

Water and geothermal resources in Iceland and its implication for renewable energy production – an opportunity for a Japanese-Icelandic collaboration

Invited talk by Prof. Dr. David C. Finger¹⁾

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Japan and Iceland have two things in common: both countries are volcanic islands located on the ridges of tectonic plates and have above average precipitation rates generating valuable fresh water resources. Along tectonic ridges numerous geothermal hotspots occurs, constituting renewable, cheap and low-carbon energy resources. Accordingly, in Iceland the domestic energy production is dominated entirely by renewable and low-carbon geothermal and hydropower sources. Furthermore, in the framework of the Icelandic energy master plan new technologies were developed to assess the hydropower potential of ungauged mountain areas (Finger, 2015), using satellite retrieved snow cover images (Finger, 2011, 2015). In Japan renewable energy sources have been explored and implemented across the country since the Tohoku earthquake and subsequent Fukushima nuclear disaster. The water and geothermal resources of Japan and Iceland provide a unique opportunity for collaboration between the two countries. In this presentation I will outline how the geologic and hydrologic setting of the two countries could be used for a constructive and innovative collaboration between Japan and Iceland. I will conclude my talk by highlighting how the two countries could play a crucial role in the promotion and development of clean and renewable energy production.

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University web site: <https://www.ru.is/>

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