



**LUCY SIEGLE**

## The innovator

Arjen Hoekstra, inventor, 43



You can imagine the eye rolling. In 2002 Professor Arjen Hoekstra first attempted to engage business and the general public with the unsustainable amounts of water embodied in almost every consumer staple. Here was a world struggling to get to grips with carbon footprints, let alone the H<sub>2</sub>O being squandered by ignorance and thoughtless design. Since then Hoekstra has worked tirelessly to humanise the concept of a water footprint. He has created a calculator at [waterfootprint.org](http://waterfootprint.org) based on the fair assumption that until we understand how much water we're wasting and its significance, we are unlikely to scale back.

"It is definitely getting easier to explain," says Hoekstra, who has been lecturing for Compassion in World Farming on his visit to the UK from his native Holland. "Did you know that just 3% of the water footprint of the average UK consumer relates to water use at home?" I didn't. The other 97% comes from the products we buy. He is not saying that low-flow showerheads aren't important, but that they're not the full story. "About 60% of your total water footprint lies outside the UK. Think of water use in water-scarce Spain for growing strawberries or tomatoes for export, use for soybean in Brazil to feed UK livestock, or in Pakistan or Central Asia for producing cheap cotton."

In a game resembling calorie counting, you can show Hoekstra any consumer staple and he'll tell you the water footprint. A slice of conventional bread takes 40 litres, one hamburger equals 2,400 litres and a single egg needs 135 litres. But this is no game. "These critical problems of water depletion and pollution are closer than we thought," he warns. "They are literally served up on our plates." ■

## It's not easy being green...

No33: Buying bread

About 80% of our daily bread is of the sliced-loaf variety, its industrialised process using low-grade wheat and vast amounts of energy for little nutritional gain. Makers increasingly add vitamins to flour to bring us a more nutritionally robust loaf. But instead of a "smarter" sliced you can go for an authentic bread that hasn't been over-processed, especially if you're lucky enough to live near an artisan (28-year-old Ella White in Ashburton, Devon, is a rare example of a young baker determined to do things properly).

Whatever you do, don't be fooled by in-store supermarket bakeries. The [realbreadcampaign.org](http://realbreadcampaign.org) found only M&S actually producing "real" bread. In all other cases the in-store bakeries acted as a "tanning salon" where dough pre-baked in an industrial unit was finished, demanding twice the energy of conventional breadmaking. Incredibly, these in-store supermarket bakeries qualify for financial incentives to reduce carbon emissions.

More grist to the mill to bake your own. Choose responsible flour – go for local (from 10,000 flour mills in the UK in the 80s, there are now just a handful) or organic. Breadmakers only require 400 to 800 watts during the baking cycle. You might not have time to knead by hand, but you can still use your loaf. ■

### ON THE WEB

Email Lucy at [lucy.siegle@observer.co.uk](mailto:lucy.siegle@observer.co.uk) or visit [guardian.co.uk/profile/lucysiegle](http://guardian.co.uk/profile/lucysiegle) for all her articles in one place

