EARSC Reflection Paper

on

GEO and the Private Sector

Background.

GEO was formed in 2003 following a summit in Washington with the goal to oversee the development of a Global Earth Observation System of Systems (GEOSS). The group become operational in 2005 with the establishment of a GEO Secretariat based in Geneva. In 2005, together with the American Alliance for Earth Observation (AAEO), EARSC wrote to the GEO secretariat suggesting that there should be an interface with the private sector and offering to cooperate to establish an appropriate dialogue.

In 2005, GEO was still in its early days and it proved too early to open a discussion with the private sector. The situation has now changed and, with an increasing number of commercial ventures and enterprises the importance of the role the private sector can play in contributing to a GEOSS has both increased and been recognised. Consequently, in 2012, the GEO executive board gave the GEO secretariat the mandate to engage with the private sector and to explore how the dialogue should be established. Executing this will be an important element of the next 10 year (2015 – 2025) work plan.

Clearly, we welcome this change of approach and look forward to addressing such a dialogue and subsequent collaboration with the objective to leverage commercial capacity to strengthen public capabilities.

The Strategic Goals of GEO

Upon formation in 2005, GEO was given a first set of strategic goals covering its first 10 years of life. Now that the mandate for GEO has been renewed for a further 10 year period, a “post-2015 working

group" of members is constructing a new set of strategic goals for the period 2015 to 2025 which are proposed to be[1]:

- *Coordinating Earth observations, seeking active collaboration with relevant existing and emerging global initiatives with complementary mandates to both promote full and open access to Earth observation data, and strengthen Earth observing networks, strategic planning and identification of the needs for applications and services.*
- *Facilitating enhanced access to national, regional and global Earth observation data and information through the implementation of a robust and user friendly GEOSS information system that links available systems, also taking advantage of repositories of "big data";*
- *Fostering global initiatives that address identified gaps for Earth observation information including where appropriate the facilitation of the development of associated services and arranging for their subsequent uptake by relevant entities.*

These strategic goals seem to be appropriate for us to consider that GEO can become a strong partner to the EO Services industrial sector. What role could GEO play to help this industrial sector to develop whilst also best meeting the government stakeholder needs?

GEO and Private Sector Engagement

The joint interests of public and private sectors are well expressed in two recent GEO secretariat papers[2,3] consider a "*GEO private sector initiative"* to engage the private sector *"by articulating a vision embodying common public and private sector ambitions about the use of Earth Observation for the benefit of society*". Industry is ready to work with GEO to help define in detail this vision.

As a starting point, the GEO secretariat established a think tank to elaborate ideas and goals to define the objectives and strategy towards developing private sector engagement. This has resulted in a report which is included as an annex to the GEO-X-05[4] document delivered from the GEO secretariat to the tenth plenary in January 2014 and which states:

"GEO must formalize its product strategy and organizational resources to develop, manage and sustain the service quality/consistency that private sector markets require."

We are not convinced that GEO needs a product strategy or the need to address the private sector markets. Rather we feel that GEO can be effective in co-ordinating, facilitating and fostering the efforts of the public sector organisations as well as private companies towards meeting the ambitions to be articulated within the vision described above.

[1] Report of the post-2015 working group.
[2] Engaging the Private Sector in the Implementation of GEOSS. Paper to GEO IX plenary, November 2012.
[3] Update on Private Sector Engagement. Paper to GEO ExCom, July 2013.
[4] GEO-X-05: Preliminary Guidance for GEO 2025.

The GEO Ministerial in January 2014 confirmed the objective to work with the private sector with an article in the final declaration asking GEO to:

"Resolve to broaden and strengthen engagement with non-governmental organizations; non-profit organizations, such as multi-lateral development banks; foundations; and the private sector"

This is very encouraging but we have some concerns that unless it is well-coordinated, to approach a broad non-governmental base could be confusing to customers and risk disrupting the market. Hence we firmly believe that the discussion should start with the EO services sector before reaching out to other non-governmental actors. Notwithstanding, with a good understanding, a common approach can be of benefit to all players.

GEO goals in working with the Private Sector:

Recognising that the primary goal of GEO is to serve its government stakeholders and taking into account the above considerations, we propose three specific actions that GEO can take which will help to maximise the potential for the sector overall:

1. **Enabling data access**. As the international organisation charged with co-ordinating the efforts of nations investing in public EO satellite capacity, GEO is mandated to ensure that this data (public satellite data and in-situ data) is accessible by all potential public and private users. Engagement with the private sector can ensure that commercially available data is equally considered within GEOSS and that member governments which have data to offer can impose equal, consistent and fair access conditions. GEO should continue to:

- Promote an appropriate free and open data policy for publicly-owned satellite systems amongst its stakeholders
- Ensure that there is a level playing field between the international data providers in both public and private sectors
- Identify gaps in data supply and encourage preferably companies or countries to invest in order to develop capabilities (satellites, sensors etc) to fill them.
- Ensure that private capabilities (present and future) are known and fully considered by the public stakeholders when they are taking investment and/or future development decisions, in order not to distort existing and emerging commercial markets.

2. **Raising awareness of the capabilities of EO data and services especially towards the public sector users'**. In Europe the services coming from Copernicus are designed to meet primarily public sector user needs. A common lacuna is the lack of awareness amongst the public sector users of what these services are able to offer to support their decision making. A strong action is needed to ensure that users at all levels in Europe are informed on what Copernicus can offer them. GEO can play this same role towards public customers globally so helping to increase the uptake of Copernicus and more broadly EO services.

We anticipate that GEO will promote particularly to the public sector stakeholders and believe that a co-ordinated approach should be followed with the EO services industry to ensure that companies are well-placed to exploit additional needs coming from these public and private users through:

- Promotion of the types of data and information products which are available from public and private organisations and systems
- Close co-ordination with the EO services sector to ensure that commercial interests are developed and maintained.

3. **Understand the Public Sector user's needs.** The government organisations participating to GEO represent national interest for the use of EO data and information. In some cases, these also represent nations which invest in and hence can offer services to the others. For all "demanding" nations there is a need to help develop their understanding of what is possible (see point 2 above) but also to understand what their specific needs are and which can help inform decision making for future investments by both public and private sectors. Hence GEO could:

- Maintain a dialogue with the public stakeholders in order to understand their geo-information needs
- Interpret these needs into existing and future systems capabilities and identify gaps.
- Work with both public and private actors to foster the necessary investment to meet these needs.

GEO must continue to focus on its role as a co-ordinator of international efforts and as an enabler to the increased use of EO products which we consider can lead to a growing commercial market.

Further Questions

By pursuing appropriate goals and strategic targets in an effective and efficient manner, we believe that GEO can play a strong and valuable role in helping the overall development of the EO services sector. We consider that the actions outlined above can deliver this but still some questions remain:

By supporting the development of a functioning, commercial market, GEO can help ensure and to streamline investments in future systems and services by both public and private organisations to the benefit of global decision making. On the contrary, as a public organisation, driven by a diverse set of international views on what concerns a commercial market and to what extent public organisations should also be revenue sources, we consider that there is an appreciable risk of GEO taking actions which conflict with the EO services provided by private sector companies. Will GEO be asked or allowed to develop revenues distinct from the grants coming from its members?

In both data supply and downstream services, a request coming from one government partner to GEO can be taken as justification for public action by another partner. The risk is much greater in the international context where commercial objectives and the appropriate role for government are viewed so differently by different countries. How practically will GEO respond to requests coming from Members to ensure the supply of new products and/or services?

Governments support the operation of GEO through:

- Provision of access to their own, national data-sets
- Co-operative projects feeding the information needs of the 9 Societal Benefit Areas.
- Direct funding for the GEO secretariat

Commercialisation of products and services developed through these supporting activities will largely remain a national or regional priority which GEO could be tasked to support. How can all parties work together to ensure maximum societal benefits including the economic benefit coming from a growing downstream sector?

GEO has strong links with the research community and public sector organisations in many member countries and has built an excellent network of research scientists. How can we ensure that products and services developed within a scientific network can be commercialised where it is appropriate?

From a European perspective, Copernicus will become a major contribution to the products and services available to GEO. How do we ensure that it is the European industry that will be able to benefit from the European investment?

How will GEO ensure a balanced playing field between the public sector organisations and the private EO services industry with which it will engage?

Hence we request that there should be an open and constructive dialogue to address these open questions. A permanent and sustained dialogue with the EO services sector is essential and a mechanism for dealing with conflicting views should be envisaged within the governance of GEO. To be clear, the private sector does not seek any decider role in this respect but that our views should be formally heard and taken into account by the decision-taking members.

Conclusions.

As an international body, GEO has a strong role to play in encouraging the use of EO technology as well as increasing the efficiency of national efforts to meet government needs. Since assets are developed and operated by the private sector which complement the public sector activities, and both public and private sector bodies offer and supply derived information services (value-added products), a dialogue between the two “sides” is essential. But the reality is that it should be a win:win situation all round.

- GEO can help industry access and develop a public market globally
- Industry can help GEO fill capability gaps through own, private-sector investments.

To start with, discussion should be constrained to the EO services sector to ensure clarity in the market and to avoid confusion. Representative bodies like EARSC provide a single voice to exchange with GEO. The AAEO could play a similar role in the US but elsewhere umbrella organisations are not known to exist. GEO can play a role in encouraging them.

A means of dialogue with the private sector should be incorporated into the mandate of the GEO secretariat with clear objectives to be defined. This would enable the private and public sectors to

work together at an international level, to avoid any competition between them and to maximise both the investment opportunities as well as the use of private funds. The priority should be to start with the EO Services sector before considering a mandate extending to all commercial sectors.

EARSC, the European Association of Remote Sensing Companies represents the Earth Observation geo-information services sector in Europe. Today EARSC has 75 members, coming from 22 countries covering the full EO services value chain including commercial operators of EO satellites, resellers of data, value-adding companies, geospatial information suppliers, consultancies and EO system/software providers. The sector plays a key role in providing value-added, geo-spatial information to its customers in Europe and the world. In 2012, the revenue of the sector in Europe is €750m giving work to 5000 highly skilled employees and is growing at around 10% per annum. The sector is dominated by small and medium enterprises with over 90% of the companies having less than 50 and over 60% having less than 10 persons employed.

Annex 1: About GEO.

The Group on Earth Observations is coordinating efforts to build a Global Earth Observation System of Systems, or GEOSS. GEO was launched in response to calls for action by the 2002 World Summit on Sustainable Development and by the G8 (Group of Eight) leading industrialized countries. These high-level meetings recognized that international collaboration is essential for exploiting the growing potential of Earth observations to support decision making in an increasingly complex and environmentally stressed world.

GEO is a voluntary partnership of governments and international organizations. It provides a framework within which these partners can develop new projects and coordinate their strategies and investments. As of 2013, GEO's Members include 90 Governments, including the European Commission. In addition, 77 intergovernmental, international, and regional organizations with a mandate in Earth observation or related issues have been recognized as Participating Organizations.

GEO is constructing GEOSS on the basis of a 10-Year Implementation Plan for the period 2005 to 2015. The Plan defines a vision statement for GEOSS, its purpose and scope, expected benefits, and the nine "Societal Benefit Areas" of disasters, health, energy, climate, water, weather, ecosystems, agriculture and biodiversity.

GEOSS will yield a broad range of societal benefits, notably:

- Reducing loss of life and property from natural and human-induced disasters;
- Understanding environmental factors affecting human health and well-being,
- Improving the management of energy resources,
- Understanding, assessing, predicting, mitigating, and adapting to climate variability and change,
- Improving water resource management through better understanding of the water cycle,
- Improving weather information, forecasting and warning,
- Improving the management and protection of terrestrial, coastal and marine ecosystems,
- Supporting sustainable agriculture and combating desertification, and
- Understanding, monitoring and conserving biodiversity.