



Figure 1: Remains of the old fountain in Choullou village, Paphos.



Street communal fountains, Cyprus

Traditional Water Systems
Transporting water from a non-local spring to
the village's households through street taps.

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Context.



Figure 2: Cyprus location within Europe



Figure 3: Cyprus neighboring countries.

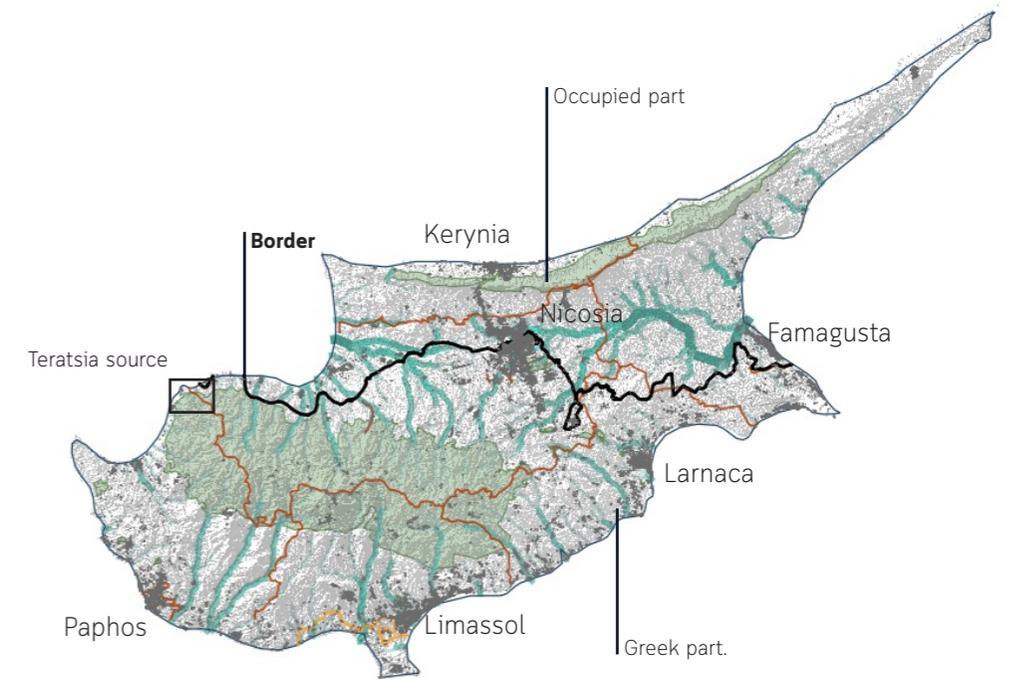


Figure 4 : Hydrographic of Cyprus and the Appidhes source location.

Location : Pomos village, Paphos, Cyprus
Period: 1940s
Founders: British people
Function : Supply for domestic and irrigation use
Material : Concrete/stone
Type : Artificial system

After the 40s, people in the villages used to be supplied with drinking water through public fountains, which were located in the main square of the village. The source of this system were either spring, chain-of-well or a borehole as well as the source water could be used for domestic or irrigation purposes. One example of spring that still provides with drinking water the households of a village is the Teratsia spring in Paphos forest.

Climate.

Climate zone: Subtropical
Sub-climate: Mediterranean and Semi-arid type.

Climate & Weather Averages

High t°: 31.8°C
 Low t°: 14.9°C
 Mean t°: °C
 Precipitation: 12.3 mm
 Humidity: 64%
 Wind: 3.5 km/h
 Hottest month: August
 Coldest month: December
 Wettest month: December
 Windiest month: July
 Annual Rainfall: 320 mm per year

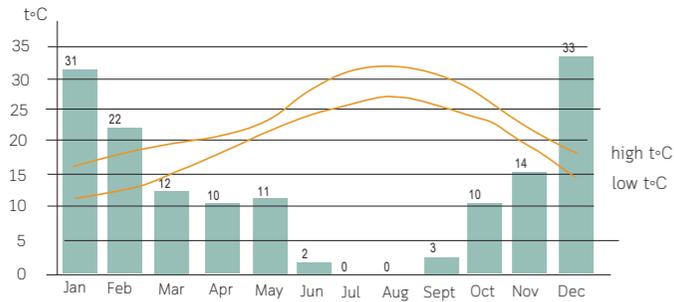


Figure 5 Temperature and amount of rainfall

Cyprus has an intense Mediterranean climate with the typical seasonal rhythm strongly marked with respect to temperature, precipitation and weather in general. Hot dry summers from mid-May to mid-September and rainy, rather changeable, winters from November to mid-March are separated by short autumn and spring seasons of rapid change in weather conditions.

The high altitude areas of the Troodos mountain range that dominates the central part of the island, corresponding to 18% of the total area. The mean annual precipitation is 690 mm.



Figure 6: Map of precipitation (mm)

The public taps.

First things first, some villages had springs, but not very close to the centre of the village during the beginning of 20th century. They used to provide their households with water, by filling water the jugs from the non-local spring and carrying them with a donkey to their house. It was their daily routine for their water supply.

However, during the British occupation (1878-1960AD) the villager's water supply scheme were essential, as the need for water had been increased and drastical actions had to be taken. In 40's, especially in 1948-1959 three noteworthy village's water supply scheme had been realized. Some smaller ones had been also made, in order to ensure the domestic use. One of them, it includes the village water scheme for Pomos village.

A village water supply scheme consists an invisible water system, which would include the development and protection of a source, the laying of a main pipe line to the village, and the installation of a piped distribution system such as storage tanks and public street fountains in the village. The water of this source could be used for domestic or irrigation purposes.

The water would be stored in tanks and then would be distributed to the village's taps. The storage tanks were circular and made of concrete and sometimes was elevated for more pressure.

Furthermore, cypriot artists have been influenced and inspired by the process of supplying water in the household through the public taps and they wrote poems and songs talking about this. Additionally, a traditional dance had been generated about the the water supplying from the fountain to the household, where the women used to wear their traditional costume.

For instance, a traditional song, which is written in the cypriot dialect is presented below:

Στείλε με μάνα μάνα στο νερό
Send me, mother, oh mother to (bring some) water

να σου το φέρω δροσερό
to bring you fresh water

τζι' αν δε στο φέρω φέρω καθαρό
And if I will not bring, bring you clean water

την νιότη μου να μεν χαρώ.
may I not enjoy my youth.

[...]

Στη βρύση μάνα μάνα μου έφτασα
After I got, mother, oh mother to the fountain

τζαι το σταμνί μου γέμωσα
and after I filled up my jug

τζι άξαφνα παραπάτησα
Suddenly I misstepped

τζαι το σταμνί μου τσάκισα.
and I broke my jug.
[...]

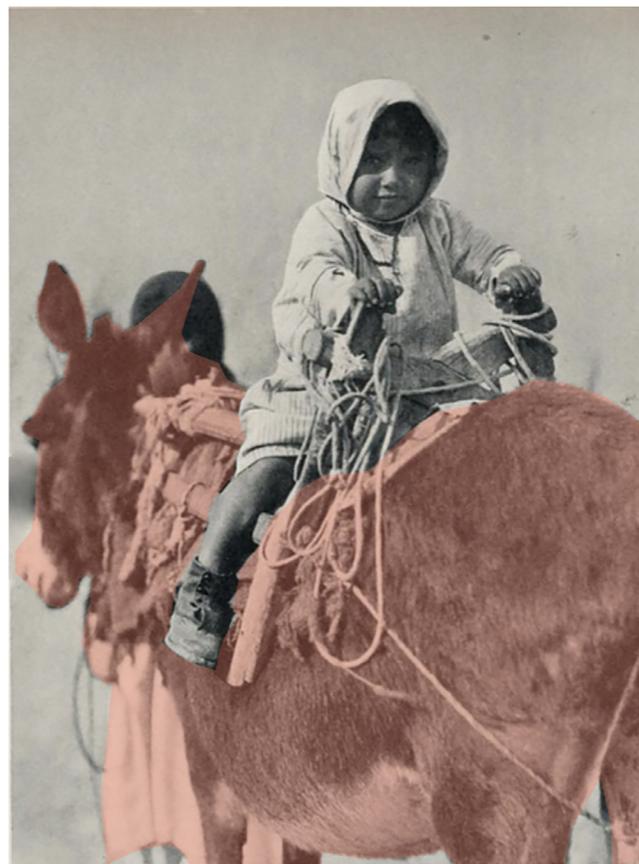


Figure 7: Donkey as a main mean of transportation for the carrying of jugs with water from the non-local spring to the house

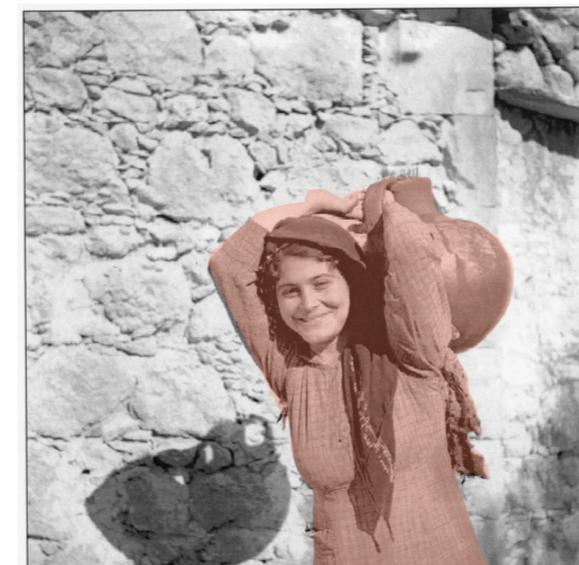


Figure 8: A young girl brings the jug with water in the house.

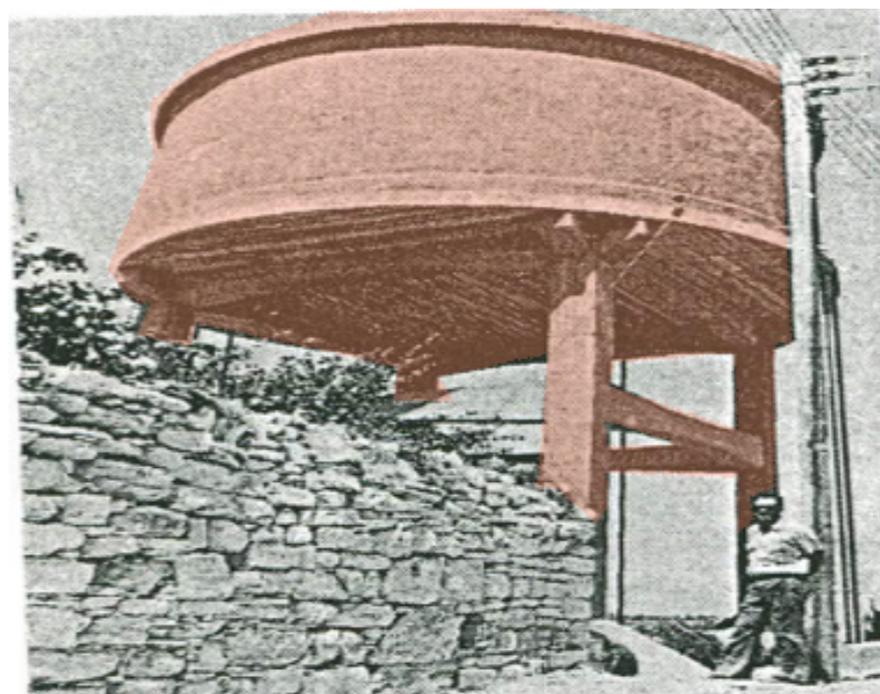


Figure 9: Circular deposit for the water storage.

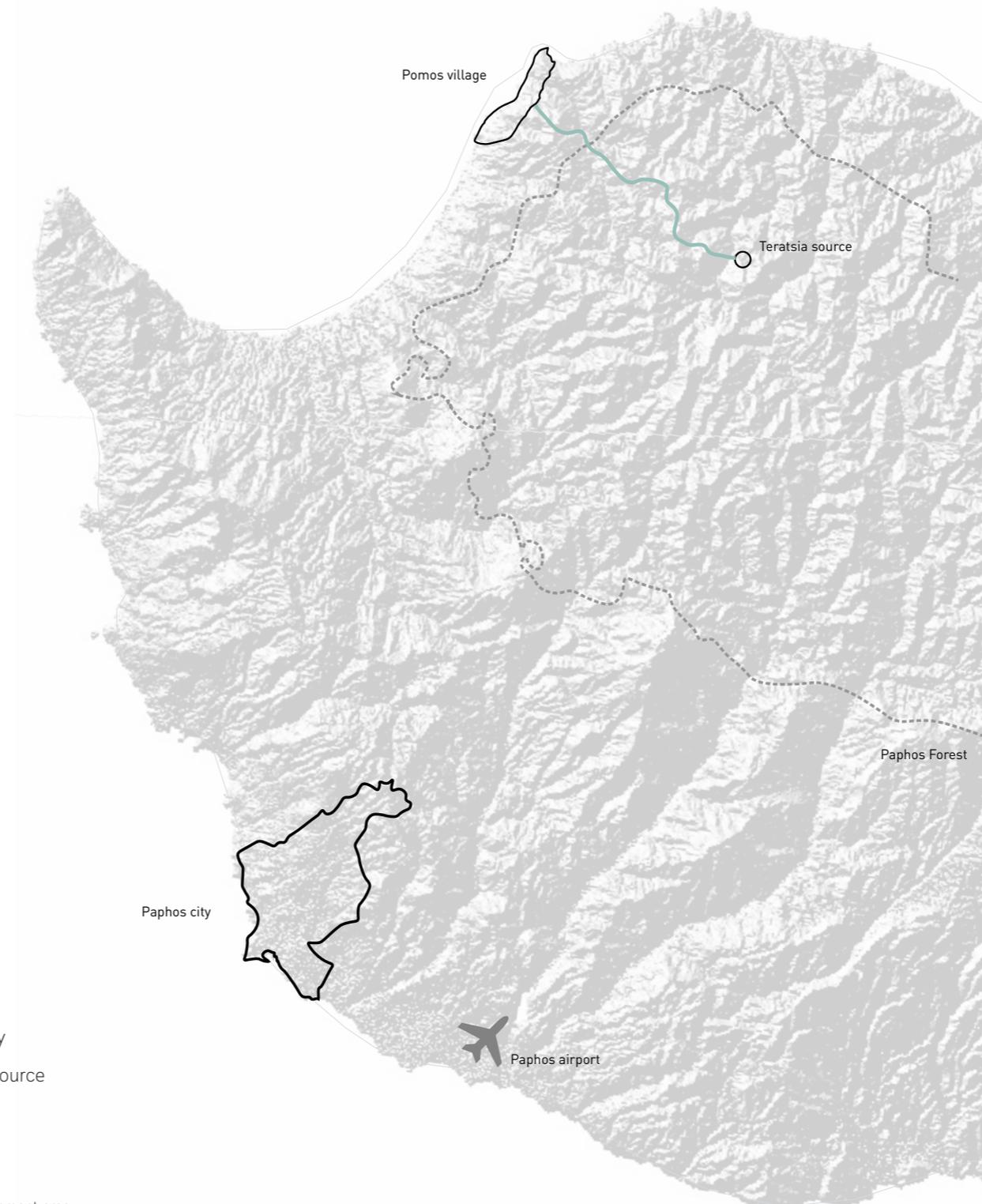
Catchment area.

The map illustrates the Teratsia source, close to the Paphos forest and the village (Pomos) that it used to supply, through underground pipes.

During the 40s, it was essential to ensure the water supply to the different villages of the Cyprus island. The water demands began increasing and the people needed more and more water, in order to cover their needs. Therefore, the authorities decided to supply with water the villages from the springs in the forest through underground pipes.

Specifically, each village used to have at least one street fountain in the main square, where consisted the meeting point of the village women, who were struggling with the water, in order to ensure that their house will be provided with enough water. In other words, they used to wake up from early morning to collect the water from the “meeting point”, where they meet the other housewives and would discuss about what was going on. They were responsible to bring the water to their household, through a circular clay jar-known as “stamna” in greek. Long queues would form around the communal fountains, since it was the only source of water.

Nevertheless, this water system had some issues. One of the main complication of the system, was the transport of pipes in the mountains.



- Paphos city
- Terratsia source



Figure 10: The catchment area.

Water System Diagram.

The diagram illustrates how the water system with the street fountains for drinking water supply used to work. Particularly, Paphos forest is represented with mountains, where the infiltration happens due to the rainfall and small streams are created, which end up in the sea.

The streams are gathered to the foot of the mountain where a spring is generated called "Teratsia". People have created the spring box, where the water passes through the limestone for purification purposes, which allows the water to be drinkable. Moving on, the water flows to the spring box, where is stored and then, through underground pipes ends up in the concrete built elevated reservoirs. which is elevated for more pressure.

Each village had its own elevated reservoirs. Then, the water flows through underground pipes to the street fountains, where the women used to collect it. The communal fountains were located in central points in the village, in order to be accessible by the locals. Housewives used to bring the water to their house, through clay traditional jugs and they usually store it in big clay jars.

In addition, during this period, the agriculture had been developed. Livadis, a permanent river was not seasonal then, and it ensured the water supply for the local agriculture aspect. Specifically, the agriculture were located in the two sides of the river. Therefore, a surface irrigation system, especially open channels were used to transfer the water from the river to the trees.

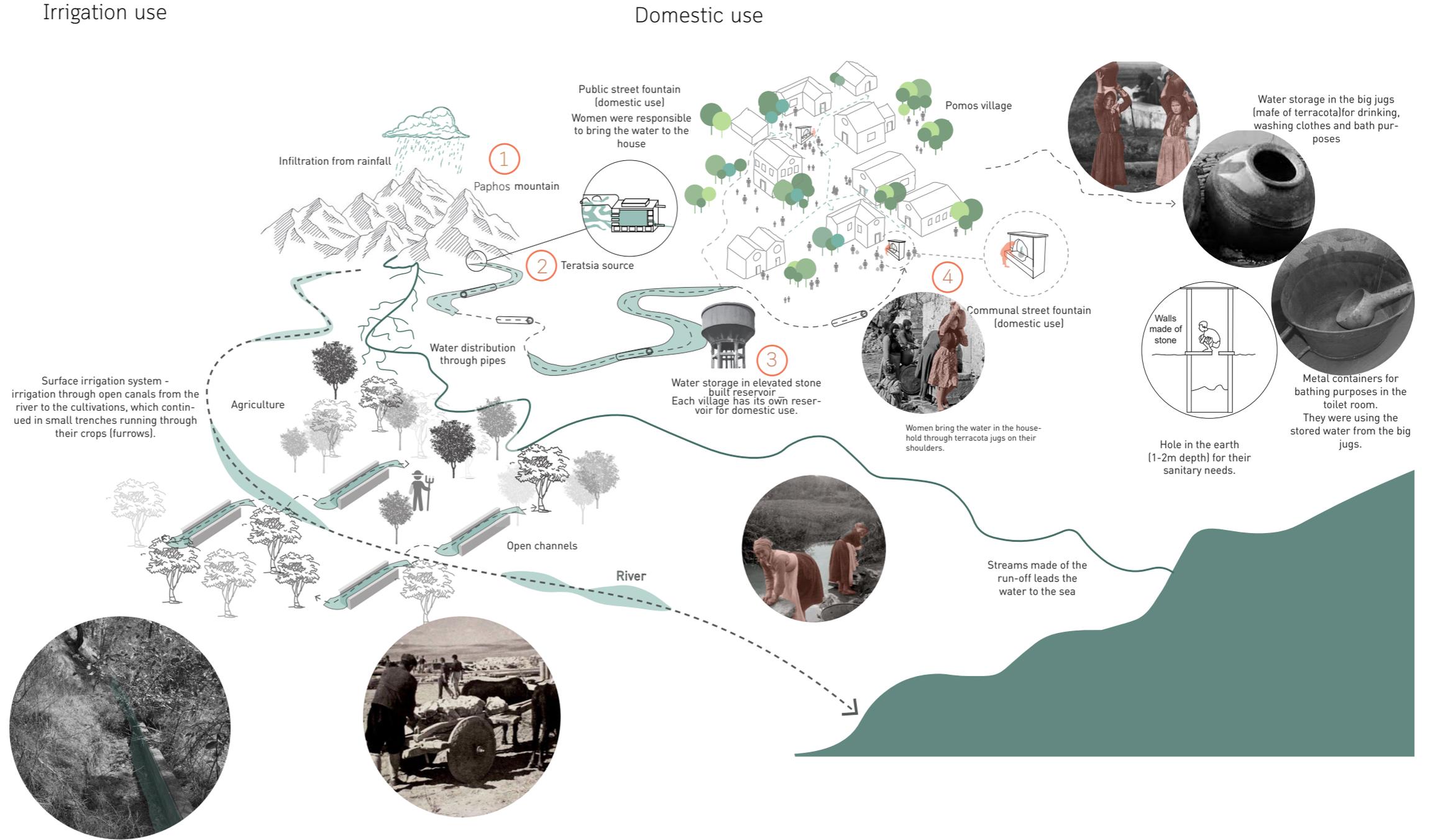


Figure 11: Diagram of communal fountains system.

Section.

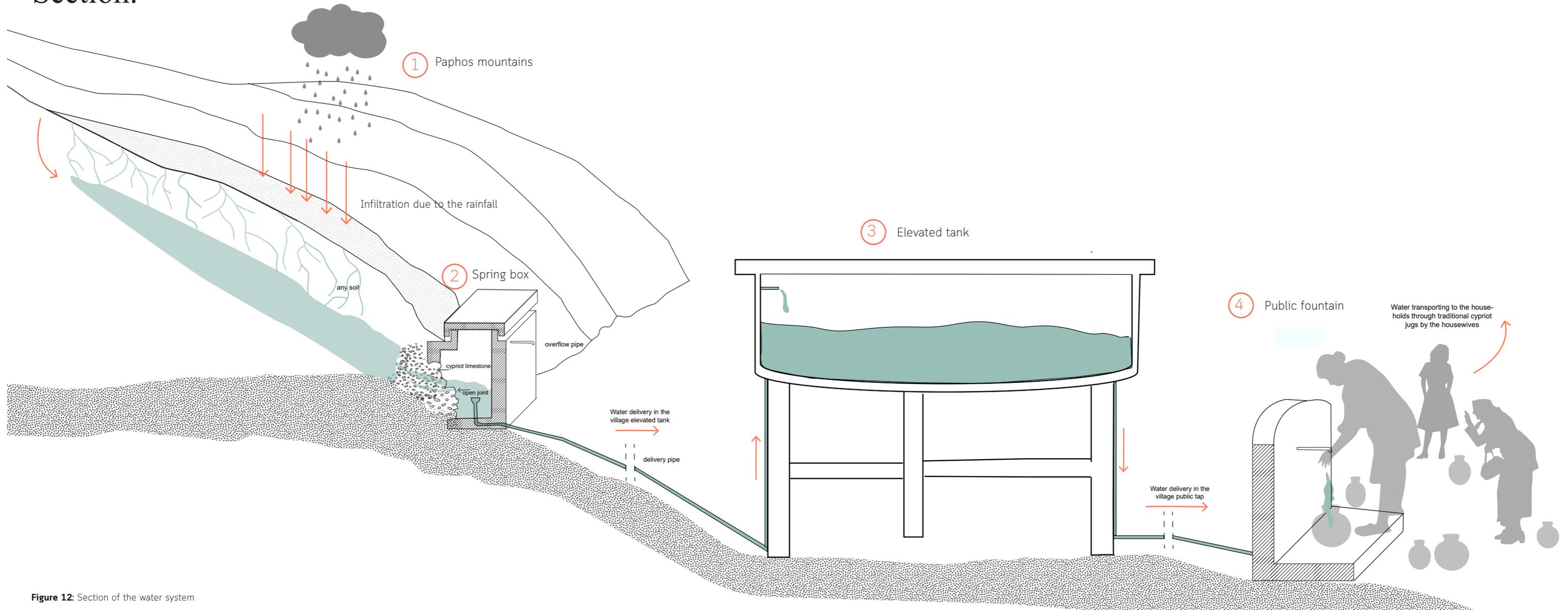


Figure 12: Section of the water system

Details

Traditional cypriot jug:

As it has already been mentioned, housewives used to bring the water from the public tap to their houses, through a traditional cypriot jug. The jug was made of clay and the main use of it was to transport the water. Its shape was especially designed to serve the transport purposes. The clay was well-known that it has the ability to keep the water cold.

As regard the shape of the jug, the bottom part was designed as a big spherical in order to store and keep cold the water. The upper part (neck) was taller and thinner than the bottom one, in order to prevent the spilling of water out. This had a handle that connects the bottom part to the middle of the neck. Additionally, the upper part was designed, in order to be convenient for the housewives to hold and carry it on their shoulder. There were many sizes of this traditional jugs.

Nevertheless, after bringing the water home, they used to store it into big clay jars, known as pitharia in greek. In this way, they save as much water as possible and the big jar kept the water cold.

Nowadays, a lot of people keep the big and small jars to their houses for decoration purposes, in order to keep the memory of this history alive.

Traditional street fountain

As it has already been stated, each village had at least one fountain in the main square of the village for the water supply. Most of the fountains were made of cypriot stone (limestone) and the upper part, where the tap is located, had arch shape.

People used to build arched hallways, doors, opening and archway in their households. This feature express the wealthy of some people, because it cost more money to form the arch. Villages used to say that if the arch was used, they call the house "palace". However, people applied the arch shape on the fountains as well. It consists an artistic approach.



Figure 13: Big traditional clay jars for water storing purposes.

Conclusion.

The concern about the water supply in the Mediterranean island of Cyprus consists a controversial topic from the first settlement of the civilisation. Cypriot people are quite familiar to a drought, since it is comprised one of the main features of this country.

Moreover, it is well-known that this island had always water scarcity issues and countless techniques had been carried out for supplying water. One of these systems are the communal fountains in the main squares of the villages. They consist symbol of the civilization and part of the traditional water system of the island through the years. Thank to the street taps, the households had been supplied with accessible drinking water within the village, compared to the previous period when people had to carry the water through donkeys from the non-local spring.

Architectural value : The communal fountains in the villages are symbol of the period that British occupied the island. Most of them have an arch in their upper part and they were mostly made of cypriot limestone. This technique was applied in the households of the villages later as a reference to the fountains. For example, the arch was applied in the entrance of the house or in the interior of the house for decoration purposes. Additionally, people used to introduce fountains in their yards as a symbol of this period and the was was used to water their garden.

Functional value: Before the introduction of the street taps in the villages, people used to collect the water from the non-local springs far away from the village and they used to transferred it through donkeys in traditional jugs. The fountains was an efficient way for the people to ensure the water supply, since the taps were really close to their houses. Even though, nowadays the households in the villages had been already provided by water, the street fountains are still in use. In other words, the citizens of the town tend to provide their houses with the public fountain's water, since the quality is much better than the one in their houses. The water from

the public tap is crystal clear, directly from the spring and without chemicals.

Landscape value: The water were collected in the spring through the landscape, especially the streams as well as from the infiltration due to the rainfall. In this way, the water was gathered in the spring box, and from there it was delivered in the elevated tanks through underground tanks, and then to the street fountains. Moreover, sometimes the hilly landscape of the area complicated the introduction of pipes for transferring the water, either to the tank ,or to the village.

Social value: As mentioned above, the housewives were in charge of bringing the water in the households. Once they were waiting in the queue for collecting the water, they were meeting and discussing with the other women their news. It was a way of socializing for them and several friendships have been developed in these areas.

Lessons to learn: However, the water system of the public tap consist a fundamental trait of the village's development, especially during the British occupation. What I mean, the villages had been developed around the public fountains since they were located in the main squares and consist the only source of water on that days. There was limited water amount for each person, because the authorities were trying to prevent water wasting. The public taps comprised a social fact for the locals, since as it has been already stressed, the housewives were responsible for water bringing in the household. Thus, the fountains were the meeting point with the other women of the village, were they had discussion and were developing friendships. The process of bringing water comprised their social interaction with other people, apart from their husband. While, the role of the husband was to bring income to the household, by working to the agriculture aspect.

In this way, we can perceive that this water system had an

positive impact in people's social life. In other words, this kind of water system consists a way to meet other human-beings in the village and have interaction with them, while they were waiting to collect the water.

Last, but not least, as it is already mentioned, some of the public taps are not in use anymore, since the authorities interrupt their flow for avoiding water consuming after the water distribution to each house. However, the water through the spring is still appreciated by the Cypriots, since consists trustworthy water source with satisfying quality for people's health.



Figure 14: The housewives are discussing while they collect water.

References.

Project : Street communal fountains, Cyprus

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Kotsila P. (2010), September, The socio-environmental history of water development and management in the Republic of Cyprus.

Stevenson P. (2013), August, 60 years of running water

Interviews with village residents.

Figure 1: Remains of the old fountain in Choullou village, Paphos., [Graph], Retrieved from <https://www.cyprusisland.net/cyprus-villages/paphos/choulou-village-paphos>

Figure 2: Cyprus location withing Europe,[Graph]. Drawin by author.

Figure 3: Cyprus neighboring countries, [Graph], Drawn by author

Figure 4: Hydrographic of Cyprus and the Appidhes location. [Graph], Drawn by author

Figure 5: Temperarture and amount of rainfall [Chart], Retrieved from <http://environ.chemeng.ntua.gr/ineco/Default.aspx?t=288>

Figure 6: Map of precipitation, [Graph], Retrieved from <http://environ.chemeng.ntua.gr/ineco/Default.aspx?t=288>

Figure 7: Donkey as a main mean of transportation for the carrying of jugs with water from the non-local spring to the house, [Image], Retrieved from <http://pinterest.com>

Figure 8: A young girl brings the jug with water in the house.[image], Retrieved from <https://cyprus-mail.com/2013/08/25/60-years-of-running-water/>

Figure 9: Circular deposit for the water storage.[image], Retrieved from <https://cyprus-mail.com/2013/08/25/60-years-of-running-water/>

Figure 10: The catchment area, [Image], Drawn by the author.

Figure 11: Diagram of communal fountain system, [Image], Drawn by author.

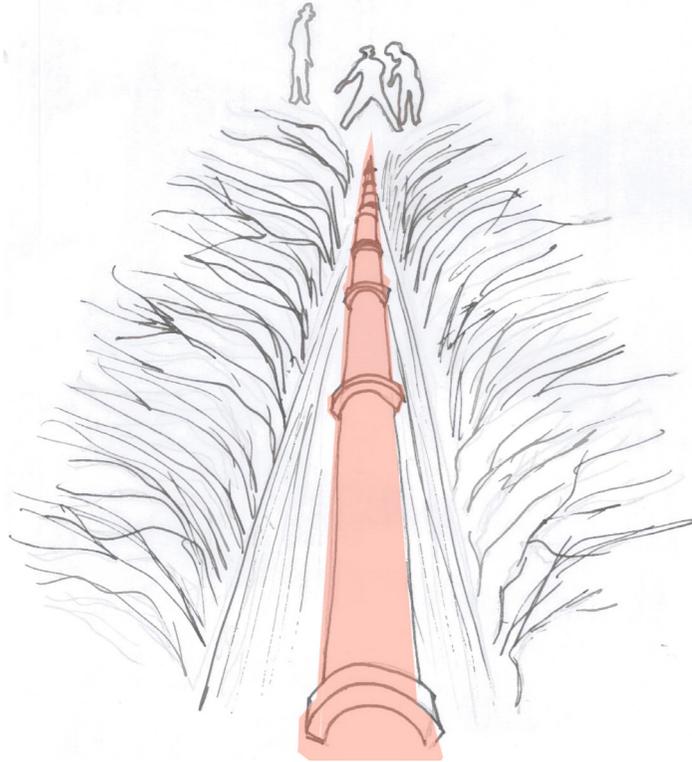
Introducing pipes for the water distribution from the spring to the villages.. [Image]. Retrieved from <https://cyprus-mail.com/2013/08/25/60-years-of-running-water/>

Figure 12: Section of the water system, [Image], Drawn by the author.

Figure 13: Big traditional clay jars for water storing purposes,[Image] Taken by the author.

Figure 14: The housewives are discussing while they collect water, [image], Retrieved from <https://cyprus-mail.com/2013/08/25/60-years-of-running-water/>

Waterworks.



Project Name: Street communal fountains, Paphos, Cyprus

Climate: Mediterranean & Semi-arid type

Year: 40s

Water type: drinkable, spring water

Landscape Type: Mountains

Altitude: m a.s.l. (meters above sea level)

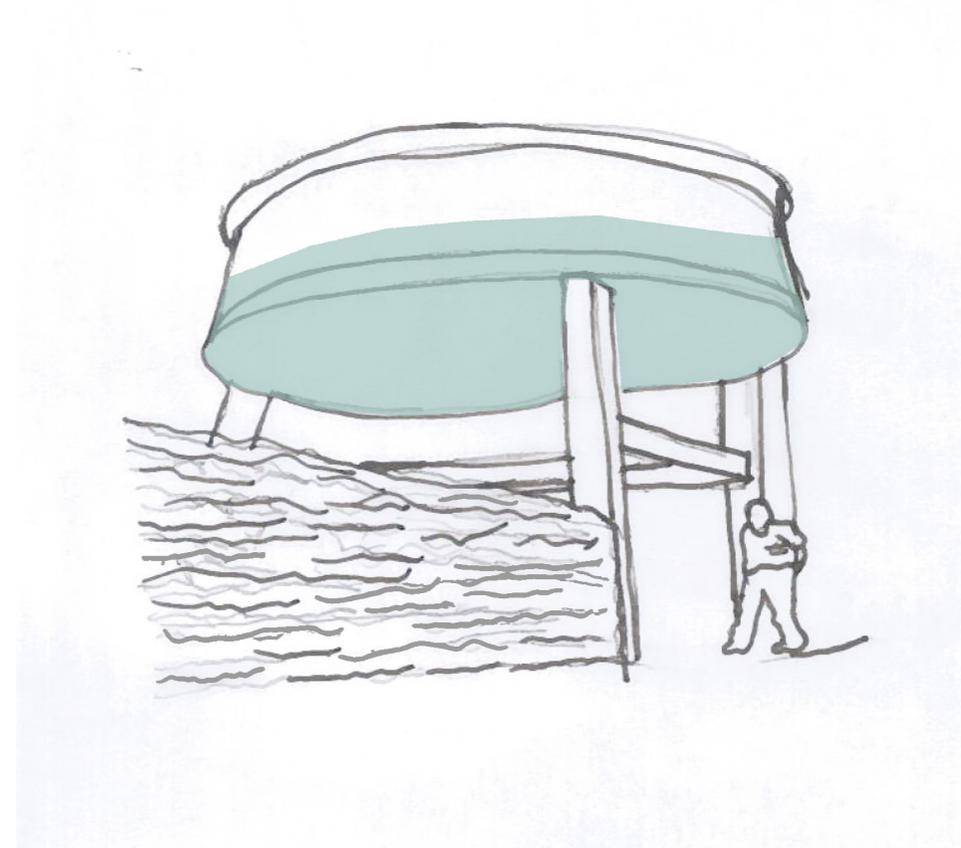
Soil condition: Sandy, clay etc

Materials: Timber, bricks etc

Period: Fixed

Form: line

Use or Functions: Water delivery



Project Name: Street communal fountains, Paphos, Cyprus

Climate: Mediterranean & Semi-arid type

Year: 40s

Water type: drinkable, spring water

Landscape Type: Mountains

Altitude: m a.s.l. (meters above sea level)

Soil condition: Sandy, clay etc

Materials: Concrete

Period: Fixed

Form: Surface

Use or Functions: Water collection

Water stories.



Project Name: Street communal fountains, Paphos, Cyprus

Climate: Mediterranean & Semi-arid type

Year: 1952-1954

Water type: drinkable, spring water

Landscape Type: Mountains

Meaning: Cover the basic needs, socializing, recreation

Water workers and users: Residents

Accessibility : Public

Materials: Stone

Period: Fixed

Form: Point

Use or Functions: to drink



Project Name: Street communal fountains, Paphos, Cyprus

Climate: Mediterranean & Semi-arid type

Year: 1952-1954

Water type: drinkable, spring water

Landscape Type: Mountains

Meaning: Cover the basic needs, socializing, recreation

Water workers and users: Residents

Accessibility : Public

Materials: Stone

Period: Fixed

Form: Point

Use or Functions: to drink