

# Personal Development Resources

Understanding if beer from aluminium cans is more sustainable than beer from bottles

Quick Guide



# Understanding if beer from aluminium cans is more sustainable than beer from bottles

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: Are the glass or aluminium from recycled or new materials, are they made locally, can they be reused, or recycled? Is there another option, such as draft beer? Can you buy the same beer in bottles and in cans?

Glass is made from silica, the main ingredient of sand. The production of glass is relatively environmentally friendly, but recycled glass needs to be smelted again, an energy intensive process. In practise much of the glass sent for recycling is used as hard core in road construction.



## 2. Identity and Culture

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

The can is made from aluminium mined from the earth as bauxite. Bauxite mining has had huge impacts on indigenous cultures across the world. In Orissa, India bauxite mining by mining company Vedanta threatens to destroy the way of life of the Dongh tribal people.

Bauxite mining in Australia has caused great damage to the ancestral lands of the aborigine people. In Northern Queensland a single mining company has a license to strip mine 2,600 sq km of bushland, and remove a billion tons of bauxite, displacing 3 communities of native people.

Much of this land is considered sacred to the aboriginal people. Aluminum can be recycled over and over again. In Britain we recycle only 41% of cans. In Norway 93% are recycled.



## 3. Wealth and Poverty

### Does this product have a beneficial or detrimental effect on the distribution of wealth locally and globally?

The provision of jobs in bauxite mining may be more than offset by the loss of land and livelihood suffered by local communities.

Recycling aluminium creates employment. Europe's main aluminium can recycling plant is Novelis, in Manchester, reprocessing 30 billion cans per year. Cans are worth 1p each, representing only 1 percent by weight of household rubbish, but 25% of recycling value.



## 4. The Natural Environment

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

Aluminium mining can cause considerable destruction to natural habitats. The aluminium is extracted from the ore using caustic soda, and the liquid which remains after extraction is extremely toxic. It is usually stored in large lakes or pools held back by dams causing contamination affecting wildlife downstream. In Northern Queensland there is a danger that tropical storms could spread this slurry into environmentally sensitive mangrove areas, rich in biodiversity.



## 5. Health

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

Aluminium mining can contaminate local water supplies and the natural environment. In Hungary last year dams holding back toxic sludge from alumina works burst, releasing thousands of tons of toxic sludge over the surrounding landscape, killing four people, and all the fish in the upper reaches of the river systems leading to the River Danube.



## 6. Climate Change

### How does the production and use of this product affect the climate? What is its carbon footprint?

17 tonnes of CO<sub>2</sub> are produced for each tonne of aluminium. The smelting process uses enormous amounts of electricity, and in many cases this electricity is inefficiently made from coal power stations. It is estimated that aluminium smelting uses 2% of all global electricity use.

The carbon footprint of recycled aluminium is only 5% of aluminium from raw materials. Glass is less carbon intensive to make, and cheaper, but it is more expensive to transport because it is heavier. It is also more fragile.



## 7. Consumption & Waste

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

Aluminium is a finite resource but can be recycled over and over again, and it is estimated that 70% of the aluminium ever made is still in circulation.

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## Conclusion

### On balance at the moment our expert would:

Drink beer from cans, so long as you make sure to recycle the can. If you have a local brewery and drink lots of beer you could approach them about returning your bottles. You could drink bottled beer, and pass the bottles on to a friend who makes their own beer.