Renewable Energy as a Catalyst for Regional Development

#### The Arava Center for Sustainable Development at the Arava Institute for Environmental Studies, Israel

#### May 20th 2013 – June 5th 2013

###### Program Introduction

Energy is crucial for economic growth and social progress. Achieving sustainable growth requires solutions to today’s environmental problems call for long-term actions for sustainable development. In this regard, renewable energy resources appear to be one of the most efficient and effective solutions. The use of renewable and clean energy is increasing and will be the effective and practical choice to guarantee future global development. Renewable energy sources such as solar, wind, biomass and geothermal can offer solutions for various problems that challenge the development of many regions around the world. The vital role and the potential of renewable energy in regional development have been globally recognized, however, its widespread implementation is not progressing as rapidly as is needed.

This training program, to be held at the Arava Institute for Environmental Studies (AIES), located on Kibbutz Ketura in the south of Israel, provides an opportunity for mid-level professionals from the private and public sector to gain knowledge about the basics of renewable energies and how to use renewable energy sources as a catalyst for regional development. The primary topics include the principles of renewable energy, the present, past and future of energy consumption, the pros and cons of renewable energy, energy production and costs, energy conversion, energy assessments, fossil fuels, regulations, environmental issues and the social and cultural impact of renewable energy. The training program will utilize the extensive knowledge of the Center for Renewable Energy and Energy Conservation (CREEC) at AIES and the Eilat-Eilot Renewable Energy Initiative.

The program will be composed of lectures by experts in their fields, as well as field trips to see technologies and renewable energy installations in action. Participants will be encouraged to share their own professional experiences, network, and work jointly in applying various solutions to their individual situations in their home countries.

###### Target Audience

The target audience for this associate certificate is those who are interested in expanding their knowledge and initiatives into sustainable and renewable energy management in their communities.

This training program is intended for mid-level professionals, working for government, non-governmental organizations, decision-making bodies, academia and the private sector.

The program will be conducted in English. It is essential that the participants have a high level of reading, writing and speaking in English. Our expectation is that a program of this type will be especially appealing to English-speaking countries in Africa, the Caribbean and the Pacific regions.

Participants should have at least the equivalent of a university degree or professional diploma, preferably in a field related to energy.

###### Specific Objectives of the Workshop

* Understand the current trends of traditional energy production and consumption locally, nationally, and on a global basis.
* Improve the participants’ knowledge of efficient energy use.
* Introduce the participants to renewable energy basics.
* Participants will learn how to successfully accomplish sustainable development projects with renewable energy.
* Participants will gain hands-on experience and learn how to construct efficient cook stoves, build residential size biogas systems, and work with small-scale PV.
* Provide participants with expert advice on specific questions they may have regarding renewable energy utilization in their home countries.

###### Workshop Overview

The training program is composed of two units as follows:

**Unit I: Renewable energy technologies**

Academic Supervision: The Center for Renewable Energy and Energy Conservation at AIES

Dr. Tareq Abu Hamed

This section will expose participants to renewable energy technologies used in Israel and the world on both large and small scales. This unit will include lectures and informal conversations with leading researchers, a tour of the validation center at the AIES and the Eilat-Eilot Renewable Energy Initiative where five different renewable energy technologies are being tested and used in cooperation with local communities.

**Unit II: Hands on experience**

Academic Supervision: The Arava Institute for Environmental Studies

This section will expose participants to the design and installation of a small scale solar water desalination system, solar cooking and biogas production (methane biodigesters).

**Field Trips:**

The course will include two field trips.

During the time at AIES, we will have a day trip in the southern Arava to visit sites appropriate to the course focus and spend a free evening in the seaside city of Eilat.

At the end of the course, a two-day trip will be organized to the holy city of Jerusalem as well as to the Dead Sea. Participants will tour the Dead Sea region and learn about measures being taken to halt the water level decline of the Dead Sea. Depending on weather conditions, participants will be able to experience floating on the Dead Sea’s waters. The group will continue to Jerusalem and stay there for two nights. The time will include a guided tour of the holy sites of the three religions of Jerusalem and free time.

###### MASHAV

Israel's Agency for International Development Cooperation, known as MASHAV in its Hebrew acronym, was founded in 1958 as part of the Ministry of Foreign Affairs. It is responsible for initiating and implementing Israel's development cooperation program worldwide. MASHAV aims at transferring the expertise and technologies that have assisted Israel in its own path to development to other countries. Today, Israel cooperates with over 140 countries, providing training in Israel and abroad, operating on-site demonstration projects and building medical infrastructure in partner countries. MASHAV is active in fields ranging from agriculture to medicine and from community development to entrepreneurship.

###### The Arava Institute

The Arava Institute for Environmental Studies is the premier environmental teaching and research program in the Middle East, preparing future Arab and Jewish leaders to cooperatively solve the region’s environmental challenges. Located in the heart of Israel’s Arava desert, the Arava Institute is a unique oasis of environmental education, research, and international cooperation.

Students and researchers at the Arava Institute explore a range of environmental issues from a regional, interdisciplinary perspective while learning peace-building and leadership skills. The studies are international in scope, with a student body comprised of Jordanians, Palestinians, Israelis, and North Americans, as well as other nationalities. The Arava Institute gives Jewish, Arab and other students and researchers a unique opportunity to study and live together for an extended period of time; building networks and understanding that will enable future cooperative work and activism in the Middle East and beyond. Here, the idea that nature knows no political borders is more than a belief. It is a fact, a curriculum, and a way of life.

###### Accommodation

Participants will stay in Keren Kolot, the guesthouse of Kibbutz Ketura, located nearby the offices and classrooms of the Arava Institute. The facilities include large air-conditioned rooms with kitchenette, private full bathrooms with shower, and cable television. The participants will be housed two to a double room.

Kibbutz Ketura is a collective community, located in the Arava valley of Israel. It is approximately 50 kilometers from the Red Sea resort city of Eilat in the south of Israel. In May-June, the weather will be hot; temperatures will range from around 35°-40°C during the day and down to about 25°C at night. For more information on Kibbutz Ketura, you can access the website at: <http://ketura.org.il/>

All meals are provided in the kosher dining facilities of Kibbutz Ketura. The lobby café of the guesthouse offers free computer use and free wireless Internet accessibility for laptop users. All facilities are accessible to the physically disabled. Staff members of the Institute will be available to assist the participants when needed.

Participants are advised to bring suitable clothing and comfortable shoes for field trips. A more detailed list of suggested clothing and other items to bring will be sent to participants with the acceptance packet.