

# NGL research planning meeting notes

Stockholm University, March 5, 2013

Summary of group discussions, compiled by Arvid Bring based on notes provided by Gia Destouni, Carmen Prieto and Andrew Frampton.

a. *Complementary suggestions of individuals representing different research fields for international advisory board:*

- Tissa H. Illangasekare (Colorado School of Mines)
- Jesus Carrera (UPC, Spain)
- Adrian Bath (UK)
- Jens Birkholzer or Curtis Oldenburg (Lawrence Berkeley)
- Ilmo Kukkonen (Helsinki University)
- John Lloyd (microbiologist, however note overlaps with Steven B)
- Finnish GTK representative
- People from other associations/organisations, eg USGS, IAH, etc, broadening the representation both in terms of type of organization and the fields of research, e.g. rock mechanics, corrosion, biology.

b. *NGL web page development already in planning phase?*

A webpage can be used both for internal and external communication and is an important tool; something we should have already now in the planning phase. It should include some kind of mission statement and showcase already ongoing research. With the risk of being presumptive, the presentation is important. The Nova-NGL relation needs to be thought through first. The web page can also have a role for outreach.

c. *Development of own NGL database hosting / use of other data host? Database requirements in different fields?*

We should at least have some metadatabase associated with NGL. A full NGL database may not be relevant for certain fields, e.g., gene sequencing where established databases exist (NCBI). Some fields represented (material science) may also not have specific database needs. Making use of existing infrastructure reduces costs; however, something more functional and accessible than SICADA is needed. Make a separate VR application for this purpose as soon as possible, or in 2015 after the main NGL running costs application. The issues of accessibility, longevity, and stability should be considered, as should possible aspects of visualization. The database group should further investigate these questions.

d. *Research links to other major research infrastructures that can support the NGL proposal?*

Some suggestions:

- National Drill Rig at Lund University/COSC

- Luleå rock mass in-situ measurements
- RADLAB initiative
- MAX IV Lab/Synchrotron radiation facility
- Natural History Museum ICP Lab
- IODP and ICDP – deep subsurface sampling programmes, multidisciplinary.
- Mining (industry)
- Relevant labs outside Sweden (e.g., connected to the International Advisory Committee).

BeFo, ESS already supporting the planning proposal. We can also look at other infrastructures already supported by VR or KAW to find additional suggestions.

*e. Other relevant organizations / research groups for contributing to the NGL planning work?*

Some suggestions:

- Los Alamos National Laboratory HDR project and organizations that are interested in working with the canister and bentonite labs and those interested in the remediation project at the site.
- Visualisation expertise – see, e.g., e-Science strategic program (Linköping).
- Possible additional geology expertise (Lund).

It was also suggested to assign all research leaders with the task of preparing a map of Swedish research in their fields, and related scientists and visions, ready for the NGL meeting in fall.

*f. When to submit full NGL proposal to VR – spring 2014 or spring 2015?*

In general spring 2014 was advocated. It was also suggested to have a stepwise proposal strategy, with spring 2014 for the main NGL running costs proposal, and spring 2015 for a possible database-focused proposal, although this could also come together with the main application in 2014. Later proposals could be submitted for potential needs of additional, heavy equipment. Other possibilities for education initiative funding are EU Marie Curie and the “Research School” program. Further considerations mentioned were whether the SKB timeline for Äspö impacts our planning. Is there a need to hurry for sake of reducing data monitoring/sampling gaps?

*g. Expectations from forthcoming larger NGL workshop in Oskarshamn?*

One group suggested having two main points for the workshop:

1. Main tasks of the proposal. Research groups with common tasks should interact.

## 2. Relevance of NGL. Why do we need the infrastructure and for what?

Another group preferred the NGL conference to be something like a first annual NGL conference, with some keynote speakers and in general showcasing already ongoing/planned NGL projects and results, and with connected focused “business meetings” for NGL proposal development, with International Advisory Committee, and for coordination with RADLAB initiative development.

Other groups suggested focus on a hands-on research planning meeting, or a main aim to synthesize and aggregate research in topic-oriented groups, with ensuing interdisciplinary discussions.

In general, expectations may depend on when application is to be submitted (2014 vs 2015). If a visit to Äspö HRL is planned for the meeting, this was suggested as an additional/extra activity, since many participants likely already familiar with site. A suggestion from one group was to invite representatives from SKB to convey information about the place on different subjects: hydrogeology, geology, hydrogeochemistry, data available, etc, and to also invite representatives from VR.

### Notes from additional discussion question

#### *What type of NGL support do we need to apply for jointly?*

- Support for concrete introduction to the physical field system, database system, and laboratory facilities of NGL.
- Support for prioritization and coordination of planned/ongoing research activities, and contacts with relevant subcontractors (field equipment/experimentation, consultants).
- Support for common GIS, visualization, virtual reality opportunities, projects and expertise.
- Support for database development.
- NGL needs to write a document describing technically the site and the knowledge about the available boreholes.
- Scientific guides. People with experience in geology, hydrochemistry, etc of the site to guide the researchers that want to use the infrastructure.
- Local guides. Someone to take you to the different areas and show the researchers the labs as well as the practical things related to them.
- Sampling equipment
- Planning capacity at the site for integration of projects.