

Personal Development Resources

Understanding if it is more sustainable to recycle waste plastic in the UK than sending it to China for recycling

Quick Guide



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In this quick guide we aim to provide an overview of the 7 Key Themes to ESDGC relating to the above topic



1. Choices & Decisions

The choice is between a range of options, not just either/or. Each choice would have different implications. More detailed information might be needed, such as: What happens to the plastic that is sent to China, what happens to plastic recycled in the UK? How is it transported? What about other options, such as incineration or sending to landfill? Perhaps it would be possible to produce less waste plastic.



2. Identity and Culture

What is the impact on other cultures and on our own?

In the UK we produce 3 million tonnes of plastic waste per year, of which less than half is recycled. Most of the rest is sent to landfill. Much of the plastic sent for recycling is contaminated, greatly reducing its value. There are now over 100 plastics recyclers in the UK, but much of the plastic recycled here is manufacturing waste or high quality separated plastic, such as clear plastic bottles or milk containers. Mixed plastic packaging is more difficult. There is little demand for recycled plastic in this country at this time. You can find information about plastics recycling in the UK from WRAP.



3. Wealth and Poverty

Does this process have a beneficial or detrimental effect on the distribution of wealth locally and globally? What are the economic implications?

There is very strong demand in China for recycled PET plastic (fizzy drink bottles), which is spun into polyester fibre and used to make textiles such as polar fleece, and HDPE plastic (milk bottles), which is turned into a variety of household products such as pipes, crates, bottles and films. Because of lower wages, resources such as waste plastic have a higher comparative value in China than in the UK. The UK has a huge economy and rate of consumption for its size and as new recycling plants start to open here, there will be increased demand from the UK for these materials.



4. The Natural Environment

What is the impact on the natural environment locally and globally?

If plastic is not disposed of properly it ends up in the environment. Waste plastic in the environment can have a negative impact on many species, particularly when it ends up in the sea. The link below describes a huge area of the North Pacific where plastic accumulates, causing great damage to birds and other wildlife.



5. Health

How does this process affect health locally and globally, in all the stages of production and use?

Production of all fossil-fuel-based products is associated with widely recognised health hazards and environmental impacts. Polyvinyl chloride (PVC) and polystyrene are among the worst polymers and are associated with hazards throughout their lifecycle of production, use, and disposal. Production and disposal of PVC releases persistent pollutants into the environment that are known to cause cancer, disrupt the endocrine system, impair reproduction, cause birth defects, and more.

Disposing of plastic by incineration releases dioxins into the atmosphere, which are known to cause cancer.



6. Climate Change

How does this process affect the climate? What is its carbon footprint?

A report on the production of carrier bags made from recycled rather than virgin polythene concluded that the use of recycled plastic resulted in the following environmental benefits:

- reduction of energy consumption by two-thirds
- production of only a third of the sulphur dioxide and half of the nitrous oxide
- reduction of water usage by nearly 90%
- reduction of carbon dioxide generation by two-and-a-half times

The international trade in recycled materials is very important, and minimizes the need to use more expensive virgin plastics and the resources required to manufacture them, including oil.



7. Consumption & Waste

Is this product made from finite or renewable resources? How can it be recycled at the end of its useful life?

Plastic is a valuable and finite resource, usually made from fossil fuels, and environmentally the optimum use for most plastic after its first use, is to be recycled – preferably into a product that can be recycled again.

In the UK we produce 3 million tonnes of plastic waste per year, of which less than half is recycled.

Wherever they are recycled it is important to clean and separate the different types of plastic so that they can be used for higher value use, such as more bottles, textiles rather than fence posts. Sending plastic to landfill is the worst option of all, except perhaps dropping it on the street.

Conclusion

On balance at the moment our expert would:

Reduce the amount of plastic you buy as much as possible, wash plastic carefully after use, separate it into different types as accurately as possible, and send it for recycling, in the UK if there is a UK market for it, but otherwise for sale to China.