HAARETZ

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Wadi Attir Project co-founder Shehadeh Abu Sabit. Photo by Eliyahu Hershkovitz

Wadi Attir farm project offers sustainable high-tech for Negev Bedouin

Combining traditional farming skills with cutting-edge technology, and a little help from New York, farm produces energy, protects the land and saves water.

By Zafrir Rinat | Jun. 22, 2015 | 8:34 AM

An amazing farm project has started operating in the past year on the outskirts of the Bedouin town of Hura, close to a thicket of warehouses, factories and unapproved buildings.

The goal of Project Wadi Attir is to develop a model for a sustainable desert community in the Negev. This is not a project that the know-it-all establishment forced on the Bedouin, but rather an initiative with the blessing of the Bedouin residents, who are full partners in establishing and running the revolutionary farm.

Government institutions have supported the project, helped to arrange all the necessary permits and approval, and – in an exceptional step – even agreed to provide state-owned land for the farm, which is located outside the municipal boundaries of Hura, in southern Israel.

The project's creator is Dr. Michael Ben-Eli, an Israeli who has lived in the United States for many years. He previous served as a consultant for international organizations and companies on matters of the development and management of natural resources.

Ben-Eli sees Project Wadi Attir as a kind of laboratory, too. Using his Lab's "sustainability principles" as a guide, the project is "designed to leverage Bedouin traditional values, know-how and experience with modern-day science and cutting edge technologies," states the project website. The project will create energy, preserve the land and save water, and is already enhancing local biodiversity.

The head of Hura regional council, Dr. Mohammed al-Nabari – a chemist by profession – is an enthusiastic back of the idea: "We wanted to do something that has positive energy," Nabari says. "We have enough problems," he adds, a reference to the ongoing battle between the state and Bedouin villagers over the evacuation of unauthorized desert towns.

Wadi Attir was allocated 400 dunams of land (about 100 acres). It will eventually include a visitor's center, featuring an exhibition area, lecture hall, laboratories, offices and classrooms, and a restaurant and gift shop to promote Bedouin hospitality, culture, local crafts and the farm's agricultural products.

First and foremost, however, the area is reserved for the agricultural projects, with special emphasis on saving water and energy, as well as land conservation. This requires finding a number of ways to balance the various interests. For example, allowing for use of the land without causing soil erosion or repressing the natural vegetation – all while the local population is undergoing the traumatic process of moving to permanent dwellings and while often being cut off from traditional sources of knowledge about life in an arid region.

An olive grove was planted on the farm, and there is already a medicinal plant section as well as a plot for nutritious, desert-hardy, indigenous vegetables that once formed an important part of the Bedouin diet. Some of the seeds used for growing the vegetables were gathered from Bedouin families in nearby communities. These indigenous seeds have been preserved and nurtured for generations, and are adapted to the arid conditions of the region. They are used as the basis for a "seed bank" to preserve this precious genetic material.

Near-zero waste

The plants are grown without the use of chemical fertilizers, pesticides and herbicides. These plants have been valued by generations of Bedouin for their health benefits, and will be used for the development of a line of health- and body-care products.

An integrated infrastructure of modern green technologies will demonstrate the project's waste-to-resources approach, maximizing the use of renewable resources, eliminating harmful emissions and aiming for near-zero waste.

Last winter, there were already encouraging signs that the efforts to rehabilitate and preserve were succeeding: The runoff water damned and helped irrigate the plants and trees, and there was almost no soil erosion.

Various animals started to appear, also. “We wanted to put in nesting boxes to attract barn owls, but they appeared by themselves,” said Ben-Eli.

The project website explains that in order to minimize its ecological footprint and to ensure the most efficient use of resources, “a basic concept of Project Wadi Attir is that by-products of one activity will be available as resources for another activity through an integrated, closed loop system of use, reuse, and recycling. The project will aim for carbon neutrality by minimizing harmful emissions and through a program of extensive planting. It will employ cutting-edge approaches to renewable energy production, resource recycling, water management and arid land stewardship. Building design will feature ‘green’ technologies appropriate for arid zone conditions,” it states.

One particularly important component at the new farm – and also part of the Bedouin lifestyle – is raising sheep and goats, and a goat shed is already in operation. “People don’t know that the Bedouin are essentially vegetarian,” said Nabari. “Animals were too expensive, so they almost never used them as a source of meat for food.”

Bedouin historically produced dairy products from sheep, used the wool and turned the animals’ excrement into fertilizer. Today, however, raising sheep has become unprofitable, since all the various products the flock produced in earlier times are no longer made – for example, a yogurt that kept for months without any need for refrigeration.

No more fast food

One of Wadi Attir’s main goals is to become a knowledge center for renewing the methods of growing and producing agricultural products. In addition, the site will use a system for recycling “gray” wastewater (pretty much all used water, except for from toilets), with the help of experts from various institutions such as Ben-Gurion University of the Negev. They also aim to develop a pioneering hybrid wind/solar energy system, and a facility for producing biogas (a mixture of methane and carbon dioxide) from organic waste and animal manure.