



## How Bad are Bananas?

<b>Age group</b>	12 +
<b>Group size</b>	5-26
<b>Time</b>	60 minutes

### Overview

In this activity participants discuss the impact of different actions on their carbon footprint.

### Objectives

- To encourage participants to reflect on the carbon intensity of different activities
- To get a feeling for the carbon intensity of different activities
- To show how difficult it is to calculate the difference in carbon intensity of different activities
- To raise awareness of the necessity to take action individually and also on the political level

### Materials

- Cards, markers, pens
- Masking tape
- Music player

### Preparation

- Write the items/activities from the appendix on cards (only the bold writing, not the numbers and explanations!)

### Step-by-step instructions

1. Spread the activity cards on the floor. Put the music on. Participants should dance around and when the music stops take a card. They should discuss with two other people who they think has the card with the highest carbon footprint. Repeat this a few times.
2. The last time, everyone should stick their card onto them.
3. Ask everyone in the big group to form a line, with high impact carbon items at one end of the room, and lower impact activities on the other end of the room. They should discuss with each other while trying to form an order.
4. When they have decided on a line, ask everyone to say what they are. Then they can put their card on the floor in the same order.
5. If there are any disagreements, allow for short discussion on these cards. Then give the missing information about the carbon footprint of the activities. Participants can add the numbers to the cards.
6. Ask participants to choose the activities that they can't have any individual influence on, but that need to be carried out by a higher level (city administration, national politics...) and put them in a separate line.

### Debriefing

- Why did you put them in this order?
- Were there many disagreements in the group?
- Was anything very easy to place? What was difficult to decide on? Why?

Make it clear that it is always very difficult to put activities in an order, because a complete measurement of all greenhouse gas emissions of an activity is almost impossible. However, there are many estimates made by researchers and it is better to have a rough measurement than to not think about the carbon footprint of these things at all.

- On which end of the line are the activities that can be carried out at individual level?
- Should we start reducing our carbon footprint through individual actions or by focusing on influencing the political level?



## Appendix: Impact cards

All figures are taken from the book 'How Bad are Bananas?' (Berners-Lee, 2010). The numbers are estimates of Carbon Dioxide 'equivalents' (CO<sub>2</sub>e), also taking into account other greenhouse gases.

**One web search** (Between 0.7 and 4.5g CO<sub>2</sub>e dependent of computer's energy efficiency)

**Drying your hands** (10g CO<sub>2</sub>e with one paper towel; 20g CO<sub>2</sub>e with standard electric dryer)

**A plastic bag** (10g CO<sub>2</sub>e for a standard, disposable supermarket bag – if you take one 5 times per week, over the year it has the same footprint as one large cheeseburger)

**Boiling one litre of water** (70g CO<sub>2</sub>e with an electric kettle)

**An apple** (80g CO<sub>2</sub>e on average - sometimes local and seasonal, sometimes not)

**A banana** (80g CO<sub>2</sub>e – not bad at all, because they are grown in natural sunlight, they are transported by ship because they keep well and they don't need much packaging because they have their own)

**One mile by bus** (150g CO<sub>2</sub>e on a normal city bus)

**One mile by train** (150g CO<sub>2</sub>e on a normal intercity train)

**500ml bottled water** (160g CO<sub>2</sub>e on average – 80g just for the plastic)

**A shower** (500g CO<sub>2</sub>e for 6 minutes in a typical electric shower)

**1kg of rubbish** (700g CO<sub>2</sub>e for average bin contents)

**One mile by car** (710g CO<sub>2</sub>e on average)

**A veggieburger** (1kg CO<sub>2</sub>e)

**A cheeseburger** (2.5kg CO<sub>2</sub>e)

**A pair of cotton jeans** (6kg CO<sub>2</sub>e)

**1kg of tomatoes** (9.1kg on average)

**Using a mobile phone** (1250kg CO<sub>2</sub>e a year's usage at one hour per day; 47kg for a year's usage at just under 2 minutes a day)

**Flying from London to Hong Kong return** (4.6 tonnes CO<sub>2</sub>e on average, more in first class)

**1 tonne of fertiliser** (between 2.7 and 12.3 tonnes CO<sub>2</sub>e depending on how efficiently it is made)

**Having a child in Europe** (373 tonnes CO<sub>2</sub>e on average)

**A swimming pool** (400 tonnes CO<sub>2</sub>e per year)

**1 hectare of deforestation** (500 tonnes CO<sub>2</sub>e per year – equivalent to a car driving 28 times around the world: Every year 13 million hectares are cut down or burnt.)

**A space shuttle flight** (at least 4,600 tonnes CO<sub>2</sub>e)

**The World Cup** (2.8 million tonnes CO<sub>2</sub>e the 2010 South Africa World Cup for accommodation, stadia use, construction and transport)

**A bushfire** (165 million tonnes CO<sub>2</sub>e the Australian bushfires 2009)

**A war** (250-600 million tonnes CO<sub>2</sub>e, the war in Iraq 2003-2009)

