

EDEN IN IRAQ WASTEWATER GARDEN PROJECT
Ecological and cultural restoration in the Mesopotamian Marshes

www.edeniniraq.com



Nature Iraq (NGO)
Nature Iraq
Pak City Apartments
Block A2, Floor 1, Flat No. 8 Sulaymaniya, Iraq



Institute of Ecotechnics
1 Blue Bird Ct
Santa Fe, NM 87508 US

The team and the Project

The *Eden in Iraq Wastewater Garden Project* (2011-present) is a humanitarian water remediation project, expressed through wastewater garden (wwg) design and environmental art, that provides environmental and cultural regeneration the historic marshes (the Ahwar) of southern Iraq. It will create a beautiful public garden and public site celebrating Marsh Arab culture.

This project is a collaboration between co-directors artist/photographer Meridel Rubenstein and environmental agronomist Dr. Davide Tocchetto, with environmental engineer Dr. Mark Nelson and engineer and managing director Nature Iraq NGO, Jassim Al-Asadi.

Extensive meetings with local city councils, regional government and national Iraqi government elected officials enthusiastically endorsed the Eden in Iraq project, since southern Iraq (and most of the rest of the country) lack any type of effective sewage treatment. Raw sewage is piped or flows into the Euphrates River and the marshes endangering public health and the vitality of the marshes.

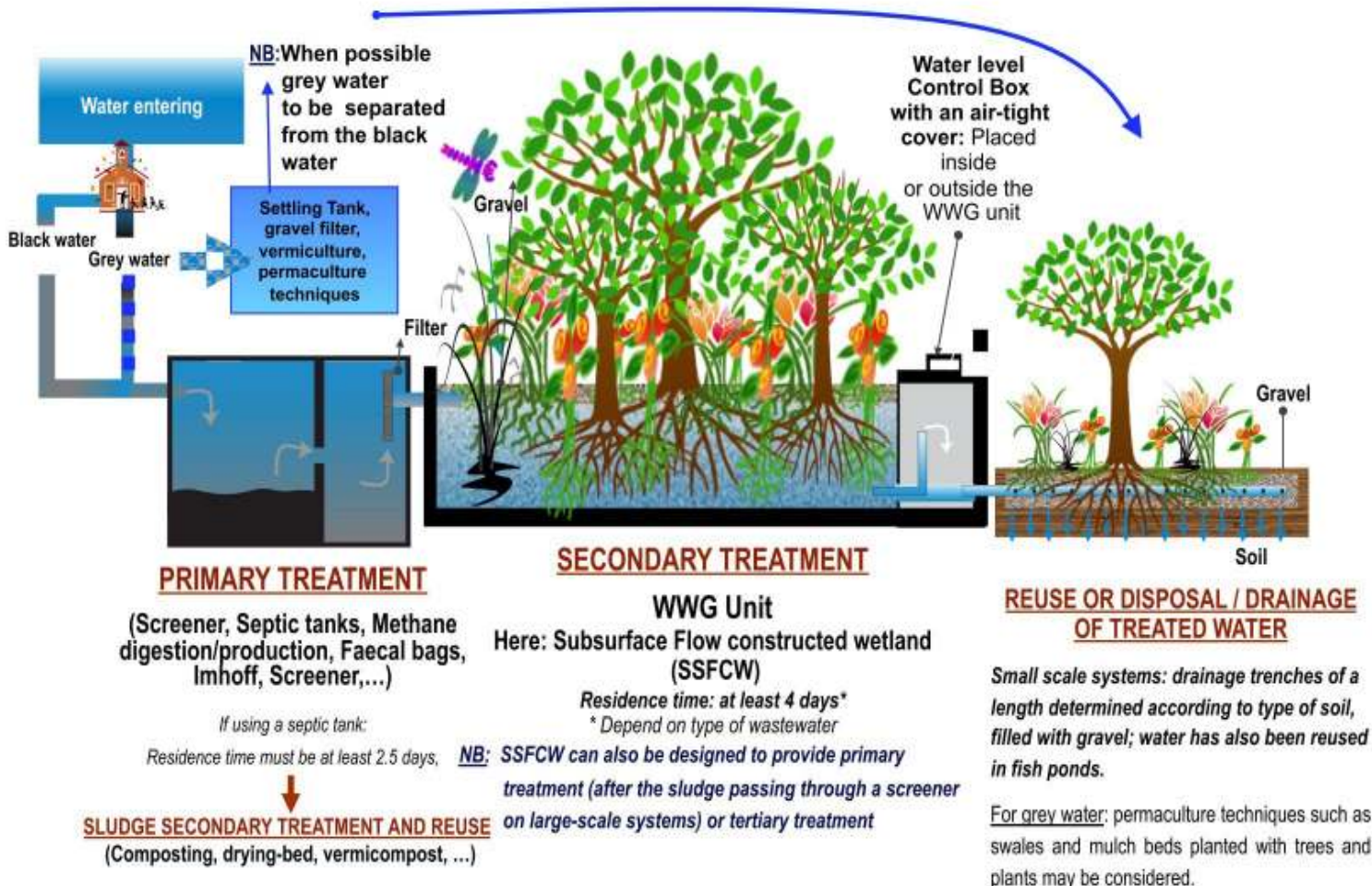
We are pleased to announce that, in the fall of 2020, the *Eden in Iraq Wastewater Garden Project* was selected by UNESCO as one of 100 projects for the UNESCO Green Citizens Initiative.



In 2017 the National Design Center in Singapore showcased our project with funding from Nanyang Technological University <https://edeniniraq.com/2017-ndc-show/>

Wastewater Garden® Technology evolved from its use in Biosphere 2 and has been successfully used in 12 nations and varied climates

Typical treatment installation for the Wastewater Gardens (WWG) system



THE Marsh Arab culture

sustainable co-habitation within the marshes for 8-10,000 years





Their famed ancient reed architecture draws on Mesopotamian as well as Islamic models, inspiring our garden design

Visualizations of the Eden in Iraq public garden In el Chibaish, the largest Marsh Arab city

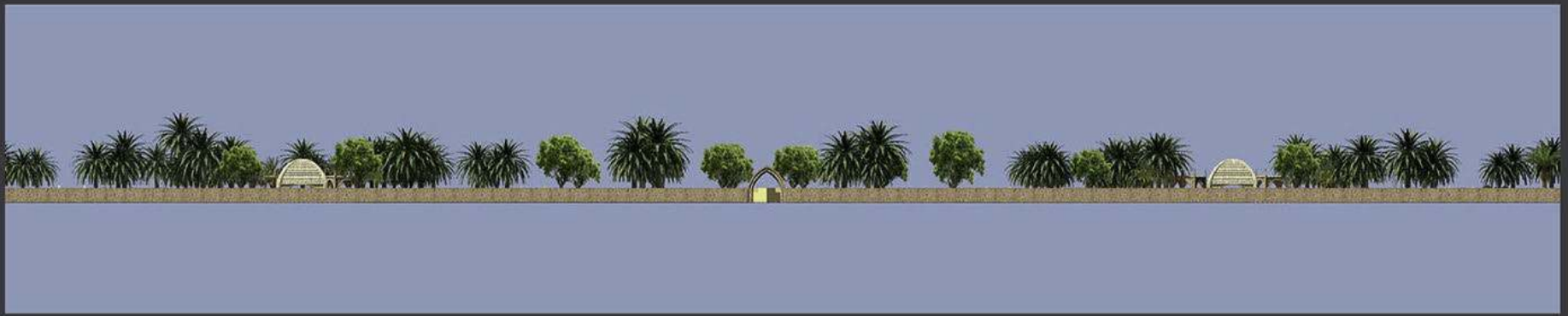
5-7



8-10



11



Historic marshes in 1977 before before the diversion of the Tigris and Euphrates rivers in the 1990s turned the Marshes into a desert. 250,00 Marsh Arabs were forced to flee. Here is the 2nd largest village of Saygal(50,000people) before and after the marsh draining.



2 top photos c. Nick Wheeler 1977

The Marsh Arabs return in 2003 to restore their land is a beacon to the millions of political and environmental refugees currently uprooted. Our Iraqi NGO Nature Iraq has led this restoration.



A new Adam and Eve in the S. Iraq Marshes (the Ahwar) with Wastewater Garden Drawing

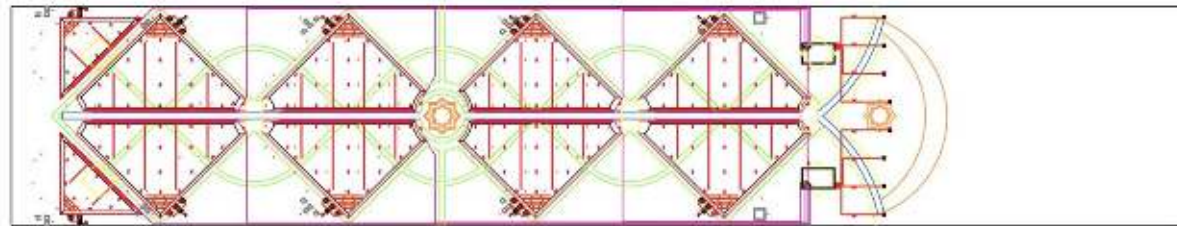
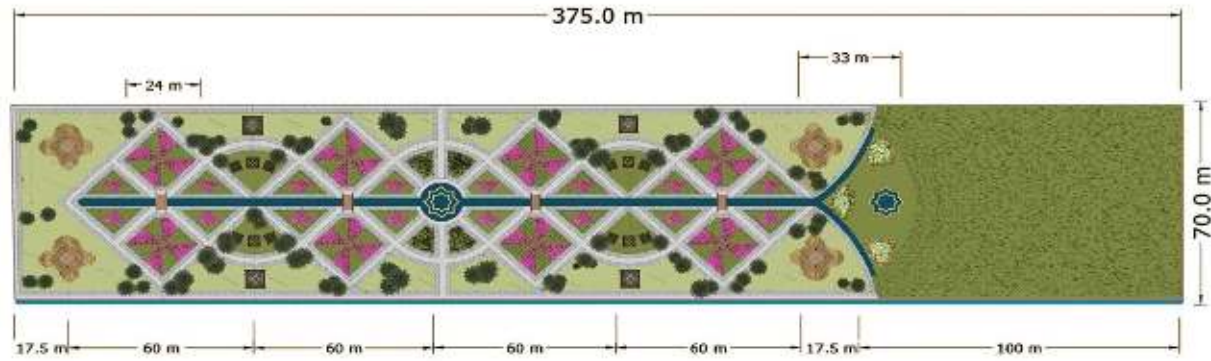


In 2011 the marshes were just 20% regreened, in 2019 60%, but today receding again due to climate change. The marshes are important stops in migratory birds' flyways and are host to beautiful rare endemic bird species.

Eden in Iraq Wastewater Garden
Project numbers

10,000	people served (estimation)
80,000	people will benefit in the project area
26,250	square meters (6.4 acres), footprint of the garden
890	meters of perimeter wall with adobe bricks and traditional design
105,000	local plants will be planted (both wetlands and ornamental)
9	In country team meetings with Iraq Ministry of Water Resources, CRIMW, local and regional Government councils, Municipality, Stakeholders
15+	Project presentations at international conferences

Wastewater Garden design inspired by traditional Marsh Arab wedding blanket patterns



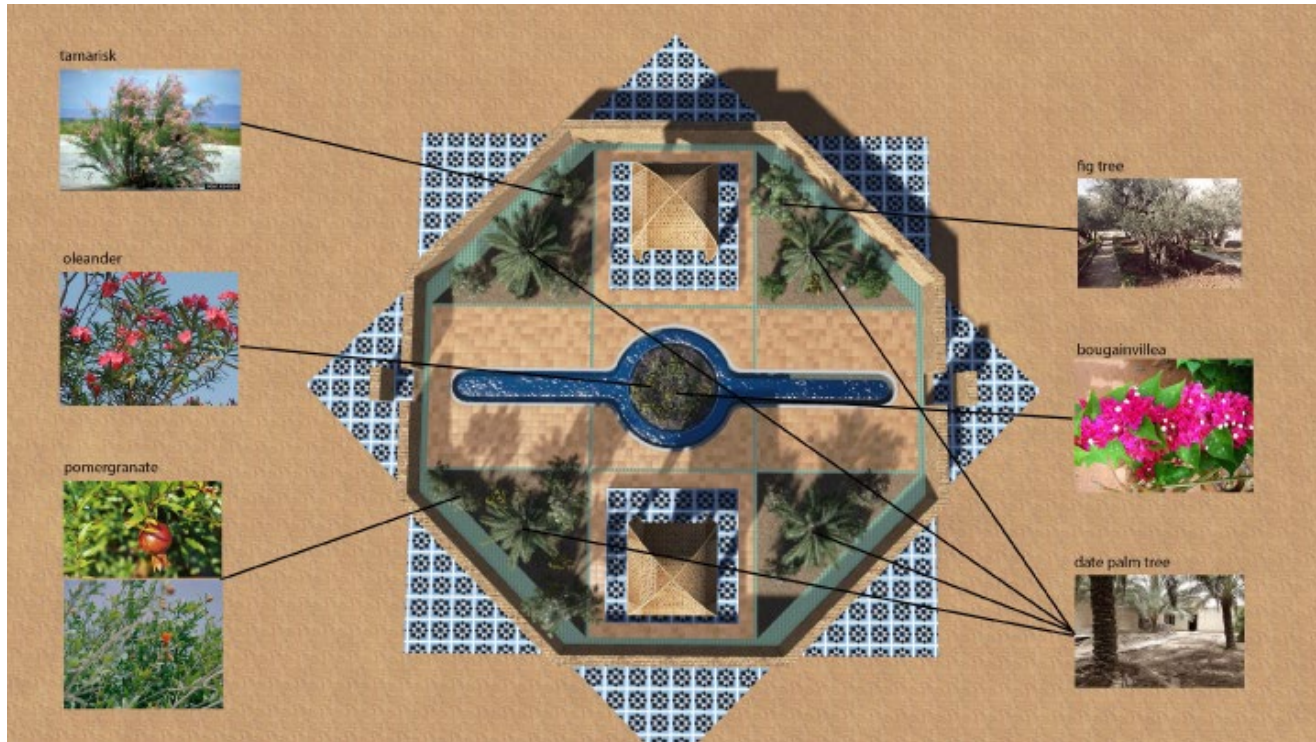
Wastewater Garden at our 26,500 sq meter
(6.5 acres) designated site at el Chibaish, S. Iraq



As El Chibaish expands, this area will become a Green Zone with innovative farming production, crafts stalls and vendors with fruit from the WWG and other local produce. It is next to the *Mesopotamian Marshes*, Iraq's first National Park, with Ur, Uruk, and Eridu, Iraq's new UNESCO World Heritage Site, a future eco-tourism destination.

The Colors of Eden

in *Eden in Iraq* Wastewater Garden



The shrubs and trees of *Eden in Iraq* will include many productive and locally valued plants such as pomegranate, figs and date palms. Plants mentioned in the Koran and Bible will also be featured, underlining the history of the area. After treatment in the WWG, remaining water and nutrients will support a landscaped area of non-wetland plants.

Eden in Iraq Wastewater Garden project will have a positive impact on these U.N. Sustainable Development goals(SDG's), especially if the project leads to more adoption of this approach in Iraq and similar Middle Eastern countries.



