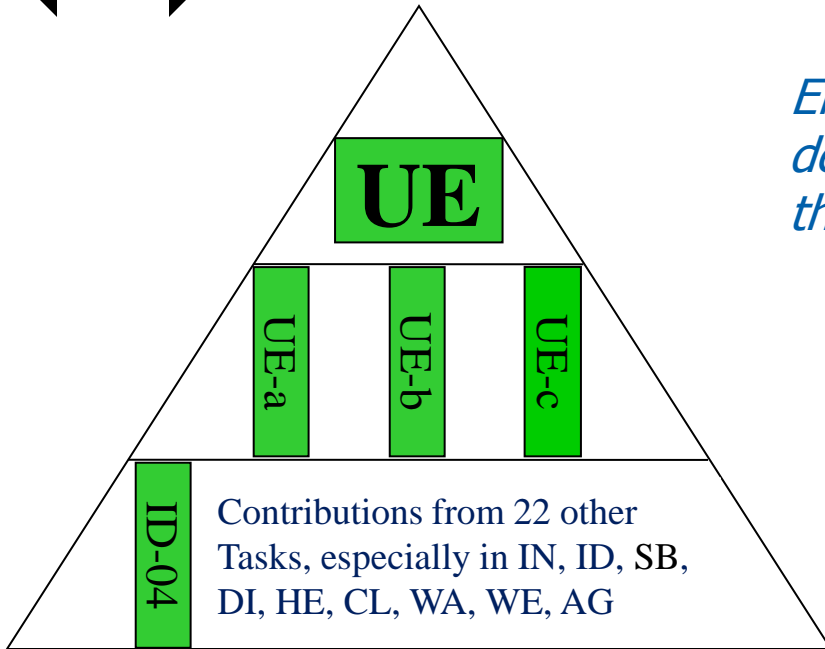


Ensure full interaction and engagement of relevant science and technology communities such that GEOSS advances through integration of innovations in Earth observation science and technology, enabling the research community to fully benefit from GEOSS accomplishments.

- **ST2. Establish links with national and regional activities** on Future Earth and the broader **Sustainable Development Goal (SDG) agenda**
- **ST3. Inform** the Science & Technology Task (ID-03) **of any national, regional and international GEO/GEOSS related scientific meetings or sessions**



User Engagement



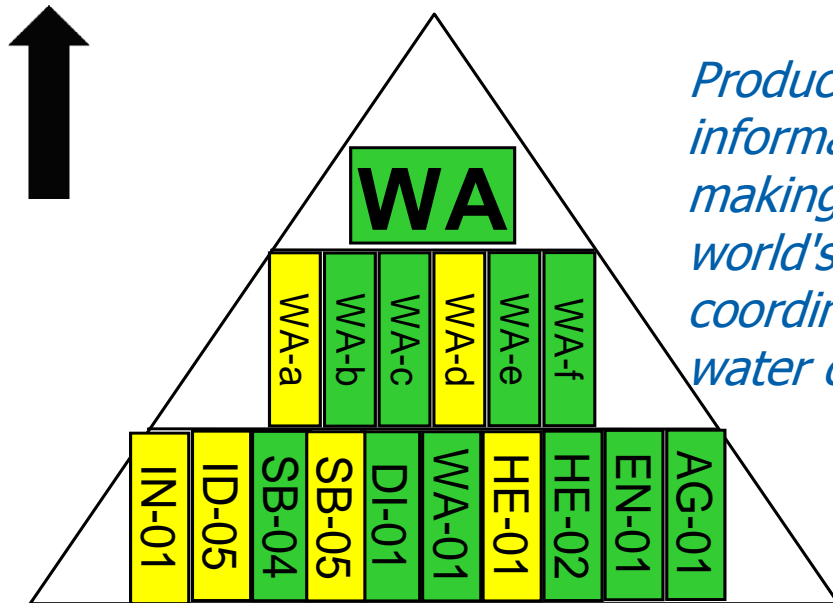
Ensure critical user information needs for decision making are recognized and met through Earth observations.

- **UE2. Support at least 1 User Engagement Session per year** (linked to 1 or more Work Plan Tasks) – to capture the work and needs of the users in a specific region
- **UE3. Encourage national/regional user engagement sessions** collocated with relevant conferences to capture contributions from **developing countries** and feedbacks on user needs



Water

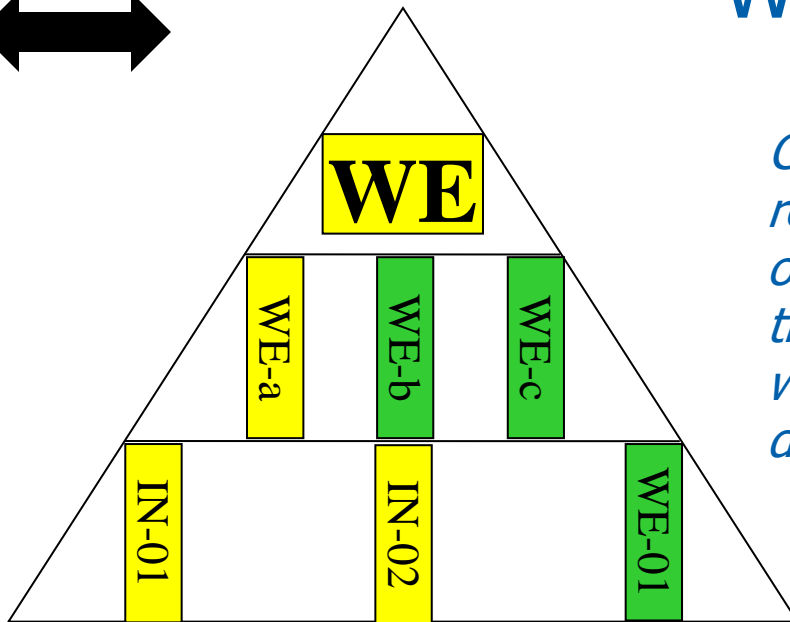
Produce comprehensive sets of data and information products to support decision making for efficient management of the world's water resources, based on coordinated, sustained observations of the water cycle on multiple scales.



➤ **WA3.** Although advances have been made, there are **many needs and opportunities identified in the GEOSS Water Strategy related to data and information service activities** that need to be contributed/funded. **GEO Members and Participating Organizations are encouraged to propose initiatives to address these challenges**



Weather



Close critical gaps in meteorological and related ocean observations, and enhance observational and information capabilities for the protection of life and property, especially with regard to high-impact events, and in the developing world.

- **WE2. Identify resources for the post-2014 era** (completion of the THORPEX programme and Europe-funded GEOWOW project) **to support the new “Polar Prediction”, “High Impact Weather” and “Sub-seasonal to Seasonal” projects of the WMO World Weather Research Programme**



- The Boards are now producing **improved assessments** based on more information, better analysis tools and a better understanding of the review criteria
- The **colour coding still needs clear interpretation:** A Target doing better (or worse) may be the result of 1) actual improvements, 2) the assessment being more complete and better informed, or 3) both factors
- Most Tasks report delays and incomplete activities due to a **lack of funding and time commitments from experts**
- **Cross-Task coordination needs to be encouraged** and assessed. Boards plan to focus on this in the coming year
- GEO should **establish strong strategic linkages with development agendas (e.g. SDGs) and Conventions,** to actively engage them in the development and use of Earth observation/information




GEOSS 2015 Strategic Targets

Strategic Target		2012 (GEO-IX)	2013 (GEO-X)	2014 (GEO-XI)
Architecture	AR	Y	Y	Y
Data Management	DM	Y	Y	Y
Capacity Building	CB	Y	G	G
Science & Technology	ST	Y	Y	Y
User Engagement	UE	Y	G	G
Agriculture	AG	Y	G	G
Biodiversity	BI	G	Y	Y
Climate	CL	Y	Y	Y
Disasters	DI	Y	Y	Y
Ecosystems	EC	R	Y	Y
Energy	EN	G	G	G
Health	HE	Y	Y	Y
Water	WA	G	Y	G
Weather	WE	Y	Y	Y



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Architecture	AR	Y	Y	Y
Data Management	DM	Y	Y	Y
Capacity Building	CB	Y	G	G
Science & Technology	ST	Y	Y	Y
User Engagement	UE	Y	G	G
Agriculture	AG	Y	G	G
Biodiversity	BI	G	Y	Y
Climate	CL	Y	Y	Y
Disasters	DI	Y	Y	Y
Ecosystems	EC	R	Y	Y
Energy	EN	G	G	G
Health	HE	Y	Y	Y
Water	WA	G	Y	G
Weather	WE	Y	Y	Y

 - Not Achievable?



Overall, our qualitative assessment indicates an improvement over time (although the improvement is more significant if we consider the “demonstrated by” Bullets)

	Green	Yellow	Red
2012	3	10	1
2013	4	10	0
2014	5	9	0

However, we should ask ourselves if this rate of improvement is optimal or can we do better.

Thank you!

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