

creative policy packages
for waste:
lessons for the UK

“green alliance...

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Green Alliance

Green Alliance is one of the UK's foremost environmental groups. An independent charity, its mission is to promote sustainable development by ensuring that the environment is at the heart of decision-making. It works with senior people in government, parliament, business and the environmental movement to encourage new ideas, dialogue and constructive solutions.

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executive summary

This report sets out how **California, Denmark, Flanders, the Netherlands, Massachusetts, Sweden and Switzerland** have set about implementing what are, by UK standards, radical waste strategies. The report gives detailed insights into the policy packages being used by these countries and states and draws lessons for how the UK might proceed with its own waste strategies. It is a discussion document, which will be used as the basis of a series of meetings and seminars to develop the recommendations, culminating in a final report.

The policy packages in use in other countries are diverse, but they have one thing in common – they employ clear bold measures. The measures are economic, legislative, and often both. The experience of other countries sheds light on why the UK struggles to improve recycling rates. We have no really effective instruments in place. We therefore recommend that:

- The UK Government must consider a doubling, possibly a tripling, of the landfill tax to provide the right price signal. The urgency of the situation suggests doing this within the next three years.
- Local authorities must be given the powers (but not a requirement) to introduce variable charging of householders, ie putting a price on waste not separated for recycling. To be effective local authorities will first have to ensure that separate facilities for the collection of recyclables are in place.
- Government must clearly indicate and communicate that the cost of waste disposal will increase over the foreseeable future to provide certainty in organisations' planning.
- Banning the landfilling of materials that could be recycled should be considered. This could be done, with appropriate lead times, for those waste streams where recycling infrastructure is either already in place, or can be developed within two to three years of a ban being announced. The priority candidates for landfill bans are compostable wastes, construction and demolition waste, paper and cardboard, glass and metals.
- Money raised through the landfill tax should be used to provide incentives to local authorities by increasing the amount of money available to pump-prime infrastructure and stimulate innovation.
- Government should commit to more ambitious targets and put force behind the measures used to achieve them. Experience abroad and research at home suggests that at least 50 per cent of municipal waste and 60 per cent of all wastes can be recycled.

- Government should state clearly that reuse and recycling are the priorities and that incineration must not be allowed to compete with recycling. To allow recycling to develop unhindered government should be prepared to put in place either an incineration tax or an indefinite moratorium on new incineration capacity to ensure that this is the case.
- The UK has an opportunity to become a leader in market development by developing a comprehensive package of measures, including mandatory public procurement measures, minimum recycled content requirements for the major waste streams, and taxes on virgin materials. These taxes could be geared to discourage products giving rise to hazardous wastes or difficult wastes, as well as to encourage use of the recycled alternatives.
- By establishing the Waste and Resources Action Programme (WRAP), the UK has made a positive start on market development. WRAP's position should be reinforced by providing the organisation with additional funding, through a raised landfill tax.
- Government must take the lead on waste prevention, setting clear targets for resource productivity, developing a package of economic and producer responsibility measures to meet those targets, and supporting service innovation and other approaches to improving resource productivity.
- Leadership is crucial and government must make a clear and oft-repeated commitment to its targets and choice of instruments.
- Public information and awareness are important but communicating government's goals, and progress against those goals, should be given equal emphasis in public information campaigns with explaining how to recycle. Most importantly, communications need to be properly resourced.

Green Alliance sees the forthcoming report from the Government's Strategy Unit, and the next Pre-Budget Report, as immediate opportunities to put these measures in place. Bold action is needed now, if the UK is to avoid fines for not meeting the Landfill Directive targets and if the UK as a whole is to reap the benefits of becoming a cleaner, greener economy.

introduction

the purpose of this report

This report sets out how four EU countries, a non-EU country and two US states have set about implementing what are, by UK standards, radical waste strategies. The purpose of the report is to give detailed insights into the policy packages being used by other countries, draw lessons for how the UK might proceed with its own waste strategies¹, and stimulate an informed debate.

We have looked at the goals and aspirations of other countries and questioned to what extent they have been successful in meeting those goals, and why. A key element of the work has been to obtain views on these questions from people active in the waste debate in each of the countries we studied. We have not sought ourselves to evaluate the environmental impact of the strategies – all countries involved use the waste hierarchy espoused by the UK and so take it for granted that prevention, reuse and recycling are better for the environment than landfill and incineration without energy recovery. This view is also evident in the UK Government Strategy Unit's September 2002 discussion document². The only disagreement between the countries is on the role of incineration with energy recovery.

This report is a discussion document which will be used as the basis of a series of meetings and seminars, involving some of the policy actors from other countries that have been interviewed as part of this research. A final report will be published next year.

We feel that the project and report is timely given the multiple initiatives currently being undertaken on waste policy, including work by: the Strategy Unit on implementing the waste strategy³, the National Waste and Resources Forum report on legislative drivers affecting the economics of recycling⁴, the Community Recycling Network/Friends of the Earth report on maximising recycling⁵, the Environmental Services Training and Education Trust report on variable charging⁶, and the Autumn 2002 inquiry into sustainable waste management by the House of Commons Environmental Audit Committee⁷. The Strategy Unit discussion document sets out the case for action on waste as an important contribution to sustainability, not least because of the need to make better use of resources.

Action is urgent because according to OECD data, municipal waste (household and commercial waste) is growing at three per cent per year in the UK and this is faster than GDP growth and also one of the fastest rates in Europe⁸. Recycling of household waste currently stands at 12 per cent⁹ in England as against a target of 25 per cent by 2005; in Scotland recycling of municipal waste is around four per cent¹⁰; in Wales recycling of municipal waste is around seven per cent¹¹. The UK is also not on course to meet targets imposed by the EU Landfill Directive. Recycling has been the focus of recent debate, but increasing recycling is just one means of achieving greater resource productivity, ie getting more economic growth from less input of resources. Resource productivity includes preventing waste arising in the first place, which can have economic as well as environmental benefits. So while boosting recycling may increase the costs of waste management in the short term (landfill is cheap and easy), focusing on the broader aim of improving resource productivity should have economic benefits for both producers and consumers.

Together with the above initiatives, we hope that the publication of this report will take the debate to a new level – one where it is accepted that much stronger measures are needed if we are to make a major difference to the way we use resources and handle waste in this country.

methodology

The project has been funded by Shanks First through the Landfill Tax Credit Scheme, with initial funding (ten per cent of the project total) provided by three waste management companies – Shanks, Biffa and Viridor.

Planning meetings were held in September 2001 and January 2002 and involved people active in waste policy, including representatives from the sponsor companies, the Environment Agency, the Strategy Unit, the Department for the Environment, Food and Rural Affairs (DEFRA), the Department of Trade and Industry (DTI) and representatives from NGOs. These discussions helped to clarify for Green Alliance what kind of information about the countries would be useful to the UK policy debate, and in what form it would be best presented.

After extensive desk research, seven ‘countries’ (two US states and one European region were included) were selected for detailed study. They offered a combination of high recycling rates (50 per cent or over for total waste, 30 per cent or over for municipal or household waste), varied policy packages, and up-to-date data. These were **California, Denmark, Flanders, Massachusetts, The Netherlands, Sweden, and Switzerland.**

We decided that the reports on each country should be based on desk research and interviews with three waste ‘actors’ – one from government, one from an NGO, and one from industry – to give as rounded a picture as possible. Detailed profiles of each country were compiled from literature and internet sources. These were sent for comment to key people identified in each country, together with a request for an interview. Those who agreed to be interviewed were asked to give brief written responses to six key questions about their waste policies. If these were returned in advance they formed the basis for the interview. Once three interviews had been completed for each country, the information and comments obtained were compiled into a draft report and sent to interviewees to be checked. Through this series of steps we are confident that we have obtained detailed, accurate and candid accounts of the implementation of seven progressive waste strategies.

how to read this report

Each country/state report uses the same headings:

- **The overview** aims to give a snapshot of that country’s strategy and why it is interesting for the UK.
- **Who did we interview?** gives details of the affiliations of our interviewees.
- **What kind of country?** provides some basic geographic and demographic information, together with the public/private status of waste services.
- **What has been achieved?** summarises the statistics on recycling successes, together with, where relevant, waste reduction, and includes notes on definitions.
- **What were the motivations behind the strategy?** summarises comments on what prompted action on waste.
- **What are the principal instruments?** outlines what measures have been, in the view of our interviewees, the most important means of achieving the objectives of the their waste strategies.
- **What have been the key factors in success?** identifies factors or actions additional to the main instruments that have smoothed implementation.
- **What were the major problems for the strategy?** gives an account of major difficulties in implementing the strategies.
- **What are some of the issues for the future?** looks beyond the data to give a view of where the country is going next, what might be the forward aims and what might be the stumbling blocks.
- **What are the lessons for the UK?** suggests points, in the view of our interviewees, that UK policy-makers should give serious consideration.

The text of each country report is followed by a series of tables and charts. In each case there is information on the competent authorities for waste, the history of waste management plans, waste definitions and an overview of the policy instruments in place. These are followed by graphs illustrating the trends over time in total, municipal and industrial waste arisings. Information is available for the source of waste and its treatment in relative and absolute terms. However, data are not available in all of these categories for every country. Table 1 summarises what is available. Additionally, the comments made in the next section about comparability of country data should be borne in mind when examining the relative progress each country has made.

table 1: summary of waste arisings data availability							
	California	Denmark	Flanders	Mass.	Nether.	Sweden	Switz.
total waste – absolute treatment	yes			yes			
total waste – absolute source		yes	yes		yes		
total waste – relative treatment	yes	yes		yes	yes		
municipal waste – absolute and relative treatment		yes	yes	yes			yes
household waste – absolute and relative treatment		yes			yes	yes	
industrial waste – absolute and relative treatment		yes	yes		yes	yes	

comparability of data

Early on in the project we were made aware of some of the difficulties of comparing countries' performance. These included differences between the types of waste streams covered in statistics for 'total' waste; differing interpretations of what constituted 'municipal' and 'household' waste and different ways of measuring performance. In the country profiles and reports we have been careful to take note of definitions and say where we feel statistics are or are not comparable to the UK. We have tried to provide figures for the countries' 'total' wastes and their relative treatment (landfill, incineration, recycling) as well as figures for municipal solid waste (MSW) and its treatment, and relate both to UK figures.

municipal solid waste

MSW tends to be the focus of most policy discussions, although, as often pointed out by the waste industry, in the UK it accounts for only six per cent of total wastes generated, and around 13 per cent of 'controlled' wastes¹². Table 2 shows the definitions of MSW and the source of the statistics for MSW – whether they are the country's own statistics, or have been extrapolated by us from other data. We feel that what is considered as MSW, either by the countries or by ourselves, is sufficiently similar to the UK definition to make comparisons with UK performance. Figures 1, 2 and 3 show how the countries and the UK compare in per capita, absolute and relative treatment of MSW.

table 2: municipal solid waste definitions for the countries studied and the UK

UK	California	Denmark	Flanders	Mass.	Nether.	Sweden	Switz.
household refuse		yes	yes	yes	yes	yes	yes
household bulky		yes	yes	yes	yes	yes	yes
street sweepings		yes	yes	no	yes	yes	yes
offices & shops		yes	yes	yes	yes	yes	yes
				Also includes non-process waste from manufacturing plants (eg office, food waste)			
source for non UK data	No MSW figures but estimated as 40 per cent of total waste	No MSW category: figures derived by adding household waste and waste from 'institutions'	MSW figure in country statistics	MSW figure in country statistics	No MSW category. Figures derived by adding household waste and waste from trade services and government	MSW figure in country statistics	MSW figure in country statistics

figure 1: per capita municipal waste arisings and treatment

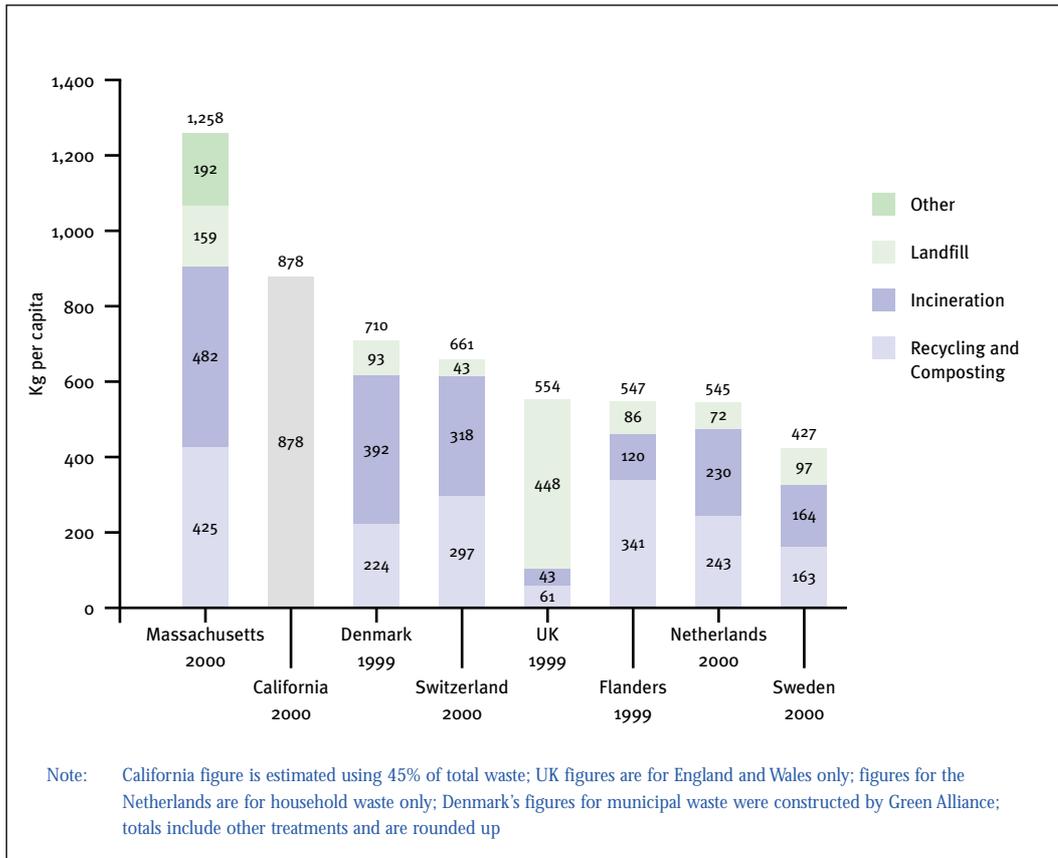


figure 2: absolute municipal waste arisings and treatment

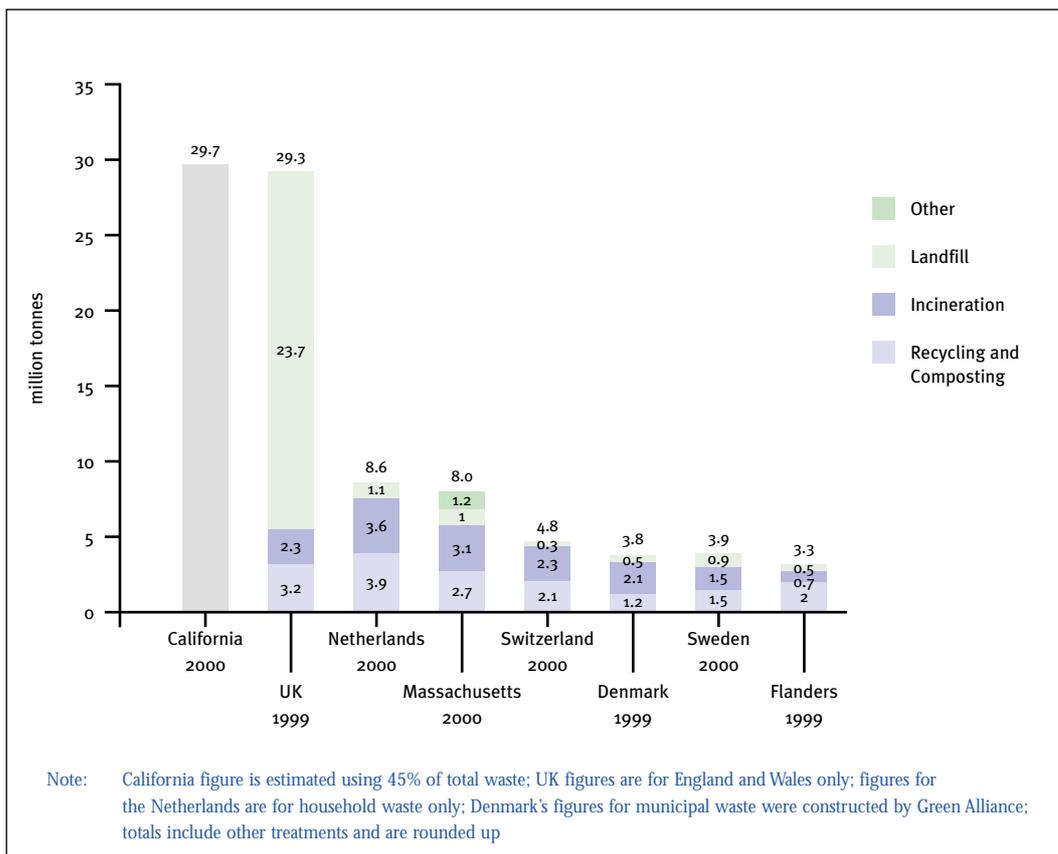
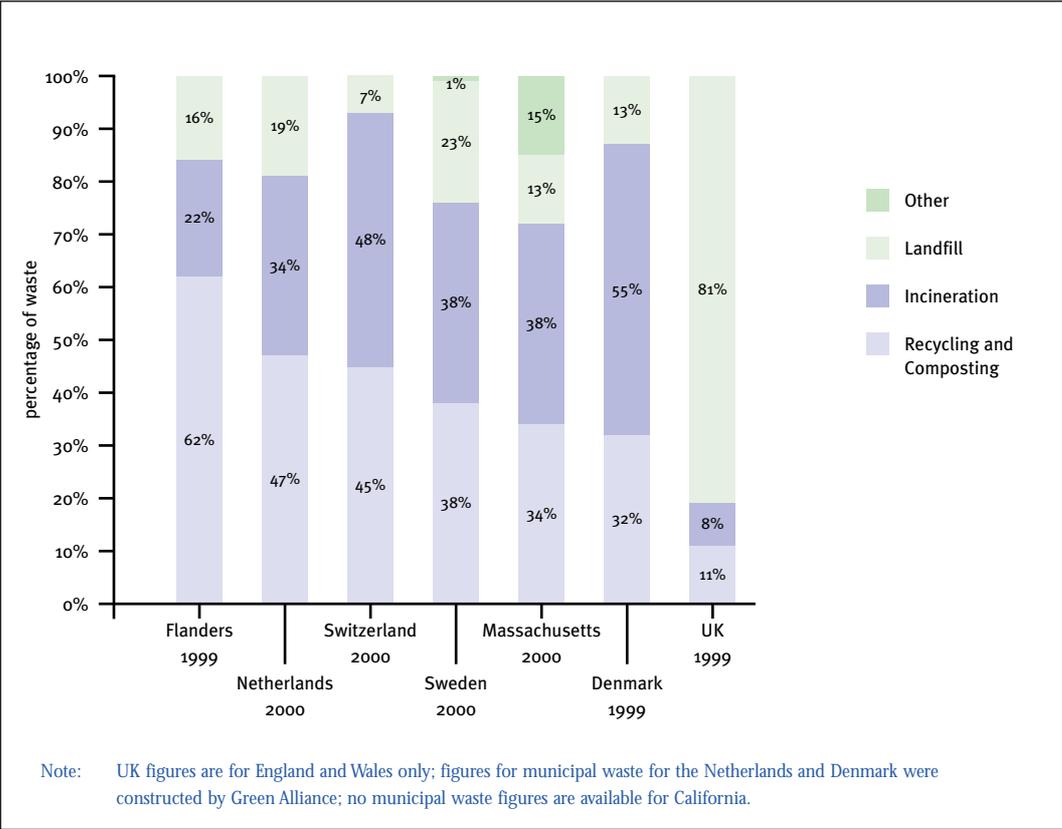


figure 3: relative municipal waste treatment rates



total waste

Total waste is much harder to compare. Table 3 shows what the countries studied do or do not include in figures for 'total' waste. Some countries include sewage sludge, agricultural and mining wastes, which are not included by the UK in statistics for recycling of 'controlled wastes' but amount to as much waste again in terms of tonnage. For this reason we have not produced a summary graph for 'total' wastes across the countries and states studied. However, we have reproduced countries' data on the absolute quantities of waste, its source, and on its relative treatment, in each of the country reports where these figures exist. The lack of recent comparable data on recycling of wastes other than MSW does not mean that this report has neglected describing the experiences of other countries in dealing with non-MSW wastes.

table 3: what is included in total waste?							
	California	Denmark	Flanders	Mass.	Nether.	Sweden	Switz.
municipal	yes	yes	yes	yes	yes	yes	yes
commercial	yes	yes	yes	yes	yes	yes	yes
industrial	yes	yes	yes		yes	yes	yes
construction & demolition	yes	yes	yes	yes	yes	yes	yes
sewage sludge	yes	yes	yes		yes	yes	yes
agricultural	yes				yes, but excludes 'surplus manure'	no	packaging only
mining & quarrying	yes		yes			yes	
dredgings					no		
excludes	hazardous medical		agricultural & forestry contaminated soils		manure surpluses contaminated soils	waste from power stations, gas works and heating plants	

findings and recommendations

1.11

Table 4 shows the mixture of policy instruments used in the seven countries, with the UK shown for comparison. This chart notes the major policy instruments – details of others are in each country profile.

The number of major policy instruments employed varies (from eight down to two) and the mix varies, showing that there are diverse ways of meeting waste strategy objectives. The sheer number of instruments does not correlate with high recycling. While most countries have employed a mixture of legislative and fiscal instruments, California has achieved waste ‘diversion’ (defined as including recycling and reduction) of around 50 per cent of all solid wastes by applying one major instrument – a mandatory 50 per cent target.

However, out of these diverse approaches, there are seven clear messages and pointers for the UK. These are discussed along with recommendations for the UK.

table 4: waste policy instruments in use in the countries studied and the UK

		California	Denmark	Flanders	Mass.	Nether.	Sweden	Switz.	UK
legislative instruments	mandatory targets for local authorities	yes							yes
	landfill bans		yes	yes	yes	yes	yes	yes	
	mandatory separation								
	household waste		yes			yes	yes		
	industrial waste		yes			yes			
	extended producer responsibility (excluding packaging)		yes	yes		yes	yes	yes	
incentive based instruments	taxes\charges								
	landfill		yes	yes		yes	yes	yes	yes
	incineration		yes	yes					
	bag (household)			yes	yes	yes	yes	yes	
	product		yes	yes			yes	yes	
	government subsidy			yes	yes				yes
	deposit-return systems	yes	yes	yes	yes		yes	yes	
total number of instruments		2	8	8	4	6	7	6	3
latest MSW recycling figure		-	32%	62%	34%	45%	38%	45%	11%

1. most countries studied have diverted waste from landfill by making major changes to the price structure of waste disposal options.

In waste policy, the price signal is paramount. The markets for recyclates cannot on their own provide that signal – they are, for most countries, still too variable. Government intervention is needed to kick-start the necessary investment. Recycling has to be consistently cheaper than other options in order to expand. Measures such as requiring or encouraging source separation, providing doorstep collection of recyclables, and public information campaigns are important but will not work unless backed up by a price shift.

In four of the countries studied (Denmark, the Netherlands, Sweden and Flanders) the price signal is provided by a high landfill tax. Two others (Switzerland and Massachusetts) have placed the price signal primarily at household level by charging according to volumes of waste not recycled. Variable household charging¹³ is used by the Netherlands, Sweden and Flanders as a measure additional to the high landfill tax, reinforcing the price signal.

Disposal taxes are in most cases combined with bans on particular waste streams going to landfill or incineration – the message is that the two mechanisms reinforce each other. In Massachusetts, for instance, these bans started as the heart of the strategy, but an increasing number of municipalities see variable charging of households ('pay-as-you-throw') as the most likely way of meeting the bans.

recommendations

The UK Government must:

- Consider a doubling, possibly a tripling, of the landfill tax to provide the right price signal. The urgency of the situation suggests doing this within the next three years.
- Give local authorities the powers (but not a requirement) to introduce variable charging of householders, ie by putting a price on waste not separated for recycling. To be effective local authorities will first have to ensure that separate facilities for the collection of recyclables are in place.
- Clearly indicate and communicate that the cost of waste disposal will increase over the foreseeable future to provide certainty in organisations' planning
- Consider banning the landfilling of materials that could be recycled. This could be done, with appropriate lead times, for those waste streams where recycling infrastructure is either already in place, or can be developed within two to three years of a ban being announced. The priority candidates for landfill bans are compostable wastes, paper and cardboard, glass and metals.

2. the main alternative to an approach based on taxes is the setting of long-term mandatory targets.

The Californian approach was to set a state-wide mandatory target of 50 per cent 'diversion' by 2000 (set in 1989). Diversion includes recycling, composting and source reduction. There is flexibility as to how the target is met, resulting in innovative contracts between public and private sectors. However, there are also clear and significant penalties for local authorities that do not meet the target. The data are still being collated, but suggests that the state-wide diversion rate was at least 42 per cent in 2000 and it may even have reached 50 per cent. However, the target has been complicated to administer and needs a high level of central government commitment and effort. Even the Californians we interviewed admitted that there may be easier ways of achieving the same goals.

The Swedish approach has been to set mandatory targets for the amount of material recycled through producer responsibility schemes. This has been successful up to a point, but has, as with the Californian example, proved complicated to administer and Sweden has recently introduced a landfill tax to improve recycling rates.

recommendation

- Green Alliance believes that the UK's waste strategies should not rely on targets alone, although they are important for stimulating and monitoring progress. We recommend that the heart of the strategy should be the establishment of appropriate price signals, through a higher landfill tax and the possibility of variable charging, as outlined above.
- Green Alliance additionally recommends that money raised through the landfill tax should be used to provide incentives to local authorities by increasing the amount of money available to pump-prime infrastructure and stimulate innovation.

3. There are rapid gains in recycling to be made, but many countries have now reached a plateau.

The policy packages studied have brought about significant shifts in waste disposal, often quite rapidly. The Netherlands' strategy took MSW recycling from 16 per cent to 42 per cent between 1990 and 1995, even before some of the main instruments had begun to bite. In Flanders, the comprehensive package of measures meant that MSW recycling increased from 21 per cent to 62 per cent between 1990 and 1999 with most of this increase, from 30 per cent to 62 per cent, between 1994 and 1999. In Sweden, the producer responsibility legislation took MSW recycling from 19 per cent in 1994 to 39 per cent in 2000. In California, the main effects of the mandated target were felt between 1993 and 2000, when recycling jumped from 24 per cent to 42 per cent, or even 50 per cent (the final figure is still being collated by the state) in 2000.

The price mechanism (or stringent legislation in the case of Sweden and California) is effective in diverting the easily-separated materials (paper, glass, construction and demolition wastes) towards recycling – what one interviewee dubbed the ‘low hanging fruit’. However, getting at the fruit higher up the tree is more difficult. Most countries see plastics and organic wastes as the major challenges. The plateau effect is a combination of having reached the maximum potential of source separation (particularly for households) and finding markets for the recyclates.

The UK still has a long way to go before reaching its plateau, given the Waste Strategy 2000 (England and Wales) figure of 11 per cent recycling of MSW; the recent DEFRA figure of 12 per cent recycling of household waste in England; SEPA’s figure of four per cent recycling of MSW in Scotland; and an estimated 28 per cent recycling of MSW, industrial and commercial wastes combined in England and Wales.

In our view, targets of at least 60 per cent recycling of all controlled wastes and 50 per cent recycling for MSW should be achievable over the next five to seven years, provided the right price signals and legislative back-up are put in place soon. The current targets¹⁴ are not ambitious enough and have no meaningful incentives or penalties to back them up.

recommendation

- Government should commit to more ambitious targets and put force behind the measures used to achieve them.

4. there is no general trend to expand incineration.

With the exception of California, all the countries studied have historically had higher incineration rates than the UK, but these are not necessarily set to increase. Those viewing incineration as a positive part of both waste and energy policies are in the minority. California, Flanders and Massachusetts have sought to limit its role. Switzerland has reduced incineration in favour of recycling, although from a base of incinerating 80 per cent of its waste 25 years ago. The Netherlands has recently lifted a moratorium on new incineration capacity to allow some expansion in the use of refuse-derived fuels in power stations and cement kilns, but it is not clear how much expansion is seen as desirable. The Danish Government is probably the most positive – it views incineration as playing a useful part in district heating since there is a long-established infrastructure to distribute the heat energy. Sweden is still developing its policy, but, as in Denmark, established infrastructure for energy-from-waste distribution makes incineration with energy recovery a tempting option for municipalities.

It is clear that if incineration is not seen as a desirable option, then, like landfill, it must be made more expensive than recycling. Switzerland discontinued subsidies to incineration in order to boost recycling. Denmark implemented an incineration tax to encourage recycling, although it is now considering allowing incineration to expand. Flanders has an incineration tax, the Netherlands has a general waste tax which enables a tax on incineration if considered necessary to limit expansion and Sweden is discussing an incineration tax. Massachusetts has a moratorium on new incineration capacity. In California, there is no specific mechanism in place but the tenor of public opinion makes it unlikely that anyone would propose to build an incinerator.

Public opinion in the UK is not in favour of incineration. Other countries are considering alternatives to mass-burn incineration, such as co-incineration (using refuse derived fuels in existing power plants and factories) and more advanced thermal technologies such as pyrolysis and gasification. Green Alliance believes that the possible future role of these technologies should be debated in the UK.

However, since our research shows that there is the potential to quadruple the level of municipal waste recycling in the UK, government should first seek to maximise diversion from landfill by creating incentives to recycle rather than incentives to incinerate. This may require placing a tax on incineration as well as on landfill, otherwise simple market economics will make incineration the preferred option for investors. The landfill tax should be converted to a general waste tax to enable this. Alternatively a simple moratorium on new incinerators may be enough to ensure investment in recycling, and this would provide the industry with certainty. The moratorium could be indefinite but with the option of review, which would provide the opportunity to debate development in the technology.

recommendation

- Government should state clearly that reuse and recycling are the priorities and that incineration must not be allowed to compete with recycling. To allow recycling to develop unhindered it must be prepared to put in place either an incineration tax or an indefinite moratorium on new incineration capacity to ensure that this is the case.

5. surprisingly little market development has been undertaken in most countries.

All the countries studied have concentrated their efforts on ensuring the supply of recyclates, either through the mandatory target approach of California and Sweden, or by making landfill (and in some cases incineration) more expensive than recycling. This has led indirectly to investment in reprocessing capacity and a continuity of supply of reprocessed materials. Surprisingly little conscious market development has been undertaken. The materials collected seem largely seem to have fed existing markets (domestic or foreign), and fluctuation of markets is often cited as a continuing problem.

The two US states studied had the most examples of market development measures. California has a recycled product procurement mandate; minimum recycled content requirements for newsprint, plastic bags and glass; and a range of grants and technical assistance programmes for those using recycled materials. Massachusetts has a recycled product procurement programme and grants. Taxes on virgin materials aimed at encouraging use of the recycled alternative are still rare.

recommendation

- The UK Government has an opportunity to become a leader in the field by developing a comprehensive package of market development measures, including mandatory public procurement measures, minimum recycled content requirements for the major waste streams, and taxes on virgin materials. These taxes could be geared to discourage products giving rise to hazardous wastes or difficult wastes, as well as to encourage use of the recycled alternative.
- By establishing WRAP, the UK has made a positive start on market development. WRAP's position should be reinforced by providing the organisation with additional funding, through a raised landfill tax.

6. few of the policy packages studied have resulted in significant waste prevention.

All the waste strategies studied aimed to reduce the amount of waste being produced (against a background of average MSW waste growth of between 1.7 per cent and 4.2 per cent per annum) as well as improve recycling. Waste prevention is inevitably hard to measure since it involves measuring something that isn't there – it has to be based on projections of waste growth based on GDP and demographic change. Only the Netherlands (for industrial waste) and Massachusetts (for the household waste component of MSW) think that the rate of growth has been slowed or stabilised in way that suggests it is no longer linked to GDP.

This finding suggests that waste reduction needs to be tackled higher up the chain of production and consumption – altering the economics of disposal with regard to recycling changes the destination of the waste, but does not affect the composition of the waste. Even producer responsibility measures, which might have been expected to give manufacturers an incentive to reduce the wastefulness of products, have not, in general, had that effect. Examples in the countries we looked at often diluted the incentive for producers to innovate by sharing the incentives and burdens of policy between all producers in a particular sector.

For the future, some countries see the need either for much higher disposal taxes, in the hope that they will work back through the system, or more developed forms of producer responsibility where manufacturers will agree to change product design. Two countries (Massachusetts and Denmark) were shifting focus from the quantity to the quality of waste, aiming to reduce toxicity of waste as priority. Reducing consumption, if considered at all, was not considered politically viable.

A clear lesson for the UK is that waste reduction must be given more emphasis in policy than recycling, otherwise the growth in waste will undermine the benefits achieved through recycling. It must be a goal of UK environmental policy, and not tackled through waste policy alone. Waste policy needs to be part of a broader resource productivity strategy. The UK Government needs to build on the Performance and Innovation Unit (PIU) report, *Making More With Less*¹⁵ if the UK's resource productivity is to be radically improved, and Green Alliance's report *Building a Bright Green Economy: An agenda for action on resource productivity*¹⁶ contains further recommendations on how this should be done. These include the development of indicators and targets of resource productivity, as well as policies to support it, including further economic instruments and action that cuts across government. For radical measures to work, they will need widespread stakeholder 'buy-in'. The National Waste and Resources Forum could be a means to achieve this.

Another option to explore is 'service innovation', an approach that has achieved significant levels of waste reduction. Service innovation is the transformation from product to service-based enterprises. The approach has the potential to significantly reduce material resource use and environmental impacts. The shift changes incentive structures, from maximising the volume of product sold to deriving profit from resource efficiency. It has been used in the US to achieve significant reductions in chemicals use and waste and has also been used as the basis of new contractual arrangement between local authorities and waste management companies to stimulate waste minimisation. Green Alliance has set up a *Service innovation for sustainability network*¹⁷ to examine the role the service model could play in the UK.

The UK Government has a clear opportunity to leap-frog the 'UK lags in recycling league' situation by moving ahead fast with waste prevention and resource productivity measures.

recommendation

- Government must take the lead on waste prevention, setting clear targets for resource productivity, developing a package of economic and producer responsibility measures to meet those targets, and supporting service innovation and other approaches to improving resource productivity.

7. public information and awareness are important, but political commitment and leadership from the centre as well as from local authorities are essential to the success of strategies.

This point is often made, but it is certainly backed up by our case studies. People need to know not only what and how to recycle, but why they are being asked to do it, and, perhaps most importantly, what are the results of their efforts.

recommendations

- Leadership is crucial and the UK Government must make a clear and publicly voiced commitment to its targets and choice of instruments designed to drive lower landfill, higher choice of recycling, waste reduction and greater resource efficiency.
- Public information and awareness are important but communicating government's goals, and progress against those goals, should be given equal emphasis in public information campaigns with explaining how to recycle. Most importantly, communications need to be properly resourced.

The forthcoming report on waste from the Government's Strategy Unit, and the next Pre-Budget Report are immediate opportunities to put these measures in place. The Government also needs to demonstrate its commitment to creating a broader policy framework that extends beyond traditional waste management and addresses how to stimulate a radical improvement of the UK's resource productivity. An early Government response to the PIU report *Resource Productivity: making more with less* would achieve this. One thing is clear: bold action is needed now. Inaction or timidity is not only likely to mean that the UK will not meet the Landfill Directive's targets, with associated financial penalties, but also that UK as a whole will fail to reap the benefits of becoming a cleaner, greener economy.

notes and references

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- 1 Waste Strategy 2000 applies to England and Wales; National Waste Strategy Scotland was issued in 1998; Wales published a new waste strategy, *Wise About Waste* in June 2002.
- 2 Waste – an interim discussion paper, Strategy Unit September 2002, paragraph 21. Available from www.cabinet-office.gov.uk/innovation/2001/Waste/summ.shtml
- 3 The Strategy Unit exists to provide the Prime Minister and government departments with a project-based capacity to look creatively at strategic long-term issues. It is currently undertaking a project on waste and recently published *Waste – an interim discussion paper* (see note 1).
- 4 *The Legislative Driven Economic Framework Promoting MSW Recycling in the UK*, report for the National Resource and Waste Forum by Dominic Hogg and Julie Hummel, 2002. Available from www.netlab.co.uk/nrwf3/publications.htm
- 5 *Maximising Recycling Rates – Tackling Residuals*, Friends of the Earth, Community Recycling Network, October 2002.
- 6 *Analysis of the Application of the Producer Pays Principle to Producers of Household Waste as a Driver towards Sustainability – A Preliminary Discussion Document*, Ernst & Young, July 2002, commissioned by the Environmental Services Training and Education Trust.
- 7 See House of Commons Environmental Audit Committee Press Release No. 40, 29 August 2002, *Winning the War on Waste* for further details. Available from www.parliament.uk/parliamentary_committees/environmental_audit_committee.cfm
- 8 See paragraph 8 of *Waste – an interim discussion paper* (see note 1)
- 9 For further details see *Municipal Waste Management Survey 2000/01*. Available from www.defra.gov.uk/environment/statistics/wastats/mwb0001/index.htm
- 10 *Waste Data Digest*, Scottish Environment Protection Agency, 2001, available from www.sepa.org.uk/nws/data/index.htm#Leaflet
- 11 *Figure from Wise About Waste: The National Waste Strategy for Wales Part One*; published 14 June 2002. Available from www.wales.gov.uk/subienvironment/content/wstetext-e.pdf
- 12 Controlled waste includes municipal, industrial, commercial, construction and demolition wastes but excludes agricultural, mining and quarrying, dredging wastes and sewage sludge. Source: Environment Agency waste statistics for England and Wales 1998-99. Available from: www.environment-agency.gov.uk
- 13 The Ernst & Young report (see note 5) defines variable charging as ‘A charge where the costs paid by the householder are related to the volume or weight of waste produced and/or the extent of segregated waste’. Direct charging is defined as, ‘where the householder pays the service provider direct, or pays the municipality who passes the payment directly to the service provider’.
- 14 Current targets for England and Wales are to ‘recover value’ (which includes recycling, composting, anaerobic digestion and energy recovery) from 40 per cent of MSW by 2005; 45 per cent by 2010; and 67 per cent by 2015. In addition, targets for recycling and composting of household waste are 25 per cent by 2005; 30 per cent by 2010; and 33 per cent by 2015. These targets are underpinned by statutory performance standards for local authorities. The *National Waste Strategy Scotland* has a set of aspirational targets, in addition to those of the Landfill Directive and other European Directives, including; reducing industrial waste arisings, the coverage and implementation of local authority waste strategies and stabilising municipal waste growth.
- 15 *Resource Productivity: making more with less*, Performance and Innovation Unit (now the Strategy Unit) November 2001, available from www.cabinet-office.gov.uk/innovation/reports/reports.shtml
- 16 Available from Green Alliance.
- 17 For further information on the Service Innovation for Sustainability Network see www.green-alliance.org.uk/Programmes_ServiceInnovation.htm