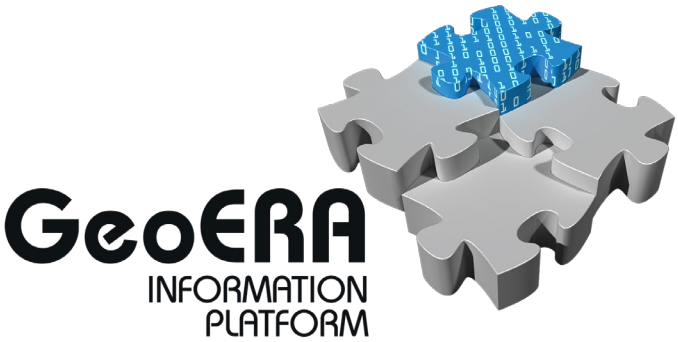

Deliverable 9.1

Financial aspects of sustaining the IP

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GENERAL INTRODUCTION

Work Package 9 of the GeoERA Information Platform Project (GIP-P) deals with sustainability issues and Task 9.1 in particular with the financial aspects of sustaining the developed Information Platform. The reason this is important is that there is no automatic funding mechanism available from the EU or national sources to ensure that the distributed and central IT systems, data and services are maintained after the finalisation of GeoERA.

Such funding is needed if the results are not going to be outdated and obsolete after a relatively short time after GeoERA.

In this report we discuss which potential funding options we see at the time of writing. This landscape may change during the course of the GIP-P, so the report may be updated at a later stage.

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1 BACKGROUND AND CURRENT SITUATION

1.1 The GeoERA Information Platform as an extension to EGDI

At an early stage in GeoERA it was decided to establish a common platform for harmonising, disseminating and safeguarding the results in terms of geospatial data, reports, background data, models, etc. from all GeoERA scientific projects (GSPs) instead of letting all those projects develop their own facilities for that.

The already existing European Geological Data Infrastructure (EGDI, www.europe-geology.eu) was chosen for this. EGDI already included facilities for displaying geospatial data and services, storage in a central database, registration of metadata, etc. The GeoERA Information Platform Project (GIP-P) was created to further develop the EGDI with the purpose of supporting the needs of the GSPs, for instance in terms of 3D/4D geological models, digital archives of reports and data, facilities for searching in all GeoERA material, support for Linked Open Data and other semantic web technologies, etc.

1.2 Development, operations, maintenance, governance and funding of EGDI

EGDI was originally established i 2016 by EuroGeoSurveys (EGS) on the basis of recommendations from the EU co-funded project EGDI-Scope. The operation and basic maintenance of EGDI has, since the launch, been carried out by EGS, and the GSPs have therefore been able to use the platform from Day One.

In parallel with the developments mentioned above, to specifically support the GSPs, some basic maintenance has taken place on EGDI including error corrections, data maintenance, addition of data and services from new projects, etc.

The funding of the basic maintenance and operations of EGDI is primarily being funded by EGS. This is possible because the activities, apart from those directly related to and funded by GeoERA, have a very limited level.

In addition to the EGS funding, EDGI also receives small amounts of funding from a few Horizon 2020 projects which are using the infrastructure. In some cases there is also some funding coming projects which use the infrastructure but also has requirements towards it for developing extra functionality. This for example the case for EMODnet.

The governance of the activities related to EGDI is based on Service Level Agreements between EGS and the so-called EGDI Consortium which consists of six individual EGS member organisation who are carrying out the practical work related to operations and maintenance. Currently there is a decision by EGS to fund the EGDI operations and maintenance until the end of GeoERA (end of 2021).

As the results of GeoERA are so closely coupled to the availability of the EGDI platform, ensuring the long term sustainability of the GeoERA results is more or less equivalent to ensuring the continued funding and stable operations of EGDI. In the next chapter we will look at which possibilities we see for this.

2 POTENTIAL SCENARIOS FOR SUSTAINING THE INFORMATION PLATFORM AFTER GEOERA

The situation after 2021 is currently unclear. The funding of GeoERA will have stopped by then and, at the same time, the EGDI will contain a substantially larger amount of data and functionality than now. The need for maintenance will be higher and, as the number of users hopefully will also be higher, the need for a stable operating solution will also be high.

In the next sections different solutions to this will be discussed.

2.1 European Partnership on a Geological Service for Europe

EGS is currently in a process of writing a proposal for the establishment of a Horizon Europe Partnership on a Geological Service for Europe (EP-GSE). This is suggested to be a Partnership which will support the Horizon Europe strategies and the goals set out in the Commission's "The European Green Deal". It will fund science projects under the four headlines "Decarbonisation", "Resourcing European industries", "Enhancing safety and wellbeing" and "The subsurface in Europe's digital twin".

An EP-GSE will take the concepts and scientific domain of GeoERA to a new level as the Partnership will work with a much broader scientific scope than GeoERA, but it will also be much bigger in terms of types and numbers of partners, time frame and budget.

The EP-GSE will, however, also need to find solutions on how to standardise, process, disseminate and safeguard results just like GeoERA has done, and the initial ideas are – also in the EP-GSE – to build on the EGDI platform. This will of course in the first place mean an even bigger need for focus on and funding for operations and maintenance, but on the other hand, the Partnership will also be able to provide such funding.

An EP-GSE will – if established – start operating at the time of finalisation of GeoERA or shortly after that and have an estimated duration of seven years. The results of GeoERA should therefore in that case be secured until approx. 2029.

An EP-GSE will deliver a Geological Service for Europe, including an established organisational structure, clear business model and established funding mechanism without the need for continued Framework Programme funding by the end of the programme. This should therefore, consequently, also ensure the results of GeoERA in the time after an EP-GSE (beyond 2029).

2.2 Other Horizon Europe instruments

The new Horizon Europe research programme will start in 2021, and currently a Strategic Plan is being developed which will define the frames under which all research must be conducted. Later in 2020 the first work programmes for Horizon Europe will be written. Currently it is not possible to see which topics will be in calls in the first round.

It is, however, already now clear that some of the issues that he Commission will emphasise regarding digital solutions will be Open Access to data and results, FAIR data principles and potential exploitation of the European Open Science Cloud. Whether this will result in calls that will be suitable for projects that can support the

further development and operation of EGDI is unclear. But we will follow the process closely.

2.3 Other sources

As mentioned above, EMODnet uses EGDI as their portal for geospatial data, and if EMODnet will continue after the current project, some funding for further development and operation of EGDI may be available from there. This will in turn then effectively support the sustainability of the GeoERA results.

Other initiatives that may contribute in a similar manner is the European Plate Observing System, EPOS, which is currently in the process of starting up operations funded by an ERIC. Data and services from EGDI (and in the longer term maybe also new content from GeoERA) is of interest to EPOS and may in the future result in some funding coming to EGDI thereby again supporting the sustainability of GeoERA results. It is, however, also in this case currently unknown what level of funding will be available and how big the cost of supplying the services will be.

Other potential sources that have been identified are:

- JRC's RMIS which needs data and services related to raw materials. A lot of such data is available from EGDI, but currently it has not been possible to convince the JRC that funding for providing this is necessary.
- Private companies needing data. Some companies – for instance in the raw materials sector – may be convinced to pay for data or services aggregated or otherwise value added to their needs. This will, however, also mean that the EGDI will have to be extended.
- Private companies who would like to develop services on top the EGDI services and data. They may be willing to pay for access to these but probably again only after the implementation of further facilities.

2.4 EuroGeoSurveys

As mentioned above, the funding for operations and basic maintenance of EGDI is currently coming from EuroGeoSurveys. The yearly amount as approximately 100,000€. This amount must be expected to be too little when GeoERA has ended as the system at that time will be considerably more complex than it is today and contain far more data. The cost for the operations may be expected to be two to three times higher than today.

If none of the above alternative sources of funding becomes reality, and can provide substantial contributions, EGS may have to continue providing the funding, but whether there is support from the EGS members for this, in particular at a two to three times higher level is uncertain.

3 CONCLUSION

A long term sustainable funding model for EGDI is the key to sustaining the results from the GeoERA scientific projects. Such a model is currently not in place. If EuroGeoSurveys has success in establishing a Horizon Europe Partnership on a Geological Service for Europe this will most likely solve the issue for many years to come. If the Partnership does not become reality EGS will have to further explore how to connect to a number of smaller initiatives and/or provide the funding from the members own resources.