

# Fact sheet



## Plastics

Nothing better illustrates our throw-away lifestyle and our waste problems than plastic. Plastic trays and bottles for food and drink, bulky packaging, items that would once have been repaired: nearly all of these end up in the dustbin, destined to be buried in holes in the ground (landfill) where they don't biodegrade, or to be burnt in an incinerator where they produce toxic by-products.

It's a sorry picture and one that should concern us all. Friends of the Earth is calling for at least half of our household waste to be recycled by 2010. We want to see a waste strategy which makes waste reduction, re-use and recycling the priority.

### Plastic facts in the UK:

- We produce 3 million tonnes of plastic every year;
- Households are the biggest producers of plastic waste;
- 60% of household waste comes from packaging;
- Over 60% of litter on beaches is plastic;
- More than 80% of all this plastic is used once and then thrown into landfill sites;
- Only 7% of plastic is recycled.

### Plastics and the environment

There are environmental impacts from plastic production, plastic use and plastic waste disposal. Plastic containers are now lighter than they used to be, using less material, but our consumption of plastic is still set to rise. The building blocks of plastic, known as monomers, are made from oil and gas (plastic production uses 8% of the world oil production each year). To make the various polymers used by industry for various uses (for example, PET for plastic bottles, polystyrene, PVC) many chemicals are used which have not undergone a risk assessment.

Friends of the Earth's Safer Chemicals campaign has targeted the following chemicals of concern. There are more details at: [www.foe.co.uk/campaigns/safer\\_chemicals](http://www.foe.co.uk/campaigns/safer_chemicals)

**Dioxins** are produced when plastics are incinerated (or burnt in other fires in various processes). These are extremely toxic even in very low doses, and they are persistent (taking a long time to break down) and bio-accumulative (they build up in our bodies). They can cause cancer and may affect our hormones and unborn children. Friends of the Earth believes that following the precautionary principle no more avoidable dioxins should be added to the environment.

**Phthalates** are a group of chemicals which are hormone disrupters. Plastic toys made out of PVC are often softened with phthalates.

**Brominated flame retardants** are a group of chemicals which are used in fabrics and plastics to counteract the spread of fires. Most brominated flame retardants are persistent and bio-accumulative, and several have been identified as hormone disrupters.

**Bisphenol A** is a chemical which mimics female hormones. It used in the plastic lining of most food cans and

in some polycarbonate plastic bottles. Studies have reported that bisphenol A in polycarbonate babies' feeding bottles may contaminate the contents when heated, with much higher levels in scratched bottles. While the scientific debate continues about safe levels of human exposure to bisphenol A, the reproduction of wildlife species is already known to be affected by hormone-disrupting chemicals in the environment. Friends of the Earth is calling for a precautionary approach and an end of the use of this risky chemical.

## **Bottled Water**

Roughly 1.5 million tonnes of plastic is used every year by the bottled water industry, and around a quarter of the 90 billion litres of bottled water drunk each year is consumed outside the country of origin, adding to greenhouse gas emissions. We might as well drink water from the tap and save all this waste.

## **Degradable plastics**

Degradable plastics are of two kinds: photo-degradable (broken down by light) and bio-degradable (broken down by bacteria). Photo-degradable plastic (usually labelled simply degradable) is made of oil polymers like ordinary plastic. It usually ends up in a dark hole in the ground where there is not enough light to degrade it, and it still takes energy to produce and is thrown away (so the energy is wasted and re-use or recycling is not an option). Even if the original product does break down it just forms small particles of plastic. And if people believe these items will simply disappear there is a danger of increased litter.

There are developments in the production of bio-degradable, compostable plastic made from corn starch, but these products are not long-lasting enough to be used widely. This bio-degradable plastic needs air and water to degrade properly: two ingredients which are in short supply in landfill. Although the cornstarch element will degrade in the right conditions, the other additives and stabilisers may not, and some of these are toxic.

Degradable plastic does nothing to promote lasting solutions to plastic waste: cutting the amount of plastic produced and the amount of plastic waste, or recycling existing plastic. Instead of using degradable plastics to make throw-away bags and bottles, the packaging industry could help the environment a lot more by cutting out unnecessary packaging and by making containers re-usable.

## **Plastics and the Law**

New European directives on waste have led to a Government Waste Strategy which sets a national target to recycle and compost 30% of our household waste by 2010 and 33% by 2015. Friends of the Earth believes that we should be aiming well beyond these targets, and that we can meet our European requirements for avoiding landfill through more recycling (including composting of green waste), without the need for incineration or new landfill sites.

Friends of the Earth is calling for a target of 50% recycling by 2010, and higher targets beyond this. The potential for recycling everyday materials in the house waste stream is huge: up to 80% of household waste could be recycled or composted. Switzerland recycles 52% and the Netherlands 46% (2000 figures), but we still have a pitifully low rate of 11% (in 1999/2000). Friends of the Earth wants every household to be provided with an effective collection for all recyclable and compostable household waste, so that recycling become an everyday activity for us all.

The EU packaging directive means that large businesses responsible for packaging must contribute towards the 'recovery' of packaging materials (meaning recycling, incineration and other energy-from-waste methods) as well as recycling. Meeting these recovery targets has meant an increase in incineration. Friends of the Earth believes there should be no recovery target at all, that the targets for recycling should be much higher and that there should also be a target for minimum levels of re-use of packaging. Friends of the Earth supports a target of recycling 75% of packaging waste by 2006, and is calling for incentives to encourage producers to plan integrated systems for the re-use and recycling of materials.

The markets for recycled materials are at present limited and unstable, which has discouraged local authorities from investing in recycling facilities. As more and more materials are recycled the price and stability of the recycled materials market will improve. Communities across England and Wales are already showing what can be achieved with commitment and investment.

## Plastic disposal problems

**Incineration:** Friends of the Earth wants a ban on new incineration capacity until policies are in place to achieve the 60-80 per cent recycling rates achieved in other countries. New European laws mean that two-thirds of bio-degradable waste (i.e. kitchen waste, garden waste, paper and cardboard) must be kept away from landfill by 2020. The Government has come up with a Waste Strategy to fulfil these obligations, but just burning more of this waste in incinerators is not the answer.

In any case, if paper and plastic waste were minimised and recycled as much as possible, in most areas there would not be enough left to make incineration financially worthwhile. Current plans to burn plastics to produce energy will not benefit the environment. Energy can be obtained from burning waste, but this is less energy than can be saved by recycling. In addition:

- Incineration destroys valuable resources;
- Burning fossil fuels like coal, oil and gas is causing increasing levels of carbon dioxide in our atmosphere, leading to **climate change**. Incineration contributes to climate change, because when materials are burnt more fossil fuel energy is used to replace them through mining, manufacturing, and transportation around the world. Energy from burning waste is not renewable;
- Incinerators need a steady stream of waste to keep them going. This means there is no incentive to reduce waste or recycle it;
- Incineration causes pollution from air emissions and toxic ash;
- Incineration is worse for climate change than recycling because new products have to be made to replace those destroyed;
- Incineration does not provide the thousands of new job opportunities that recycling does.

**Landfill:** Friends of the Earth wants a ban on new landfill capacity until policies are in place to achieve the 60-80 per cent recycling rates achieved in other countries, because:

- Landfill waste valuable resources;
- Landfill contributes to climate change, because when materials are buried more fossil fuel energy is used to replace them through mining, manufacturing, and transportation around the world;
- Landfill produces methane, a powerful greenhouse gas which contributes to climate change;
- Landfill creates water pollution as liquid from landfill sites leaks into our water supply;
- Landfill can lead to land contamination;
- Landfill leads to increased traffic, noise, smell, smoke, dust and litter.

## What you can do: Reduce, Re-use, Recycle

### Reduce

The drive to market competing foods means more eye-catching packaging, not less. You can even buy individual bananas in plastic pouches. We need manufacturers to be part of the solution, rather than the problem.

*What you can do:*

- Don't buy plastic if you can avoid it.
- Avoid packaging where possible. For example, buy vegetables loose or use a vegetable box scheme and return the box.
- Avoid over-packaged goods, and complain to the manufacturer if you think the amount of packaging is excessive.
- If you can afford to, choose goods that are durable and repairable. Buy second-hand items where appropriate.
- Avoid disposable plastic goods such as plastic cups – why not use a mug and wash it up instead!

## Re-use

It makes sense and it saves energy to re-use rather than recycle, but it is currently more economical for manufacturers to produce new product rather than wash and re-fill packaging. The Body Shop will re-fill plastic bottles with the same product, and many small producers across the country also do this, showing that re-use can make economic sense.

*What you can do:*

- Re-use your plastic bags, or better still avoid them by using a sturdy bag that will last for years.
- Re-use pots with lids (like yoghurt pots) for storage rather than buying new ones.
- In the garden, re-use plastic pots for raising seedlings and cut-down plastic bottles to protect them from slugs when you plant them out.
- Give usable goods to charity shops, or hold car boot sales for charity with any plastic items that can be re-used.
- Ask suppliers if they will take back plastic items for re-use: for example, plant pots in garden centres.
- Use re-fillable toner cartridges.

## Recycle

Recycling is one of the most immediate and effective ways to protect the environment. By recycling instead of producing goods from raw materials, substantial amounts of energy and raw materials are saved. 40% of local authorities now provide facilities for recycling plastics, with a quarter of these involved in doorstep collection schemes which are the most successful in recovering plastic waste.

The six most common types of plastic can all easily be recycled and have a much higher value than most recyclable materials. There is currently a lack of processing facilities in the UK and they are all in the North West. With more incentives for the industry to expand and more facilities across the UK recycling will increase. As the volume of recycled material increases markets will expand, making the material more attractive to industry and the benefits of recycling more apparent.

At present we recycle just 11 per cent of household waste, but if we could recycle 30 per cent of our waste by 2005 we could create 45,000 jobs. Friends of the Earth has calculated that recycling and waste minimisation businesses could employ over 100,000 more people than the landfill and incinerator businesses would make redundant.

*What you can do:*

- Buy products made of recycled plastic wherever possible.
- Recycle plastic. Waste Watch and Waste Connect can give you details about recycling facilities in your area (contact details below).
- Contact your council if they do not provide adequate facilities.
- Set up a community scheme. The Community Recycling Network can help (contact details below).
- Encourage recycling in your workplace/school/church, etc.

## Further Information from Friends of the Earth

### Waste Campaign

[www.foe.co.uk/campaigns/waste](http://www.foe.co.uk/campaigns/waste)

### Safer Chemicals Campaign

[www.foe.co.uk/campaigns/safer\\_chemicals](http://www.foe.co.uk/campaigns/safer_chemicals)

### More from Less

Showing how we can live better on less in tomorrow's world, this book is a blueprint for sustainable living and working in the 21<sup>st</sup> century. It discusses how we can cut our excessive use of finite resources like materials and energy. Available from Friends of the Earth publications on 020 7490 1555.

## Other organisations

**Waste Watch** *Information on waste reduction and recycling issues, with useful fact sheets*

Tel: 0870 243 0136

Web: [www.wastewatch.org.uk](http://www.wastewatch.org.uk)

**Waste Connect** *Database of recycling facilities in your area: just enter your postcode*

Tel: 01686 640 600

Web: [www.wastepoint.co.uk/wasteconnect](http://www.wastepoint.co.uk/wasteconnect)

**Community Recycling Network** *Information about setting up recycling schemes*

Tel: 0117 907 4107

Web: [www.crn.org.uk](http://www.crn.org.uk)

**National Recycling Forum** *Database of recycled products*

Web: [www.nrf.org.uk/buy-recycled/menu.htm](http://www.nrf.org.uk/buy-recycled/menu.htm)

**Recoup** *Recycling of Used Plastic Containers Ltd - with advice for setting up plastic recycling schemes*

Tel: 01733 390021

Web: [www.recoup.org](http://www.recoup.org)

**Greenpeace** *PVC alternatives database*

[www.greenpeace.org/%7Etoxics/pvcdatabase](http://www.greenpeace.org/%7Etoxics/pvcdatabase)

Published: December 2001

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Friends of the Earth is:

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- a unique network of campaigning local groups, working in over 200 communities throughout England, Wales and Northern Ireland
- the most effective environmental network in the world, with almost one million supporters across five continents and over 60 national organisations worldwide
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