

GEO Performance Indicator Methodology

Core function	Expected results	Indicator	Methodology(included description of the info to be collected)	How to collect information					
				From public INFO	Member & PO's reports (CD-02)	PO's annual Reports	GEO WP Activities Report	Dedicated surveys	other
1. Identifying user needs and addressing gaps in the information chain.	<p>1. Identification of the information products and tools required for key user groups to use Earth observations to produce the actionable information necessary to address critical global and regional challenges and opportunities.</p> <p>2. Agreement on the highest-priority essential Earth observations for specific and multiple SBAs, based on relevance to critical global and regional challenges and opportunities, taking account of the feasibility of their translation into products and tools that deliver impact.</p> <p>3. Commitments made by providers to end users to address the highest priority gaps in information chain.</p>	1. Number of SBA user communities for which Earth observations (EO)-enabled information product and tool preferences have been documented.	(1) the criteria of “ <i>user community</i> ” should be given based on GD-08 outcome, normally “national” level (2) Composite analysis of each SBA; (3) aggregate the number of user communities from each SBA.				GD-08 SBAs process :systematic determination of user needs /observation gaps		
		2. Number of SBAs for which high priority Earth observations have been identified, validated and approved by GEO Plenary.	(1) the criteria of “ <i>high priority</i> ” should be given based on GD-08 outcome (2) evaluate the priority of EO in SBAs (3) calculate the number of SBAs.	Well known, for example EO as SDGs key indicator or tool has been adopted in some areas.			GD-08 SBAs process :systematic determination of user needs /observation gaps		Announcement of GEO Plenary
		3. Percentage of identified high priority (in-situ and satellite-based) Earth observations, information products and tools that are either currently available or that providers have committed to deliver.	(1) the criteria of “ <i>high priority</i> ” should be given based on GD-08 outcome; (2) summarize the number of the commitments from the providers; else capture some information from GD-05 and GD-06 (3) summarize the number of “committed to deliver” (4) get the percentage	Member and PO's commitment and the gaps in the value chain			GD-08 SBAs process :systematic determination of user needs /observation gaps GD-05 (CEOS)provides satellite-based observation GD-06 provides in-situ observation		GEO Meeting (ExCOM, Plenary) commitment by the provider
2. Sustaining foundational observations and data	<p>4. Ongoing predictable creation of the new satellite and non-satellite Earth observations required to address the approved highest-priority requirements.</p> <p>5. Minimization of non-productive overlap in observing systems as a result of programme coordination and data sharing.</p>	4. Number of Members and Participating Organizations making use of collective long-term planning scenario information for key observing systems to prioritize their funding and investments	(1) collect the information of EO long-term plans from GEO reports Member & PO's EO reports (2) calculate the number		the number and the description of EO plans in the EO reports should be required in which template of EO Report is one of 2016 CD-02 outcomes				
		5. Number of gaps between actual data delivery compared to expected data delivery identified on an annual basis.	(1) analyze the information and the description from GD-03, related task “ <i>Identify potential gap</i> ”, (2) or conduct dedicated survey on the gaps between actual data delivery (3) calculate the number of gaps			GD-03 Global observation and information systems	dedicated surveys on the gaps between actual data delivery		
		6. Reduction in number of non-productive overlaps identified in surveys.	(1) conduct dedicated surveys among the Global observation and information systems (2) analyze the reduction of non-productive overlaps (3) get the reduction in number			GD-03 Global observation and information systems GD-05 GD-06	dedicated surveys in term of data sharing principals		
3. Fostering partnerships and mobilizing resources	<p>6. Increased involvement and investment in GEO activities from national, international and private funding sources.</p> <p>7. Increased use of Earth observation</p>	7. Cumulative number of new partnerships in place with the private sector to i) provide technical, non-proprietary support of GEOSS development; and ii) promote the use	(1) conduct the dedicated surveys among the activities of GEOSS Development and GEOSS Operation (2) collect the number of new partnerships with private sectors.				Collect the information from the GD-02 (GCI Operations) and GD-07 (GCI Development)	dedicated surveys in the scope of GEOSS development and GEOSS operation	

	data. 8. National governments, regional governments and international bodies adopt policies that are based on Earth observations.	and fair exploitation of GEOSS resources to deliver information products, decision support tools and service for the benefit of society; and with international development and donor organizations.							
		8. Total annual contributions and number of Flagship Initiatives	(1)evaluate the overall GEO contributions (2)Collect and analyze by GEO Secretariat from GEO Work Programme						GEO Work programme
		9. Citations of Earth observation data in key documents including scientific journals, government and international body studies and reports, and in metadata projects benefitting multiple SBAs.	The citations can be done as a GEO community activity by one scientific participation organization.			CODATA Report			Core Journals Retrieval
		10. Number of new community activities in the GPW that identify benefits for specific SBAs	(1)Aggregate the number from every activity in the GPW						GEO Work programme
		11. Number of national governments, regional governments and international bodies that have adopted policies that build on Earth observation information.	(1) summarize the overall information that police-making on Earth Observation information from CD-02 and CD-03 reports (2)Aggregate the number		the description of EO application in police-making should be required in which template of EO report is one of 2016 CD-02 outcomes		CD-03 Assess the benefit from EOs		
4. Advancing GEOSS and best practice in data management and sharing	9. Earth observation data, information, knowledge, products and services are easier to access, integrate and use.	12. Number of information products and services that can be accessed directly through the GEOSS Portal.	(1)Directly check the number from the GEOSS Portal, and as an activity result presented in the GD-02 Annual report				GD-02 (GCI Operations)		
	10. Increased implementation of GEOSS Data Sharing and Management Principles.	13. Number of datasets that can be downloaded directly, or processed in-situ, through the GEOSS Portal.	(1) the criteria of " dataset" should be given based on GD-02 outcome (2) check the number from the GEOSS Portal, and as an activity result presented in the GD-02 Annual report				GD-02 (GCI Operations)		
	11. Data holdings are life-cycle managed.	14. Proportion of data accessible through the GEOSS Portal for which sufficient metadata is available to enable reliable traceability from a derived product to the fundamental observation data.	(1)collect and analyze the information about data accessible through GEOSS Portal from the GD-02 Annual report (2) calculate the proportion				as an activity result presented in the GD-02(GCI Operations) Annual report		
	12. Historic non-digital data are recovered	15. Percentage of GEO Members reporting that they have implemented the GEOSS Data Sharing Principles.	(1)Collect and analyze the information about GEOSS Data Sharing Principles based on the outcome of GD-01 , <i>monitor data sharing progress by the GEO member governments</i> (2) calculate the percentage				GD-01 (Advancing GEOSS Data Sharing principals)		
		16. Percentage of datasets accessible through the GEOSS Portal for which the custodian reports compliance with GEO-approved best practice approaches to life-cycle data management.	(1)Collect and analyze the information about datasets accessible through the GEOSS Portal based on the outcome of GD-2 ,related task of GCI Components operation(ESA,CNR,USGS,IEEE)ii, iii <i>partnership with data and service providers , collect feedback from Users Communities.</i>				GD-02 (GCI Operations)		

			(2) calculate the percentage						
		17. Number of key legacy datasets that have been digitized for users.	(1) the criteria“ key legacy datasets” should be given based on GD-02 (2)derive the number through GEOSS portal, as an activity result presented in the GD-02 Annual report					GD-02 (GCI Operations)	
5. Implementing sustained global and regional services	13. Increased use of data in monitoring and implementation of critical international frameworks and policy goals. 14. Implementation of regional or global initiatives within GEO that provide data or information services to meet shared information needs for societal benefit. 15. Transfer of GEO service provision initiatives to sustainable host organizations.	18. Number of cases of demonstrated use of Earth observation-based information services in support of the global sustainable development agenda.	(1)derive the number and the description through GI-18 and Member & PO’s EO reports		the description of EO support in SDGs should be required in the Members and POs reports.			GI-18 Earth observations in Service of the 2030 Agenda for Sustainable Development	
		19. Number of international frameworks for which GEO activities provided, or played a key role in establishing processes which provided, data as part of the evidence base for implementation or monitoring of progress.	(1)derive the number and the description through CD-3 and public info	Public info also present some information				CD-03 Assess the benefit from EOs	
		20. Number of regional or global initiatives within GEO for which a formal partnership with the relevant international or regional institution has been established.	(1)derive the number from GEO work programme, particular GEO Initiatives proposal						GEO Work Programme
		21. Number of regional or global initiatives that have been transferred to permanent host organizations and which continue to be operational more than 3 years after the hand-over.	(1)derive the number from public info, dedicated surveys or GEO plenary, which is a small number						
		22. Number of UN agencies/bodies participating actively in GEO Initiatives and Flagships.	(1)Collect and analyze the information by GEO Secretariat through GEO Work Programme (2) calculate the number					SO-04 Resource Mobilization GI -18 EO in service of 2030 Agenda	
6. Cultivating awareness, building capacity and promoting innovation	16. Increased awareness among key decisions makers and stakeholders of the value and importance of Earth observations. 17. Basic global reference measurements (e.g. gravity, bathymetry and topography) are established and provide the information required to underpin application of Earth observation data through GEO activity 18. Increased collaboration between countries with differing capacities and regions. 19. Increased development of regional and national EO plans.	23. Instances of reported gaps in available global reference measurements.	(1)collect and describe some instance from GD-03 report or public info	Public info also present some information			GD-03 Global Observing and Information Systems		
		24. Number of GEO Flagships, GEO Initiatives and GEO Community Activities that involve contributions from both developed and developing countries.	(1)Collect and analyze the information by GEO Secretariat through GEO Work Programme (2) calculate the number					GEO Work Programme	
		25. Percentage of GEO Members that report that they have developed national Earth observation plans.	(1)Collect and analyze the information of the Earth observation plans of GEO Members (2)calculate the percentage		the number and the description of EO plans in the EO reports should be required in which template is one of 2016 CD-02 outcomes				
		26. Number of regional (multi-state) and Participating Organizations Earth observation plans that have been developed.	(1)Collect and analyze the information of the Earth observation plans of GEO POs and GEO regional (2)calculate the number		the number and the description of EO plans in the EO reports should be required in which template is one of 2016 CD-02 outcomes				

