

A load of c__ p!

Apologies for the scatological heading, but this piece really is about human sewage.

Herbert Girardet¹ recounts how the German chemist Justus Liebig tried to persuade the London authorities to build a sewage recycling system for the city in the 1840s. This would collect sewage and recycle it as fertiliser for the land outside the city on which the city's food was grown. However, this proposal was rejected for a sewage disposal system, which involved channelling the sewage and depositing it into the sea.

Liebig and others, therefore, had to set to work on the development of artificial fertilisers to replenish the fertility of soil now that the natural fertiliser was no longer available. This political and economic decision contributed to the current unsustainability of both agricultural and urban systems.

Britain promoted (through trade and empire) this system of sewage disposal around the world. Although it reduced the incidence of disease in urban areas, it has contributed to loss of soil fertility and greater water pollution.

Today, there are many designs for water-free lavatories, which collect sewage in a hygienic way and allow it, over time, to break-down into a form that is suitable for fertiliser. These lavatories can be, and are, used in urban environments. No longer is it necessary to flush sewage away with valuable fresh drinking water and then to worry about how to treat it so it does not pollute.

Girardet also points out that we need to see cities as systems whose functioning needs to mimic natural systems. We need to move from a linear metabolism (using and disposing) to a circular metabolism (reusing / recycling) (*see diagram 'Linear / Circular' adapted from Girardet*)

As societies get richer, they tend to use more water, yet the amount of fresh water available is finite. In 1995, the Vice President of the World Bank said that "if the wars of this century were fought over oil, the wars of the next century will be fought over water."² Should we not be rethinking how we can use water more sustainably?

Discussion points:

- Why do you think the authorities in the 1840s chose to build the water-based sewage systems? Do you think they saw themselves as being short-sighted or as being enlightened?
- How can we ensure that political, economic and technological decisions made today are taken with the long view in mind? Why is this problematic?
- Should we introduce wide use of the water-free sewage systems today? What are the problems of doing so? What would be the benefits?

¹ Creating Sustainable Cities Green Books 1999

² Ismael Serageldin, quoted in Vandana Shiva, *Privatisation, Pollution and Profit* South End Press 2002