



GLOBAL
GEOTHERMAL
ALLIANCE

GGA SIDE EVENT – ICELAND GEOTHERMAL CONFERENCE

Geothermal Direct Utilisation and Food Security

24 April 2018 - Reykjavík, Iceland

Concept Note

BACKGROUND

Geothermal energy can play a substantial role in addressing the key global challenges of energy security, universal access and climate change, and offers vast local economic opportunities. In this context, the Global Geothermal Alliance (GGA) initiative serves as a global platform for improved dialogue, cooperation and coordinated action between policy makers geothermal industry, and other key stakeholders committed to accelerate the deployment of geothermal energy worldwide. The Alliance, which brings together 43 Member countries and 31 Partner institutions, is designed to facilitate the exchange of insights and to provide customised advice and capacity building to countries and regions with geothermal potential.

One of the recommendations stemming from the first High-Level Conference of the Alliance held in Italy in September 2017 was to increase awareness about the technical feasibility and economic benefits of all applications of geothermal energy. While the market has mainly been developed around electricity until now, various geothermal direct use applications are also available to cover heating and cooling demand in residential and non-residential buildings, industry, agriculture, and fishery sectors. Geothermal resources suitable for these purposes are widespread across the globe, which significantly expands the areas where geothermal can replace fossil fuels and provide affordable and sustainable energy.

A notable example of using geothermal energy beyond electricity generation is Iceland where, since the second half of the 20th century, the country has experienced an extraordinary growth thanks to cheap geothermal energy. This energy transformation resulted in a shift from 80% dependency on imported oil and coal to a nearly 100% domestic and renewable-based energy system. In this country, geothermal energy was also crucial in enhancing food security and nutrition.

Food security and nutrition is one of the biggest concerns for developing countries, including Small Islands Developing States and landlocked countries, which are endowed with geothermal energy resources. In regions such as East Africa, Latin America and the Caribbean, East Asia, and the South Pacific geothermal energy could be used to heat greenhouses and sterilise the soil to increase farmer productivity and off-season availability. It can also serve for drying, which helps preserve a wide range of foods. This could contribute to higher nutritional value and reduced food waste and result in substantial reduction in the drying space as well as time requirements.

The experience of Iceland can be replicated in many other countries and demonstrates that the possibility to address various challenges, including food security and nutrition, through which domestic

geothermal resources may turn problems into potential drivers for economic development.

OBJECTIVES

This GGA side event, taking place in framework of the Iceland Geothermal Conference, will offer participants the occasion to discuss the key factors behind successful experiences and present partnership opportunities for projects and programmes related to direct uses of geothermal energy with a focus on food and agriculture.

FORMAT

The event will be conducted in an interactive setting to allow for open discussion. In the first session, experts from industry and development partners will present practical applications of geothermal energy in the food and agricultural sectors with the aim to identify what the key enablers for the successful replication in more regions of the world are. The second session will feature the presentation of some projects under development with the aim to facilitate partnerships and discuss how to overcome implementation obstacles that can be of a policy, regulatory, funding or capacity building nature.

DRAFT AGENDA

09:00 – 10:00

Welcoming remarks:

H.E. María Erla Marelsdóttir, Ambassador and Director General of International Development Cooperation, Ministry for Foreign Affairs and External Trade of Iceland

Keynote Speeches:

H.E. Ólafur Ragnar Grímsson, Chairman, Arctic Circle, Former President of Iceland
Adnan Z. Amin, Director-General, IRENA

10:00 – 11:00

Session I: Accelerating geothermal energy deployment in the agricultural and food sectors: What challenges and success factors?

Moderator: Salvatore Vinci, IRENA

Scene Setting Presentation: Margeir Gissurarson, Matís, Iceland

Panel discussion

- *Tanja Faller, GIZ Central America*
- *Loredana Torsello, CoSvig (Consortium for the Development of Geothermal Areas), Italy*
- *Andrea Blair, Upflow, New Zealand*
- *Margeir Gissurarson, Matís, Iceland*

11:00 – 11:15

Coffee Break

11:15 – 12:15

Session II: From project ideas to implementation: Overcoming barriers and facilitating project partnerships

Moderator: Alexander Richter, International Geothermal Association

Project Presentations:

- *Johnson P. Ole Nchoe, Geothermal Development Company (GDC), Kenya*
- *Héctor Miguel Aviña Jiménez, IIDEA, Universidad Nacional Autónoma de México (UNAM), México*
- *Vincent Kato, Ministry of Energy & Mineral Development, Uganda*

Concluding remarks