



**Permaculture offers an appropriate
approach for food production in
agroforestry systems**

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Challenges



The final results





The world's population is currently **(7,713)** billion

It is expected to be **(9.700)** billion in 2050

The number of hungry people in the world is **0.822** billion

A **third** of the world's food production is wasted annually. **1.3** billion tons
The equivalent of **\$750** billion = **6** times the food aid worldwide.

**“We cannot solve our problems with the
same thinking we used when we created
them.” Albert Einstein.**





Permaculture

integrates land, resources, people and the environment through mutually beneficial synergies.

Permaculture studies and applies holistic solutions that are applicable in rural and urban contexts at any scale. It is a multidisciplinary toolbox





Methodology

Permaculture offers an appropriate approach to food production, we use and combines all available resources, including plants, animals, soil resources, water resources, agro-forestry, landscape, climate, human resources, buildings, technology, waste materials and local knowledge, It regards the relationships among different resources in a given area as the relationships of one whole or integrated community and try to encourage the most productive relationships





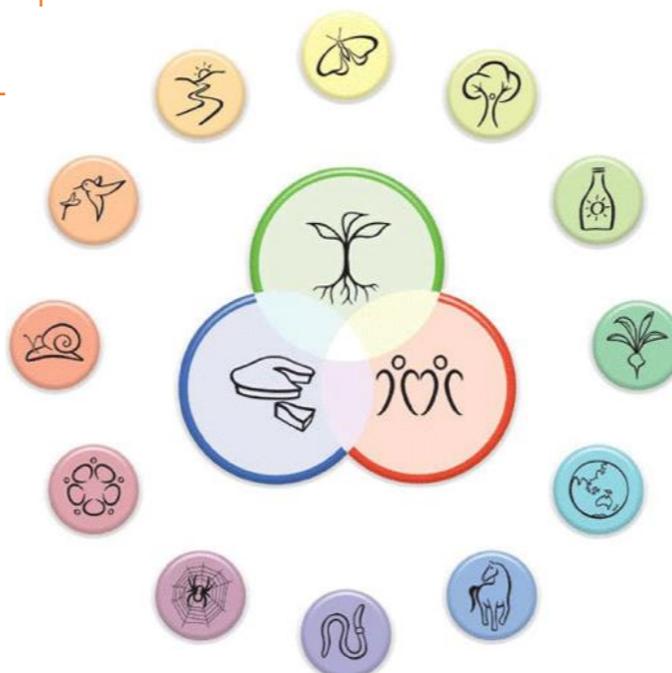
permaculture principles

**Recycle, reuse, reduce
resource consumption and
recycle all waste.**

Obtain yield

**Observation and
observation**

**Each element in the design
performs a variety of functions**



back to nature

**Building as many relationships as possible between the
elements: it is not important the number of elements, but
the number of useful relationships that complement each
other in the design**

**It is better to spend more time
thinking and designing than
working without planning**



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on Grazed Woodlands**
Amman - March 15th, 2023



The main objective of Permaculture project:
**Building Resilient Food Security Systems through Extending
Permaculture Design and Technologies in The Jordan Valley.**

To
**Increasing the resilience of poor and vulnerable
communities to climate change impacts**





NARC implemented permaculture project in two pilots sites in the Jordan Valley, one in the north and the other in the south. The total area of the two sites is 12 hectares.



Kin's Domain

min. 1 hectare/ 2.47 acres

Space of Love





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Site survey

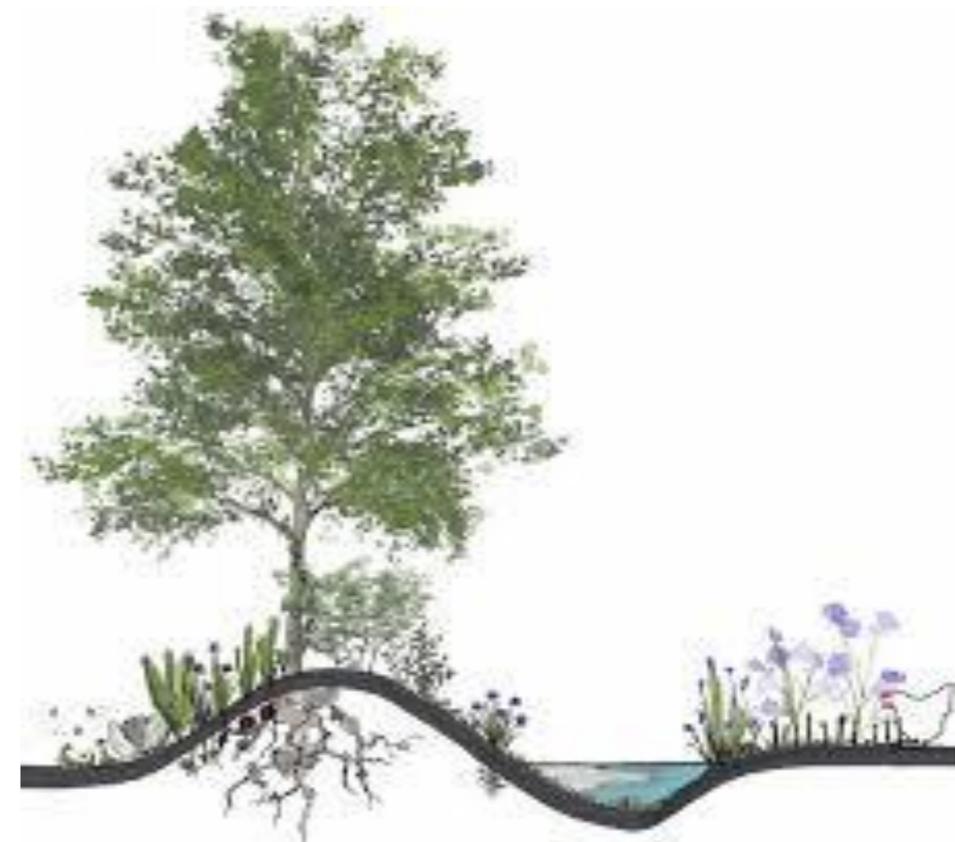




water harvesting techniques

Rainwater harvesting through Swales

The basic concept of a swale on contour is to catch water as it drains and hold it in place until it absorbs into the ground. It looks a bit like a massive ditch with closed ends, trapping all of the water as opposed to having it flow anywhere.



Untitled Map

Write a description for your map.

Legend

 SHARHABEEL STATION5

Google Earth

Image © 2023 CNES / Airbus

500 ft





As we start harvesting rainwater using the Swale, we need to plant ground cover together with legumes, fruit trees and herbs.





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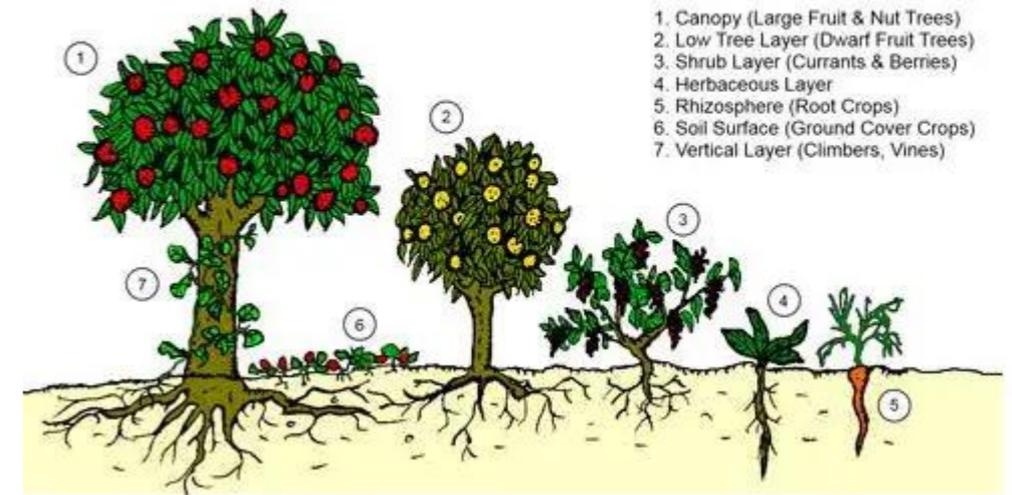
“Edge Effect” which is the use of edge and natural patterns for the best and most abundant effect. The use of this principle can increase productivity, efficiency, and diversity within a system.





Food forests

forests are the seed banks of the future.



- It is a community of interconnected individual species of different sizes, heights, root depths and functions,

- food forest is a single group, of plants, animals, fungi, birds, bacteria, viruses...etc and so on.

it has the ability to survive in adverse conditions much better than individual plants.

that ensure the most efficient use of resources and the most sustainable.

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LIVINGAGRO





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Composting





LIVINGAGRO



Livestock plays a very vital role in permaculture if well utilized in the farming system. Animals provide meat, eggs, feathers, skin, honey and manure and are a good source of income and balance the farm's ecosystems. And some of them control pests.



CHICKEN NEEDS
feed, shelter, water, protection from predators, shade, medicines, friends (other chickens), dry earth, fencing, box for laying eggs, fresh air

CHICKEN PRODUCTS
meat, eggs, manure, money, feathers, work (weed and pest management)





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Thank you

