

Aman Iman

by Bruno Zanzottera

The importance of water in the history of mankind and the problems caused by its lack, through a geography of global climate and political changes.

'La vache qui pleure' (the cow that cries) is a Neolithic graffito in the territory of the Tassili n'Ajjer, a vast plateau in the southeast of Algeria on the border of Libya, covering an area of 72,000 square kilometers. Here, the Sahara is the custodian of a treasure of rock art comprising 15,000 drawings, engravings, and paintings listed as a UNESCO heritage site due to its universal value. An open-air museum that narrates the processes of climate change, fauna, and human life. The most spectacular and perhaps the most significant engraving is that of the weeping cow. The tear that seems to fall from the snout of one of the cows, engraved in a drinking position, has given rise to various interpretations and legends. A group of cows grazing in the area went to their usual watering hole to drink, but due to the drought, they found it dramatically dry. The poor, desperate beasts wept, aware of their end. The artist, 7000 years ago, stylizing the scene that he entrusted to the rock, with a few, precise and clean strokes, expresses all the tragic nature of the event and its meaning."

DROUGHT AND DESERTIFICATION

The heavily man-made climate is changing the water geography of the planet, disrupting the stability of water cycles which have remained largely unchanged for over 11,000 years. Among the most obvious effects linked to rising temperatures are increasingly long and intense droughts with the consequent enlargement of desert territories.

(Afghanistan 2022), Shir Ali an elderly Kuchi - Farjayan observes his herd near his tent in a semi-desert area in the northern province of Kunduz. Because of the drought, this family is forced to travel several kilometres every day with donkeys to get water for themselves and their animals, who feed on a few dried up grass stalks.



'Aman Iman!' say the Tuaregs of the Sahara, 'Water is Life!'. In the raw wisdom of the inhabitants of the desert is what man has always felt within himself, before modern science came to understand it. Life on earth came into being thanks to water. Our bodies are 70 per cent water. The planet is 70 per cent water; no living thing can exist without it.

Although there are 1,390 million cubic kilometers of water on the planet, only 2.5% is fresh water, mostly in the form of ice in the polar ice caps. The remaining 97.5% is salt water.

Therefore, human beings only have 93,000 cubic kilometers at their disposal, or about 0.5% of the total. While the whole world is focused on the analysis of energy resources as a major factor in wars, little is said about water, the scarcity of which could change the destiny of future global conflicts. UNESCO, in a report with the emblematic title 'The United Nations world water development report 2019, leaving no one behind', estimated that 2.1 billion people in the world lack access to safe drinking water and 4.5 billion lack safe sanitation.

After the term 'land grabbing', the policy by which many rich countries appropriate territories of other nations for their own food needs, today we can safely speak of 'water grabbing'. Its effects are devastating. More and more states are appropriating aquifers from small local communities or neighbouring nations.

But the cause of the water shortage is not only the world's geopolitical situation, ongoing climate change is also responsible for the droughts that are making various parts of the world increasingly complicated for survival.

Outlining a geography of global change, recounting the earth's changing, its transformations and the inescapable connection between natural, economic and social phenomena, choosing water as the key to interpretation, today becomes necessary to put all the pieces of the puzzle together.

This project on the importance of water in the history of humanity on our planet has developed over several years of research.



DAMS AND FLOODING

The construction of ever more gigantic dams along rivers bathing different nations creates international tensions as well as social and environmental disasters. The town of Hasanköy, lying along the banks of the Tigris in Turkish Kurdistan and its 12,000 years of history, has disappeared under water because of the lake created by the Ilisu dam, 85 km to the south.

(Turkey 2019), bars that have put their tables in the water in front of the town of Hasanköy that will be flooded by the lake created by the Ilisu dam.



rites of fertility.

Since the beginning of civilisation, water has been the main element for fertilising Mother Earth. Every year in Peru, the ritual of the Señor de Qoyllur Ri'ti is celebrated. The festivity is very important for the religious syncretism between Christianity and the Andean world with the fertility rituals practised by pre-Columbian populations. During the ceremony, groups of Ukukus (mythical beings, the offspring of a male lama and an Inca princess) climb the Sinakara glacier at over 5,000 m. Until a few years ago, these characters carried huge blocks of ice on their shoulders to irrigate their lands with the mountain's sacred water, directly linking them to Andean fertility rituals. Today this practice has been banned due to the rapid disappearance of the ice. (Peru 2012), pilgrims from the 8 original nations carry crosses at the foot of the sacred Sinakara glacier on the second day of the pilgrimage.

WARS FOR WATER

The wars of the 21st century are already being fought over the control of water resources. The search for water for various needs, from drinking to agriculture and industry will increasingly become the leitmotif of numerous political tensions that will recur with every dry season. The Middle East and North Africa, already prone to political instability, face a serious shortage of water, making them the areas most at risk.

(Palestine, 2011), Palestinian youths in front of the Israeli wall that completely surrounds the village of Qalquilya. Amnesty International states that in more than forty years of occupation of the Palestinian territories Israel has overexploited Palestinian water resources, neglected the water and sewage infrastructure in the territories, and used them as a dumping ground for its waste, causing damage to groundwater and the environment"



WATERWAYS

In vast territories where the only open spaces are the rivers, real wounds traced by water in the forest, these became highways for the expansion of populations, the birth of agriculture and consequent great civilisations. Waterways consistently revealed the secrets of the Dark Continent to European explorers, paving the way for subsequent colonization.

(Democratic Republic of Congo 2017), a dugout canoe on the Congo River west of Kisangani. Between 1876 and 1877 the British journalist Henry Morton Stanley, on a mission for the King of Belgium Leopold II, travelled most of the river, reaching its mouth after a journey of 5,000 km.





FROM PASTORS TO FISHERMEN

The nomadic Turkana pastoralists occupy the territories around the lake of the same name in northern Kenya, a mass of sharp black lava rocks, partly covered with ash and sand, where the temperature often exceeds 50° and the rainfall does not exceed 200 mm per year. In such an environment, total mobility is the only chance of survival. In recent years, a prolonged period of drought caused by climate change has led herders to lose up to 80% of their herds, forcing them to transition into fishermen, a situation that is absolutely deplorable for a nomadic herder. (Kenya 2023), a young Turkana woman cleans the fish caught in the lake by her husband.

MELTING OF GLACIERS

In the last 40 years, the melting of the polar ice caps has multiplied by a factor of 4. This leads to an inevitable rise in sea levels with many cities and territories at risk of going under water in the not too long term. In addition to this, there is the rapid shrinking of all the world's glaciers, from the Himalayas to the Alps. Among them, the ones most at risk of disappearing within a few decades are the African glaciers of Kilimajaro, Rwenzori and Mount Kenya, which are located in the equatorial belt.

(Tanzania 2008), what remains of the Kilimanjaro glaciers that once covered the entire crater summit.





HERDERS AND FARMERS

The Sahel, the gigantic region that stretches south of the Sahara, has historically experienced unstable rainfall patterns. The problem has worsened in recent decades due to climate change, which is shifting the desert boundary further and further south. The Niger River, the great waterway that runs through much of the Sahelian region, also suffers from this. Its inland delta in Malian territory, which with its seasonal flooding allowed the populations of nomadic herders and farmers to coexist, is increasingly finding it difficult to guarantee enough water for all, with the consequent exacerbation of tensions between the various ethnic groups. During the annual transhumance, the Peul who cross the fields of the inner Niger delta with hundreds of thousands of cattle, after the farmers have made their harvests, risk fuelling tribal clashes into which Islamic extremist groups now also creep.

On the left: (Mali 2006), a young Peul herder leads his cattle across the Niger river during the current transhumance.

On the right: (Mali 2006), Songhay women harvesting millet in the inner Niger delta.

AQUEDUCTS FOR A PRIMARY NEED

The emergence of empires with large concentrations of inhabitants in urban areas posed the problem of water supply. In its first centuries, Rome used the Tiber for its own needs, but the growth of inhabitants soon imposed courageous choices. "The monumental aqueducts, with elevated sections that allowed water to traverse entire valleys, were engineering works that amazed the world even many centuries after their construction. (Italy 2022), the ruins, in the Aqueduct Park, of one of the many aqueducts that supplied Rome.



WATER FOR ELEPHANTS

In Hwange National Park, the largest in Zimbabwe, there are no rivers and during the dry season the water holes filled by the increasingly scarce rains dry up inexorably. In the past, thirsty elephants migrated to the Zambezi basin in search of water, but now, with the increase in population, the migratory corridors have been occupied by villages and crops. In order to keep the pachyderms inside the park all year round, the Zimbabwe Parks & Wildlife Authority has dug a series of wells to pump water into the parched ponds.

(Zimbabwe, 2015), Mark Butcher, a former Zimbabwe Parks & Wildlife Authority ranger, personally operates the diesel engines that pump the water.





SACRED RIVERS

The waters of rivers have been essential to our civilisation. Their importance has only increased over time, and some of them have attained a sacred status. The Jordan River, where Joshua, the successor of Moses, led the Hebrews to the Promised Land and in whose waters Jesus was baptised, is the destination of numerous pilgrimages.

(Israel 2015), a group of Brazilian evangelical pilgrims are baptised in the waters of the Jordan River at the place where St. John the Baptist supposedly baptised Jesus.



WATER AND ENERGY

Water and energy are closely related. The former is indispensable for every stage of energy production and the latter is indispensable for water treatment and pumping systems. The revolution in the use of water to produce energy occurred when turbines stopped being used as a modern version of the mill wheel and were used to produce electricity.

(Italy 2022), the turbines of the cave hydroelectric power plant at Entracque in Piedmont.



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(Afghanistan 2022), Shirin Aigha and Bismillah, two Kuchi boys collect water for their flock in the northern province of Kunduz. Because of the drought they are forced to buy water from tanker trucks and store it in this small reservoir they have made.

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(Zimbabwe 2015), this baby elephant did not survive the dry season in Hwange National Park in Zimbabwe.





WATER IN ART

Rivers and water have always satisfied our spirit and inspired our art. Rivers and torrents are recurring pictorial elements in the art of many civilizations, from the Egyptians to the Minoan civilization, to name but a few.

(Italy 2021), the mosaic with the baptism of Christ in the waters of the River Jordan, on the dome of the Baptistery of the Aryans in Ravenna.

ENDANGERED LAKES

The size and depth of a lake can vary over time and for different reasons. Through natural processes, lakes that reach the end of their life cycle fill with sediment and evolve into a terrestrial system. But human influence can accelerate the process. Lakes such as Lake Chad or the Aral Sea are disappearing because of massive withdrawals for irrigation.

(Australia 2007), Lake Eyre is the largest lake on the continent and one of the largest salt lakes in the world. It covers an area of about 9,500 km² when it is at its largest, but due to repeated droughts it is turning into a giant salt crust.



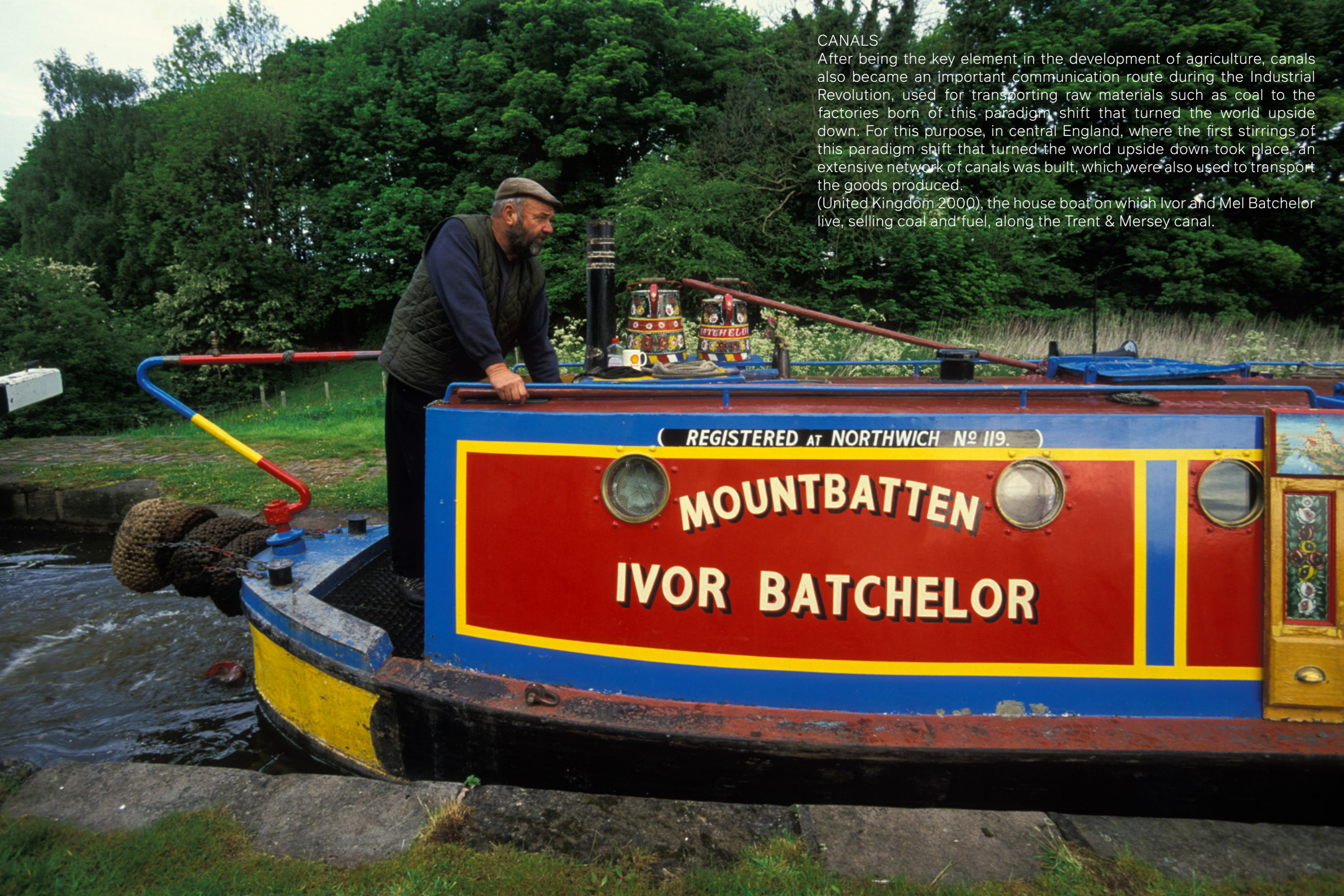


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Left: (Palestine 2011), Mohammed Salichud whose well, which was used to irrigate his land and that of the entire community in the area around the town of Toubas, has been destroyed by the Israeli army.

Right: (Palestine 2011), Israeli settlers bathe in a spring water well owned by the Palestinian villagers of Nabih Saleh.



CANALS

After being the key element in the development of agriculture, canals also became an important communication route during the Industrial Revolution, used for transporting raw materials such as coal to the factories born of this paradigm shift that turned the world upside down. For this purpose, in central England, where the first stirrings of this paradigm shift that turned the world upside down took place, an extensive network of canals was built, which were also used to transport the goods produced.

(United Kingdom 2000), the house boat on which Ivor and Mel Batchelor live, selling coal and fuel, along the Trent & Mersey canal.



THE NILE: THE BIRTH OF A CIVILISATION

The waters of the Nile allowed for the birth of agriculture in a semi-desert territory, and it was the careful and intelligent management of these waters by the ancient Egyptians that enabled the development of Egyptian civilization. For the pharaohs, the river immediately became the pivot around which the entire society revolved. The very name of the area 'Egypt' is said to derive from Agpt, a term used to indicate the land covered by the waters that flooded from the river during the floods.

(Italy 2023), a painting on papyrus depicting a boat on the Nile and the sowing of a field, kept at the Egyptian Museum in Turin.



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(Afghanistan 2022), a flock of sheep of Kuchi shepherds is moving across the Shiwa Plateau. Families who traditionally spent the entire summer here, now find themselves leaving as early as the end of July and beginning of August due to the depletion of pastures.



DROUGHTS IN WETLANDS

The Pantanal region is the largest wetland in Latin America and is home to the greatest biodiversity in the world, but due to drought and fires, its situation has long been critical. Over the last three decades, Brazil has lost about 15.7% of its water surface, the equivalent of more than 3.1 million hectares. All biomes, those perfect ecosystems such as the Amazon and the Mata Atlantica, have recorded losses, but the most worrying situation is undoubtedly that of the Pantanal, where, due to drought and fires, there has been a dramatic reduction in the surface area covered by water. The paradox is that traditionally the Pantanal is characterised by being marshy, but since 1985 it has lost 74% of its water surface.

(Brazil 2011), caimans in a pond in the territory of the fazenda San Josè, in the background some boyaderos (cowboys).



DAMS AND FLOODING

The construction of increasingly gigantic dams along rivers bathing different nations creates international tensions as well as social and environmental disasters. The small town of Hasankeyf lying along the banks of the Tigris in Turkish Kurdistan and its 12,000-year history has disappeared under water. Its end, along with that of 199 other villages - with their approximately 80 thousand inhabitants - was decreed by the Turkish government, which completed the construction of the enormous Ilisu dam, 85 km further south. But to the detriment of the local populations who were forced to abandon their homes and fields without adequate compensation.

(Turkey 2021), Mahsum Konagi in front of one of the submerged houses in the village of Hosgeldiniz (Sucekene) where he lived.



METROPOLIS WITHOUT WATER

At Cape Town, the third most populous city in South Africa, there has been a very severe drought for the past three years, mainly due to climate change, which, combined with corruption, political instability and a growing population, has caused a severe water emergency. Day Zero water was scheduled for April 2018, but thanks to restrictions imposed by the municipality and light rains in the last two months, time has been gained. The problem, however, has not been solved: the dams have no longer reached the appropriate water level and restrictions on consumption are still in place. The South African city has become an example: climate change is affecting the entire globe, and it is thought that Cape Town could be the first in a long series of metropolises that could face the same problems.

Left: (South Africa 2018), Theewaterskloof, the largest of the six reservoirs supplying the city, has reached one tenth of its total capacity of 480 billion litres.

Right: (South Africa 2018), queue of people for water in Philippi township. Most of the shacks in this informal settlement have no running water and even the public fountains have been restricted.



AGRICULTURE AND FOOD SAFETY

Agriculture is responsible for about 75% of the world's water withdrawal. Against a backdrop of climate change, a rapidly growing population and intensive agriculture, it is questionable whether there will be enough water in the future to sustain agriculture and animal husbandry on a global scale. Moreover, as the phasing out of fossil fuels progresses, there is a growing trend of cultivating more crops to produce biofuels. (Brazil 2009), sugarcane harvest in the northeast region of Brazil, the world's leading producer of sugarcane ethanol.



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