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HOUSEHOLD WASTE PREVENTION

Kit Strange

Genova



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Investigating household waste prevention – a review of evidence





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BACKGROUND

In 2010 the UK Government published an evidence review on household waste prevention.

As part of this project Kit Strange prepared a review of international experiences in household waste prevention.



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QUESTIONS ASKED

- To what extent is waste prevention practised?
- What are the barriers and opportunities?
- What are the options for householders?
- What are the options for stakeholders?
- What are the infrastructure considerations and technical solutions?



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Definition

The evidence review adopted the definition of waste prevention set out by the OECD:

- strict avoidance (not generating waste)
- source reduction
- product reuse (in its original form)
- reducing the hazardousness of waste.

This definition excludes all forms of recycling – including food collection and commercial composting – and remanufacturing. The latter are sometimes included in a broader definition of “waste minimisation”.



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PROJECT ACTIVITY

More than 800 sources were identified in a scoping phase.

88 documents were reviewed in detail

106 others studied within the international review.



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CONSUMERS - ENGAGEMENT

The review found that there is no standard set of behaviours accepted as ‘household waste prevention’. It covers anything from rejecting junk mail to reusing food leftovers; from home composting to donating electrical goods to charities; from buying second hand clothes to avoiding single-use bags.

Unlike recycling - a more defined act - prevention comprises many small, individual, behaviours. Also unlike recycling, WP behaviour tends to be private and invisible, so there is much less likelihood of a social norm developing.



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EXTENT OF WP BEHAVIOUR

Examples include:

- home composting 35%
- avoiding packaging 10-40%
- committed to preventing food waste 14%
- always using 'bag for life' 23%
- avoiding junk mail 15%
- buying second hand 30-45%.

60% claim to perform at least one WP behaviour, but *sometimes* rather than *always*, and some will do one or a few but not a whole range of behaviours



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EXTENT OF WP BEHAVIOUR

Willingness is consistently greater than the actual level of engagement in waste prevention.

Donating is commonly reported as the most practised behaviour; private reuse in the home and other 'low effort' reduction behaviours tend to occupy an intermediate position; and those that require major changes in habits are least practised.



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EXTENT OF WP BEHAVIOUR

Practice varies across different socio-economic groups and the variations are often specific to the behaviour in question.

If generalisations can be made, then an older, middle-high income woman living in a detached owner-occupied house with no children living at home and with a concern for the environment tends to be more likely than others to take part in waste prevention activities.



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Behaviour change factors & WP

Personal values, norms and identity – I feel the issue is important, I feel responsible, I feel I am the kind of person who does this, and I feel I am able to do it, the perceived difficulty and costs

Social norms and identity – whether I want to act because I see others do it, or I feel obliged to do it because most people do it, do I get praise from others for doing it, or it gives me a sense of social ‘belonging’

External conditions – whether I have access to services or products or whether there are other barriers that are out my control

Habits – not all action is reasoned (so not subject to the direct influence of values, norms &c) but theoretical mechanisms are described for breaking into habits and ‘re-freezing’ new ones (eg learning by doing) .



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Motivations for WP behaviour

WP behaviours are poorly correlated with recycling, sometimes even negatively – recycling may become a reason for not doing more to reduce waste . The research also revealed a degree of confusion among the public between “recycling” and “reduction”.

Models have only weak explanatory power. Two of the main studies found that some 70 - 85% of the variation in behaviour could not be explained. Difficulty in explaining WP behaviour may be related to the fact that it is, in reality, not a single behaviour but many.



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Motivations for WP

- Values
- Personal responsibility
- Self-efficacy
- Costs
- Social norms
- Habits



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Motivations for waste prevention

Values

Several authors link WP behaviour to underlying personal values, including what are commonly termed ‘universal’ values (generally where an individual puts collective benefits ahead of their own personal gain).

Moral and charitable motivations are drivers for reuse (especially donation); and an ‘ethic of care’ – a general sense of responsibility for the intrinsic value or on-going use of ‘things’ – has also been flagged.



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Motivations for waste prevention

Personal responsibility

Acceptance of personal responsibility is often cited as a primary requirement for prevention behaviour. It may be manifested, for example, as a sense of duty or obligation, satisfaction, embarrassment (or lack of it in relation to second-hand goods), guilt, and active concern.



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Motivations for waste prevention

Self-efficacy

This describes the personal capabilities, confidence, know-how and skills needed to carry out a particular behaviour.

Interventions or campaigns may address it by providing hands-on help or giving tips on how to perform an activity.



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Motivations for waste prevention

Costs

Saving money through avoided or alternative purchase has been shown to be an important motivator - for example on home composting (through subsidy), plastic bags (charging), buying from charity shops, interest in refills, and switching from bottled to tap water.

Money-saving is a complex driver, however, and must be set against the risk that consumers will perceive cheaper or alternative products as lower quality options



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Motivations for waste prevention

Social norms

Knowing or seeing that others are taking action can create a sense that individual contributions are worth the effort.

A national survey, for example, indicated that 5 - 10% of home composters started due to encouragement from friends.



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Motivations for waste prevention

Habits

Habits can have a +/- effect on WP behaviour: they can either block the take-up of new behaviours where routines are so established that consumers never think to question them; or help to maintain established 'good' behaviours.

The challenge for behavioural change interventions is to disrupt routine thinking and help consumers maintain new habits. This can be done through repeat communication and hands-on support.



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Barriers to waste prevention

- Apathy
- It's someone else's responsibility
- Inconvenience
- Cost
- A sense of powerlessness
- Social norms don't favour WP
- Dominance of the recycling norm.



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Barriers to waste prevention

Apathy

Apathy or a general lack of interest in the idea of prevention has been identified as a general barrier and specifically in studies of junk mail, food and refillables.



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Barriers to waste prevention

It's someone else's responsibility

Lack of interest is often compounded by a feeling that business and retailers are more responsible for the waste problem than consumers, commonly noted around packaging but also food waste.



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Barriers to waste prevention

Inconvenience

Inconvenience is commonly cited as a barrier, with specific mentions for home composting, refillable packaging and retail self-dispensing systems, product service systems, reusable nappies and donating for reuse.

Non-participants can be put off by perception of inconvenience without any actual experience.

Behaviour change projects may address this by providing opportunities to see activities 'for real' (eg nappy or home composting demonstrations) or making it easy to participate.



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Barriers to waste prevention

Cost

Cost can be a motivator for buying low waste products where there is some price advantage (or subsidy); but where consumers perceive there will be little or no discount, or they think an alternative will be more expensive, this acts as a barrier (eg in relation to refills, product service systems and food purchase).

Special offers on food have been shown to contribute to food waste by encouraging people to buy more than they need.



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Barriers to waste prevention

Weak self-efficacy & sense of powerlessness.

Many people feel that their contribution, either to the waste problem or solution, is marginal. In particular, some specific WP behaviours can be seen as too insignificant to be worthwhile.

In addition, consumers may lack the know-how which would enable them to act differently, including what products to buy/use (eg nappies or home composting), how to manage wastage (eg on food or junk mail), or where to access services (eg reuse).



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Barriers to waste prevention

Social norms don't favour waste prevention.

Prevailing social norm values mass consumption, rapid turnover of products and a personal identity built on the ownership of 'stuff'; WP is not a mainstream behaviour and may be seen as weird or different, eg buying second hand.

Moreover, WP actions that are largely private and unseen, so there is no explicit social pressure to 'do the done thing', nor a reminder to hang on to new prevention habits – as there is now for recycling.



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Barriers to waste prevention

Dominance of the recycling norm

The recycling norm has become so strong that this is generally people's understanding when they are asked to "reduce waste".

Intervention projects have found that people need to be educated about the specific actions they can take, and why these are worth doing, rather than relying on general exhortations to "reduce waste" – because many people believe they are already doing their bit by recycling.



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Consumer WP campaigns

Campaigns and interventions that tackle a full range of WP behaviours are new for many local authorities. The two main approaches trialled so far include:

- Doorstepping information and advice campaigns
- Volunteer household campaigns/projects, where individuals sign up to be part of group receiving a package of advice, challenge activities and (often) hands-on support



Consumer WP campaigns

Table 1 Impacts achieved from waste prevention campaigns & promotions

Waste prevention behaviour	kg/hh/wk	Source
Home composting* – WRAP	2.9	(WRAP) personal communication
Home composting* – other literature review	3.5 – 3.8	(1)
Food waste* – becoming a committed food waste reducer – Love Food Champion	1.46 2.50	(WRAP) personal communication (11)
Bulky waste** - donate for reuse (<i>NB</i> per person)	~ 0.07	(24 & 25)
Cross-cutting waste prevention campaign**	~0.5-1.0	0.5 est. from (3) 1.0 est. from (18)

* data refer to impact of each *individual* recruited to an activity ** data averaged across *all households* in specified geographical area



Illustrative potentials of WP options

Actual achieved (latest year) – million tonnes/yr

Love Food Hate Waste 2008 (a)	0.14	Courtauld – packaging 2008 (a)	0.08
Bulky & textiles reuse 2007 (e) (NB estimates suggest percentage of bulky reused could ~ double in future)	0.50	Carrier bags avoidance 2008 (a)	0.02

Projection or scenario – million tonnes/yr

Home composting by 2020 (p) (included in LATS)	1.40	General household campaigns (p)	0.56 to 1.12
Love Food Hate Waste (p) (Courtauld by 2010)	0.16	Love Food Hate Waste (p) (total household food waste inc. above)	0.25
Junk mail – low (p)	0.12	Junk mail – high (p)	0.22
Reuse – furniture scenario (p)	0.22	Reuse – WEEE scenario (p)	0.10
Refill – e.g. glass coffee jars (p)	0.08	Refill – e.g. deodorant stick (p)	0.01
Mandatory rechargeable batteries (p) (if all single use substituted)	0.02	Self dispensing – e.g. cornflakes (p)	70 tonnes



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CONCLUSIONS

The figures suggest that the largest voluntary gains could come from home composting and local cross-cutting waste prevention campaigns (there is likely to be double-counting, as campaigns often include home composting).



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CONCLUSIONS

There are potential quick wins in options such as junk mail and carrier bag reduction (supported by voluntary agreements) that are popular with the public and relatively straightforward to implement.



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CONCLUSIONS

Since the impacts of these behaviours may not be great (eg with bags) it will be important to leverage any 'foot in the door' effects of initiatives on these aspects in order to educate on the bigger impact activities.

This will be especially so in local campaigns.



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kit@acrplus.org

