GeoERA

Establishing the European Geological Surveys Research Area to deliver a Geological Service for Europe

Technical review report for project HotLime

This report is part of a project that has received funding by the European Union's Horizon 2020 research and innovation programme under grant agreement number 731166.

INTRODUCTION

Technical review report is part of GeoERA's Monitoring and evaluation process for co-funded projects (*hereinafter: project*). The aim of a technical review is to assess the work carried out under the project over a certain period and provide recommendations. Such technical review evaluates the project reports and deliverables, the proper use of resources, the management of the project and the expected impact.

Technical review report consists of four sections, each representing one level of monitoring and/or evaluation of the project:

Level	Monitor / Reviewer	Input	Aim
1 – Monitoring of progress indicators	Monitoring and reporting officer (GeoZS)	MPPR* FPPR**	Monitoring of the effectiveness of implementation of selected projects with respect to finance, time and administration.
2 – Scientific review	Reviewers (GeoZS)	Submitted deliverables MPPR FPPR	Quality review of the deliverables and review of achieving scientific and professional goals.
3 – Review of the theme progress	Theme coordinators	MPPR FPPR	Review of achieving theme objectives.
4 – GeoERA Progress evaluation	Stakeholder Council member(s)	Sections 1 and 2 of this report Review meetings	Overall project progress and general recommendations.

*MPPR = Midterm Project Progress Report (see PI doc no 2)
**FPPR = Final Project Progress Report (see PI doc no 2)

Monitoring and evaluation process:

M0 = End of reporting period
M1 = Submitted (Final) Project progress Report (MPPR / FPPR)
M2 = 1 – Monitoring & 2 – Evaluation
M3 = 3 – Evaluation of the theme progress
M3 = (Final) Review Meeting & 4 – Progress evaluation

Each project will be reviewed twice: for first project period M1-M18 – Technical review report, and second project period M19-M36 – Final review report.
Technical review report is based on Horizon 2020 templates but adopted to GeoERA needs. Technical reviews of projects shall be carried out on a confidential basis.

GENERAL INFORMATION

ERA-NET Cofund Grant Agreement:	731166
ERA-NET Cofund acronym:	GeoERA
Call identifier:	H2020-LCE-2016-2017/H2020-LCE-2016-ERA
Project full title:	Mapping and Assessment of Geothermal Plays in Deep Carbonate Rocks – Cross-domain Implications and Impacts
Project acronym:	HotLime
Project reference number:	GeoE.171.006
Project topic:	GeoEnergy
Project specific topic:	GE2 Geothermal energy
Lead partner:	LfU Bayerisches landesamt fur Umwelt (Bavarian Environment Agency - Geological Survey)
Project website:	http://geoera.eu/projects/hotlime/

☒ Technical review report
☐ Final review report

Period covered	01/07/2018 – 31/12/2019
Review meeting date	09.03.2020

Contributor:	Role:	Approved on:
Barbara Simić	Monitoring and reporting officer	10.03.2020
Maja Ilić	Monitoring and reporting officer	10.03.2020
Matevž Novak	Scientific reviewer	10.03.2020
Jasna Šinigoj	Scientific reviewer	11.03.2020
Matija Krivic	Scientific reviewer	10.03.2020
Serge van Gessel	Theme coordinator	16.03.2020
Thomas Crafford	Stakeholder Council member	NA
Philipe Dumas	Stakeholder Council member	14.04.2020

1 LEVEL 1 – MONITORING OF PROGRESS INDICATORS

In this section the project is monitored "remotely" on the basis of the respective reports. This part is filled in by Monitoring and reporting officer with aim to monitor the effectiveness of implementation of the selected projects with respect to finance, time and administration, based on submited MPPR and FPPR.

	Yes	Partially (comment needed)	No
PROJECT MANAGEMENT			
Has the MPPR / FPPR report been submitted on time?	☒		☐
Have there been any changes in project partnership?	☐		☒
Has the project management been performed as required?	☒		☐
Has the collaboration between partners been effective?	☒		☐
Do you identify evidence of underperforming partners, lack of commitment or change of interest of any partners?	☐ (see comment)		☒
DELIVERABLES and MILESTONES			
Have the planned deliverables for the period been submitted on time according to timeline in Project Agreement?	☒		☐
Have the planned deliverables for the period been completed (from MPPR / FPPR, sheet 4)	☒		☐
Have any changes to deliverables occurred (type/ dissemination level)? (from MPPR / FPPR, sheet 4 and 5)	☐		☒
Have planned milestones been achieved for the reporting period? (from MPPR / FPPR, sheet 4)	☒		☐
Have the project partnership identify any difficulties achieving any of the deliverables / milestones?	☐		☒
DEVIATIONS (from MPPR / FPPR, sheet 5)			
Has the project partnership identify any deviations that will not affect projects outputs?	☐		☒
Have any deviations occur on the project, with impact on project outputs?	☐		☒
In case of deviations, have the project adopted corrective measures?	☐		☒
DISSEMINATION, COMMUNICATION			
Has the project adopted its dissemination plan?	☒		☐

Have the planned dissemination activities been completed for the reporting period? (from MPPR / FPPR, sheet 6)	☒		☐
Have the partners' disseminated project results and information adequately?	☒		☐
Is the project following dissemination plan?	☒		☐
Is the project interacting in a satisfactory manner with other GeoERA projects?	☒		☐
Is the project interacting in a satisfactory manner with national/international bodies?	☐	NA	☐

FINANCE			
To the best of your estimate, have the resources used been utilised for achieving the project? (according to MPPR / FPPR, sheet 9)	☒		☐
To the best of your estimate, have the resources used been in a manner consisted with the principle of economy, efficiency and effectiveness? *	☒		☐
Are there any major deviations in the budget consumptions from the financial plan? (zero consumption in M18; deviation from plan exceeding 20% in M36)	☐		☒
Are there any major deviations in the Person - Months consumptions from the plan? (zero consumption in M18; deviation from plan exceeding 20% in M36)	☐		☒
Are any budget modifications for the project needed? (from MPPR / FPPR, sheet 5)	☐		☒

***The principles of economy, efficiency and effectiveness**: refers to the standard of "good housekeeping" in spending public money effectively. Economy can be understood as minimising the costs of resources used for an activity (input), having regard to the appropriate quality and can be linked to efficiency, which is the relationship between the outputs and the resources used to produce them. Effectiveness is concerned with measuring the extent to which the objectives have been achieved and the relationship between the intended impact and the actual impact of an activity. Cost effectiveness means the relationship between project costs and outcomes, expressed as costs per unit of outcome achieved.

Comments (highlighting the project progress) / deviations / recommendations:

HotLime project deals with challenges of Geothermal energy in deep carbonate rocks. It aims to improve the understanding of geological conditions that determine the distribution and technical recoverability of their potential resources. In the first reporting period project achieved all 12 deliverables on time. Project management is on-the-spot, the communication within the partnership is regular. Project lead recognized the main risk-factors concerning project management and implementation already in its application phase, the project plan is well designed with well-defined results and outcomes. Project communication and dissemination plan has been adopted and activities adequate. The partnership estimates they have reached a little less than 4.000 people

through various online media, publications, events and meetings, which is approximately an average reach compared to other GeoERA projects.
Overall financial consumption at the end of first reporting period is 58 %, which is really good. Some partners reached high percentages, and one has overspending. For these partners (ARPAP, ISPRA) a minor role is foreseen in the second reporting period. The partner with overspenditure (RU) is aware that the budget from the GeoERA cannot increase.

Project management structure is well defined and efficient.
No challenges in achieving project outcomes are recognized, the project lead provides good support to partners with implementation of project activities.

Overall assessment of the project:

☐ 5 - **Overachiever** (the project has achieved all objectives and goals for the period and has even exceeded expectations)

☒ 4 - **Excellent progress** (the project has fully achieved its objectives and goals for the period)

☐ 3 - **Good progress** (the project has achieved most of its objectives and goals for the period with relatively minor deviations)

☐ 2 - **Acceptable progress** (the project has achieved some of its objectives; however corrective action will be required)

☐ 1 - **Unsatisfactory progress** (the project has failed to achieve critical objectives and/or is not at all on schedule)

Summary of dissemination activities (detailed activities are annexed to this report):

Activity	Target audience	Number of people reached
Publications	EU institution	
Publications	Scientific community	>3000
Publications	General public	>500
Events	Scientific community	324
Events	General public	>400
Meetings	EU institution	
Meetings	Scientific community	96
		>3.960

Are the dissemination activities adequate? (link to GeoERA WP5)

☐ 5 - **Overachieved** (the projects dissemination activities have exceeded expectations)

☒ 4 - **Excellent** (the projects dissemination activities have fully achieved its expectations)

☐ 3 - **Good** (the projects dissemination activities are adequate; however, some additional activities are needed)

☐ 2 - **Acceptable** (the projects dissemination activities need corrective actions; additional activities are needed)

☐ 1 - **Unsatisfactory** (the project has failed to disseminate)

Cummulative financial statement:

	Person months	Total eligible costs	Reimbursement rate	GeoERA contribution	In-kind contribution
Plan	249,48	1.658.729	29,7%	492.642	1.166.087
1st period consumption	136,67	963.222	29,7%	272.217	691.005
2nd period consumtion					

2 LEVEL 2 – SCIENTIFIC REVIEW

In this section the project is reviewed ”remotely” on the basis of the respective reports. This part is filled in by reviewer with aim to review the quality of the deliverables and review of achieving scientific and professional goals. Scientific review is based on submitted deliverables and reported Impact statement in MPPR/FPPR.

Impact statement (from MPPR / FPPR, sheet 8):

At present, at the end of WP2, the mapping and characterization of different hydrothermal plays across Europe, the status quo can be summarized as follows. The development of a common procedure for assessing the viability of geothermal reservoirs and its application to different pilot areas yields a common high level of understanding of hydrothermal systems in carbonate rocks and substantially contributes to an improved and better harmonized European overview of prospective and identified geothermal energy resources. Specifically the feedback from the geothermal base assessment in ongoing WP3 may help to further improve the approach and to increase the confidence in the prospectivity and potential contribution of the geothermal resources to provide low carbon and dispatchable energy. As deep carbonate rocks are more widespread in Europe than the project’s scope, the approach of HotLime is applicable to promoting geothermal exploration in many regions of the EU, thus is deemed appropriate to further stimulate green thermal energy uptake.

Expected impact (from Project Agreement):

The planned cooperation between the partners will ensure HotLime’s clear transnational focus. Developing generic information and methodologies based on and validated by trans-regional and crossborder use cases will serve national and European stakeholders and end-users. The joint development of a common procedure for assessing the viability of geothermal reservoirs and its application to different pilot areas will yield a common high level of understanding of hydrothermal systems in carbonate rock suites and will substantially contribute to an improved and better harmonized European overview of prospective and identified geothermal energy resources. Testing HotLime’s approach in deep carbonate rock suites of contrasting geological settings and providing reliable data and additional mapping products pertinent to the development of deep geothermal installations will increase the confidence in the prospectivity and potential contribution of those geothermal resources across Europe. In addition, as deep carbonate rocks are widespread in many parts of Europe, the outputs of HotLime are applicable to promoting geothermal exploitation in many regions of the EU. This will further stimulate green thermal energy uptake especially in urban regions and populous areas with a high density of potential customers for direct heat use. HotLime will increase awareness of the economic viability of deep geothermal installations in carbonate environments. Increased understanding and knowledge transfer and the provision of a consistent

and data-driven knowledge base will aid the formulation of policy tools and strategies aiming for large-scale geothermal energy developments across Europe. Thus, the HotLime project will complement EU-funded programmes, including the new GEOTHERMICA, through identification and assessment of geothermal resources, in order to demonstrate geothermal energy deployment within the energy system and develop paths to commercial large-scale implementation. It will deliver a sound basis for further site specific, indepth research and development. Sharing the improved understanding of potential benefits and impacts from developing deep geothermal plays in carbonate aquifers will raise public awareness and support the social licence to operate. In some countries, demonstration of geothermal potential, including in deep carbonate basins, will facilitate and accelerate development of licencing regulations for commercial exploitation of geothermal energy.

Evaluation of deliverables

Deliverables list status			
No.	Title	Status (Approve/ Reject)	Comments
D1.1.1	Project Implementation Plan	Approved	
D1.1.3	Project Progress and Monitoring Report	Approved with comments	See below
The deliverable D1.1.3 (Project Progress and Monitoring Report) lacks information on the progress of the activities in worksheet no. 4. This is critical for reviewers to be able to assess the progress in those work packages that already started in (or earlier than) M6 but their deliverables are scheduled in the later phases. Now, only the WP descriptions are written, but no information on progress.			
D1.1.5	Annual Expenditure Reports	Approved	
D1.2	Project Communication and Exploration Plan	Approved with comments	See below
The external communication and dissemination seem rather limited with the webpage within the GeoERA website. Not many updates are posted. We recommend the creation of a blog (see e.g., the one of the Geoconnect3d project) or a Facebook profile with more regularly posted information, especially the ones that are relevant for stakeholders.			
D1.3	Project Data Management Plan	Approved	
D2.0	Summary report of resources mapping and characterization, catalogue of methods and required parameters, best practice and guidelines	Approved	Different title of the deliverable
D2.1-D2.10	Geology of prospective geothermal reservoirs parameterized / categorized	Approved	

D5.2.1	Specifications/technical requirements for data repository/semantic web	Approved	
D6.1.1	Fault property requirements and exchange logbook	Approved	
D7.1	Specifications/technical requirements for EGDI spatial data repository_ M6	Approved	
D7.1	Specifications/technical requirements for EGDI spatial data repository_M12	Approved	
D7.2	Requirements catalogue for the common knowledge base	Approved	

Has the quality as a whole been achieved according the objectives? Has the project as a whole been making satisfactory progress?

☐ 5 - **Overachiever** (the project has achieved all objectives and goals for the period and has even exceeded expectations)

☒ 4 - **Excellent progress** (the project has fully achieved its objectives and goals for the period)

☐ 3 - **Good progress** (the project has achieved most of its objectives and goals for the period with relatively minor deviations)

☐ 2 - **Acceptable progress** (the project has achieved some of its objectives; however corrective action will be required)

☐ 1 - **Unsatisfactory progress** (the project has failed to achieve critical objectives and/or is not at all on schedule)

Comments (highlighting the project progress) / deviations / recommendations:

The exceptionally well prepared Summary report of resources mapping and characterization (Deliverable 2.0 with deliverables D2.1-D2.10) best showcases the scientific progress in this project.

We dont have any additional recommendations or comments, and therefore we approve the scientific part of the HotLime project.

3 LEVEL 3 – REVIEW OF THE THEME PROGRESS

In this section the project is reviewed ”remotely” on the basis of the respective reports. This part is filled in by Theme coordinator with aim to review the achieved scientific goals in accordance with theme objectives, on the basis of Sheet 3 in MPPR / FPPR – Project contribution to GeoERA project.

Project contribution to GeoERA project (from MPPR / FPPR, sheet 3):

HotLime substantially contributes to GeoERA’s objective to integrate the GSO’s information and knowledge on clean (low-carbon) and efficient subsurface energy, at the heart of the H2020’s Societal Challenge 3, and with this more specifically underpins the aim of Geo-Energy theme to develop transparent, harmonized and science-based pan-European information and knowledge on the subsurface potential to deliver energy resources. The joint approach of HotLime’s partners in characterizing and assessing the geothermal potential in deep carbonate reservoirs, based on state-of art methodologies for harmonized mapping and common assessment methods, will result in interoperable, pan-European data and information services on the distribution of geo-energy. Such information will enable policy decisions to support a safe and responsible exploitation of subsurface resources and capacities. Implementing scientific intelligence and information into the policy domain considering relevant cross-thematic links to groundwater and mineral resources will help to evaluate competition, interference and synergies between different uses of subsurface space.

Theme objectives:

Theme objectives: compliant

- Potential subsurface contributions with regards to energy resources and storage capacities;
    - Main project objective, results presented in midterm
- Potential risks and environmental impacts associated with subsurface use for energy applications;
    - Minor objective. Technical exploration risks are regarded
- Risks of competition and interference between different uses of subsurface space, including interactions with surface infrastructures, and rewards of synergies.
    - Not in project scope?

Theme scope: compliant

- Hydrocarbons including conventional/unconventional oil and gas, gas hydrates;
    - Not in project scope

- Energy derived from solid resources such as coal (including coal bed methane (CBM) and underground coal gasification), lignite, peat, uranium;
    - Not in project scope
- Geothermal energy from hydrothermal and petro-thermal resources, both shallow and deep;
    - Main project scope, results and progress presented
- Capacities for temporary storage of energy carriers (natural gas, hydrogen, compressed air and heat);
    - Not in project scope
- Capacities for permanently storage of CO2 and other energy effluents.
    - Not in project scope
- Identification and analyses of overlap and interactions between geo-energy resources and areas prone to seismic activity;
    - Not in project scope
- Determination and analysis of potential connections to groundwater and surface water systems;
    - Not in project scope?
- Identification and analysis of potential interferences as well as synergies/pooling between various geo-energy resources and subsurface uses.
    - Not in project scope?

Theme approach and methods: compliant

- Deliverables proposed by geo-energy theme projects should be compatible with a common spatial geological framework defined by the extent, depth, thickness, as well as essential properties of geological intervals containing relevant geo-energy resources and storage capacities.
    - The project follows a uniform presentation of geothermal assessments including distribution/depth/thickness/properties of carbonate formations (geothermal prospects) in 2D and 3D
- Common state-of-the-art methodologies will be developed and applied with the aim to assess and quantify technically recoverable resources.
    - The project develops and applies common (industry) standards for resource calculation and classification. Implementation and improvement of existing methodologies (e.g. ThermoGIS)
- Development and demonstration of advanced 3D modelling and assessment activities may be proposed for complex geological configurations typical for specific cross-border regions under the condition that these methodologies have generic value and can be linked to the future objectives of a common spatial-assessment framework.

    - Methods and concepts for 3D mapping of carbonate formations in 11 (partly cross-border) areas (presented as result/progress + publication)
- The joint call will either ask for final deliverables and methodologies consistent on a transnational to pan European level, or for the demonstration and development in cross-border regions of methodologies that have generic value for future pan-European assessments.
    - The project assesses 11 key areas for geothermal prospective carbonates which are partly defined as cross-border.
- Correlation schemes of cross-border geo-energy resources;
    - Core aspect in the project (one of main results)
- Compatible and interoperable model scales/resolutions and geometries;
    - The project focuses on regional scales.
- Commonly agreed modelling and assessment methodologies.
    - The project develops and applies common (industry) standards for resource calculation and classification. Implementation and improvement of existing methodologies (e.g. ThermoGIS)

Beyond state of art

- Advanced mapping and 3D modelling strategies that allow for regional to pan-European cross-border consistency and integration;
    - 3D modelling of geometry and properties of deep carbonate formations. Challenging due to heterogeneous and sparse data availability
- Advanced and harmonized resource estimation workflows addressing uncertainty and sensitivity;
    - Key aspect of the project (basis for stochastic resource calculations in ThermoGIS / Doublet calc tools). Geothermal exploration and development risks
- State-of-the-art assessment workflows for analysis of potential geologically related surficial and subsurface effects induced by resource exploitation (e.g. subsidence, tremors, etc.);
    - Not in project scope
- Methodologies to objectively weigh interacting or mutually exclusive potential uses of space within the geoenergy theme and across the other themes on groundwater and minerals.
    - Not in project scope?

Project-2-Project:

HotLime exchanges fault data with HIKE and collaborates on the semantic definition of fault systems. The project collaborates with MUSE on geothermal assessment and classification.

Has the project as a whole achieved the objectives and expected impact of the theme?

☐ 5 - **Overachiever** (the project has achieved greater impact on project theme and/or other themes than expected)

☐ 4 - **Excellent progress** (the project has fully achieved its objectives and goals towards the theme as expected)

☒ 3 - **Good progress** (the project has achieved most of its impact towards the theme for the period with relatively minor deviations)

☐ 2 - **Acceptable progress** (the project has minor impact; corrective action will be required)

☐ 1 - **Unsatisfactory progress** (the project has failed to achieve critical objectives and/or is not at all on schedule and/or has no impact on the theme; corrective actions are required)

Comments / deviations / recommendations:

HotLime progresses in line with the project objectives and thereby follows the theme scope/objectives and GeoERA principles in general as mentioned in the call description.

Additionally the review analyses how the project performs beyond the project scope and raises the overall profile of the Energy Theme and GeoERA as a whole, i.e.:

- Developing and actively implementing standards and methods for panEU harmonization in the GSO community that are of value to the Energy Theme and/or GeoERA in general (i.e. beyond the project scope)
- Successfully introducing and implementing innovative and novel methods and standards in stakeholder/science communities leading to wider recognition of the Energy Theme and/or GeoERA
- Stimulating synergies between projects and themes
- Raising the overall impact and recognition of the Energy theme and/or GeoERA though active engagement of stakeholder and science communities
- Opening opportunities for future research and spin-offs including EP-GSE (i.e. possibilities for sustained development of results after project lifetime)

The HotLime project is rated as 'good' for the following reasons:

1) The project actively develops and implements new standards and tools for geothermal assessment and correlating source formations across Europe. The project takes an active role in harmonizing semantic concepts within GeoERA.

2) Although the project has synergies and interactions with other GeoERA projects, the current activities are still mostly focused on the project and GeoERA community. It is recommended to increase external stakeholder engagement and involvement. Stimulate further external recognition of HotLime activities (e.g. adoption of results in geothermal exploration and resource management) and thereby demonstrate the added value and benefits of performing these activities in the context of the Energy Theme and GeoERA in general.
3) Is there a further synergy with the 3DGEO-EU project on implementing 3D modelling standards?

Note: During the mid-term review meeting HotLime indicated that stakeholder activities will be increased during second half of the project.

4 LEVEL 4 – GEOERA PROGRESS EVALUATION

In this section the project is reviewed on the Review meetings, where projects present their overall progress and achievements. This section relates to particular project, broader impact of GeoERA as a whole on policies will be covered at the Final Review meeting with questionnaire and interview with Evaluator.

Based on technical review summaries provided by Sections 1 – 3 of this report, and project presentation on the (Final) Review meeting:

Has the project as a whole been making satisfactory progress according to your own understanding and expectations of the GeoERA project?

☐ 5 - **Overachiever** (the project has exceeded expectations)

☒ 4 - **Excellent progress** (as expected)

☐ 3 - **Good progress** (minor recommendations given below)

☐ 2 - **Acceptable progress** (below expectations; minor corrective action will be required)

☐ 1 - **Unsatisfactory progress** (the project has failed; corrective actions are required)

Overall comments for the project (overall recommendations, modifications, corrective actions, or re-tuning the objectives to optimize the impact or keep up with the State of the Art, re-focusing, or a simple praise)

A general recommendation is to bring project results into a general perspective. The purpose of this project should also be to facilitate access to geothermal information at European level via proposals for the development of an information platform, the creation of standard and common data models at EU level. This should be achieved through progressive harmonisation of national data to facilitate data discovery and data mining.

The specific recommendations are the following:

- proposals on underground data from ETIP-DG should be assessed (> chapter E. KNOWLEDGE SHARING of the ETIP-DG strategic research & innovation agenda (http://www.etip-dg.eu/front/wp-content/uploads/AB_AC_ETIP-DG_SRA_v3.3_web.pdf))
- How do the project see its results of interest for market actors ?
- when assessing de-risking, partners should review and comment the GeoRisk tool: https://www.georisk-project.eu/georisk-tool/
- Regarding knowledge transfer, it would be beneficial to liaise with ETIP-DG and SU-DG-IWG and present project results during one ETIP-DG/SU-DG-IWG event.

Stakeholder Mr Thomas Crafford participated at the review meeting and provided recommendations for the projects. Due to personal reasons, he wishes not to participate further in the GeoERA monitoring and evaluation process. The “date of approval” of this document is therefore NA.

Annex 1: Review meeting list of participants

Name	Role	Organisation
Tessa Witteman	GeoERA coordinator	Netherlands Organisation for Applied Scientific Research
Barbara Simić	Monitoring and Reporting Officer	Geological Survey of Slovenia
Jasna Šinigoj	Scientific Reviewer	Geological Survey of Slovenia
Matevž Novak	Scientific Reviewer	Geological Survey of Slovenia
Serge van Gessel	GeoEnergy Theme coordinator	Netherlands Organisation for Applied Scientific Research
Tom Crafford	GeoERA Stakeholder council member	US Geological Survey
Philipe Dumas	GeoERA Stakeholder council member	The European Geothermal energy council
Reghina Dimitrisina	Review meeting participant	The European Geothermal energy council
Gerold Diepolder	Project manager	Bavarian Environment Agency
Isabel Rupf	Project member	Regional Council Freiburg
Hans Veldkamp	Project member	Netherlands Organisation for Applied Scientific Research
Brian McConnel	Project member	Geological Survey of Ireland
Marco Pola	Project member	Croatian Geological Survey

Annex 2: Communication and dissemination activities

Please select activity	Subcategory	Date	Target audience	Number of people reached	Short name of project participant	Author(s)	Link (if applicable)
MEETINGS	Meeting with international body	03/07/2018	EU INSTITUTION		LfU, GSI, GBA, LGRB, ISPRA, GeoZS, HGI-CGS, ICGC	All HotLime partners present	
PUBLICATIONS	PROJECT SPECIFIC PUBLICATION (please specify: leaflet, poster, catalogue, …)	03-05/07/2018	EU INSTITUTION		LfU & HotLime Team	Gerold Diepolder	
PUBLICATIONS	NON-SCIENTIFIC PUBLICATION	23/08/2018	GENERAL PUBLIC	> 500	LfU	Gerold Diepolder	http://www.comet.bayern.de/webservice/pressesystem_stmuv/pressemitteilung/pm_dokument/223/1091917/Geo-Newsletter-Bayern-2018-39.pdf
MEETINGS	Meeting with international body	17-19/09/2018	SCIENTIFIC COMMUNITY	26	13 HotLime partners + EEAB	All HotLime partners present	-
EVENTS	TRAINING	23-24/01/2019	SCIENTIFIC COMMUNITY	24	HGI-CGS, LfU, GBA,	S. Borović, G. Diepolder, G. Goetzl, C. Steiner	https://geoera.eu/blog/knowledge-exchange-workshop-of-muse-and-hotlime-projects-held-in-zagreb/
PUBLICATIONS	ABSTRACTS	30/01/2019	SCIENTIFIC COMMUNITY	> 1000	LfU, HGI-CGS	G. Diepolder, S. Borović	https://pangea.stanford.edu/ERE/db/WGC/Abstract.php?PaperID=5384

Annex 2: Communication and dissemination activities

MEETINGS	Meeting with other GeoERA projects	11-13/03/2019	SCIENTIFIC COMMUNITY	20	LfU	G. Diepolder	-
MEETINGS	Internal project meeting	19-21/03/2019	SCIENTIFIC COMMUNITY	20	13 HotLime partners	All HotLime partners present	-
PUBLICATIONS	PAPERS	26/07/2019	SCIENTIFIC COMMUNITY	> 2000	LfU, HGI-CGS, ICGC	G. Diepolder, S. Borović, Ignasi Herms & HotLime Team	https://www.researchgate.net/publication/335871009_HotLime_-_Mapping_and_Assessment_of_Geothermal_Plays_in_Deep_Carbonate_Rocks
MEETINGS	Meeting with international body	17-19/09/2019	SCIENTIFIC COMMUNITY	14	8 HotLime partners + EEAB	All HotLime partners present	-
EVENTS	CONGRESS	02-04/10/2019	SCIENTIFIC COMMUNITY	70	HGI-CGS	Staša Borović	
EVENTS	CONGRESS	09-12/10/2019	SCIENTIFIC COMMUNITY	30	HGI-CGS	Staša Borović	
EVENTS	CONGRESS	23-27/10/2019	SCIENTIFIC COMMUNITY	200	HGI-CGS	Staša Borović	
EVENTS	CONFERENCE (tele-conference)	13/11/2019	GENERAL PUBLIC	> 400	RU	Andrea Motti	non-scientific report in panel discussion and tele-conference (GISday 2019)
MEETINGS	Meeting with national body	22.11.2019	SCIENTIFIC COMMUNITY	16	LfU	Gerold Diepolder	presentation for Geothermieallianz Bayern @ TU Munich