

RECYCLING & SUSTAINABILITY

A brief guide to recycling & sustainability

Sustainability



For environmental purposes sustainability should be defined as follows:

“Meeting the needs of today without compromising the ability of future generations to meet their own needs.”

Herman Daly (American Ecological Economist) further went on to highlight the following three points regarding environmental sustainability:

1. *For renewable resources, the rate of harvest should not exceed the rate of regeneration;*
2. *For pollution, the rates of waste generation from projects should not exceed the assimilative capacity of the environment;*
3. *For nonrenewable resources, the depletion of the nonrenewable resources should not exceed the development of renewable substitutes for that resource.*

What is recycling?

Recycling is a simple idea: take something that has no use and turn it into something new. In reality though recycling is rather complex, interacting with the environment, politics and the economy. It is also done on a range of scales from the household level such as turning a glass jar into a pen holder, to a global level of recycling thousands upon thousands of tonnes of consumer goods.

Why is it important to recycle?

We live on a planet with finite resources but a linear system*. This is simply not sustainable* as it depletes the earth's non-renewable resources. For example the production and supply of plastics account for up to 8% of the global use of oil.

How can we become more sustainable? The answer is to **REDUCE, REUSE** and **RECYCLE**! This will reduce the reliance on the unsustainable practice that is extracting raw materials and lead a move away from a linear system to a circular economy*.



Aside from reducing the extraction of non-renewable resources, recycling has many other benefits. It reduces the amount of waste sent to landfill and is economically beneficial to many countries.

Sustainability and recycling

An easy way to visualise how sustainable you are is by looking at your ecological footprint*. To be sustainable the earth's footprint should be 1 (meaning that there is exactly enough land to sustain the use of natural resources), but it is currently 1.5, meaning that we are in “ecological overshoot” and living unsustainably. Ecological footprints vary dramatically between countries and the general trend is that economically developed countries are unsustainable

Ecological footprint

“The impact of a person or community on the environment, expressed as the amount of land required to sustain their use of natural resources.”

You can calculate your own ecological footprint here: footprint.wwf.org.uk

Linear system

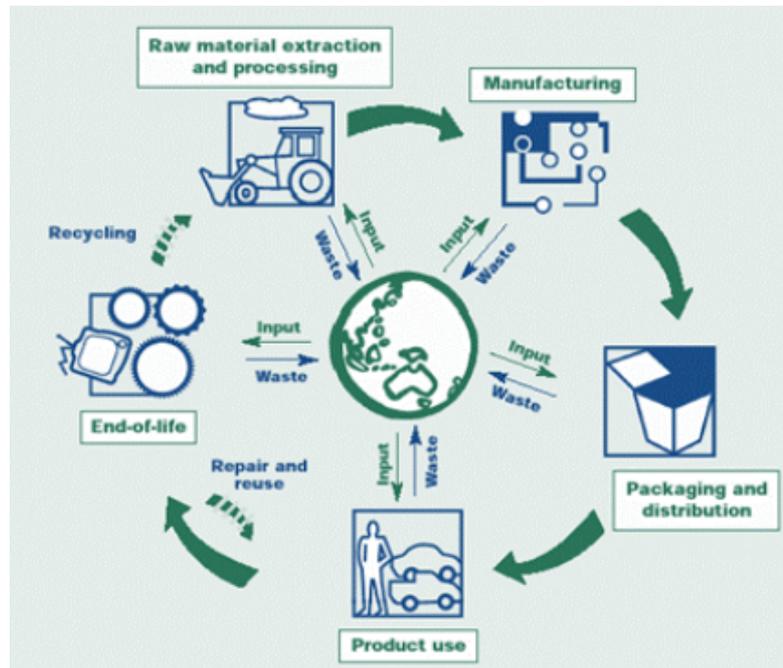
A linear system is a system whereby raw materials are extracted from the earth, manufactured, sold, consumed and then thrown away as waste never to be used again. It is otherwise termed as a ‘take, make, dispose’ model. For a fun and detailed explanation search “Story of Stuff” into YouTube.

Circular economy

“A circular economy is one that is restorative by intention; it aims to use renewable energy; reduces, tracks and eliminates toxic chemicals; and eradicates waste through careful design.” (Ellen Macarthur Foundation)

(see USA) whilst those less economically developed are more sustainable (Bangladesh) (see <http://www.footprintnetwork.org/>). Recycling plays a major role in reducing ecological footprints as it reduces raw material extraction and the amount of energy required to produce items, thus reducing CO₂ emissions.

Lifecycle of a product



What can be recycled?

A variety of materials can be recycled and the Southern Amenity Site accepts glass, plastic bottles, aluminium cans and foil, vehicle batteries, batteries, fridges, televisions, clothes, cooking and vehicle oils, turf, inert material, clean rubble and green waste for recycling. Once dropped off the materials are taken on separate paths until they are back in use; each path will be described in following articles. It is only the inert material that is not recycled.

Some materials are better than others when it comes to recycling; aluminium cans can be recycled indefinitely never losing value whilst paper can only be recycled a certain number of times before ink residue and shorter fibres make the paper not worth recycling; this is known as down-cycling.



Further information

For further information on sustainability and recycling please see the following websites/books:

<http://www.epa.gov/sustainability/basicinfo.htm>

Meadows, D., Randers, J., & Meadows, D. (2004). Limits to growth: the 30-year update. Chelsea Green Publishing.

<http://science.howstuffworks.com/environmental/green-science/recycling.htm>

<http://www.footprintnetwork.org/>

footprint.wwf.org.uk