

A woman in a long blue dress and a red headscarf stands on a dirt bank next to an irrigation canal. The canal flows from the left towards a small concrete structure in the distance. The landscape is arid with sparse green vegetation and trees. The sky is clear and blue.

# Mesopotamian Irrigation

By J. Nedelcu

# What is Irrigation?

Your average dictionary will define irrigation as “the artificial application of water to land to assist in the production of crops.” That is exactly how the mesopotamians used it, 7000 years ago. Today it’s still used in most of the world, in a similar fashion. People didn’t really need to improve on the methods, because the irrigation system was efficient and simple from the start. It was basically required for large-scale agriculture, especially in the middle of the desert. Its only downside was that it had to be used close to a water source, at least when the Mesopotamians used it. In fact, irrigation was the first spectacle of engineering that the Mesopotamians pulled off.



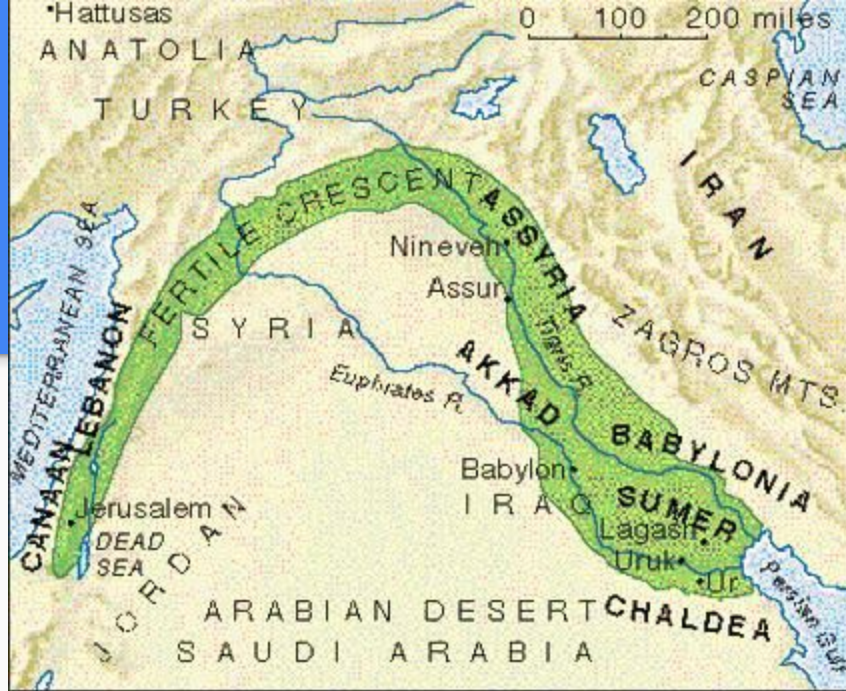
- A canal through a field filled with crops in India.



- Modern surface irrigation. Was not used by Mesopotamians because of water shortage in the area.

# Where was it used?

Even though most people lived in the “Fertile Crescent”, it was mostly sand and soil severely lacking in minerals. Since the soil condition was so bad, at first, it seemed almost impossible to grow crops. Thankfully, someone had the good idea to make levees between the two rivers surrounding the area, so that water would flow from the higher one to the lower one. It worked for the farmers upstream, but the people downstream often had to deal with dirty water filled with silt or sometimes, during dry seasons, no water at all. It was simple; without a levee or a canal, you couldn't grow anything.



- The fertile crescent was where most Mesopotamians settled. You can see that there is a large bulk where the mouths of the rivers are, because that was the ideal location for farming.

# How was it made?

The Sumer were the first to make canals between the two rivers that enclosed Mesopotamia, Tigris and Euphrates. The canals took water out of one river, and distributed it among many agricultural fields, and then led to the other river. These canals were made by digging a trench, then piling up dirt on both sides, creating breaks in it when needed to water plants. Later on, the Sumer made their own levees, basically a larger canal that could handle much more water. Natural levees are embankments made through flooding, that are built up over time. They are perpendicular to the water's surface, but then arc backwards to land. The Sumer replicated this by making small walls by fire-hardening reeds, tying them together, and then packing mud around them. They would then stack clay bricks around the exterior. Afterwards, they built canals leading inland.



- A modern levee with water distributed by hoses instead of canals.



- A levee with its remaining water split into canals.



# How Important Was It?

The Mesopotamians depended on their irrigation to provide all of their water, and without it, there most likely would have been no Mesopotamia at ALL. The irrigation also played a large role in the opposite respect: They would redirect water from the river during the flood season, saving countless crops in the process. Since the rivers carried enormous amounts of silt, which could have been harmful to the crops, people helped every year to change the arrangement of the canals and clean up the silt from the previous ones. It was an efficient system, but it was also open to manipulation.





# What Role Did it Play in Government?

The Kings of the city-states had full control over the irrigation, and could distribute water as they saw fit. This often led to hoarding. Irrigation also played a role in where the city-states themselves were built. Most of the city-states were built on a hill close to a river, where they could access the water but it would not present a threat to them. The canal and levee systems were built around the city for farmers and the like.



# Bibliography

Mays, Larry W. "Irrigation Systems, Ancient." *Water Encyclopedia*, JRank, [www.waterencyclopedia.com/Hy-La/Irrigation-Systems-Ancient.htm](http://www.waterencyclopedia.com/Hy-La/Irrigation-Systems-Ancient.htm)

Kielmas, Maria. "Ancient Sumerian Levees & Canals." *Sciencing*, Sciencing.com, 25 Apr. 2017, [sciencing.com/ancient-sumerian-levees-canals-16874.html](http://sciencing.com/ancient-sumerian-levees-canals-16874.html).

"Ancient Irrigation." *Ancient Irrigation*, University of California, Davis., May 1999, [mygeologypage.ucdavis.edu/cowen/~gel115/115ch17oldirrigation.html](http://mygeologypage.ucdavis.edu/cowen/~gel115/115ch17oldirrigation.html).