



SIDE EVENTS

Monday 7 November 2016

09:00-16:00 TOWARDS OPEN EARTH OBSERVATION DATA POLICIES

Room: Green 10

3. Challenges in Implementing Data Sharing Principles

*The challenge to identify regional datasets to be linked to the GEO-CRADLE Regional Data Hub,
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There is no need to repeat how important and beneficial the availability of open data is for the people, organisations and markets, as well as governments themselves. There are many areas where we can expect open data to be of value, such as:

- transparency in governing;
- improved efficiency and effectiveness of government services;
- improved or new value added products and services;
- innovation;
- impact measurement of policies;
- new knowledge from combined data sources and patterns in large data volumes.

I'm speaking on behalf of the GEO-CRADLE project, an EU-funded coordination action. The project attempts to identify, assess, and ensure the synergetic integration of the existing EO capacities in the territories of North Africa, Middle East, and the Balkans (RoI). The main aim is to provide roadmaps for addressing common regional and societal priorities in relation to:

- **Adaptation to Climate Change;**
- **Improved Food Security & Water Extremes Management;**
- **Access to Raw Materials;**
- **better exploitation of the renewable Energy resources.**

Among our aims is to set up a Regional Data Hub (RDH) seamlessly linked to the GEOSS portal facilitating the access of EO players, service providers, and end-users to regional data, information and knowledge.

In this framework we initiated actions to inventory the existing EO capacities and identify portals of data either open or with restricted/licensed access. The aim is to make GEOSS portal data with a geographic reference to the RoI available to the stakeholders at regional level through the GEO-CRADLE network of stakeholders; while at the same time new portals and data that are identified through the GEO-CRADLE to be linked to the GEOSS platform and querying interface.

The study is ongoing; however some first conclusions are drawn and presented herein for the purposes of the meeting. We expect that in a couple of months we will have a better picture of the regional state-of-the-art in relation to existing portals and data hubs.

The **key findings** based on a set of indicators (existence of portals, geographic coverage, organizational issues, technical infrastructures and policies, quality/quantity of data) are the following:

- I. **Different Middle East and North Africa (MENA) governments have decided to explore Open Data policies and initiatives. Different countries follow significantly different paces for the development of open data policies and infrastructures:**
 1. **In the Middle East there are countries with no evidence at all of any open data activity, and some other countries like United Arab Emirates, Jordan, Qatar, Israel (<https://data.gov.il>) and Bahrain (<http://www.data.gov.bh>), that have created limited specific sections of open data on previously existing governmental websites or models dedicated to open data portals. However, until today they remain at a stand-by mode and there is no substantial advance for a long period of time.**
 2. **In Africa, open data availability remains limited and is frequently focused on statistical data and budgeting, and not always in a format that enables the reuse.** There is also a great lack of data of good quality and geographic coverage. More PDFs and Excels and less open and machine readable formats are available through portals. **There is a great need for data creation using open standards together with the creation of the political and technical frameworks to gather and host the data. After several meetings with local stakeholders and data owners it became obvious that although some countries (e.g. Morocco <http://data.gov.ma>, and to some extent Tunisia <http://opendata.tn>) do have the will and have initiated actions for data sharing (data of a large geographic coverage extent and fine resolution), they are unable to continue because there is lack of adequate funds and technical/connectivity infrastructures to develop and maintain data portals and ensure the proper data dissemination. The development and maintenance of the needed technical infrastructure is one of the main challenges for most African countries for keeping and sharing open data.**
 3. **On the other hand the Balkan countries present a big diversity. A significantly larger number of data portals are accessible compared to MENA. There are member states of EU (e.g.**

Romania, Cyprus, Greece) that maintain portals providing open and free data, and others not belonging to the EU (Serbia, Albania, Bosnia & Herzegovina, Croatia, and Turkey) which maintain data portals but their portals are either of restricted access or only for viewing. Another issue is that many portals are using the local language and they are not using open standards for documenting the data. **Therefore one of the main challenges reported in the Balkans has been the language used and the open standards that are not used in most of the cases.**

II. Challenges reported so far for creating and keeping data open:

- 1. A key challenge is the diversity and difference in cultures** when compared to Europeans. **Governments are not used to communicating, collaborating and partnering** with those outside.
- 2. There are serious political disputes and several sensitive issues at regional level, and this has been a key barrier which does not allow the opening of the data between the stakeholders and the countries, and in certain cases there is red tape for formal sharing between organizations even in the same country.**
- 3. Also because of the culture, but also due to linguistic difficulties and limited communication, it happens rather often that there is no adequate knowledge on the existing capacities, open data repositories and data portals.** As a result, several projects and serious overlapping initiatives have been initiated at national and regional level that lead to a **duplication of effort and investment.**
- 4. Several of the portals that we identified are not available in other languages besides the national one.**
- 5. In all the three regions we found cases where there is reluctance to share data between organizations. There is distrust between organizations and some of the success stories reported are based on personal connections to a large degree. The only means that allowed the opportunity to cooperate, also in the domain of data sharing, has been the common projects running at regional level.**
- 6. We have also noted the lack of educational capacities in some countries.**
- 7. Another key challenge is the institutional and organisational aspect in the countries, and the key role that most of the governmental institutions play in the data and service market. It is typical in most of the countries that we examined in the Balkans, North Africa, and Middle East that the SME sector (EO&GI companies), which traditionally creates and exploits open data, and also needs to access open data portals for generating downstream apps, is very limited. At the same time the governmental institutions, and/or the state-owned enterprises have far more significant employment and often play the role of data owner and service**

provider with only a smaller part of the data exploitation and service business reaching the private sector.

8. **Our study shows that the data share policy**, as well as the creation and maintenance of open data is highly vulnerable to politics – there is lack of institutionalization. Organizations keeping data tend to be centralized, they are mostly governmental organisations; thus any decisions on data openness and share and posts are assigned at the political level. Changes in government and other political occurrences can stop or backtrack progress in an organization. Therefore the data sharing policy ranges from free and open to restricted access only to country's citizens.
9. In regards to the technical challenges the data format is also very important. There is lack of Web Services (WS), or WS are used but not described, or the WS are not using the same APIs to communicate with one another. There are also challenges with the metadata, e.g. there is lack of uniformity in xml schemes, middlewares are needed etc.
10. In the Balkans the main challenges relate to the data formats. The linguistic issue is also important as the mother tongue is mostly used, while the data policy issues are reasonably tackled. In North Africa and Middle East the situation is less good. The typical characteristics are the lack of web services for data dissemination, the use of the mother tongue in the existing portals, and the pending initiatives for data policies for a long period of time.

In an attempt to **classify the portals according to their thematic content and region**, it was concluded that the smaller number of available portals has been reported in the North Africa, a much greater number in the Middle East, and in the Balkans we count a number of portals that is twice as big as in the other regions. In regards to the thematic content of the identified portals, the majority is classified as belonging to the Climate and Food Security sectors, and a significant less number of portals refer to data provided in the Energy and Raw Material sectors.

In conclusion, after the study we have conducted so far and the collected feedback from the stakeholders, a strong message which comes out, and we consider as necessary to communicate to the decision/policy makers, international organisations, initiatives, and institutional investors (e.g. World Bank, EIB, etc), is the need for initiating dedicated education programs, coordination actions, together with capacity building, and know-how exchange projects, that allow in the long-term to create an open, transparent culture, and trust, create data and portal infrastructures, support the update and ease access to knowledge and data bases, and facilitate the team up process between the stakeholders. **All this in turn will develop the needed context for routinely processing, sharing and interpretation of data to value-added information.**