Working group 4: Knowledge

What is knowledge ?

- Knowledge is at the end of the chain. Knowledge is a final distillation of information. To be achieved it needs an understanding on processes, provide solutions. Placing data into context to gain knowledge.

- It is about mixing several information, which together provide knowledge. Story line, from the past to the present. Providing a trajectory in time and space, then inform, through scenarios, on choices and solutions. E.g. What are the role of ecosystems services to improve water quality,…

where GEO starts and when it stops?

There are two types of knowledge on W.Q. which need to be differentiated:

- The overall knowledge on water quality: what is leading to good or bad water quality, the measures on water quality and the actions to improve water quality...

- the knowledge on what E.O. (remote sensing products + in situ) as well as models can bring as a contribution to this knowledge.

- GEO can act as an incubators. GEO could help by promoting the provisions of examples, on what can be performed by EO to participate the elaboration of knowledge.

GEO's mandate

- 1. Advocacy of E.O. (demonstrate the capabilities of E.O. to provision support to the decision making processes).

- 2. Engagement through the community of practices including the political (science policy public interface).

- 3. Delivery of data and products.

GEO and Knowledge

- GEO is working horizontally enabling access to data from System of system. Knowledge is derived through collaboration with partners toward solutions.

- GEO needs to understand what are the needs from the community and for this need to check the connectivity with the decisions makers.

- It should be underlined that decisions and actions are taken at a regional level: water catchments level for water quality, or coastal areas.

GEO's role

- GEO could help in harmonizing the E.O. products by easing process to reach a globally accepted methods for transforming geospatial data into information products. Calibrated and harmonized and standardized manner. These would be a key component to access to knowledge.

- Datacube example was discussed. How by compiling all Landsat data together, we can ease access to information in both space and time dimension.

- GEO can contribute by providing demonstration on success story. E.g. sediment monitoring on dams and what happened on downstream.

- Need an interface to provide access to data and examples of how this data can be used. Standardized procedures. Well defined data with meta-data.

Conclusions

EO (RS + in situ) + models : GEO can play a key role in harmonizing and bringing products to a level which can be integrated into a process leading to knowledge. Adding story lines on successful cases on what work and what didn't work. But also needs to work upstream to see what is needed by decision-makers. GEO could help in:

1. showing examples of E.O. for decision processes on Water quality

2. Presenting these example to a community of practices and then selecting products which correspond to end-users needs.

3. Need to advocate how E.O. can be incorporated with decision processes.

GEO can be involved in the knowledge process regarding the component based on geospatial data side.

GEO can provide knowledge on :

- How data need to be processed

- What products can be provided (processed data)

- Where to access them

-    How to select and integrate these products for overall knowledge.

To achieve this, GEO needs to have the vision in what decisions makers need to do, by providing information, valid and fit for purpose.