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Water footprinting takes root in food and textiles

News that Marks and Spencer has started to look at the water footprint of its supply chains coincides with growing warnings that water scarcity is emerging as a key business risk.

Marks and Spencer announced in August that it has begun to assess the 'water footprint' of its clothing ranges and a selection of fresh produce. The retailer is the first in the UK to confirm it is assessing how vulnerable its supply chains are to water scarcity.

The firm is making a "high-level assessment" of its clothing business, looking at the water required to make the fibres it uses. It then plans to make more detailed regional assessments of the water scarcity issues facing the regions where the fibres are grown.

Detailed water footprinting of five commodities - strawberries, tomatoes, lettuce, potatoes and roses - is also under way.

It hopes to use the information gleaned from the studies to work with suppliers in water-stressed regions and inform future sourcing decisions. However, the firm emphasises that it is only in the early stages of deciding how to manage water risks in its supply chain.

Its announcement coincides with warnings from WWF director general James Leape that behind the world food crisis lurked a global freshwater crisis. The warning came in an address to the annual World Water Week symposium held in Stockholm in August.

Mr Leape said that many of the world's irrigation areas are highly stressed and are already drawing more water than rivers and groundwater reserves can sustain. Increases in population, changes in consumption patterns and the effects of climate change will make the strain on global water resources more acute. If left unchecked, it will affect the cost and supply of water-intensive products.

Similar warnings have come in a joint report from the International Water Management Institute, the Stockholm International Water Institute and the Stockholm Environment Institute. The report's message is that water will be a key constraint to food security unless society changes the way it thinks and acts about the whole supply chain, from production to consumption.[1] Research published by WWF suggests the UK is particularly vulnerable because it is far from being self-sufficient in water.[2] The study measured all the water consumed nationally by the UK, plus water used in other countries to make food and clothing imports. The water required to make products exported from the UK was subtracted.

It concludes that only Brazil, Mexico, Japan, China and Italy import more water than the UK. The NGO estimates that only 32% of the UK's water use comes from national sources. It identified Uzbekistan, Egypt, Pakistan, Spain, Israel, Sudan and Morocco as some of the countries facing extreme water stress, yet supply the UK with substantial amounts of water embodied in commodities. Cocoa, cotton, palm oil, soya, coffee, maize and rice are some of the most water-intensive food and fibre commodities imported into the UK.

Yet the picture is more complex when the focus moves beyond commodities that intuitively use water to the water embedded in many globally traded goods and services, the World Economic Forum said in a

discussion paper issued before its January meeting in Davos. Nine sessions addressed the consequences of worsening water stress.[3] Last year, the charity Waterwise estimated it takes about 11,000 litres to produce a pair of jeans and 400,000 litres to build a car (ENDS Report 392, pp 34-37 ▶).

"Water makes companies vulnerable. Many think they can manage water scarcity in the same way as carbon, but you can't. The non-substitutable quality of water has really shaken the firms that have started to look at the issue," said Stuart Orr, WWF's freshwater policy officer. "To reduce risk, businesses need to do their utmost to encourage more efficient and effective water use in the water-stressed areas where they operate."

WWF is now calling for the UK's largest companies to evaluate their water footprints. It wants firms to focus efforts where the impacts are most harmful, ask suppliers to be more water-efficient and invest in their efforts. As a last resort firms may have to think about shifting the source of raw materials to regions where water resources are managed better.

Yet the complexity of the issue means many businesses are struggling to know how to deal with it, according to Mr Orr. WWF has convened a water footprint working group to address this made up of academics, policy officers and businesses such as Coca-Cola, Nestlé, SABMiller and Suez Environmental. The group is trying to develop and promote water footprint accounting standards, guidelines on how to measure water footprint impacts and methodologies to mitigate them.

Further information

- 1. Saving water: from field to fork (http://www.siwi.org/documents/Resources/Policy_Briefs/PB_From_Filed_to_Fork_2008.pdf)
- 2. UK water footprint (http://www.wwf.org.uk/filelibrary/pdf/uk_waterfootprint_v1.pdf)
- 3. Managing our future water needs (http://www.wwf.org.uk/filelibrary/pdf/uk_waterfootprint_v2.pdf)

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