

## FINAL REFLECTIONS ON WATER (Part III)

A fundamental part of a pool is water, yet most of us take its continued free supply for granted. Such a simplistic perception is changing – not only is the pool industry already offering many other facilities and alternative services, but the real value of water is now making serious financial and environmental impact, for better or for worse.

Water is truly precious: it is essential for life and it has curative qualities for health. With our attention fixated on the economies of water we tend to overlook the ineffability of water. In the final reflection, our future this century will be determined by water sufficiency and efficacy.

### **Doomsday scenario**

Gaia scientist Professor James Lovelock is pessimistic about the future of the world, consequent to global warming and rising sea levels. Britain though, he argues, will be a winner. Conditions here by 2100 will resemble our warmest summer, making the island “a very desirable piece of real estate” as packed with population as modern day Hong Kong.

Whether or not we agree, climate change is taking place and there is measurable shift in the ‘average weather’ we experience. There are definite changes in temperature, wind patterns, rainfall and storms. Our weather is regulated by a system known as the ‘greenhouse effect’. Greenhouse gases, essentially water vapour, carbon dioxide, nitrous oxide and methane, trap the heat of the sun, reducing radiation that dissipates away into space. This blanketing effect keeps the average temperature of the Earth around +15°C rather than the -18°C it would be without naturally occurring gases.

Human activities and airborne effluents since the Industrial Revolution have increased the concentrations of carbon dioxide by 30 per cent, nitrous oxide by 15 per cent and methane by 145 per cent. And with ongoing high economic growth, they are set to treble pre-industrial levels by 2100. The long life of the extra gases in the atmosphere cause change in temperature greater than the warming experienced by the planet after the depths of the last ice age 25,000 years ago.

Even if concentrations of greenhouse gases were stabilised today, air temperature would continue to increase by 2 to 4°C and sea levels rise by 15 to 95 cms by 2100. Because water plays such a key roll in economic and societal activities, climate change will directly affect the

quantity and quality of water available, creating competing demands as presented in the scientific findings released recently by the Intergovernmental Panel on Climate Change (IPCC).

### **Warmest Year since 1659**

The Met Office confirms we’ve just had the warmest April for 350 years at an 11°C average (3° above norm), adding that the past 12 months were the warmest on record (Central England Temperature Series) and then suggesting, 2007 could become the warmest year ever. There are unforeseen effects with soaring temperatures, warns the German newspaper Bild: “The heat excites the sex hormones, disturbs the sleep and stimulates lust”.

In the South East, climate change means the English region can expect hotter, drier summers with warmer, wetter winters. The 2004/6 water crisis (similar in severity to the worst drought of the past 100 years) has placed severe strain on water resources. Already the South East has the highest amount of water usage per person in Europe, yet has less water available than Spain or Greece. Unfortunately, added pressure from extensive house building quotas over the next decade will overload the existing infrastructure, raising demands for new reservoirs by water companies and stimulating more calls for water-efficient, water-saving devices by conservationists.

On the other hand, Environmental Minister Lord Rooker cheered up the House of Lords this April when he said, “There won’t be any water shortages across the South-East this summer. Even if the summer is as dry as last summer, the wet winter should ensure enough supplies to avoid any hosepipe bans.” For good measure, he added that the winter has “produced the right kind of rain” which has “filled the aquifers and the reservoirs”.

### **The Stern Review**

Former World Bank economist, Nicholas Stern, in his long-awaited environmental report (February 2007), unreservedly accepts that climate change is happening and lack of water is one of the major symptoms. He emphasises that something has to be done now – the longer we wait, the worse the consequences, the greater the cost. He puts the cost of acting now to alleviate global warming effects at about 1 per cent of GDP per year. But doing nothing

will cost between 5 and 20 per cent GDP eventually.

Ultimately, stabilisation requires that annual carbon emissions need to be brought down to more than 80 per cent below current levels. Ways to achieve this target involve increased energy efficiency and reduced energy demand with the adoption of clean power, heat and transport technologies. The economic highlight of the review is the key recommendation for international carbon trading to level out territorial inequalities. Political bargaining though, will not resolve water insufficiency, nor stop the Arctic from melting.

IPCC and other institution computer models originally calculated Arctic ice to be shrinking at 4.3 per cent per decade, but latest research, based upon satellite data, show shrinkage to be 9.1 per cent per decade. At this rate, the ice cap could be ice-free by 2020, three decades earlier than gloomiest predictions. Ted Scambos, glaciologist at the National Snow and Ice Centre, Colorado, predicts strong knock-on effects. "Without that Arctic ice, or with much less of it, the Earth will warm much faster."

### **The Water Watchdog**

OFWAT Report *Meeting the Demand for Water* (January 2007) states 'Eleven of the twenty-two water companies in England and Wales predict demand for water in their region will increase'. This increase is due to the proposed growth in the number of households and an increase in average water consumption. The majority of companies predicting increases are in the South-East.

Existing water supplies may be shared by transferring water from local areas with a surplus to nearby areas with a deficit. A transfer however of water from the North to the South East of England is estimated to cost up to £15 billion to construct. That is not considered viable and water companies must manage their own resources, taking into consideration particularly location and number of new-build homes in their areas.

OFWAT is under attack by an influential group of MPs, the Public Accounts Committee, who in May reported that the water watchdog must toughen up its 'limp attitude' to regulation by imposing maximum fines on companies that fail to fix leaky pipes. They emphasise 'Thames Water missed its annual leakage targets six years in a row without so much as a slap on the wrist'. In response, OFWAT point out Thames Water agreed to replace hundreds of miles of old pipes to avoid a large fine last July. They

add: "We agreed a legally binding undertaking that committed the company to invest, at shareholders' expense, an extra £150 million, more than twice the maximum fine we could have imposed". MPs insist therefore that OFWAT must also push harder for more water meters, to give customers financial incentive to use less water. To date only one third of customers currently have a meter.

Increased investments, rather than fines, makes more sustainable sense, say OFWAT. After the 1995 water crisis for Yorkshire Water, when reservoirs in the region fell to below 20 per cent of total capacity, investment in its own 'grid system' has taken the company from the bottom to the top of the supply efficiency league in 10 years.

### **And finally ...**

Where does the pool industry fit, while watery arguments go on? Until the trade develops political leverage to persuade government to ensure sufficient investment in sustainable infrastructure, along with thorough efficiency in water supply and usage, the answer is "Nowhere". Without clout, say now't!

Perhaps our real job is to build up appreciation that 'water is precious'. And the more precious, the greater the persuasion. Therefore, every way we can improve our environmental efficiency and keep poolwater cleaner, longer and healthier, the sooner we can contribute to the 'great debate'.

In our present situation, I suggest we need to go back to the basics of bathing. We risk forgetting why we are building and maintaining pools when we chuck the baby out with the bath water by trying to cope with all those squabbles at the waterhole.

If you only half agree, then read the book *Taking the Waters: spirit, art, sensuality* by Alev Lythe Groutier (Abbeville Press, 1992) and see why 'naiads, nymphs and nudes' so readily enjoy wondrous waters. Our everyday work is to provide for them all.

Article reprinted from the ISPE Magazine Vol. 18 No. 2 - June 2007.

© John Dawes and ISPE April 2012