

Pioneering environmental project taking root in the sand
Fertilizer companies as catalysts for greening the desert

The Sahara Forest Project AS today signed a cooperation agreement for building a Pilot Plant in Qatar together with Yara International ASA and the Qatar Fertiliser Company, QAFCO.

The agreement was signed by CEO Khalifa A. Al-Sowaidi of QAFCO, CEO Jørgen Ole Haslestad of Yara International and CEO Joakim Hauge of The Sahara Forest Project AS. The estimated cost for the Pilot Plant is 5.3 million USD. QAFCO and Yara International will provide the funding. The parties have already started the preparations, and are on schedule to reach the target of having a fully operational Pilot Plant by December 2012.

“We are very excited to join forces with QAFCO and Yara to realize this truly unique system of green technologies. The Pilot Plant will prove the benefits of a holistic approach to challenges in the food, water and energy-sector,” said CEO of The Sahara Forest Project AS, Joakim Hauge.

"Increased food demand must be met with innovative thinking and an efficient agricultural sector. This project demonstrates that Yara's continuous research and development efforts go well together with environmental activities aiming at solving one of our times' most important challenges," said Jørgen Ole Haslestad, President and CEO of Yara International.

"While contributing with our industrial experience and nutrient knowledge in this environmental project, we are at

the same time developing potential new and exciting markets in desert areas,” said Mr. Haslestad.

“QAFCO and Yara are sponsoring this Environmental Project to be executed by Sahara Forest Project in a pilot scale to demonstrate the potential of the Green Technology in arid region like Qatar using seawater and solar energy for future larger scale research and commercial platform in the area of Horticulture, Freshwater generation, Energy Production, Algae Production,” said Khalifa A. Al-Sowaidi, CEO of QAFCO.

“This project is expected pave way for commercialization of this green technology for large scale implementation with a vision to produce energy, food and fresh water not only for Qatar but for tomorrow’s world population in a sustainable way,” said Al-Sowaidi.

ONE HECTARE OF INNOVATIVE GREEN TECHNOLOGIES

A one hectare site outside Doha, Qatar, will soon host the SFP AS Pilot Plant. It will contain a unique combination of promising environmental technologies carefully integrated in a system to maximize beneficial synergies. A wide specter of leading experts and technology developers are taking part in the effort to realize the project. A cornerstone of the pilot is greenhouses utilizing seawater to provide cool and humid growing conditions for vegetables. The greenhouses will also produce freshwater themselves. The greenhouses will be coupled with a state of the art parabolic trough solar collector with a thermal desalination unit supported by PV-technology. The pilot will also allow for cultivation of algae

in a system of photobioreactors and open pond cultivation systems.

An important part of the pilot is to demonstrate the potential for cultivating desert land and making it green. Outdoor vertical evaporators will create sheltered and humid environments for cultivation of plants. Additionally, the pilot will contain outdoor hydroponic raceways for cultivation of halophytes – plants tolerant of irrigation with salty water. The facilities in the pilot plant will be supported by on-site laboratories, scientists and professional growers.

“The Pilot Project in Qatar will demonstrate the benefits of reducing waste streams in technological systems. Our message is that it is possible to design solutions that are good for the environment, good for social development and that have a long-term economic sustainability,” commented Joakim Hauge, CEO of The Sahara Forest Project AS.

“The Pilot Project is designed to fit in an approximately 10,000 m² area inside the QAFCO 5 site in Qatar and will consist of Seawater-based greenhouses, Concentrated solar power (CSP) for heat & electricity, Evaporative hedges and ponds for reducing brine to dry salts, Algae cultivation facilities, Vegetated outdoor areas and Halophyte cultivation units,” added Al-Sowaidi.

BACKGROUND

ACCELERATING THE COOPERATION

In 2011 it was announced that the Sahara Forest Project AS had entered into cooperation with Yara International ASA and the Qatari company QAFCO. The first step of the cooperation was for The Sahara Forest Project AS to conduct

a comprehensive feasibility study in Qatar. Yara and QAFCO committed to provide financial, knowledge and technical support to the Sahara Forest Project AS in these studies. The preliminary results, and the tests that have been conducted, has encouraged the parties to proceed to the construction of a Pilot Project.

THE SAHARA FOREST PROJECT

By combining different existing technologies into one integrated system The Sahara Forest Project uses what we have enough of to produce what we need more of. This is made possible by utilizing sunlight, deserts and seawater to produce food, water and energy.

The Sahara Forest Project has been well received by among others Dr Gro Harlem Brundtland, former Prime Minister and UN Special Envoy on Climate Change, and Olav Kjørven, Deputy Secretary of UNDP. The EU's Commissioner for Development, Mr Andris Piebalgs has stated that "The Sahara Forest Project appears to be a very interesting example of the more integrated and holistic kind of thinking that we will need a lot more of in the future to make our energy, water and industrial systems more sustainable."

The Sahara Forest Project has been presented in a number of leading publications including Science, National Geographic, TIME Magazine, The Economist and Financial Times.

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