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EPSRC

Engineering and Physical Sciences
Research Council

Should plastic have a future?

Prepared by the EPSRC CDT in Sustainable Chemistry



A Scientist

- Wasting food is worse for the environment than preserving it using plastic wrapping and clingfilm
- It is possible to make plastic from renewable materials (such as plants) and biodegradable plastic
- In hospitals, disposable plastic is safer than having to sterilize glass and metal
- Alternatives to plastic bottles like glass and cans are more energy intensive to use due to their production and transport
- 3-D printing using plastic is a great tool for making prototypes for other technology. - it is cheap, quick and easy



Head of Fizzy Drink Company

- Alternatives to plastic bottles, e.g. glass and cans, require more energy to be produced
- Plastic is lighter than glass which means it is cheaper and less energy intensive to transport
- There are schemes to encourage people to recycle so that the plastic is not waste
- Different types of plastic are important for getting the right fizz - drinks could go flat in the wrong packaging
- Plastic is safer than glass, it can't smash and break



Leading Conservationist

- Plastic is usually made from fossil fuels – a non-renewable feedstock
- The process used to make plastic produces is energy intensive and produces greenhouse gases
- Tonnes of plastic ends up in the ocean where it will take thousands of years to degrade
- Microplastics from clothes and cosmetics can enter the ocean through water streams – causing harm to aquatic life
- Making plastic from plants requires a lot of land – which could be used to grow food



Head of a Supermarket

- Wasting food is worse for the environment than preserving it using plastic wrapping and clingfilm
- Transporting goods is more efficient when they are packaged; plastic is cheap and lightweight - it is the most sensible option
- Plastic is safer than glass, it can't smash and break
- Alternatives to plastic can be more expensive (e.g. biodegradable packaging)
- The public are becoming more aware of plastic waste - we should try to move away from using it to please our customers



A Member of the Public

- The local recycling schemes are complicated and aren't always the same
- Alternatives to plastic can be more expensive
- Glass was used for decades for drink bottles in the past and worked well – can we go back to using glass?
- We should do what we can to protect wildlife and the environment
- There is no information on the long term effects plastic will have for us because it is a new material