

Chapter 8

Conclusions and Recommendations

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Chapter 8

Conclusions and Recommendations

The ERIA research project 'Sustainability Assessment of Utilising Conventional and New Type Geothermal Resources in East Asia' has started to develop guidelines for sustainable use of geothermal energy. The guidelines should be referred to by engineers and managers who newly begin a geothermal business, or by related researchers.

To make these guidelines, as the first step, a census and its analysis had been done on the current status of geothermal use, technology, and management, and barriers and opportunities in each member country.

According to the results of the census, the highest technological interest related to sustainability of geothermal power generation and direct heat use are, in order of priority:

- monitoring and reservoir engineering
- reinjection
- anti-scaling
- anti-corrosion and anti-erosion

For GSHP systems, the following are pointed out to be important:

- basic hydrogeological data collection
- system monitoring

Note that 'sustainability' in this case is resource sustainability and not environmental or social sustainability.

Therefore as the second step, collection of case studies on these topics was conducted. Finally a guideline for sustainable use of geothermal energy were made based on the compilation of these case studies. Case studies and the guidelines were achieved separately for power generation and direct heat use systems and GSHP systems since the necessary technologies are different for these two categories.

Although the solutions shown in the guidelines may contribute to sustainable use of geothermal energy for the current state, continuous studies are needed for the future. Therefore recommendations to policymakers for more sustainable utilisation of geothermal energy are:

- For the present, the guidelines in this report should be distributed and used as a result of a review on the current best practices in the Asian region.
- Continuous study should be done for the sustainable use of geothermal energy in the future, especially for the topics listed above. Government support for such study is desired.

Besides the guidelines, based on the results of the census on the current status, Chapters 2 to 4 provide recommendations to policymakers for more intensive utilisation of geothermal energy. These recommendations are also summarised in the Executive Summary. It is strongly recommended for policymakers and high-level government officials to refer to these recommendations for rapid and sound increase of geothermal energy use.