Geothermal ERA-NET

Periodic Activity and Management Reports

Reporting Period No 1

October, 2013

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Acknowledgements

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Executive summary

The aim of following deliverable is to present achievements of Geothermal ERA- NET partners in first year of cooperation. The report combines overview from all work packages from May 2012 until October 2013. Period focus on beginning the cooperation of national program owners and administrators and thus be an enabler for the integration of national research and development agendas into a coherent European geothermal R&D program. Countries has been chosen for cooperation on the basis of their ambitions to include geothermal energy into their goals for 2020 and 2050 on the reduction of CO_2 emissions.

The leaders of the work packages developed and implemented the communication strategy and associated plans. Work package leaders were primary face of the ERA-NET and set up the agreed ways of working and the rules of engagement. Infrastructure related tasks will include creation and management of various web based tools, organizing meetings and workshop and managing the first outputs of ERA-NET. Leaders of work packages have implemented communication strategy and associated plans assisting national programme owners in achieving the required visibility.

Important milestones have been reached, and various activities have taken place, including the project website (www.gothermaleranet.eu), and deliverables that are due in the first 18 months are either submitted or in the last phase of review.

The program role is to strengthen geothermal sector and its developmens as one of the three important EU pillars. Linking together the geothermal industry pillar, the research pillar and the policy pillar by increasing cooperation and consultation between those pillars and stakeholders to strengthen geothermal assessment and policy recommendation.

PROJECT PERIODIC REPORT

Grant Agreement number: 291866

Project acronym: Geothermal ERA NET

Project title: Geothermal ERA NET

Funding Scheme: FP7-CSA-CA

Date of latest version of Annex I against which the assessment will be made: 24/07/2013

Periodic report: **1st X** **2nd ☐** **3rd ☐** **4th ☐**

Period covered: **from 01/05/2012 to 31/10/2013**

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[1] Usually the contact person of the coordinator as specified in Art. 8.1. of the Grant Agreement.

[2] The home page of the website should contain the generic European flag and the FP7 logo which are available in electronic format at the Europa website (logo of the European flag: http://europa.eu/abc/symbols/emblem/index_en.htm logo of the 7th FP: http://ec.europa.eu/research/fp7/index_en.cfm?pg=logos). The area of activity of the project should also be mentioned.

Declaration by the scientific representative of the project coordinator

I, as scientific representative of the coordinator of this project and in line with the obligations as stated in Article II.2.3 of the Grant Agreement declare that:

- The attached periodic report represents an accurate description of the work carried out in this project for this reporting period;
- The project (tick as appropriate) [3]:
  - ✓ has fully achieved its objectives and technical goals for the period;
  - ☐ has achieved most of its objectives and technical goals for the period with relatively minor deviations.
  - ☐ has failed to achieve critical objectives and/or is not at all on schedule.
- The public website, if applicable
  - ✓ is up to date
  - ☐ is not up to date
- To my best knowledge, the financial statements which are being submitted as part of this report are in line with the actual work carried out and are consistent with the report on the resources used for the project (section 3.4) and if applicable with the certificate on financial statement.
- All beneficiaries, in particular non-profit public bodies, secondary and higher education establishments, research organisations and SMEs, have declared to have verified their legal status. Any changes have been reported under section 3.2.3 (Project Management) in accordance with Article II.3.f of the Grant Agreement.

Name of scientific representative of the Coordinator: .Hjalti Páll Ingólfsson

Date: 09 / 04 / 2014

For most of the projects, the signature of this declaration could be done directly via the IT reporting tool through an adapted IT mechanism and in that case, no signed paper form needs to be sent

[3] If either of these boxes below is ticked, the report should reflect these and any remedial actions taken.

1 Publishable summary

1.1 Project context and objectives

Geothermal resources have been used successfully and economically in some locations in Europe where geological conditions are exceptionally favourable (e.g. Italy and Iceland), but they can play a much more important role at the European scale, if they can be made accessible in other places. Numerous projects in several countries (e.g., in France, Germany, Switzerland) have started to make use of this source of energy applying new approaches.

The Geothermal ERA-NET work will deepen the cooperation of national program owners and administrators of the participating countries and lay the groundwork for the integration of national research and development agendas into a coherent European geothermal R&D program.

The Geothermal ERA-NET will focus on the utilization of geothermal energy, from direct heating applications up to higher enthalpy resources and their corresponding uses (e.g. power generation). To ensure appropriate linkages to related R&D activities (renewable heating and cooling via ground storage heat pumps, power distribution and transmission) the interface with related ERA-NETs such as ERACOBUILD or SmartGrids will be maintained to avoid overlap. The ERA NET will include technical and non-technical issues as long they can be considered to be exclusively applied to the support of geothermal energy utilization.

A significant instrument will be the EERA Joint Programme on Geothermal Energy whose aim it is to contribute via research and development to the renewable energy targets for 2020 and beyond, in member and associated states. Coordination activities will focus on implementation of commonly agreed objectives, joint activities and funding of joint transnational research actions

1.2 Objectives

The overall objective is the mutual opening up of national research programmes and research infrastructures, and the development of joint activities. To reach this target, the detailed objectives that will direct this Geothermal ERA-NET are aimed to:

- Complete the preliminary work required to create a European Geothermal Database whose purpose it is to share information on legal and regulatory aspects, policies, measures, institutions, research projects and data.
- Exchange information on the status of geothermal energy, including national support schemes and RD&D activities and identification of gaps.
- Recommend measures to strengthen European geothermal development in order to meet short-term targets according to National Renewable Energy Action Plans (and similar endeavours in associated countries) and future contributions to renewable energy supply.

- Foster synergies at regional and pan-European level by mobilizing competitive and non-competitive funds for research in a more coordinated way through joint activities.
- Achieve a critical mass to address cross-thematic research targets, thus enhancing cooperation and avoiding fragmentation.
- Define possible schemes and barriers for the joint activities and recommend practical solutions.
- Prepare and execute transnational funding activities, required agreements on themes of the planned projects and on all implementation and administrative issues concerned.
- Increase transnational collaboration in research training and mobility in geothermal research, improving human capacity building, by sharing of best practices, gap analysis and improve science development and collaboration.
- Gain a clear understanding of the principal stakeholders for a successful, Europe-wide coordination of publicly funded, national research, development, deployment and innovation programmes.
- Communicate with principal stakeholders and enhance public awareness toward the values and benefits of geothermal scientific and policy issues.
- Prepare the ground for the future formulation of a common European roadmap for geothermal energy technology research, development, deployment and innovation programme.

1.3 Work performed main results

During the first 18 months of the Geothermal ERA NET the focus has been put on exchanging information on the status of geothermal energy utilization, including national support schemes and research, development and deployment (RD&D) activities and the creation of an inventory report on these activities. Emphasis has also been put on gaining an understanding of the principal stakeholders, including key industry players for a successful, Europe-wide coordination of publicly funded national research, development, deployment and innovation geothermal energy programmes. Great efforts have also been put on the preparation for a Joint European Data/Information platform called EGIP or European Geothermal Information Platform.

The consortium has met 5 times in physical meetings and in addition had several telephone conference on different issues. The first meeting was a kick off meeting that took place in Reykjavik Iceland in end of May 2012. Two times the consortium has met for annual meetings, first in Pisa, Italy in September 2012 and then in Budapest, Hungary in September 2013. Then there were two workshops organized within WP3, one in March 2013, focusing on geothermal database State of the art and needs and then another one in June 2013, focusing on the feasibility study for the geothermal database. In connection to the WP3 workshops the coordinator organized a general working meeting for the ERA NET.

Gerdi Breembroek on behalf of the Geothermal ERA NET took part in the Korenet matchmaking event, R&D Forum 2013 in Brussels, 25 June 2013. The aim of the matchmaking event was to foster collaboration between EU and Korea on several selected topics, in particular through participation of Korea in ERANETs. The Geothermal ERA NET was specifically invited by Peter Hahn, VDI/VDE IT (Germany), working on EU/Korea collaboration. The meeting was successful and inspiring, but there has as yet been no concrete follow-up.

All planned milestones have been met, including the project website (www.gothermaleranet.eu), and deliverables that are due in the first 18 months are either submitted or in the last phase of review, with the exception of WP6 deliverables, which were postponed as described later in the report.

The next major steps in the Geothermal ERA NET process is to identify research gaps and opportunities for joint activities within participating countries. To find common interest and discuss joint research agendas.

Deviation to Annex I

During the first eighteen months three main deviations from the original Annex I can be indicated.

a) Postponement or delay of work.

b) The name of the WP3 is changed from "Towards a European Database" to "Towards a European Geothermal Information Platform ",

c) The implementation of a preliminary EGIP was proposed as a joint activity by interested consortium members to demonstrate the usefulness of EGIP concepts, taking into account information and data considered of high priority. A decision on a joint call would be based on the result and experience of preliminary demonstration.

The reason for a) is twofold: postponement of WP6 work and delay in WP2 work. Due to the close similarity of WP2 and WP6 information collection the consortium decided to postpone the work of WP6 so it would be more in line with the work of WP2. This resulted in delay of D6.1 and D6.2, it should however not affect the overall results of the project as the work of WP 6 will be performed in parallel to the work of WP2, using the same questionnaires and so on. In case of WP2 however, we are experiencing a delay of 4-6 months in preparing the results. It took more time to get all material together and subsequently analyse it. The individual participants in the network are national experts on geothermal energy, who need to match the need to work for the ERANET with their other obligations. WP2 and WP6 are laying the foundation for the other WP with useful and good-quality results, and the delay experienced in WP2 could actually be regained again later in the project, due so high quality preparation in information collection and analysis. The highest risk of affect will be on the work of WP4 "Development of joint activities" and WP 7 "Implementation in joint activity".

The reason for b) is that the term database appeared to be restrictive and mainly related to the data container while the designation 'Information Platform' entails not only to store geothermal information but also to display, examine, compare and integrate them. Moreover, the platform is meant to comprehend a broader set of geothermal information with respect to what is usually defined as a geothermal database, and is designed as a distributed system.

The deviation c) is due to the actual sceptical feeling of members of the consortium on EGIP implementation by a joint call before testing the performance of the system and the usefulness of the data provided by the participant countries. Therefore it was decided to demonstrate the implementation of EGIP as pilot in the beginning and do this as a joint activity of interested participants in the ERA NET consortium. This would be done as an "in kind" contribution by volunteer participants in the year 2014. A decision on a Joint Call for EGIP would be taken early 2015, based on the results and experience of the pilot implementation.

GA amendments requests

As a reaction to the deviation mentioned above and changes in the consortium the coordinator will request for an amendment to the Grant Agreement on the following topics

1. Adding Slovenia Energy Directorate as full partner.
2. The name of the NL partner has changed from Agentschap to **Rijksdienst voor Ondernemend Nederland**
3. The postponement of tasks in WP6
4. WP 3 name of WP and task 3.4.
5. Delay the delivery dates of D2.3, D2.4 and D2.5

1.4 Expected results and impact

National geothermal energy programs have developed mostly in response to specific local geothermal resources and conditions, national skills and competences and importantly, along national goals that result from local conditions. This has led to the development of national/local RD&D value chains that are duplicated in other European countries. The fragmented nature of the geothermal industry and hence technology development has become a liability considering the vastness of the geothermal resource.

National governments have recognized that a structured, internationally rooted, in the first instance, European approach needs to be developed to evolve towards a coherent and effective industry and research infrastructure that can master technological challenges. National authorities and in particular those that administer research, development, deployment and innovation (RDD&I) programs have to play a crucial part in bringing about a development towards a unified platform for wide-spread uptake and growth of geothermal energy utilization.

While for example pan-European research topics have been suggested for Enhanced Geothermal Systems (ENGINE within the 6th Framework Programme), actual work on the topics has been patchy owing to the lack of concerted action by national and EC funding agencies. Very little, if any prioritised activities have been carried out by member states. More relevant for this Joint Proposal is the fact there has been virtually no implementation of inter-/transnational research activities in parts due to a lack of a platform for funding agencies and national program owners.

The creation of the Geothermal ERA-NET is a necessary prerequisite to exploit synergies and to significantly reduce the fragmentation in the European geothermal energy research area. The work program will identify key challenges and bottlenecks; define the actions to tackle them; establish the investment levels needed; develop a strategy for prioritisation and thus to develop an understanding of the optimal level of intervention from member states that wish to advance geothermal development and deployment.

Primary impact areas of the ERA-NET are expected to be on a strategic level, optimal resource allocation levels and with regards to positioning Europe within an international context.

Strategic coordination of national research programs: the Geothermal ERA-NET is expected to contribute to an indigenous European energy supply that is reliable, affordable and sustainable. The cooperation will also contribute to the development of a European market for research, development and activities that are driven by excellence and value added rather than championing national entities that act exclusively on a local/national level. National program owner will be given an opportunity to coordinate program implementation beyond national boundaries.

Implied is a drive towards optimal allocation of national resources (funds, personnel and time) according to strengths of national players and resource specifics while freeing up resources that are better deployed in other regions and organizations to deliver expected results.

2 Core of the report for the period: Project objectives, work progress and achievements, project management

2.1 Project objectives for the period

The following milestones were to be reached within the reporting period:

Table 1 Milestones in first period

Milestone number	Milestone name	WP(s) involved	Expected date [4]	Actual date [5]
1	Kick Off meeting	1,2,3,4,5,6,7	month 1	Month 1
2	Website	1	Month 3	Month 5
3	Annual project meeting	1,2,3,4,5,6,7	Month 9	Month 5
4	Annual project meeting	1,2,3,4,5,6,7	Month 21	Month 17
8	Database workshop 1: European Geothermal Database: State of the art and needs	1,2,3,5	Month 10	Month 10
9	Database workshop 2: European Geothermal Database: Feasibility study	1,2,3,5	Month 15	Month 13

Objectives for the first reporting period were to get the project management structure up and running and install a communication strategy. The focus was put on preparation work for a European Geothermal Database, information exchange and stakeholder analysis.

The call text of the FP7-ERANET-2011-RTD call specifically requested to consider the creation of a European Geothermal Database. The definition of a database is however quit broad and a considerable efforts were put into defining the boundaries and conditions of which to set up the database. The final conclusion was to aim for a European Geothermal Information Platform (EGIP). The EGIP entails not only storage of geothermal information but also enabling analysis (that is, to display, examine, compare and integrate information to create knowledge). Moreover, the platform is meant to comprise broader sets of geothermal information with respect to what is usually defined as a geothermal database, and is designed to be a distributed system. The EGIP aims to be as INSPIRE compliant as possible.

Another very important foundation for future ERA NET work is the collection and sharing of information on the status of geothermal energy utilization, including national support schemes and research, development and deployment (RD&D) activities as well as information on training and mobility and stakeholder analysis. Relevant questionnaire where sent out to the participating countries to be filled out and then analysed by the WP leaders.

[4] Measured in months from the project start date (month 1).
[5] Measured in months from the project start date (month 1).

2.2 Work progress and achievements during the period

The Gantt chart below shows the planed timing of the work and the red line indicate the end of this reporting period. As can be seen from the figure the work of WP4 and WP7 is related to the outcomes of the first tasks of other WP and consequently has not started yet. There is therefore no activities to report on those WP's.

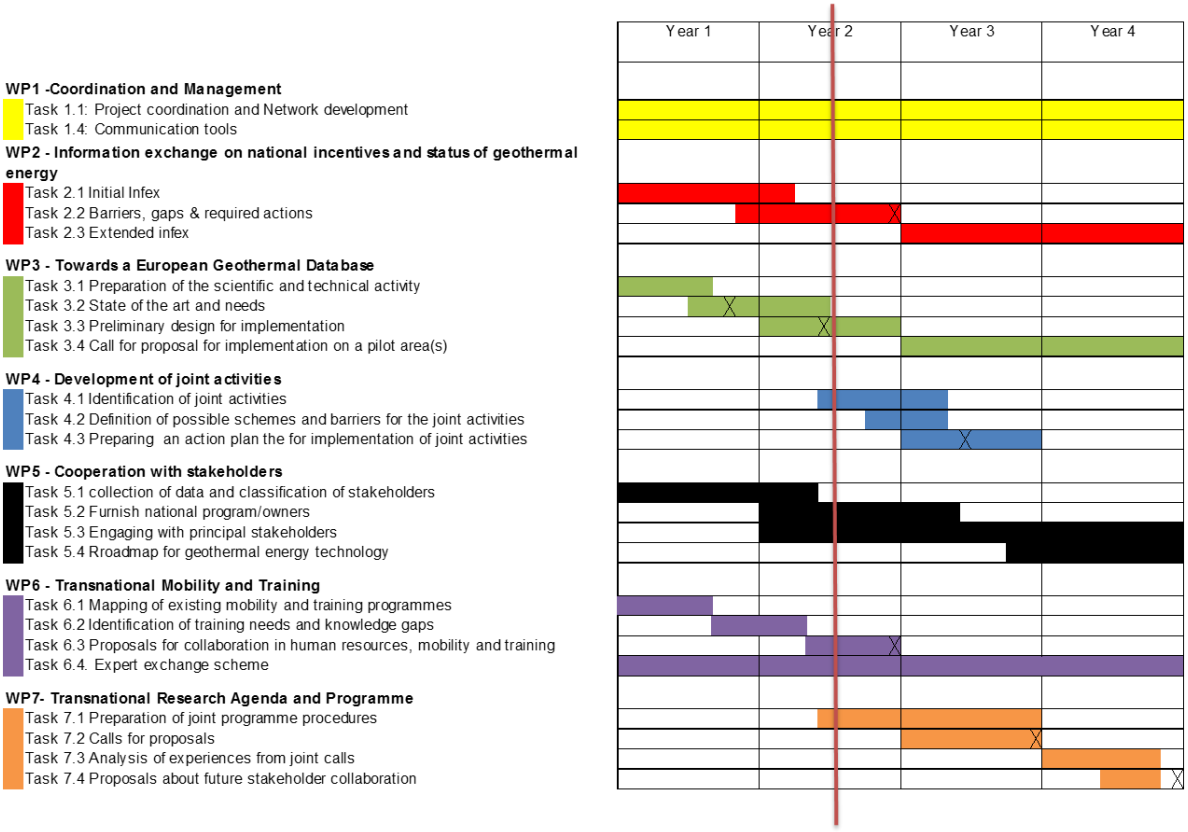

Figure 1 Gantt chart providing details of the progress of each work package up to 18 month from beginning of coopeation

2.2.1 **Work Package 2:** Information exchange on national incentives and status of geothermal energy

The results of the work on information exchange are highly relevant, and they deliver useful insights for the further Geothermal ERANET activities. The collaboration between task leader, coordinator, participating countries, and the task leaders of other work packages is very good. There is a delay of about 4-6 months, which might have an impact on subsequent work packages. However, the future work will also benefit from the solid foundation that the group has now laid.

List of results to date

Table 2 List of results for WP2

Task 2.1	• Questionnaires on national status and incentives, and on selected RDD&D projects. • Completed questionnaires on national incentives and status of geothermal energy per country (available via Sharepoint, restricted) • Completed questionnaires (Powerpoint/Excel) on highlights of RDD&D projects per country (available via Sharepoint & included in deliverable D2.2) • Country presentations at the Reykjavik meeting, 4-5 March 2013 (available via Sharepoint, restricted) • D2.2 "Inventory of RD&D project highlights", approved October 2013, published as pdf 25-11-2013. • D2.1 "Geothermal energy status and policy review – Geothermal ERANET participating countries - Part A Analysis", draft report 30 October 2013.
Task 2.2	• Approved approach and "ten bullet lists" for gathering information on Task 2.2; one list on barriers and opportunities; one list on future RD&D needs.

Progress per task: Task 2.1 Initial information exchange

The collection of information on support and funding schemes, evaluation, monitoring and dissemination, and on RDD&D projects has been instrumented with two questionnaires, which have been discussed in the network before distribution. The questionnaires also covered the status of geothermal energy in the participating countries. A number of questions from WP6 were included as well, for efficiency reasons.

At the 3rd project meeting, each country has presented its national situation, as a "WP2 workshop", which has added greatly to our understanding of the challenges that face our colleagues in the ERANET project. The slides are available on the Sharepoint.

The information in the questionnaires has been analysed and brought together in two reports. The report "Inventory of RD&D project highlights" has been approved in October 2013. This report is public and will be available on the website. The report "Geothermal energy status and policy review – Geothermal ERANET participating countries - Part A Analysis" is currently being reviewed by the project partners. This will be a public report too. At the Sharepoint, all partners can access questionnaires of all member countries (which form Part B of this report).

Progress per task: Task 2.2 Barriers, gaps and required actions

The procedure for identification of barriers, gaps and required actions was proposed and accepted at the 4rd working meeting, 9-10 September 2013 in Budapest. Subsequently, a format for two ten-bullet lists has been distributed among project partners, for completion before 1 December 2013. From then, Agentschap NL will work together with the CNR (Italy) and Jülich (Germany) to identify joint barriers and opportunities, and future R&D needs

respectively. This information will flow into the subsequent work packages for the definition of joint activities.

Progress per task: Task 2.3 Extended information exchange

No actions yet. A proposal who shall bring in information on which other relevant EU and non-EU countries initiatives was made. However, the focus in WP 2 is now on Task 2.2.

2.2.2 **Work Package 3:** Towards a European Geothermal Information Platform

Task 3.1 Preparation of the scientific and technical activity:

The leader of this work package and the associated partners prepared the scientific and technical activity since the kick-off project meeting. Two specialized workshop dedicated to the preparation of the European Geothermal Database were proposed and organized:

a) a first one held in Reykjavik on the 5th of March 2013 (MS8)
b) a second held in Pisa on the 3th of June 2013 (MS9).

Additional meetings, such as conference call or one to one informal meetings have been done to discuss some important technical issues of the WP3 topics (01/07/2013 – 08-10/10/2013).

Task 3.2 State of the art and needs:

In order to establish the state of the art in geothermal data organization and its needs and gaps, a questionnaire was proposed and the survey performed among the Geothermal ERA-NET partners. The questionnaire covered four topics:

i) Context,

ii) Data,

iii) Application,

iv) Management of the European Geothermal Platform.

This work has been outlined in the first specialized workshop: "European Geothermal Database: state of the art" held in Reykjavik on the 5th of March 2013. The description of the activity and the survey results were described in the "Report on the state-of-the-art and needs in regarding geothermal data and existing tools to manage them" (D3.1).

Task 3.3 Preparation of a feasibility study:

Based on the results of the previous task, a preliminary design for the European Geothermal Information Platform at the European (EGIP) scale was carried out. The design takes into account the best practices and the rules proposed in the INSPIRE European directive. The proposed design goes beyond pure data sharing: it also involves the way information and data are displayed, examined, compared and integrated. A second specialized workshop titled

"European Geothermal Database: Feasibility study" has been held in Pisa on the 3th of June 2013. In this event the consortium discussed on the benefit on EGIP implementation following the INSPIRE rules and defined a step-by-step involvement data process, setting short-, medium- and long-term targets.

The task deliverable D3.2, titled "Feasibility study for a European Geothermal Information Platform", including also the budget estimation for EGIP realization was completed in October 2013 and circulated. Since it was particularly detailed and required an effort to review and contribute to, this report is still under partners review and will be made available by the end of 2013.

The milestones scheduled for the WP3, MS8 (Database Workshop 1: European Geothermal Database State of the art and needs, month 10) and MS9 (Database Workshop 2: European Geothermal Database Feasibility Study, month 15), were achieved in accordance with the Geothermal ERA-NET time table.

The deliverable D3.1, related to the task 3.2, was released on time, while the D3.2 (due for month 18) is under reviewing, and will be available for the end of November 2013.

In occasion of the INSPIRE conference 2013 (Florence, Italy 25-27 June 2013) Eugenio Trumpy (CNR) gave a talk, in the session "Thematic Application", titled "The European Geothermal Information Platform: an Opportunity to be INSPIRE Compliant for Geothermal Knowledge".

2.2.3 **Work Package 5:** Cooperation with stakeholders

Work package 5 provides the analysis of stakeholders relevant to program owners and managers related to geothermal research, development and deployment (RD&D). As funding agencies and decision makers for grant applications, a thorough stakeholder analysis is warranted to enable efficient execution of RD&D programs, manage expectations, justify continued RD&D into geothermal not to mention growth for RD&D funds. The output to task 5.1 was a report titled "Stakeholder Analysis on a National Level" which serves as input to WP2 (Information exchange on national incentives and status of geothermal energy) and the European Geothermal Database (WP3). To summarize the principal outcomes, stakeholder types differ strongly between the countries, a fact which is mostly related to the local availability and type of geothermal resources utilized and the overall energy demand. Driven by local circumstances, national RD&D scenes have developed in highly variable directions. Nonetheless, some general findings apply to all partner countries: information and dissemination of knowledge related to geothermal energy is essential and needs to be tailored to the needs of important stakeholders; there is a need to communicate how geothermal RD&D can help realize potentials and achieve cost reductions; coordination of RD&D on both, national and international levels needs to be clearly spelt out; stakeholders ask for an increase funding of R&D and pilot projects, and ways and means to promote international cooperation. The report and methodologies that have been employed serve as a building block for a stakeholder analysis on an international level.

The report suffered a 5 month delay owing to a more protracted than expected process to agree on classifying and ranking stakeholders according to their importance and relevance to running geothermal RD&D programs. During the information gathering process member countries have found it rather difficult to provide an assessment without adverse consequences on country-specific stakeholder relationships. A reassessment of terminology ("influence" and "relevance") and appropriate terminology was introduced which enabled the acquisition of information relevant to the report.

The resources were employed in broad accordance to plan. The work package leader (Swiss Federal Office of Energy) had to modify the human resource accounting system (billable hours) to allow for full accounting of hours spent on the Geothermal ERA NET project. Since retroactive corrections were not possible, fewer hours than anticipated have been recorded. Corrective actions are no longer required.

2.2.4 **Work Package 6:** Transnational Mobility and Training

The aim of work package 6 is to map programs within mobility and training in the geothermal sector open to researchers in the field.

Task 6.1 Mapping of existing mobility and training programs:

Due to similar questioner as in task 2.1 a joint decision was made to merge two questionnaires and accordingly the delivery date of task 6.1 was postponed.. This will result in later delivery dates for the upcoming tasks. Information has been gathered on training and mobility together with courses in universities in Europe related to the field of geothermal. The first draft of the report was presented to the ERA-net partners at a meeting in Budapest in September 2013. Additional information have been gathered and the final report delivered January 2014.

Task 6.2 Identification of training needs and knowledge gaps:

Due to later delivery of task 6.1 this task has been delayed.

2.3 Project management during the period

Consortium management tasks and achievements

At the start of the project, a kick-off meeting was organised in Reykjavik Iceland. At this meeting, the coordinator, Guðni A Jóhannesson, gave a short address where he welcomed the foreign guests and celebrated the start of the Geothermal ERA NET. The project set-up, objectives, time plan, and governance structure was reviewed as well as practical issues related to finances and reporting to the EC. Dr. Erich Naegele the EC project at that time attended the meeting and gave an overview on „the Rules of the Game - Basic Principles of FP7 Grant Agreement". The latter part of the meeting was devoted to fruitful discussion on the work ahead and the objectives of the Work Packages. WP leaders presented their views on the first steps ahead. At the kick-off meeting, an activity plan for the first year was discussed and agreed on.

A major duty of the project management is the financial coordination of the project. The prepayment received by the EC was distributed among partners.

There was a change in the consortium right at the beginning of the project. This was due to administrative changes with the Hungarian partner Energy Centre. The institution was merged with another institute in Hungary, resulting in a loss of their PIC number and legal status at the EC. This called for a double amendments of the Grant Agreement; 1) The removal of the Hungarian partner Energia Kozpont as consortium partner. 2) The admission of the new Hungarian partner Magyar Foldtani Es Geofizikai Intezet (MFGI). The admission was already discussed at the kick off meeting. The consortium approved that MFGI would take over the responsibility and budget of Energy Centre in the ERA NET. The personal costs of MFGI are slightly lower that of Energy Centre so that the work effort of MFGI can somewhat be increased with the same budget. The coordinator arranged the paperwork for this to happen, surprisingly, taking significantly longer time than expected.

Adding partners is a high priority target to strengthen and broaden the ERA-NET. Potential new partners have been named and special part of the budget has been earmarked to be utilized for newcomers. The first one to join in is the Energy Department of Slovenia. Their admission was approved at the second annual meeting in Budapest, Hungary in September 2013. Their formal admission is planned in early 2014. Other potential partners are UK, Norway, Romania, Austria, Spain, Greece and Portugal to name a few.

In addition to the kick off meeting 4 physical meetings have been held in the Geothermal ERA NET from the start and in addition several telephone conference on different issues have been held. The kick off meeting took place in Reykjavik Iceland in end of May 2012. Two times the consortium has met for annual meetings, first in Pisa, Italy in September 2012 and then in Budapest, Hungary in September 2013. Then there were two workshops organized within WP3, one in March 2013, focusing on geothermal database State of the art and needs and then another one in June 2013, focusing on the feasibility study for the geothermal database. In connection to the WP3 workshops the coordinator organized a general working meeting for the ERA NET.

The project has been well received internationally and has been disseminated at several different events and conferences. Below is a list of the major ones.

- Renewable Heating & Cooling Technology Platform panel meeting in Brussels on 4 September 2012. Address by Gunter Siddiqi, Swiss Federal Office of Energy, Geothermal ERA NET Work Package 5 Leader. Venue: EUROCITIES -Square de Meeûs 1, B-1000 Brussels, Belgium

- Iceland Geothermal Conference, 4-8 March 2013 Address by Paul Ramsak – Agentschap NL, Geothermal ERA NET WP 2 leader. Venue: Conference Center Harpa – Reykjavík, Iceland

- Seminar on research infrastructures, JPI and ERA-NET, hosted by the Ministry of Science and Higher Education of the Republic of Poland, 20 May 2013 Address by

Lubos Slovak, Geothermal ERA NET partner Venue: Warsaw (Centrum Bankowo - Finansowe "Nowy Świat", sala/room A),

- 4th European Conference on Renewable Heating & Cooling 22-23 April 2013, Dublin Ireland Address by Hjalti Páll Ingólfsson, Project manager at Geothermal ERA NET coordination office. Venue: The Convention Centre Dublin, Ireland

- European Geothermal Congress 3-7 June 2013 Keynote address by Guðni A Johannesson, Orkustofnun Director General, ERA NET coordinator Venue: Palazzo dei Congressi in Pisa, Italy

- Global Atlas IRENA expert meeting, 3 June 2013 Address by Guðni A Johannesson, Orkustofnun Director General, ERA NET coordinator Venue: Palazzo dei Congressi in Pisa, Italy

- Korea-EU R&D Forum, 25 June 2013, Addres by Gerdi Breembroek, Agentschap NL, Geothermal ERA NET WP2 leader. Venue: Thon Hotel, Wetstraat 75, Brussels

- Progress on establishing the Geothermal ERA-NET has been communicated at various Executive Committee meetings of the IEA‘s Geothermal Implementing Agreement and the Steering Committee teleconferences of the International Partnership for Geothermal Technology (an EGS focussed and project-specific collaboration platform for the USA, Iceland, Switzerland, Australia and New Zealand).

The website for Geothermal ERA-NET www.geothermaleranet.eu, was opened on September 14, 2012. The website is written in a system called Eplica. On the front page there are general information about the Geotheramal ERA-NET, participants and work packages. There is a sign in button where partners can sign into a SharePoint website that is only open to the participants of the projects. A login-password has been communicated to each partner to make them able to enter this restricted area. On the SharePoint website the participants can share documents and work together.

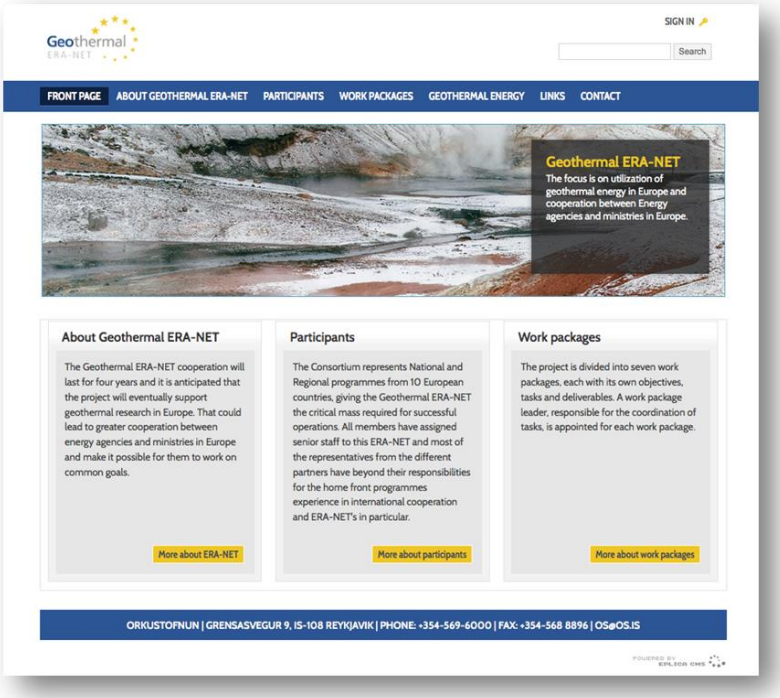

Figure 2 Screenshot of website

On the bottom of the page there is information about the coordinator, the address, phone, and email.

On the front page there are six main buttons: About Geothermal ERA-NET, Participants, Work packages, Geothermal Energy, links and contact.

To make the Geothermal ERA NET project more visible and easier to identify, a logo was chosen by the consortium.

Figure 3 Logo presentation

Adele Manzella, on behalf of CNR, the leader of WP 7 Implementation of joint activities took part in a workshop prepared by ERA-LEARN in 18-19th of September 2013. This was a training workshop on the implementation of Joint Calls, targeted in particular at current and future ERA-NETs, ERA-NET Plus and JPIs. The workshop content was primarily designed

for newcomers, but experienced practitioners of joint calls had the opportunity to discuss good practices as well. The workshop was very valuable and the learnings from it will be useful in the latter part of the Geothermal ERA NET where the focus will be put on joint activities.

3 Use of resources

During the first 18 months of the project the consortium has used in roughly 19% of the total budget planned for the whole duration of the project. This is slightly less than expected as we are already about 40% into the project duration. However as the project progresses the effort of the consortium is expected to increase so it will be good to have some extra budget at the latter part of the project.

The table below summarizes the claimed cost of the participants for the first reporting period, broken down to WP as well as percentages of the total budged for each participants. The cost is in EUR. It's obvious that the efforts is quite different between partners as can somewhat be explained by different obligations in the WPs´ and the fact that some of the WPs´ haven't started yet. This also reflects well in the chart below. The largest contribution is by the WP leaders of WP1, WP2 and WP3 where bulk of the work has been taking place. However it's obvious that the consortium should and will increase their efforts to be able to achieve their ambitious goals of the Geothermal ERA NET.

Table 3 Claimed cost for the first reporting period (18/48)

Participant	WP1	WP2	WP3	WP4	WP5	WP6	WP7	Indirect	1st RP total	Total budget	% of total
OS	62.047	9.131	12.864		1.142	1.875	158	17.443	104.660	519.821	20,1%
Agentschap NL	2.361	42.425	2.782		547			9.623	57.738	399.526	14,5%
SFOE	3.372				7.320			2.050	12.742	192.000	6,6%
CNR	6.544	5.571	57.512		2.916	4.686		44.941	122.170	288.257	42,4%
Jülich	1.630	3.444	5.647	5.525	609	352		5.080	22.286	246.137	9,1%
ADEME	8.860							2.552	11.412	22.080	51,7%
BRGM	7.412	2.906	2.906		2.906	2.906		3.807	22.844	84.480	27%
Rannis	3.924	1.240	2.811	120	518	7.069		3.136	18.818	187.650	10%
TUBITAK	9.358	2.407	2.407		1.777	1.201		3.430	20.579	107.100	19,2%
MESRS	1.289	8.412	8.659		15.041	11.502			44.904	141.600	31%
MFGI							813	106	919	102.240	0,9%
Grand Total	***106.796***	***75.537***	***95.587***	***5.645***	***32.775***	***29.592***	***971***	***92.168***	***439.072***	***2.290.891***	***19,2%***

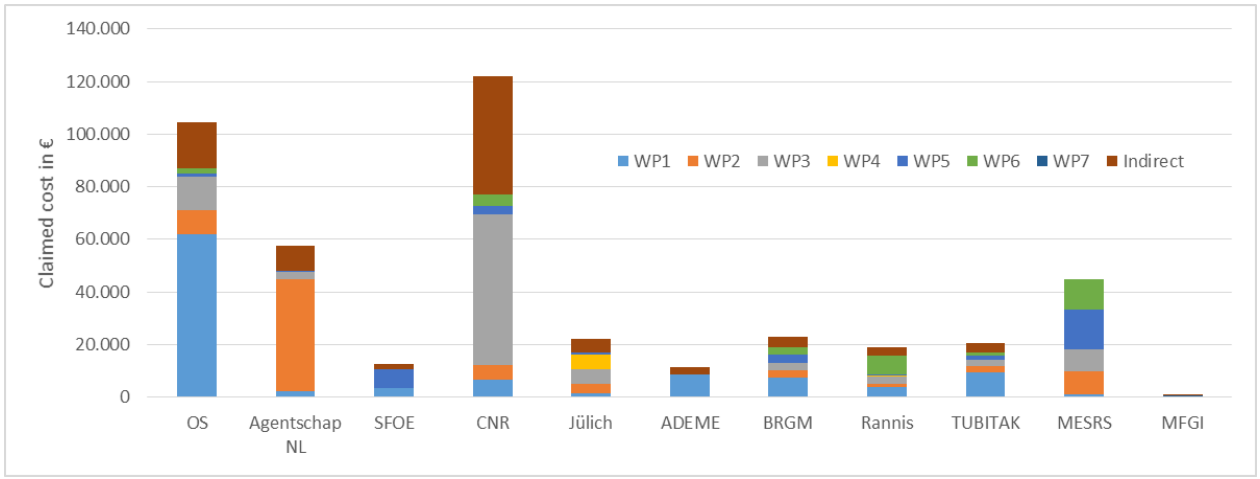

Figure 4 Overview of costs in all work packages by all participants

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