

**First Place**

**“Metabolism of the Anthroposphere – Analysis, Evaluation, Design”, by Professor Paul H. Brunner and Mr Peter Baccini, published by MIT Press, 2012. ISBN: 978-0-262-01665-0**

This is not a book that simply focuses on waste and resource management but has a much wider perspective. Significantly it provides waste managers with a broad understanding of where we fit into the global system of material flows. The book also uses case studies to illustrate some of the strategic changes, particularly in relation to urban design, needed to make resource and waste systems more sustainable.

The historical and urban design aspects are of interest because they show how recently in the course of human history we have moved from local and global systems which are sustainable – living within the confines of a solar and renewables based economic system – to predominantly fossil based economies. One of the more recent changes highlighted in the book is how in urban and regional metabolic systems the emissions of consumers are increasingly outpacing those from industrial and commercial production systems. These emissions are inherently more difficult to control compared with those from industrial production.

Much of the book examines different methodologies to describe and analyse urban and regional metabolism and the tools that have been developed to help our understanding of these processes. The four main case studies show that for resource problems that require a more sustainable solution, this can only be achieved through reforming the anthropogenic system as a whole. Waste and resource management obviously has a key role to play in moving us towards reducing our environmental impacts on the earth’s metabolic system. The book shows both the difficulties in achieving the aim of moving from systems based upon a linear economy of extraction, utilization and discard, to those that are more in tune with natural cycles of resource flow and raises some of the key considerations for success in fulfilling that objective.

The panel believes the book makes a good contribution to understanding the challenges of resource and waste management; challenges current thinking about these issues and will be a useful reference book for both practitioners and policy makers

## **Joint Second Place**

**“Designing for Zero Waste. Consumption, Technologies and the Built Environment”, by Professor Steffen Lehmann and Dr Robert Crocker, published by Earthscan, Abingdon, Oxfordshire, 2012. ISBN: 978-1-84971-434-1/435-8 and ISBN: 978-0-203-14605-7 (ebk)**

This is an intelligent and innovative work with a practical application for those designing for waste prevention and zero waste. The book is balanced with a strong theoretical basis drawing upon a range of disciplines including sociology, geography and anthropology and practical examples.

The book is in four sections:

- Zero waste, sustainability and behaviour change: principles
- Zero waste, enabling technologies and consumption: policies
- Zero waste in sustainable architecture and design at the household and building scale
- Zero waste in cities, urban governance and material flows.

There are eighteen essays by researchers mostly, multi-authored, plus over-view articles and useful additional information on source materials. This is a text which everybody interested in ‘Zero waste’ as a subject will want on their bookshelf or their electronic equivalent.

**“Is biodegradability a desirable attribute for discarded solid waste? Perspectives from a national landfill greenhouse gas inventory model” by Mr James M. Levis and Mr Morton A. Barlaz, published Environmental Science and Technology, 2011, Vol 45, No 13, pages 5470 - 76**

This short but cogent article tackles an issue that is at the heart of people’s perception of their waste. Basically the average person thinks that if something is bio-degradable then it is good to discard it because it will degrade naturally. Items such as plastics are bad because they do not degrade. This scientific analysis of the current position using LCA was undertaken using USA data on average waste composition and emissions from a range of different conditions for landfill in the USA. The results show that there is no clear advantage to having a greater proportion of bio-degradable plastic material being utilised and going through to landfill. Therefore all other factors being equal plastics ought to continue to be manufactured from fossil based sources ‘assuming, of course, the availability of petroleum-based feed stocks’.