# An Elephant in the Living Room

## Hong Kong's Looming Food Waste Problem

*By George Woodman, Director Teng Hoi Conservation Organisation*

'The elephant in the living room', that wonderful English idiom, that refers to a truth that is being overlooked, even though it's as obvious as an elephant in your living room. The elephant we are illuminating here that has been almost overlooked until now is the importance of food waste in Hong Kong in the context of waste management. Our government maintains and publicises excellent statistics for the SAR that includes figures for our daily disposal needs and a breakdown of the types of waste. Food waste has typically made up around 40% of all domestic waste over the last few years, with around one third of the total waste going into landfill.

When food waste is buried in a landfill it decays anaerobically (in the absence of oxygen) generating gases such as methane, hydrogen sulphide and carbon dioxide. Some of the gases smell bad and lead to complaints from local residents. Less well-known is that methane is a potent greenhouse gas: each tonne of methane is equivalent to around 25 tonnes of carbon dioxide in its Global Warming Potential, and that methane from landfills has contributed up to 12% of Hong Kong's emissions in recent years. Food waste is therefore a component of our solid waste that generates significant issues.

Perhaps one reason why we've managed to miss this elephant in our living room is the stupendous efficiency with which the Food and Environmental Hygiene Department (FEHD) deals with our waste and, more importantly perhaps, at no charge to the public. By contrast, in many developed countries one has to pay directly for domestic waste disposal and there is a financial incentive to 'Reduce, Reuse, Recycle'. So why is Hong Kong so different? One reason for the evolution of Hong Kong's system is that putrescent waste (which is mostly waste food) is a potential health hazard and therefore the maintenance of high standards of cleanliness has facilitated the evolution of a zero-charge system to avoid fly tipping and other non-compliance issues. Whatever the reason, the Hong Kong public has been spoilt by our marvellous FEHD. The rapidly-filling landfills have been reported in the newspapers over the last decade or more – yet Hong Kong's volume of waste has steadily risen. By contrast, Taiwan reduced its waste stream by 50% over the same time period.

An important key to Hong Kong's waste problem is to separate putrescent waste from all other waste. Then there would be no need to collect rubbish so frequently. In fact, once the putrescent waste has been separated, then recycling of the non-putrescent waste such as plastic and metal can be much more efficient and pleasant. However, the difficulty of engaging the public with this has confounded policy makers.

Bokashi Composting is a Japanese solution that has been successfully used in other countries to separate food waste. Normal putrefying microorganisms are out-competed when food waste is placed into an airtight container with Bokashi, which contains other microorganisms that ferment the food waste. Bokashi composting is a technique that can buy time for more sensible handling of food waste. In our work with schools, we've kept food waste in sealed boxes for periods of many months. When opened, there's a distinct smell of vinegar and pickles, but it's not the awful smell one would expect. The other great advantage with Bokashi composting (when compared with worm composting) is that it can handle nearly all types of food waste, including cooked and uncooked meat and fish as well as vegetables and carbohydrates such as rice and noodles. It is possible to imagine a Hong Kong where domestic waste is collected once a week from flats and homes in a sealed box where it is safely and hygienically fermenting, free from vermin and unpleasant smells. Such systems exist elsewhere: in east London a charity group has successfully run a scheme that handles over 80% of the residents of tower blocks that are not too dissimilar to the mostly urban environment of Hong Kong.

One common misconception with Bokashi composting is that the end result is a container of compost. It's not quite as straightforward as this: the pickled food waste in its container needs to be either digested in a purpose-built machine or buried into soil where the soil microorganisms finish off the decomposition. The end result in both cases is a rich compost.

There is now a need to demonstrate that Bokashi composting is acceptable in the Hong Kong community and hence underline its potential to resolve one of the thorniest issues of our waste management problem. Community acceptance of a new way of handling waste is a very important component of an effective solution. Teng Hoi is currently working with Britcham along these lines to help develop educational and practical approaches to the food waste management problem that are suitable for Hong Kong. ■