

Future pressures, future needs? – speech by Sarah Mukherjee



CIWEM Seminar and Debate, Farming and the Public Water Supply:

Speech by Water UK Director of Environment, Sarah Mukherjee

Future pressures, future needs? Wednesday 3 December 2014



2



Future pressures, future needs...?

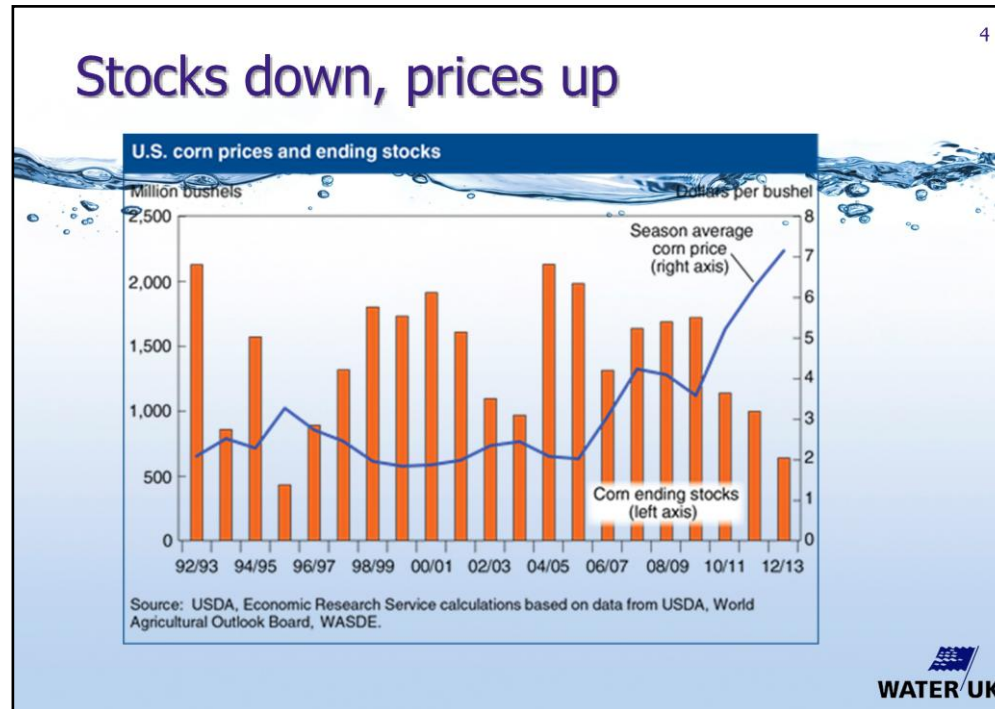
Sarah Mukherjee, Director of Environment

CIWEM Seminar and Debate, Farming and the Public Water Supply,
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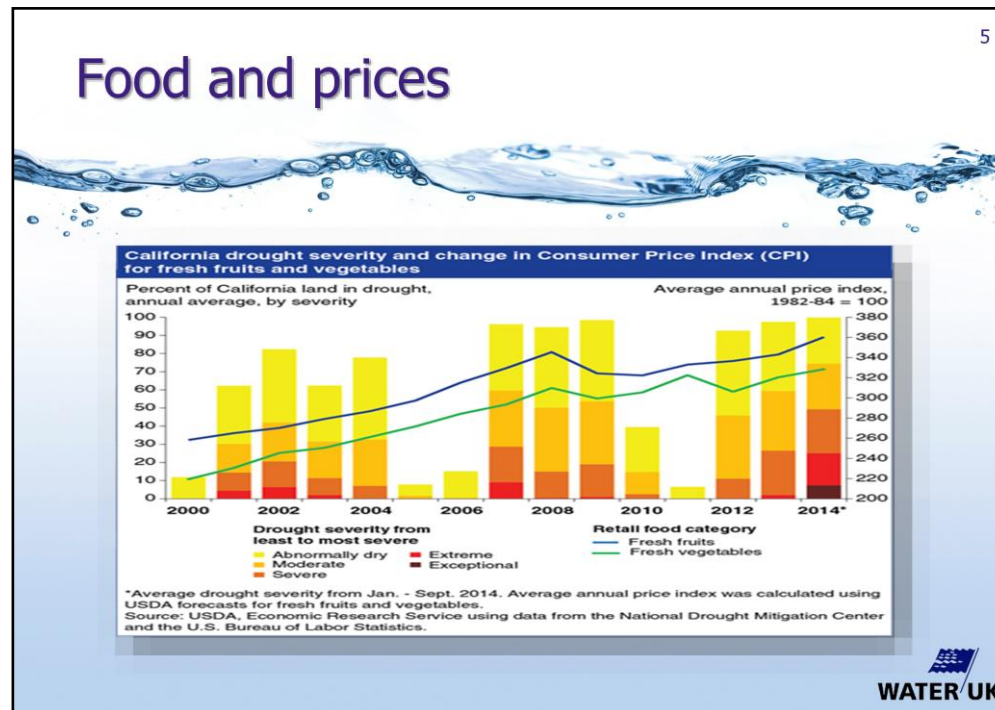


Good morning – and firstly I would like to thank CIWEM for giving me this opportunity to speak at what has already been a stimulating and enjoyable event. When the organisers suggested this topic, I don't think they probably expected me to take as much license as I am going to in the next few minutes with my talk. I am here as Director of Environment for Water UK – which, as its name suggests, is the policy development organisation for the UK water industry – public, private, not for profit, from the very small to the very large.

However, I have taken the liberty of drawing also on my experience of 20 years as a broadcast journalist, many of them working in rural affairs and the environment. And I am going to suggest that the national, international and world community is looking at food security through the wrong end of the telescope. Unless we get the water security right, we are not going to succeed with the increasingly complex task of feeding the world in the future – and at the moment, we are behaving like gamblers who've helped themselves to a few too many free house cocktails, assuming that we will always turn up trumps.



And, as you can imagine, as stocks of corn fell, prices went up. Supply and demand, right? Although the price of raw materials doesn't have the effect on food products that you might think – when I was working on Farming Today we estimated that grain prices made up about 10 per cent of the cost of a loaf – transport, energy and labour making up a lot of the rest – but it seems pretty safe to assume that governments will take notice when food prices go up and think about how to ensure better food security? Again – yes and no.



As I said, a lack of water, leading to a lack of food, does have some pressure on food prices. According to the United States Department for Agriculture's analysis of the 2014 drought in California: "Droughts in California are generally associated with higher retail prices for produce but the effects do not occur immediately. Price increases associated with a drought are lagged due to the time it takes for weather conditions and planting decisions to alter crop production. For example, a head of lettuce takes roughly 2.5 to 3 months to reach maturity. In 2005, following five years of drought, retail fruit prices rose 3.7 percent and retail vegetable prices increased 4 percent. Prices continued to rise in 2006, one year after drought conditions began to improve."

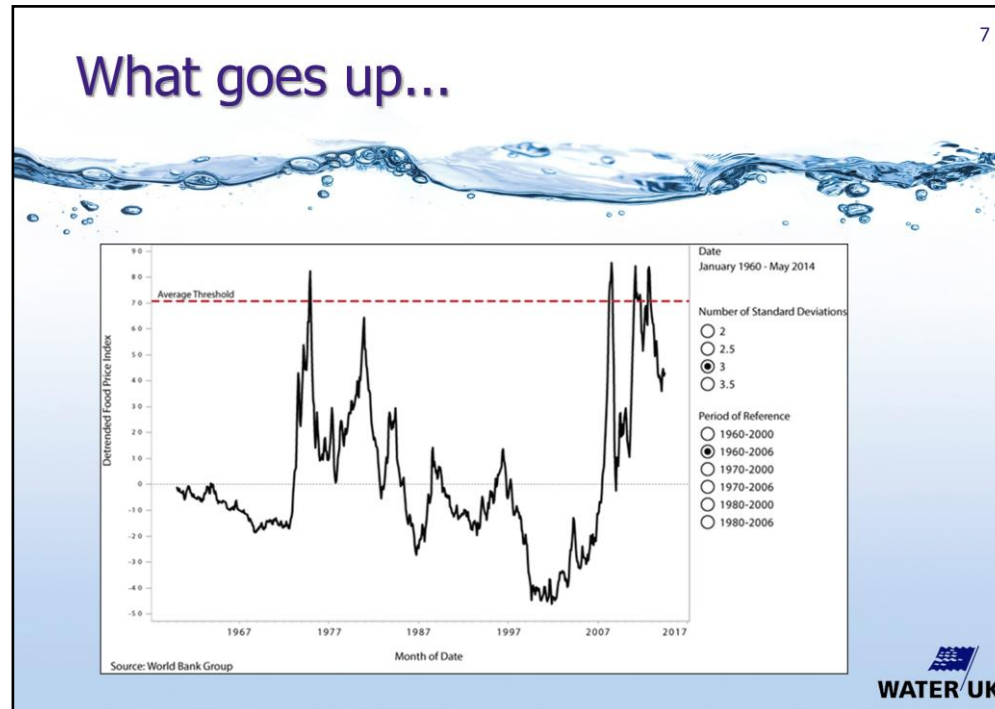
However, the report goes on to say: "it is important to keep in mind that many factors affect retail produce prices. Despite drought conditions, prices for fresh produce fell in 2009, as the 2007-09 recession reduced foreign and domestic demand for many retail food products."



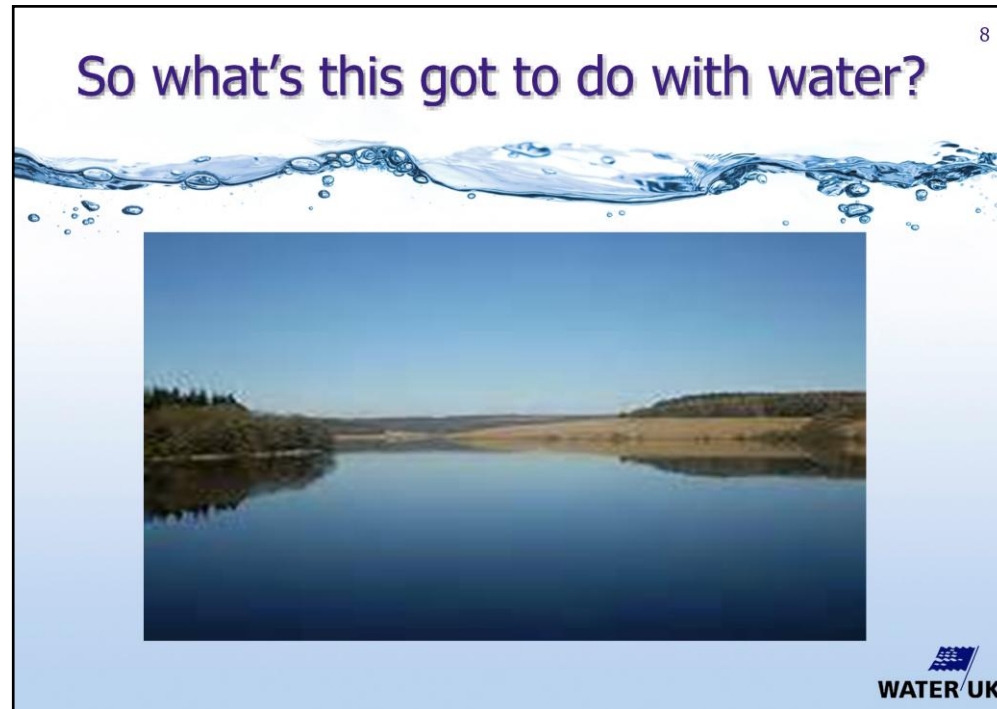
Sorry, come again? Dustbowl USA and prices went down? Well, yes. Reduced demand globally because of the recession brought prices down, and according to the World Bank's Food Price Watch in December this year:

“International prices for wheat and maize decreased sharply between April and August... International wheat prices plunged 19% between April and August 2014, with two consecutive 9% monthly decreases in June and July (6% in August). Such monthly price decreases had not been seen since October 2011. Likewise, the prices of internationally traded maize plummeted 21% between April and August 2014, remaining 26% lower than those observed a year ago.”

The reason they gave is reduced demand from China, among other things – and, as you can see from this map from the weather channel a couple of weeks ago, the drought, apart from some parts of California and a couple of other states, has receded.



So thanks to a globalised economy, the worst of what the weather can throw at us can be mitigated, right? We may have three, ten, sixteen year droughts – but eventually the rain does fall, and in the meantime there’s always somewhere in the world that can pick up the slack? Well – for the third time - yes and no. Now I know you can show a lot of stuff with graphs depending on the axes and all that stuff, but this is a World Bank graph which shows global food price trends 1960-2014. Prices have always gone up and down – but you could argue, looking at the end of that graph, that volatility is increasing – and on top of production, you have to overlay politics – the recent stand-off between Russia and Europe over that other bread basket nation, the Ukraine – and political instability and uncertainty – while wheat and maize went down, rice went up, the World Bank’s analysts attributing this in part to the decision of the government of Thailand to suspend sales of rice from public reserves in June. Volatility, as many people in the financial markets will tell you, is the real killer. If prices fall, or even rise, with some certainty, you can plan for it. However, rollercoaster prices can lead to more instability, as people rush in and out of markets and hedge their bets to ensure they are not caught out next time. And, by the way this isn’t necessary a climate change thing, if you are a climate change sceptic – there have been long droughts before, but the world hasn’t had to feed seven billion and counting, the majority of whom live in urban areas.



I guessed this would be the question you'd be asking yourselves by now, possibly with the odd expletive thrown in, so thank you for bearing with me – and here's a lovely picture of Kielder Water to look at while I do the next bit.

You see, I think we are looking at food security and managing populations through the wrong end of the telescope. We talk about food and population needs, when we need to start with the water. Companies in the UK provide some of the highest quality drinking water in the world, and treat millions of litres of used water a day, returning it to the environment. There is more we can do, certainly – reducing leakage is something customers are understandably very keen about, especially when we ask them to restrict their own water use in times of drought. But when we are talking about building new communities, the first question we ask is not “where is the water?” It's normally where is the economic growth, assuming that the water will arrive – somehow.

9

Are we there yet?



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WATER UK

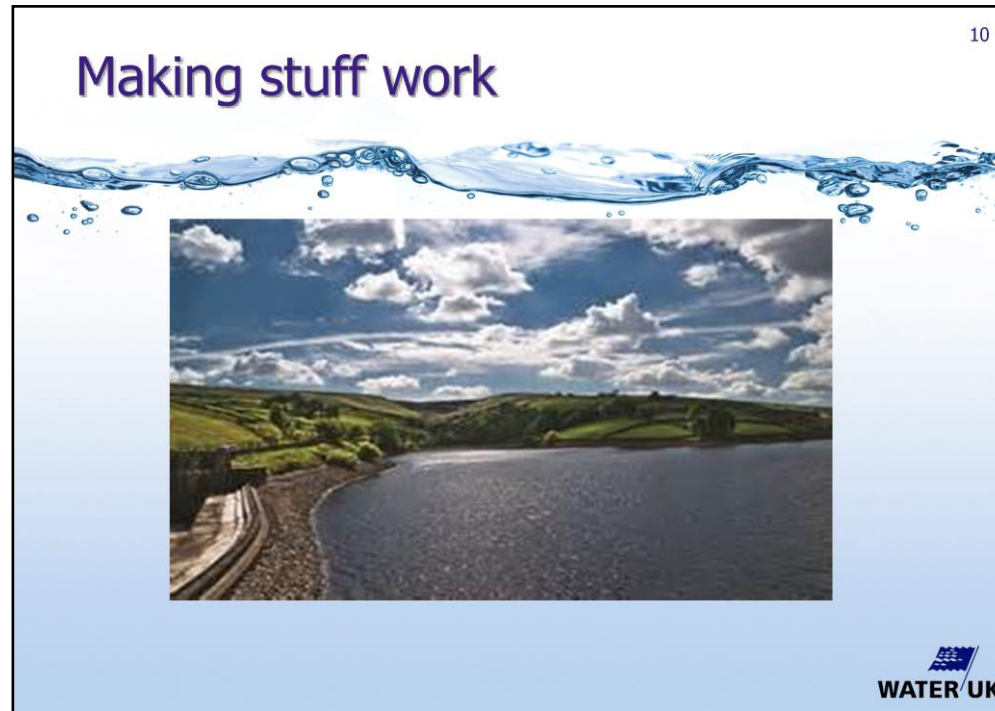
We're a bit like the gambler who keeps throwing doubles – or getting twenty-one or – well, insert your winning combination of choice. You can win and keep winning, you can even break the bank. But no-one's lucky streak lasts for ever you need to learn from our mistakes. And there is evidence to suggest that, as soon as we go back to situation normal, we're like sailors on shore leave. Bearing in mind the American drought has bitten hard for a couple of years, take this article by Eduardo Porter in the New York Times: "The price of water going into Americans' homes often does not even cover the cost of delivering it, let alone the depreciation of utilities' infrastructure or their R&D. It certainly doesn't account for other costs imposed by water use — on, say, fisheries or the environment — caused by taking water out of rivers or lakes. Consumers have little incentive to conserve. Despite California's distress, about half of the homes in the capital, Sacramento, still don't have water meters, paying a flat fee no matter how much water they consume.

Some utilities do worse: charging decreasing rates the more water is consumed. In Fresno, which gets less than 11 inches of rain a year, a family of four using 400 gallons a day faces a monthly water bill of \$28.26. In Boston, where rainfall exceeds 40 inches, the same family would pay \$77.73."

Now, large water users are often charged less by water companies in the UK as well, as they have a smaller impact relatively speaking on the need for networks and connection. However, economic factors have to be balanced with environmental needs.

Mr Porter goes on to describe the "first come, first served" water rights in parts of America, which has, he argues, led to 60 million acres of irrigated land in the United States use flood irrigation, just flooding the fields with water. Underground water reserves meanwhile declined by 53 million acre-feet between 2003 and 2014.

Australia, after many cycles of drought over the year, is the land of the two-minute shower. And yet they are still, according to Australian government figures, high pre capita consumers of water, with most going to farming, and most of the going to pastureland. I have spoken to Australian farmers who say they can't carry on like this – and yet the lure of the pan-Asian beef export market is almost impossible to resist. And there's anecdotal evidence to suggest that, even in cities, water consumption has risen as the rains have fallen.



And here's another lovely picture for you – this time from Yorkshire Water.

Our drought, affecting parts of southern and eastern England between 2010 and 2012, pales into insignificance compared to these international crises. And mainly, the water industry has been incredibly good at managing these increased demands. It's a sector rich in engineers who can find solutions to the trickiest of problems, and since the drought we have been looking at ways to increase water sharing and transfers; we have developed a code of practise so businesses have certainty in times of water restriction; and we have developed an e-learning course with the Horticultural Trades Association in water conservation, to name but a few. But several of our members have admitted that the solution clingfilm, if you like, will only stretch so far. There were times when even experienced engineers did not know how much water was left in some groundwater supplies in the drought that affected parts of southern and eastern England in 2012, and if we had not had the rain when we did, making it the wettest drought on record, we could have had some serious problems.

But water availability and supply needs to be at the heart of our decision making for communities, businesses and agriculture – we can increasingly not just assume it will be there when we need it. We need to think about water availability, how we plan, how we husband it and how we capture increasingly heavy winter rainfall as and when it comes. Globalisation will only get us so far – without placing emphasis in our planning decisions in the future on the availability of natural resources, future pressures can only continue to increase. We can only roll the dice so many times before they fall of the table and into the void of the real unknown.