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An End to Waste?

EVEN THOUGH WASTE IS AN INEVITABLE ACCOMPANIMENT TO ALL PROCESSES, CONTEMPLATING an end to waste can force us to think about how we define, generate, and manage it. Two common definitions of waste are a substance or object that is discarded and the avoidable loss of a resource. The current waste management practices in industrialized countries are widely recognized to be unsustainable, yet it is clear that we are not changing our practices effectively or fast enough. What are the impediments and how can we overcome them?

Current waste management practices include the options of disposal, recovery, recycling, reuse, minimization, and prevention. Reuse begins to blur the definition of waste: If an unwanted by-product of one industry can be used as a feedstock for another, is it a waste or a resource? For example, food and crop waste has been identified as a valuable feedstock for biofuel production. And with improved extraction technologies, wastes generated by past mining activities can serve as a valuable source of mineral resources. More effort is needed to identify such potential opportunities, develop the technologies needed to exploit them, and remove any regulatory or legal constraints to implementation. Such efforts should target the sectors that generate the most waste. In the 27 European Union (EU) member countries, just three sectors—construction and demolition, mining, and manufacturing—generated nearly 74% of all waste in 2008.* One advance is the “end of waste” status developed by the EU Environment Agency, which allows the processed material, no longer classified as waste, to be used in the same way as comparable virgin materials or products. Such end-of-waste regulations were set for scrap metal in March 2011.‡

Under current practices, many environmental costs of production, including waste generation, are externalized; that is, they are not incorporated into the cost of products. For example, the requirement for manufacturers to take back packaging or even products at their end of life can be a critical step in internalizing costs, shifting waste management from disposal to recycling or reuse. But political processes, such as regulation, are generally necessary to achieve such goals. It is therefore critical to raise the awareness of waste as an important societal issue. Even though household waste constituted only 8.5% of the waste generated in the EU in 2008, it is disproportionately important both because a focus on it creates broader social awareness and because higher-value goods such as electronics are being discarded.

Online

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Podcast interview with author Janet G. Hering (http://scim.ag/ed_6095).

Political aspects are also central to the inefficient use of resources. Agriculture in the arid southwestern United States is often used as an example of the inefficient use of water. This is partly because water rights require beneficial use of the resource (“use it or lose it”), which acts as a perverse incentive to discourage water conservation and must be addressed by changing the legal framework. This can only be achieved through political processes, yet water conservation will also require technological improvements in irrigation and an increased scientific understanding of hydrological and plant growth processes.

Public awareness will be crucial if waste management is to be addressed from the perspective of consumption as well as production. This is essential if a displacement of costs, either in space or in time, is not to be mistaken for a gain in efficiency. For example, production may appear efficient if it need not accommodate later recycling, but those costs are merely shifted (both in time and often in space) from the producer to the recycler. Even real increases in efficiency will ultimately reach a limit because of the fundamental linkage of waste to throughput. Thus, the question of waste also requires that we examine our patterns of production and consumption and adjust them to the inevitable limits of our planetary ecosystem.

– Janet G. Hering

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*http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Waste_statistics.

‡www.environment-agency.gov.uk/static/documents/Business/End_of_waste_reg.pdf.

