

Water Shortage

Chtouka Ait Baha in Morocco as a case study

Water is a major constituent of all living matter. Humans as well as all living things on earth cannot sustain their existence without water. Strangely, though, despite the limited amount of water on earth, humans tend to treat it as if there will always be enough of it for everyone anytime anywhere. As a result, the world today is dealing with a water crisis. Morocco is one of the most water-scarce countries in the world. Chtouka, a region in the south of Morocco, is no exception. Due to various factors including climate change, unsustainable agricultural practices, and the rapid population growth, Chtouka is dealing with a serious water shortage.



Climate change is one of the main factors that has led to water shortage in Chtouka. In the recent years, the region has seen an apparent change in its climate, mainly marked by a considerable decline in annual rainfall. Given the fact that the region has few water resources, it's population, especially those who live in rural areas and whose main source of income is rainfed agriculture, depend on rainwater to carry out their agricultural activities and fulfil their demand for water. Rain scarcity, therefore, affects negatively the region's economy mainly because it heavily relies on agriculture. Moreover, the climate in the region has become unstable lately due to climate change. As a result, there have been frequent floods that have led to the erosion and degradation of soil. This leads to a decline in the shortage capacity of dams due to the accumulation of sludge. In a word, water availability in Chtouka Ait Baha region will significantly decrease, primarily because of climate change.

Irrational consumption of water by the agricultural sector is considered another major reason behind water shortage in Chtouka. As mentioned previously, agriculture is the core activity of the region's economy. Chtouka is home for high-productivity farms. These farms consume large quantities of water each year. Besides, their main source of water is underground water aquifers,

which are, simultaneously, the main source of potable water in the region. This brings us to the problem of unequal distribution of water share. It is well known that the agricultural sector alone consumes more than 90% of the water used throughout the kingdom. Further, high productivity farms not only drain water resources, they also contribute to the pollution of downstream ecosystems as a result of their extensive use of fertilizers and pesticides. Worse, some farms tend to exploit groundwater without any legal authorization from the local authorities. That is to say, these farms hardly pay for the water they use, which makes them more likely to consume water resources irrationally and greedily, knowing that their only concern is profit.

Over the last few years, Chtouka region has seen a significant increase in population. This is due to the fact that Chtouka keeps providing job opportunities thanks to the agricultural sector. Since most of these jobs require no skills, people come from all over the country to settle down and work in the region. The rise in population leads to an increase in demand for water. This increase in water demand has mounted pressure on already few and scarce water resources. Consequently, there have been constant cut-offs in water supply during night-time throughout the region in order to minimize domestic water consumption. In addition, Chtouka, as is the case in the rest of the country, has a weak infrastructure marked by the lack of functioning sanitation networks and wastewater treatment systems. This leads to the pollution of already scarce water resources, namely groundwater. Furthermore, very little is done locally to make people aware of the water crisis the region is confronting. Therefore, in Chtouka, like in most places of the world, water is treated in wasteful ways.

In conclusion, Chtouka has become one of the most water stressed areas in Morocco due to the factors aforementioned. Therefore, serious measures need be taken urgently in order to face the challenges related to water shortage. These measures should take into account providing water management techniques as well as newer and more efficient water use patterns, preserving water resources from pollution, implementing better environmental practices by farmers for a sustainable agriculture, and finally, sensitising people on the importance of water preservation so that they can value it more. The right policies and incentives should work well to protect our remaining resources of water and achieve sustainable development. Thankfully, though, hope seems to arise when the government launched the seawater desalination project, which mainly

aims at supplying abundant amounts of water to cover the whole region's various needs. It has been frequently reported that the project is in its final stages.