

Opinion & Analysis

Global water crisis threatens millions of lives and jobs



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As reliable sources of fresh water such as aquifers and glaciers dry up, the world faces extreme consequences

‘WATER WATER everywhere, nor any drop to drink.” Coleridge’s line from the *Rime of the Ancient Mariner* has, in the opening years of the 21st century, an altogether new resonance. Despite its apparent abundance on the planet’s surface, a global water crisis now threatens the livelihoods and lives of millions.

In the course of the 20th century, our population quadrupled. In the same period, water usage increased ninefold. This massive upsurge in consumption of fresh water coincides most unfortunately with the effect of global warming on our planet’s hydrological systems. This is most strikingly illustrated in the precipitous recent decline in glaciers.

While there has been a huge recent media focus on rocketing food prices and shortages, food production remains by far the largest consumer of fresh water. Irrigation alone uses fully two-thirds of all our water, to produce crops either to feed us, or to feed the animals we like to eat.

Industry is the next major consumer, while direct human usage accounts for around one-tenth of our total water consumption.

In Ireland, each of us uses around 150 litres of water a day, for drinking, washing, toilets, etc. And since water, unlike oil, is rarely traded internationally, it’s easy to imagine

that a water crisis in Pakistan, Peru or India really has nothing to do with us. In a sense, however, we are all drinking from the same fount.

We in the western world import staggering amounts of what economists call “virtual water” from some of the most stressed countries on Earth. An example would be the T-shirt you buy in Penneys. In Pakistan, the cotton used to make that one garment swallows the equivalent of 2,700 litres of scarce fresh water – that’s as much as we use for our personal needs in nearly three weeks. Other goods are equally thirsty.

Producing one kilo of coffee will have consumed 20,000 litres of water before it reaches your shopping trolley. In China, every ton of grain grown slurps 1,000 tons of fresh water. While we only actually ingest around one ton of water each in a year, our total annual usage, including virtual water, could be 2,000 times as much.

On a daily basis, each of us probably accounts for 50-100 times our own weight in the total water it takes to clothe, bathe and feed us. Collectively, we use, pollute and waste water on an epic scale.

The last century has seen some of the world’s most ambitious engineering projects designed to bend the world’s waterways to our needs. The results have been mixed. For instance, two-thirds of the world’s rivers are

“Despite warnings of large cuts in supply, the Government still has no plans to bring in water metering

now dissected by dams. Humanity has quite literally re-plumbed the planet.

Our efforts at reshaping nature have a habit of going pear-shaped. The former Soviet Union engineered the largest single ecological disaster of the century when it destroyed the Aral Sea by diverting the rivers that fed it in a grandiose scheme to irrigate cotton fields. What was once known as the Blue Sea is now a barren salt pan the size of Ireland.

In spite of such setbacks, irrigation has allowed huge increases in global agricultural

output. This is just as well, given that the Earth’s numbers are ballooning by the population equivalent of the Republic of Ireland every two-and-a-half weeks.

These gains may come to be seen as pyrrhic in our battle to master the environment that sustains us. For instance, eliminating the flood plains of rivers and intense irrigation has led to dramatic increases in soil destruction through salinisation – the build-up of salt in the soil. Pollution, especially from the heavy use of nitrates in fertilisers to coax ever-greater food production, has led to the own-goal of lakes and even inland seas being wrecked by eutrophication.

While rainfall is renewable, groundwater is easily depleted. The American midwest is the world’s largest grain-producing belt, yet much of the water it depends on is pumped from the massive Ogallala aquifer below ground. There are now over 150,000 pumps bleeding this once-mighty source. It could be drained within a decade.

In India, China, Pakistan and elsewhere, there has been a positive frenzy of well digging. In the case of India, “it’s a colossal anarchy, a one-way trip to disaster”, in the words of Tushaar Shah of the International Water Management Institute (IWMI).

A million new pumps are being added by Indian farmers every year, as they scramble for water. They are rapidly exhausting a finite

resource, and the IWMI reckons some 200 million people in India face a near future without water.

The other major source of reliable fresh water is the great mountain glaciers, especially those that feed the river systems of Asia and the Americas. Rising global temperatures have thrown them into headlong retreat, with potentially devastating consequences for billions of people who depend on the water they provide.

Glaciers are a critical reservoir of fresh water, trapping it as snow during the winter and slowly releasing it during the annual spring melt. As the glaciers disappear, this “sponge” is being lost, leading to devastating winter flooding from the mountains, followed by summer droughts.

Nor are we immune to direct water shortages. Scientists at NUI Maynooth have warned that Ireland faces reductions of up to 40 per cent in water availability by mid-century, with flooding and droughts “likely to play havoc with people’s lives”. Despite this, the Government still has no plans to introduce residential water metering in Ireland.

As the saying goes, you don’t miss the water till the well runs dry.

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