



BAGUS Project News

BAGUS Project's Final Evaluation

As the termination of BAGUS Project is approaching, a final evaluation on the progress and development of the project was conducted. In this regard, Prof. Atsushi Tsutsumi and Dr. Keisuke Kosaka of the Japan Science and Technology Agency (JST) visited ITB and met the members of the Project from October 22nd to 24th, 2019 to interview BAGUS Project team members as well as its proponents -- Center for Mineral, Coal and Geothermal Resources (CMCGR), Ministry of Energy and Mineral Resources, Star Energy, co. Ltd., and Geo Dipa Energi (Persero).

Opened by the Dean of Mining and Petroleum Engineering Faculty of ITB, Prof. Sri Widiyanto, the first day of the evaluation went smoothly with each Project member from both ITB and Kyoto University having presented the summary of their research result related to BAGUS Project since 2015 to date along with the outcomes (thesis and publications):



BAGUS Project team leader (of Indonesian side), Prof. Sudarto Notoiswoyo with Prof. Atsushi Tsutsumi of JST (left) and Mr. Ryoya Fuse of JICA (right) at the closing of BAGUS Project's final evaluation

- *Research Progress of the BAGUS Project in 2018 for Steam-spot Detection by Kyoto University Team by Prof. Katsuki Koike
- *How Geostatistics Could Contribute for Modeling the Probability of Permeable Zones at Geothermal Field by Assoc. Prof. Dr. Moh. Nur Heriawan
- *Outcomes from Geochemical Study in BAGUS Project by Assoc. Prof. Koki Kashiwaya, Ph.D.
- *Geobotanical Remote Sensing for Geothermal Prospecting by Asst. Prof. Arie Naftali Hawu Hede, Ph.D.
- *Characterization and Detection of Geothermal Steam-spot Based on Active Remote Sensing and Field Based Operations by Assoc. Prof. Dr. Eng. Asep Saepuloh
- *Summary (final) of the BAGUS Project by ITB Team (2015-2019) by Prof. Sudarto Notoiswoyo
- *Output-3 of BAGUS Project for Sustainability Studies of Several Geothermal Fields in Indonesia by Asst. Prof. Dr. Sutopo
- *Progress of Radon Gas Survey to Specify Steam-spot of Geothermal Resource by Long-term Periodical Measurement in the BAGUS Project by Mr. Taiki Kubo
- *Challenges and Important Role of The Near Surface Hydrogeology, Water Geochemistry and Dissolved Gas Analyses in Geothermal Exploration by Asst. Prof. Irwan Iskandar, Ph.D.
- *Detection of Fluid Passes by Audio-frequency Magnetotelluric Survey in the Wayang-Windu Geothermal Area, Indonesia by Prof. Tada-nori Goto

On the second day, 23rd October 2019 a site visit was conducted at the Patuha field belonging to PT Geo Dipa Energi (Persero) to see radon monitoring points, geothermal manifestations, production wells, and a power plant, where the research activities took place for remote sensing, geochemistry, and spatial/reservoir modeling in BAGUS Project.



The evaluation continued on the following day with a laboratory inspection. On 24th October 2019 the evaluators observed the equipment and software installed at ITB which have been utilized by the students and researchers of ITB to develop the knowledge and skills in geothermal science and technology. Besides, many Indonesian companies and government agencies also have been using the facilities provided by the project for other uses, for example pollutant/waste identification and drug/narcotics forensic test. The aim of the laboratory is to become a center of excellence in geothermal research in Indonesia. The agenda on the third day continued with discussion between the evaluators and the project team to exchange views and opinions on the current status and the future of the project as well as meeting representatives of former intensive geothermal course participants to evaluate the training course.



The followings are main points discussed:

- The annual two-week intensive training course at Kyoto University for ITB's junior researchers and engineers/scientists of ITB's as well as co-partners' was conducted 4 times since 2016 successfully, increasing the participants' knowledge in geothermal science and technology and contributing greatly to the development of human resources in geothermal science and technology.
- The technologies developed through the project's researches have been applied to other research fields both by KU and ITB, such as hazard mitigation, groundwater resources and mineral exploration. This reflects a fact that developed technology has been practically applied for use and socialization beyond the geothermal project.

- In the final report, BAGUS Project team should explain more simply and clearly on how to integrate various methods used to detect the steam-spots. Suggestion includes a cost-benefit analysis and proof of the actual contribution of BAGUS Project to social implementation such as determination of new drilling locations in the Wayang Windu and Patuha fields.
- Both Kyoto Univ. and ITB Team should explore funding possibilities to sustain the research after the termination BAGUS Project in March 2020.

Intensive Geothermal Course: Certificate Hand-over

BAGUS Project also took the occasion of the visit of the Japanese researchers and a JICA representative, Mr. Ryoya Fuse, to meet the participants of this year's trainees and present the certificates following their successful participation in the two-week intensive geothermal course.

This year, Best Score was awarded to Mr. Arifin from Hydrogeology Dept. of ITB for his remarkable achievement during the training course. We congratulate Mr. Arifin for his accomplishment and the rest of the participants for their involvement in the training course. We wish all participants success in all their future endeavors.



Open Lectures from BAGUS Project Researchers

In light of the Project's purpose to develop human resources in geothermal science and technology, Japanese researcher members took occasion to give lectures in their respected expertise in conjunction with their visits in Bandung. The most recent one was held on 25th October 2019 where Prof. Koike's lecture (title on picture) to ITB students. The event was arranged by Mining Engineering Dept. of ITB.



Prof. Dr. Katsuaki Koike
Graduate School of Engineering, Kyoto University

“Advanced Remote Sensing and Geostatistical Techniques for Revealing Detailed Resource-Related Structures”

