

# Annual report 2019 for EERA Geothermal

In this short report, we try to take a small step back and summarize some of the main EERA Geothermal activities implemented in 2019.

#### In 2019, we have:

- organized an EERA Geothermal annual meeting in Bochum (27-28 May), including a strategic seminar for the update of our Description of Work;
- co-organized the European Geothermal Workshop (EGW) in Karlsruhe (9-10 October), with internal sessions within individual Sub-Programmes;
- partnered in the JA-2 project for H2020 to support the realisation of the SET Plan Implementation Plan Deep Geothermal;
- been an active stakeholder in the SET-plan Deep Geothermal Implementation Working Group, with EERA Geothermal Joint Programme Coordinator as cochair on behalf of research;
- contributed to PRE-LEAP-RE EU-AU project proposals, two project proposals were submitted by 3 January 2020;
- sent two newsletters, informing on a range of our activities;
- been an active stakeholder in the European Technology and Innovation Platform Deep Geothermal;
- held five Management Board meetings;
- presented EERA Geothemal in a plenary lecture for the European Geothermal Congress 2019; and
- finalized a conference article on EERA Geothermal that will be presented on the World Geothermal Congress 2020.

Joint Programme Coordinator (JPC) Inga Berre (UiB) has, together with the Scientific and administrative Secretariat, finalized the process of updating and revising the Description of Work (DoW) for EERA Geothermal. DoW was approved by the Steering Committee on the SC meeting in Bochum 27 May 2019.

**EERA Geothermal Management Board (MB)** is led by the JPC, consisting of the Sub-Program Coordinators, Scientific Secretary and administrative Secretariat/Program office. In addition, Holger Ihssen is invited as an observer to the MB. MB has been very active and held six meetings during 2019, 4 via WebEx and 2 physical meetings.

In EERA Geothermal, several **Joint Progamme Coordinator Team** meetings have been held via videoconference between UiB and GFZ to coordinate work and communicate updates on the progress of ongoing tasks and for planning upcoming events.



Photo: The European Geothermal Congress 2019 from left Fausto Batini (chair, ETIP Deep Geothermal), Inga Berre (EERA Geothermal), Guðni Jóhannesson (coordinator, SET-plan IWG Deep Geothermal SU) and Philippe Dumas (Secretary General, EGEC)



### EERA Geothermal Annual and Steering Committee meeting

The EERA Geothermal Annual meeting and Steering Committee meeting was held 27-28 May, hosted by International Geothermal Center Bochum (GZB), Germany. There were 33 participants attending the meetings, and all Sub Programmes were present as well as two potential new members joined.



Photo: The JPGE participants at the organized field site tour of GZB

Several important resolutions were made at the Steering Committee meeting, amongst them the approval of two new Full participants: AIT Austrian Institute of Technology GmbH and Université de Lorraine.

Most of the JPGE participants also joined the organized **field site tour of GZB**, where short presentation of all the infrastructure at the site was given by Rolf Bracke.



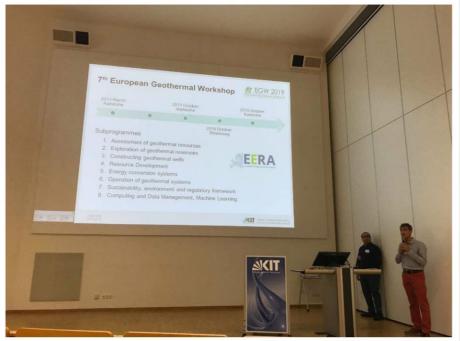
Photo: Representatives of the Management Board at the Meetings in Bochum. From left; Damian Bontè (UU), Philippe Calcagno (BRGM), Florian Wellman (Aachen), Erlend Randeberg (NORCE), Michele Contini (SSSA), David Bruhn (GFZ/TU Delft), Paola Bombarda (POLIMI), Jean Schmittbuhl (UNISTRA), Martin Saar (ETHZ) and Inga Berre (Univ. of Bergen)



## European Geothermal Workshop (EGW)

On the 9th and 10th of October 2019, the 7th edition of European Geothermal Workshop (EGW) was held in Karlsruhe. EGW 2019 in Karlsruhe gathered more than 200 participants, including 55 students, from 21 countries around the world (France, Germany, Belgium, Netherlands, Denmark, United Kingdom, Norway, Italy, Spain Switzerland, Iceland, Algeria, Egypt, Turkey, Canada, China, United States, Djibouti, Japan, Pakistan, Philippines). EGW is organized by the LabEx G-eau-thermie Profonde and the Karlsruhe Institue of Technology (KIT). The workshop is held every year, over two days, and is hosted alternately by EOST and KIT. In 2019, EERA Geothermal co-organized the event for the second time.







Also for EGW 2019, EERA Geothermal actively participated actively as co-organizer of the event. Thanks goes to EERA Geothermal members in the scientific committee and organizing committee: Phillippe Calcagno (BRGM), David Bruhn (GFZ/TU Delft) and Thomas Kohl (KIT), Emmanuel Gauche (KIT), Maziar Gholamikorzani (KIT), Alexandra Kushnir (UNISTRA) and Jean Schmittbuhl (UNISTRA).

The topics covered at EGW2019 was aligned with the EERA Geothermal Sub Programs:

- Geothermal resources
- Exploration of geothermal
- o reservoirs
- Geothermal wells
- o Resource Development
- Energy conversion systems
- o Operation of geothermal systems
- o Sustainability, environment and regulatory framework
- Computing and Data Management, Machine Learning

# Deep Geothermal IWG Workshop

On 8 October this year, alongside the EGW Workshop, the Support Unit for the Deep Geothermal Implementation Working Group (Deep Geothermal IWP Support Unit) workshop took place at the Institute of Applied Geosciences (AGW) of the Karlsruhe Institute of Technology in Karlsruhe, Germany.

The workshop discussed the need to strengthen geothermal research and cross-border project management procedures to better coordinate long-term geothermal research studies in Europe. During the meeting, a very strong focus was placed on the know-how and human resources to ensure high quality geothermal science, as well as on sustainability and social acceptance of geothermal projects.

The participants were informed about the objectives of the Deep Geothermal IWG and the possible support for cross-cutting activities, the formation of consortia and funding opportunities.



### Revision of Set-Plan; Deep Geothermal Implementation Plan

Deep Geothermal IWG and EERA Geothermal members are involved in the forthcoming revision of the IWG Plan and their possible contributions in this regard. A group led by Inga Berre was set up in the Deep Geothermal IWG to suggest revisions of the Deep Geothermal IP. EERA Geothermal has established its own working group to follow up on the Deep Geothermal IP revisions, consisting of the participants:

- Kristian Bär (TU Darmstadt)
- Inga Berre (EERA Geothermal coordinator/UiB)
- David Bruhn (EERA Geothermal scientific secretary/GFZ)
- Philippe Calcagno (SP1 leader, BRGM)
- Adele Manzella (CNR)
- Jan Diederik van Wees (SP2 leader, TNO)

The work with the revision of the SET-Plan will continue in 2020.

## Launching of new EERA websites

EERA will launch new websites in 2020 and a training session was organized on 9 December 2019. Program Officer Torill Eidsvaag (starting 1.1.2020) attended the training and will be the new contact for the EERA Geothermal website.



# **EERA Geothermal Organization**

Joint Program Coordinator: Inga Berre, inga.berre@uib.no

Scientific Secretariat: David Bruhn, dbruhn@gfz-potsdam.de

#### Programme office/secretariat:

Justyna Ellis, ellis@gfz-potsdam.de
Charlotte Gannefors Krafft, chga@norceresearch.no

#### Sub-Programme coordinators:

SP1 Assessment of Geothermal Resources: Philippe Calcagno, p.calcagno@brgm.fr

SP2 Exploration of Geothermal Reservoirs: Jan Diederik van Wees, Jan\_Diederik.vanWees@tno.nl

SP3 Constructing Geothermal Wells: Erlend Randeberg, Erlend.Randeberg@iris.no

SP4 Resource Development: Martin Saar, saarm@ethz.ch

SP5 Energy Conversion Systems: Paola Bombarda, paola.bombarda@polimi.it

SP6 Operation of Geothermal Systems: Thomas Kohl, thomas.kohl@kit.edu

SP7 Sustainability, Environment and Regulatory Framework: Francesco Rizzi, francesco.rizzi@sssup.it

SP 8 Computing and Data Management: Florian Wellmann, wellmann@aices.rwthaachen.de

