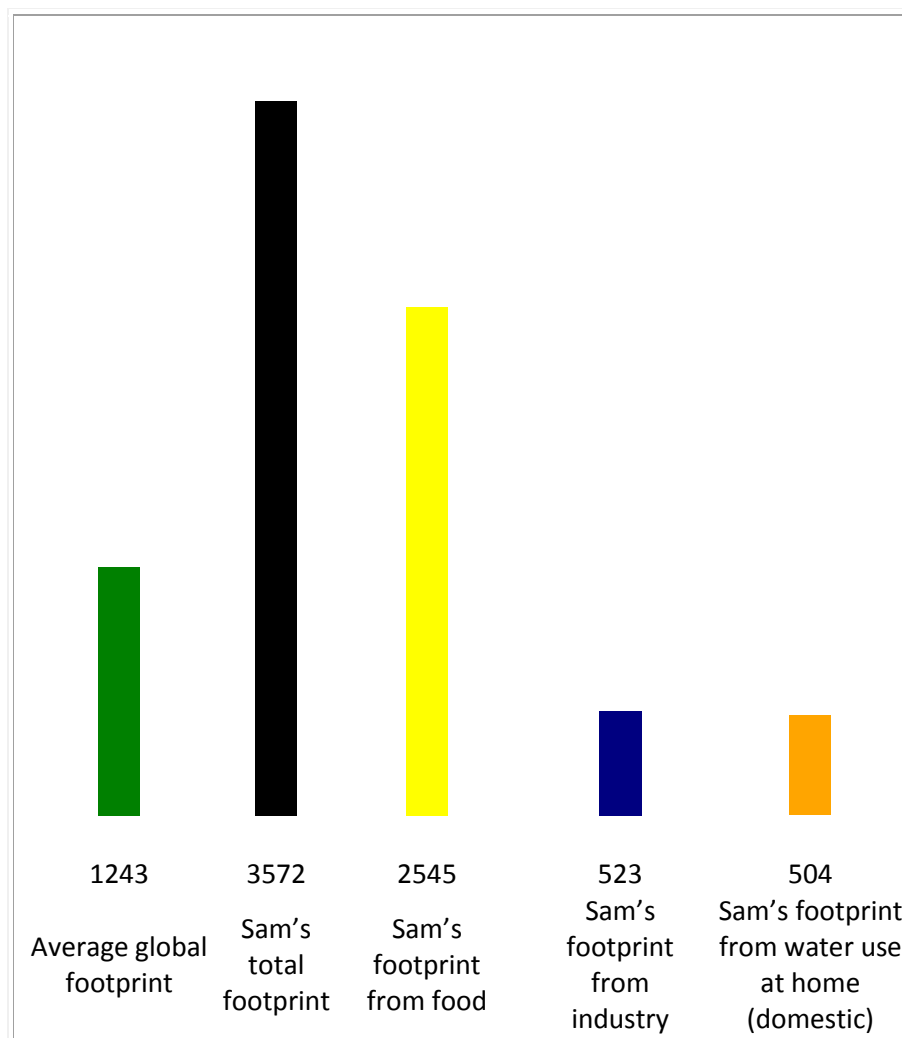


## Calculating water footprints worksheet

The quick calculation of Sam's water footprint at [www.waterfootprint.org](http://www.waterfootprint.org)<sup>1</sup> shows how Sam's water consumption compares to the global average. The numbers correspond to volume in cubic metres ( $1\text{m}^3 = 1\text{m} \times 1\text{m} \times 1\text{m}$  and equal to 1000 litres. An Olympic swimming pool typically contains 2,500 cubic metres of water by comparison 50m long x 25m wide x 2m deep).

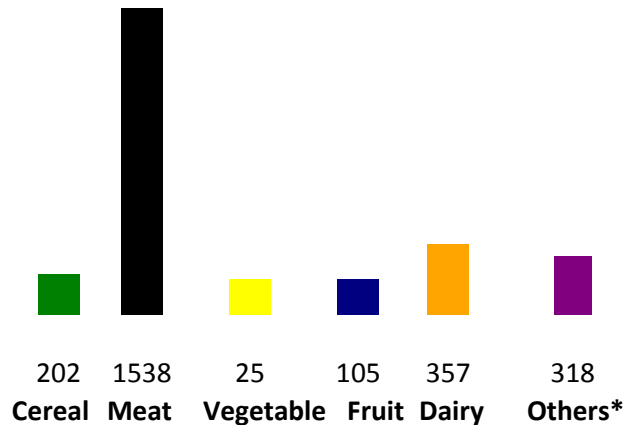
### Components of Sam's water footprint per year and comparison to the global average



1. Look at Sam's water footprint graph
  - a. What is the total volume of water consumed each year in cubic metres?
  - b. If an Olympic swimming pool contains 2500 cubic metres of water, calculate what proportion the total footprint is of a swimming pool.
  - c. What volume of the total water footprint is due to food? What is this as a percentage of Sam's total use?
  - d. What volume of total water footprint is due to domestic use? Give some examples of domestic water use.
  - e. What do you notice when you compare water consumed for domestic use and that used for food?

<sup>1</sup> The water footprint calculators are under copyright: © 2005 Arjen Y. Hoekstra, Ashok K. Chapagain and Mesfin M. Mekonnen

### Contribution of individual food categories to Sam's total water footprint



*\*'Others' include vegetable oil, starchy roots (potato), sugar & sweeteners, pulses, animal fats, nuts, coffee, tea, cocoa).*

This graph specifies which types of foods contribute the most to the water footprint. Answer the following questions based on the results on the graph.

Q. What two kinds of food make the biggest contributions to the water footprint?

Q. How many cubic metres do they contribute to Sam's footprint?

Q. Convert these figures into percentages of Sam's food water footprint.

Q. What kinds of food contribute the least?

Q. Make some suggestions about how the average person can reduce their water footprint by eating differently.

Q. Would there be any other benefits to changing their diet in this way?

Q. What would be the costs to a) individuals? b) some farmers?

This quick calculation is an estimate based on Sam's footprint. However, if you would like to assess your water footprint based on your specific consumption pattern you can complete the Extended Version of the individual water footprint calculator, at [www.waterfootprint.org](http://www.waterfootprint.org) . In this case you might have to talk to the person who does your weekly shopping as you need to know how many kilograms of different foods you consume.