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Country / City	Israel - Haifa
University / School	Technion - Israel Institute of Technology
Academic year	4th year, thesis project, B.LA
Title of the project	<b>OUT OF WATER - Planning Water Resources as a Basis for Leveraging an Underprivileged Desert Community</b>
Authors	Ella Reichental

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# PERFORMATIVE NATURE

Barcelona International Landscape Architecture Biennial

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SCHOOL PRIZE

X International Landscape Architecture Biennial

Máster d'Arquitectura del Paisatge -DUOT - UPC

ETSAB- Escola Tècnica Superior

d'Arquitectura de Barcelona

Avenida Diagonal, 649 piso 5

08028 Barcelona-Spain

## TECHNICAL DOSSIER

Title of the project	<b>OUT OF WATER</b> Planning Water Resources as a Basis for Leveraging an Underprivileged Desert Community
Authors	Ella Reichental
Title of the course	LandBasics _ Territorial Agriculture in Israel
Academic year	4th year, thesis project, B.LA
Teaching Staff	Matanya Sack, Barbara Aronson, Naomi Angel, Hatzav Yoffe, consultant: Dr. Tamar Berger
Department	Landscape Architecture Program
University/School	Technion-Israel Institute of Technology

Written statement, short description of the project in English, no more than 250 words

A critical shortage of water for Palestinian agriculture in the Jordan Valley has led to the abandonment of lands, and consequently to unemployment, and to a loss of local culture and landscape identity, as well as to a sense among the inhabitants that "there is no future for living in the area." The project proposes a strategy for the management of the water resource in the Palestinian settlements in the Valley, based on the vision of enabling independence, equal opportunity and a regional communal-economic future.

Israel and the Palestinian Authority, which are located at the edge of the global desert belt, share natural resources and are both forced to cope with water shortage. While Israel is a world leader, recycling more than 85% of water directed for its agriculture, the agricultural fields in the Palestinian Authority are drying up. These gaps encourage the quest for creative solutions.

The Palestinian village Uja a-Tachta is a test case in which I propose a master plan based on sustainable use of water resources. The plan includes creating a green skeleton for the streets, using greywater systems; touristic and commercial development along Road no. 90; restoration of the ancient water conduits in the village; and the establishment of an agriculture research and development center that will serve as an open public area for the village's inhabitants and enable regional collaboration in dealing with agriculture in water shortage conditions. The design principle combines engineering and landscape infrastructure, and through the water, leverages various tiers in the village.

In this complex region I see bottom-up activities as the key to success, concurrently with the formulation of a long-term large-scale strategy, which will together build a robust regional system that leans on the values of culture, heritage, environment and co-existence in the Jordan Valley.

For further information

**Máster d'Arquitectura del Paisatge -DUOT - UPC**

T: + 34 93 401 64 11 / +34 93 552 0842

Contact via email at: [biennial.paisatge@upc.edu](mailto:biennial.paisatge@upc.edu)

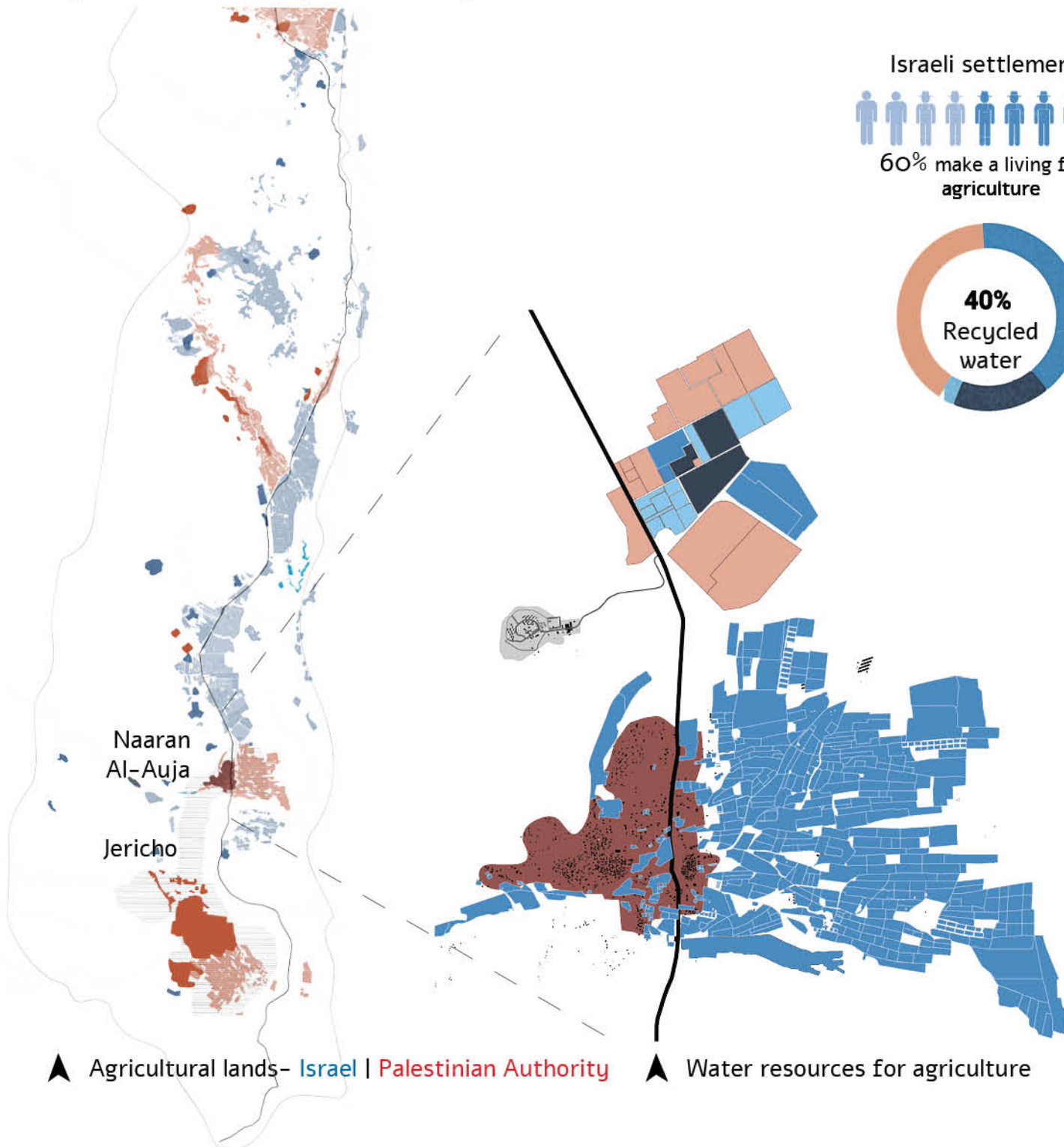
Consult the web page <http://landscape.coac.net/>





▲ Current situation of the agricultural landscape - Naaran Israeli settlment | Al-Auja Palestinian settlment

## Agriculture in the Jordan Valley



Israeli settlements  
60% make a living from agriculture



Palestinian settlements  
85% make a living from agriculture

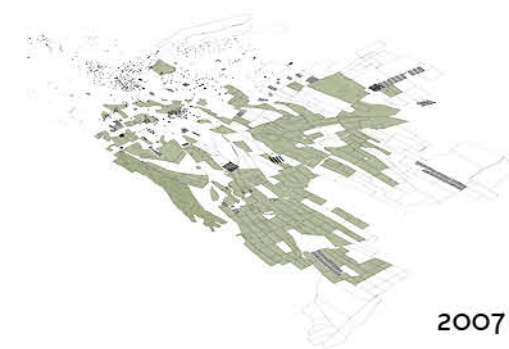
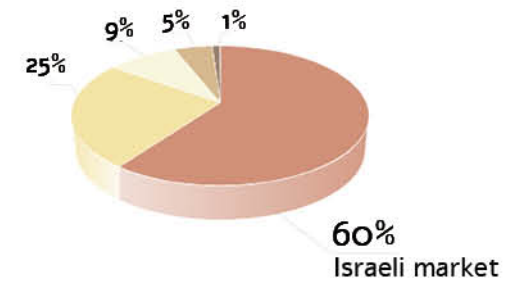


reclaimed water  
Fresh water  
salty water  
Flood water

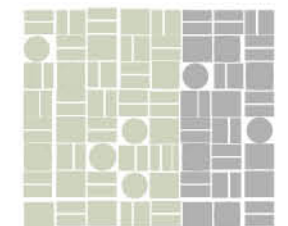
## Case study - Al Auja village



Economic dependence-  
60% of the residents work in the Israeli market

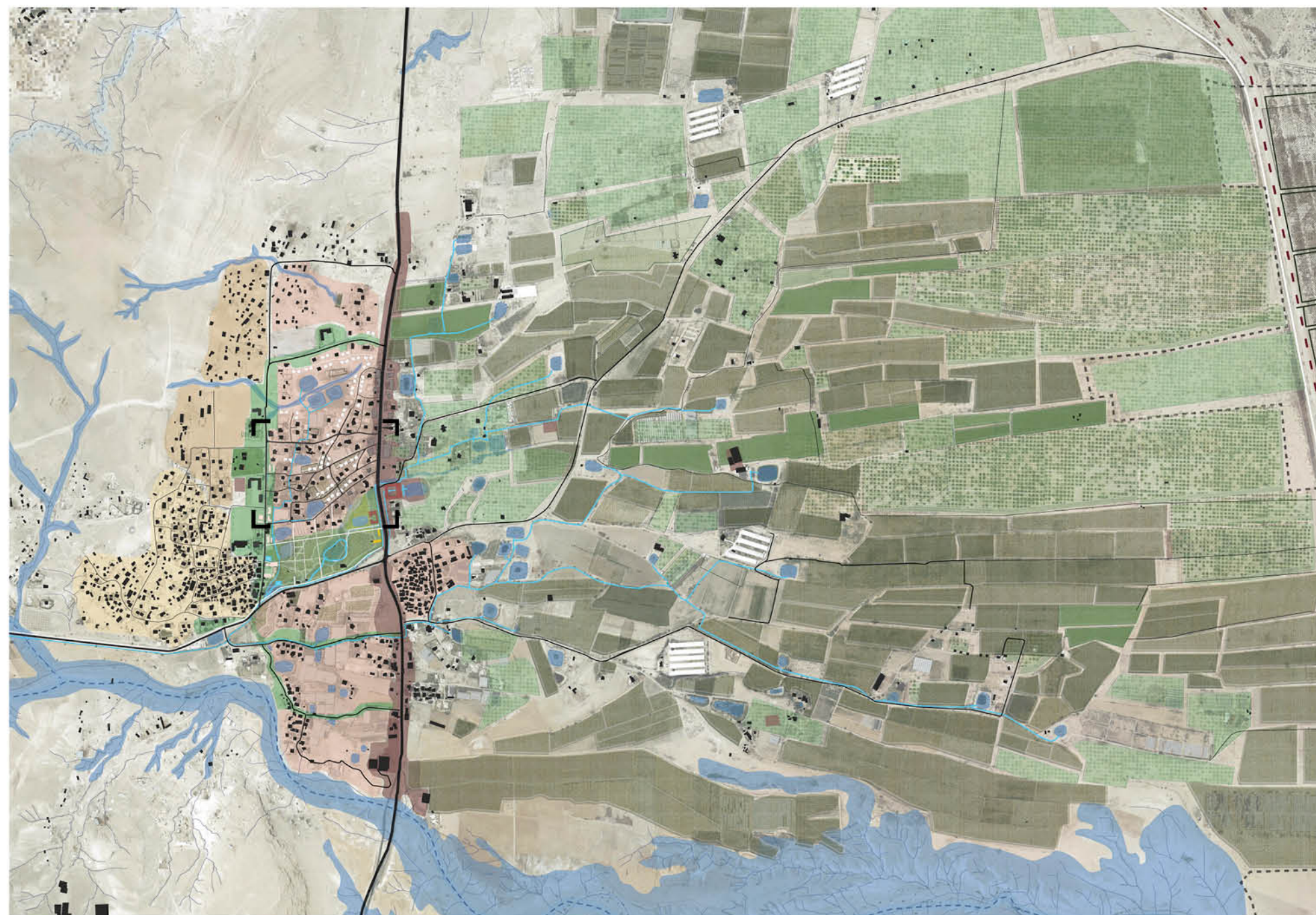


Loss of agricultural land-  
30% of the agricultural land was sold for construction



▲ Drying of the agricultural fields





- Rural construction - gray water systems
- Conservation of Natural systems
- Green axes connect the families
- Trade and tourism area
- Research area and public open space
- Graduated rural construction

▲ Al-Auja Master plan based on water management

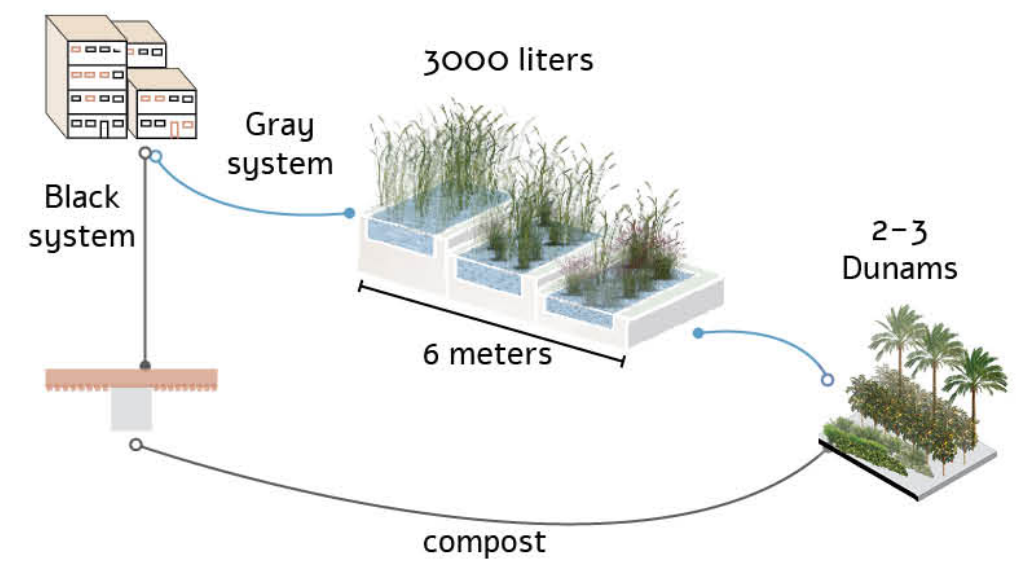


▲ Rehabilitation of water channels and development of local market

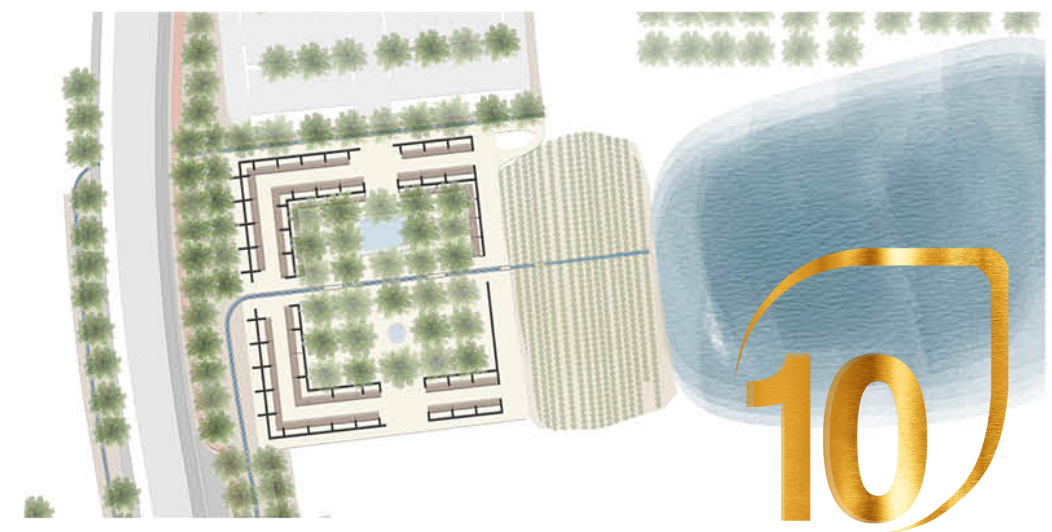


- Public fruit tree - Gray water supply
- A common orchard for families

5 families X 6 persons



▲ Neighborhood plan based on gray water system





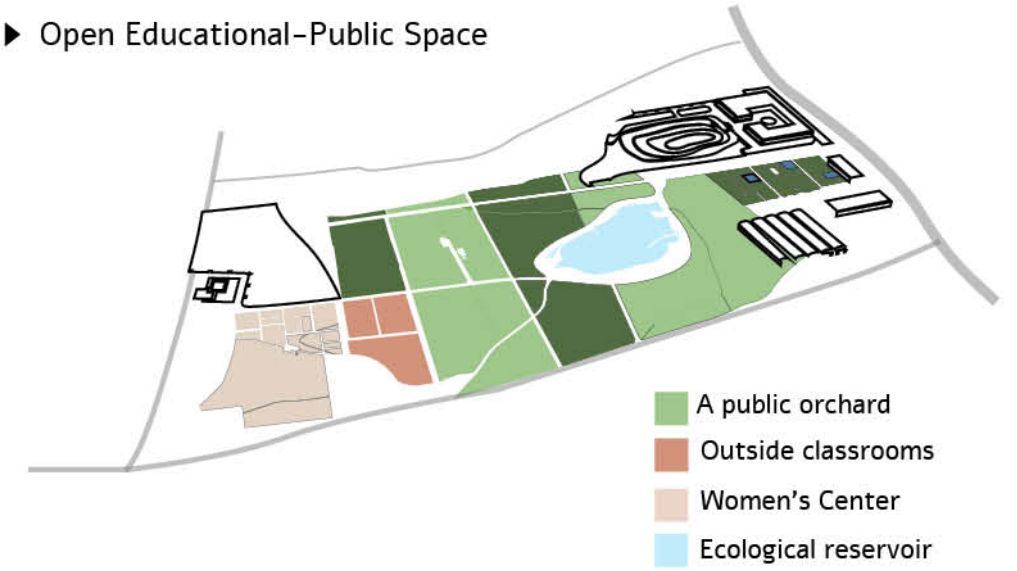


▲ Agricultural Research center – open public space

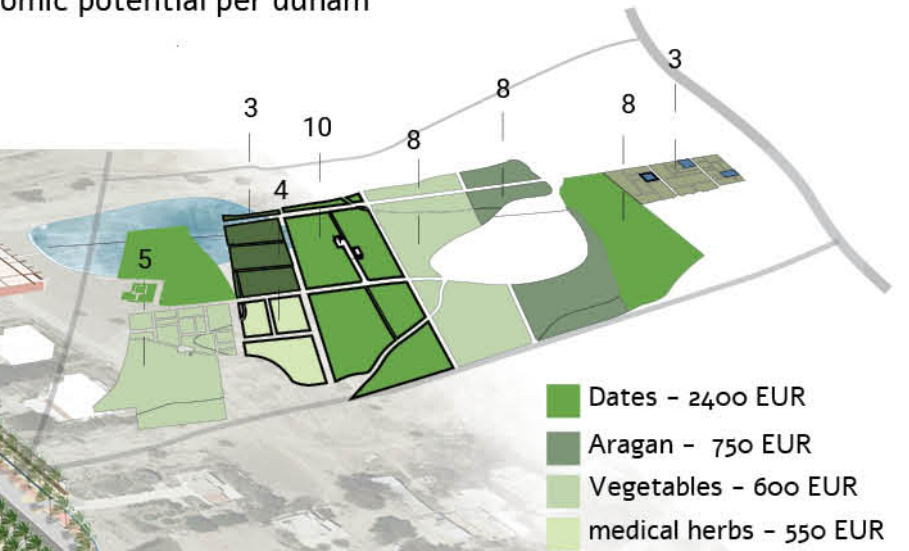


▲ From an engineering infrastructure to a landscape identification – restoration of ancient water channels

► Open Educational–Public Space



► Economic potential per dunam



▲ Agricultural Research center – strengthening the heart of the village as part of the master plan