



A cry for water



Photos by: Federico Borella, Mirko Cecchi, Alessandro Gandolfi, Vittoria Lorenzetti, Sergio Ramazzotti, Pietro Romeo, Bruno Zanzottera



SOUTH AFRICA

The Theewaterkloof reservoir, which supplies Cape Town with the majority of its water supply, is only half full. A few years ago the South African metropolis risked becoming the world's first city to reach Day Zero, the moment when the taps in people's homes run dry. The authorities hastily introduced severe limitations on the use of water to prevent this from happening. Today the situation is slightly better but the problems are far from being resolved.



DROUGHT IS WORSENING EVERY YEAR AND EFFECTIVE WATER RESOURCE MANAGEMENT IS URGENTLY NEEDED

Nowadays few still refuse to accept the reality of climate change and its consequences. Understanding the full extent to which it is caused solely by humankind's polluting activities, however, is more complicated.

Yet while we reflect on that issue, the climate continues to change rapidly and the devastating effects of this include periods of drought that are lasting longer and longer. In the Sahara desert there is a Neolithic cave engraving that, viewed nowadays, appears to have been prophetic: "The crying cow" is located in Tassili n'Ajjer, the vast highland plateau in southeast Algeria. In this depiction a tear appears to be falling from the face of one of the cows engraved into the rock, a tear

that many interpret as a cry for a doomed future. According to local tradition, when the herd went to drink at their usual waterhole they found it dry because of drought: the cows therefore began to cry desperately, fully aware of their imminent demise.

Seven thousand years ago that rock artist managed to express all the tragedy of the scene, while also summarising in an image the transformation of an area once rich in water and vegetation into what is now the Sahara desert. Could same destiny now await the entire planet?

This project is a collection of images by various photographers, bearing witness to the effects of droughts all over the world. The project also illustrates some potential solutions for effective water resource management.

The pictures were taken between 2007 and 2021.



ITALY

Nemo's Garden, Noli (Liguria). Underwater it is possible to create conditions that are highly favourable for agriculture: constant temperatures, high humidity levels and an absence of insects and parasites (thereby avoiding the need to use pesticides). Farming takes place in biospheres, semi-circular PVC structures that are filled with compressed air and anchored to the seabed. Thanks to the temperature differences between the air inside the biosphere and seawater around the structure, the water within the biosphere evaporates and condenses on its interior surfaces. Farming without having to use land could be a potential solution when drought makes regular farmland unusable.



BURKINA FASO

The Saisonnière Centre in Ouagadougou promotes urban farming with small “domestic” gardens that optimise the use of water and space.

BURKINA FASO

A water collection tank in the fields of the Farmers' Union of Loumbila, an experimental site where new techniques are being trialled to optimize the use of water, which is always scarce in this area.





ITALY

Bagno di Romagna (Forlì-Cesena). The Ridracoli dam, which since the 1980s has been supplying water to more than a million people on the Riviera Romagnola and the plains of the provinces of Forlì-Cesena, Ravenna and Rimini. Italy is increasingly feeling the painful squeeze of aridity and droughts. Emilia-Romagna, the true heart of Italian agriculture, is a region where the scarcity of rain is being managed in an efficient and modern way.



KENYA

A herder looks out over the lava flows that frame lake Turkana. The dams built by Ethiopia on the Omo River have reduced the water levels of the lake that is a main source of livelihood for populations of shepherds and fishermen. Ethnic groups like the Turkana have already been partly forced away from their traditional herding activities to take up fishing but now even this new activity is under threat, as it is also in the villages of the El Molo, one of Africa's smallest ethnic groups.



ITALY

Anna Mastellaro and Anita Bonotto, agronomists in the Zero M facility at Zero Farms in Pordenone, check batches of basil, chives, mizuna and other varieties. All the plants are grown in aeroponic facilities without the use of soil and/or substrates.



ZIMBABWE

A young elephant killed by drought in Hwange National Park. There are no rivers in the park and during the dry season the waterholes that rely on rains dry up completely. In the past the thirsty elephants would migrate towards the Zambezi river basin in search of water but now, as the human population has increased, their migration routes are often blocked by villages or farms. In order to keep the elephants living within the park all year round, some decades ago the Zimbabwe Parks & Wildlife Authority dug a series of wells to pump water into the dry waterholes. Today, due to the state's chronic lack of funds, it has been left to private organizations to continue this program but it is a very complicated challenge.



BRAZIL/PANTANAL

Boyaderos (cowboys) on the San José ranch work to vaccinate the herds. The Pantanal region is Latin America's largest tropical wetland and is home to a huge variety of wildlife and biodiversity. However, due to drought and fires the situation has long been critical and there has been a dramatic reduction in the land covered with water. The Pantanal is known for being a swamp but since 1985 it has lost 74% of its surface water. Last year around a third of the area was burnt to ashes – an unprecedented disaster.



KENYA

Global warming and a lack of snow have led to the disappearance of almost all of the glaciers that, until few decades ago, surrounded the peaks of Mount Kenya, which at 5,199 metres is Africa's second highest mountain.



SOUTH AFRICA

A line of people wait to fill their buckets with water in the township of Philippi. Most of the shacks in this informal settlement do not have running water and even the public taps have had restrictions placed on them. A few years ago the Cape Town area risked becoming the world's first city to achieve Day Zero, the moment when the taps in people's homes run dry. The authorities hastily introduced severe limitations on the use of water to prevent this from happening. Today the situation is slightly better but the problems are far from being resolved.



AUSTRALIA

An aerial view of the vast semi-desert area of South Australia. Since the beginning of the 21st century, in Australia periods of drought have become increasingly frequent and extreme. Farmers are finding it harder and harder to find sufficient water for their herds, while the Great Cattle Drive, the migration of the herds through South Australia and New South Wales, has often had to be cancelled due to a lack of water.



ITALY

Bagno di Romagna (Forlì-Cesena). A visitor watches a film through VR goggles at the Idro Ecomuseum near the Ridracoli dam that has provided water to more than a million people on the Riviera Romagnola and the plains of Forlì-Cesena, Ravenna and Rimini since the 1980s. Emilia-Romagna, the true heart of Italian agriculture, is a region where the scarcity of rain is being managed in an efficient and modern way.

ETHIOPIA

Women walk along the road connecting Filtu to Dolo. Ethiopia is one of the African countries regularly affected by droughts and in recent years the situation has been deteriorating. This has direct effects on hygiene conditions: pandemics are widespread and food costs rise as farmers struggle. Desertification is reducing the land available for farmable fields, forcing farmers to move to new lands, resulting in quite predictable social tensions.





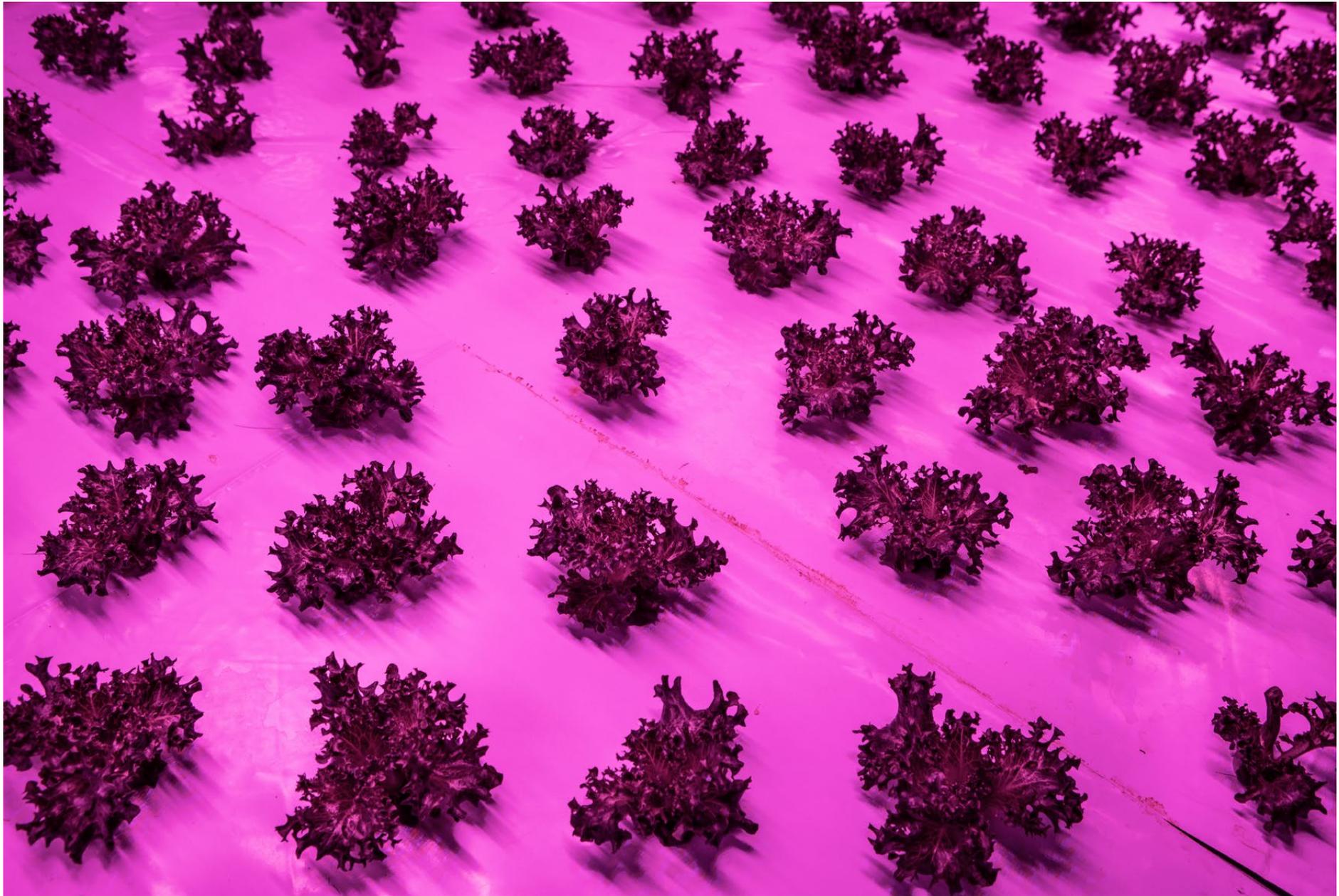
ITALY

A primary school from Ro Ferrarese visits the Fabbrica dell'Acqua in Serravalle (Ferrara), the environmental educational centre created at the C.A.D.F. (Ciclo integrato Acquedotto Depurazione Fognatura) in collaboration with the Ferrara provincial administration to promote awareness and respect for water resources. Emilia-Romagna, the true heart of Italian agriculture, is a region where the scarcity of rain is being managed in an efficient and modern way.



SOUTH SUDAN

A Dinka cattle camp near Yirol (Lakes State). South Sudan is experiencing its worst famine since the country's independence in 2011. Around seven million people, almost 60% of the population, do not have enough to eat: of these, one and a half million are experiencing a state of emergency and fight every day to survive. Frequent droughts have drastically reduced the fertility of the soil for the herds and farmers. The incessant effects of climate change – combined with the violence and continuous clashes in the country – are exacerbating a situation that is already critical, above all in the more remote areas.



ITALY

Edo Radici Felici, Quarrata (Pistoia). Red lettuces six days after replanting. The lettuces are positioned on a two-coloured film that serves to screen the light in such a way as to prevent the formation of mould and bacteria. The plants experience 16 hours of light, 8 hours of dark and one hour of dawn and dusk. Farming without land could be one possible solution to the problem of drought that is making farmland increasingly unusable for agriculture.



ETHIOPIA

Dhahayal. People draw water from a local lake. Ethiopia is one of the African countries regularly affected by droughts and in recent years the situation has been deteriorating rapidly. Droughts, which used to happen every 10 years, are now occurring every two years. This has direct effects on hygiene conditions: pandemics are widespread and food costs rise as farmers struggle. Desertification is reducing the land available for farmable fields and forcing farmers to move to new lands, resulting in quite predictable social tensions.



AUSTRALIA

Mary Briscoe, an aborigine from the Arrenrte people in the community of Titjikala in the Northern Territory south of Alice Springs, displays a large worm that is a particular delicacy: these can be found by digging among the roots of the trees that grow in the desert. Since the beginning of the 21st century droughts have become increasingly frequent and extreme in Australia and have posed serious risks to animal breeders. Only the aborigines, who are more accustomed to the desert climate, manage to find food even in extremely challenging conditions, for instance, in the form of large worms that live between the dry roots of trees.



ITALY

Sara Simona Cipolla, a researcher with the GST4Water project at the University of Bologna, up on the "green" experimental roof of CIRI Edilizia & Costruzioni. The roof is being used to test how effective it can be in reducing meteorological water runoff in sewers. Emilia-Romagna, the true heart of Italian agriculture, is a region where the scarcity of rain is being managed in an efficient and modern way.



AUSTRALIA

Mary Briscoe, an aborigine from the Arrernte people in the community of Titjikala in the Northern Territory south of Alice Springs, digs among the roots of trees that grow in the desert in search of large worms that are a delicacy among the aborigines. Since the beginning of the 21st century, droughts have become increasingly frequent and extreme in Australia and have posed serious risks to animal breeders. Only the aborigines, who are more accustomed to the desert climate, manage to find food even in extremely challenging conditions, for instance, in the form of large worms that live between the dry roots of trees.



AFGHANISTAN

Band-e-Amir, the western lake viewed from the road from Bamyan.



SOUTH AFRICA

A closed public water faucet in the township of Kayelitsha. Many shacks in the township have never had running water, but even use of the public taps is restricted. A few years ago Cape Town risked becoming the world's first city to achieve Day Zero, the moment when the taps in people's homes run dry. The authorities hastily introduced severe limitations on the use of water to prevent this from happening. Today the situation is slightly better but the problems are far from being resolved.



ETHIOPIA

A woman is in a state of shock after having witnessed a fight between two herders during the vaccination of their cows. Droughts, which used to happen every 10 years, are now occurring every two years. This has direct effects on hygiene conditions: pandemics are widespread and food costs rise as farmers struggle. Desertification is reducing the land available for farming, forcing the farmers to move to new lands, resulting in quite predictable social tensions.



ALGERIA

The rock engraving "The crying cow", a Neolithic graffiti in the Sahara desert in Tassili n'Ajjer, the vast highland in the southeast of Algeria. The transformation of the Sahara into a desert could represent a harbinger for the future of the entire planet.



RUSSIA/KALMYKIA

Ozero Tsomokskoye. Shepherd Magomed on the pasture with his dog and his Chinese-manufactured motorcycle. Today, new regulations impose containment measures and set a maximum number of animals per farm. The Autonomous Republic of Kalmykia is a slice of land facing the Caspian Sea where the consequences of Soviet rule are still visible today. One of these is the desertification that, although aggravated by global warming, is largely a result of the intensive agriculture implemented in the years following the death of Stalin. Today, the increasing periods of drought and high temperatures are endangering not only the already precarious balance between man and the environment but also the region's entire biodiversity.



ITALY

Craco (Matera), badlands along a dry river. Even though these badlands have been part of the regional landscape for many years, they have become one of the symbols of Basilicata's progressive desertification that has seen a degradation of the soil as a result of both natural and human impacts.



ZIMBABWE

Mark Butcher, a former ranger of the Zimbabwe Parks & Wildlife Authority, personally checks up on the diesel engines that pump water into the wells in the Hwange National Park. There are no rivers in the park and during the dry season the waterholes that rely on rains dry up completely. In the past the thirsty elephants would migrate towards the Zambezi river basin in search of water but now, as the human population has increased, their migration routes are often blocked by villages or farms. Some decades ago the Zimbabwe Parks & Wildlife Authority dug a series of wells to pump water into the dry waterholes. Today, due to the state's chronic lack of funds, it has been left to private organizations to continue this program but it is a very complicated challenge.



PALESTINE/ISRAEL

A wastewater channel nearby the town of Toubas where the Israeli army intervened to demolish Palestinian water wells. Control of water resources is one of the main reasons behind the conflict between Israel and Palestine. The Sea of Galilee is at an extremely low level. The Israeli water authority fears that, if the situation continues, it could reach a point of no return, provoking irreversible damage to the water quality. Those paying the price of the water crisis are, above all, the Palestinians. In a hard-hitting report, Amnesty International highlighted the Palestinians' extremely limited access to their own water resources. According to the report, the 450,000 Israeli settlers living in the West Bank and East Jerusalem "use more water than the 2.3 million Palestinian residents".



ITALY

Reservoirs along the Lamone valley (Forlì) are indispensable for crops like kiwis, which require a lot of water. Emilia-Romagna, the true heart of Italian agriculture, is a region where the scarcity of rain is being managed in an efficient and modern way.

BURKINA FASO

A farmer contemplates the very low water level in Loumbila. When it is full of seasonal rains, this reservoir manages to serve a wide area.



