

Amersfoort – 17 oktober 2014

# Enkele (inter)nationale ontwikkelingen met de Mondiale / Ecologische Voetafdruk

Jan Juffermans, Werkgroep Voetafdruk Nederland

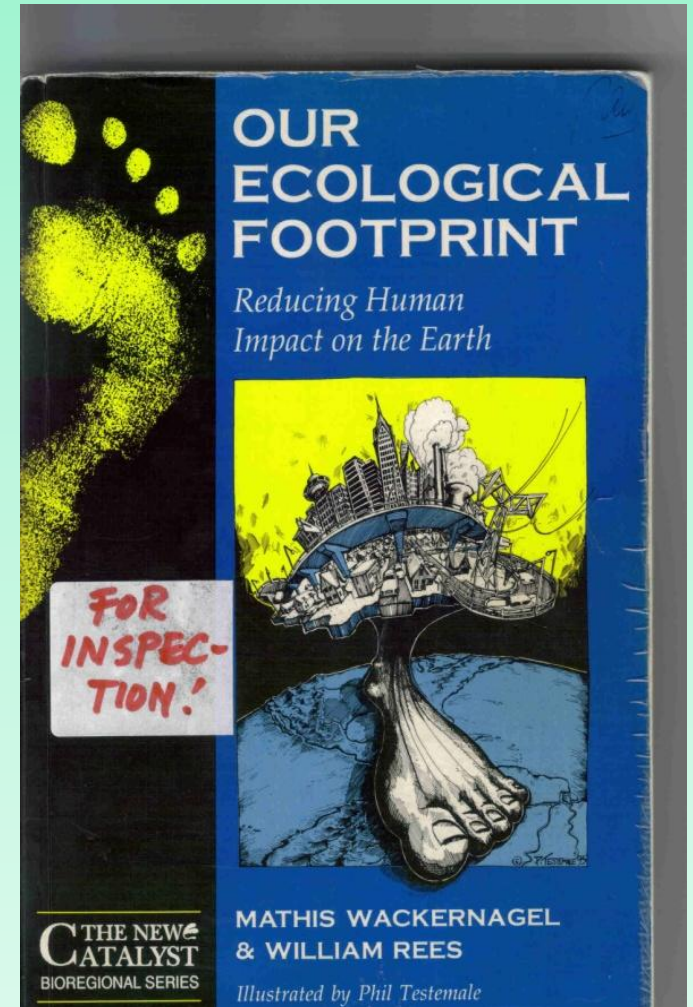


# De Mondiale Voetafdruk

Voor het meten van enkele cruciale aspecten van (on)Duurzame Ontwikkeling

Eerste boek in 1996 van Mathis Wackernagel en William Rees

Voor goed beleid is een dashboard nodig met meer indicatoren, bijv. ook kwalitatieve!



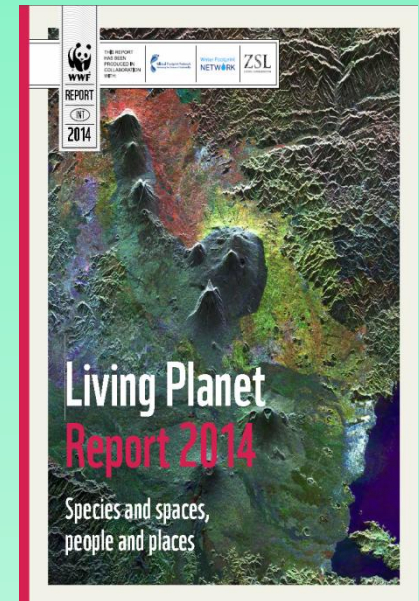
# Living Planet Report 2014

*10e editie (elke 2 jaar)*

*Inclusief de Water Footprint*

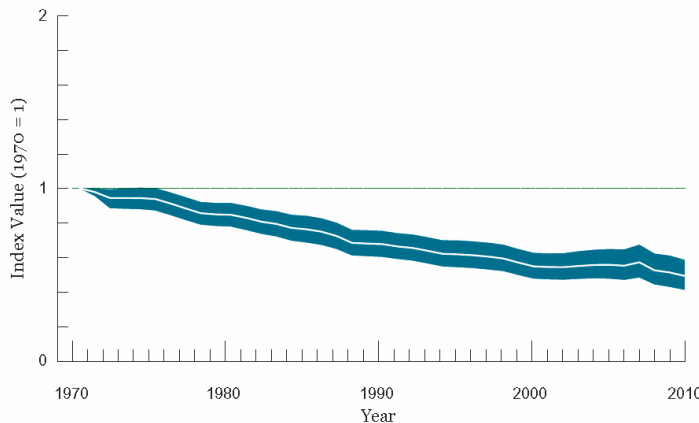
*Living Planet Index*

*Mondiale Voetafdruk*

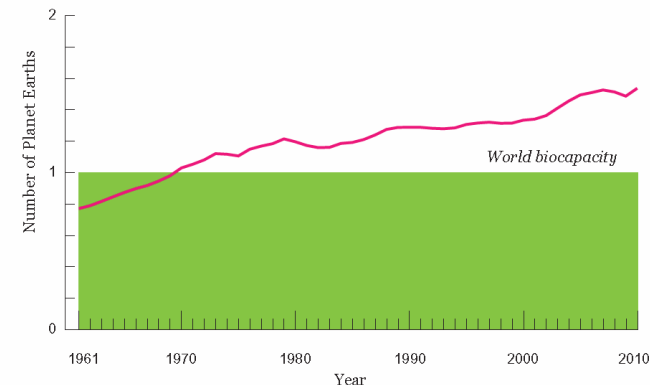


**Figure 2: Global Living Planet Index**

The global LPI shows a decline of 52 per cent between 1970 and 2010. This suggests that, on average, vertebrate species populations are about half the size they were 40 years ago. This is based on trends in 10,380 populations of 3,038 mammal, bird, reptile, amphibian and fish species. The white line shows the index values and the shaded areas represent the 95 per cent confidence limits surrounding the trend (WWF, ZSL, 2014).



Key



**Figure 3: Humanity's Ecological Footprint**

1.5 Earths would be required to meet the demands humanity currently makes on nature. For more than 40 years, humanity's demand has exceeded the planet's biocapacity – the amount of biologically productive land and sea area that is available to regenerate these resources (Global Footprint Network, 2014).

Key

— Humanity's Ecological Footprint  
— World biocapacity

# De Mondiale Voetafdruk

## Het Living Planet Report

### 152 landen en hun Mondiale Voetafdruk

#### ECOLOGICAL FOOTPRINT

The Ecological Footprint measures people's natural resource consumption. The footprint can be compared with nature's ability to renew these resources. A country's footprint is the total area required to produce the food and fibre that it consumes, absorb the waste from its energy consumption, and provide space for its infrastructure. People consume resources and ecological services from all over the world, so their footprint is the sum of these areas, wherever they are on the planet.

The global Ecological Footprint was 13.5 billion global hectares in 2001, or 2.2 global

hectares per person (a global hectare is a hectare whose biological productivity equals the global average). This demand on nature can be compared with the Earth's biocapacity, based on its biologically productive area – approximately 11.3 billion global hectares, which is a quarter of the Earth's surface. The productive area of the biosphere translates into an average of 1.8 global hectares per person in 2001.

The global Ecological Footprint changes with population size, average consumption per person, and resource efficiency. The Earth's biocapacity changes with the amount

of biologically productive area and its average productivity.

In 2001, humanity's Ecological Footprint exceeded global biocapacity by 0.4 global hectares per person, or 21 per cent. This global overshoot began in the 1980s and has been growing ever since (see Figure 2). In effect, overshoot means spending nature's capital faster than it is being regenerated. Overshoot may permanently reduce ecological capacity.

Figure 15: The Ecological Footprint per person for countries with populations over 1 million.

Fig. 15: ECOLOGICAL FOOTPRINT PER PERSON, by country, 2001

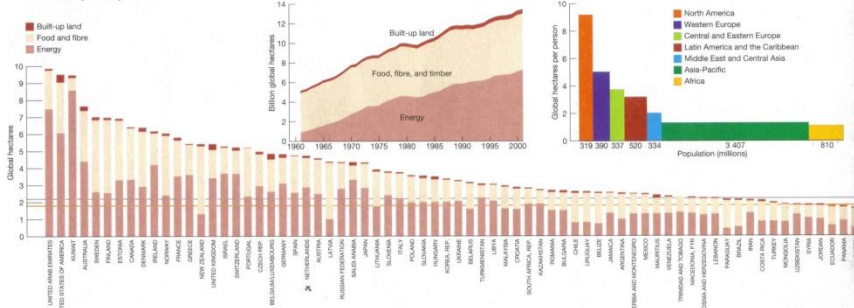


Fig. 16: HUMANITY'S ECOLOGICAL FOOTPRINT, 1961–2001

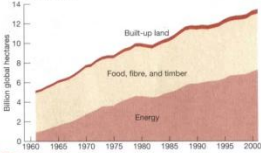


Fig. 17: ECOLOGICAL FOOTPRINT BY REGION, 2001

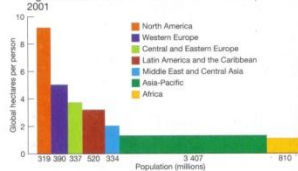


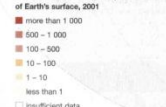
Figure 16: Humanity's Ecological Footprint grew by about 160 per cent from 1961 to 2001, somewhat faster than population which doubled over the same period.

Figure 17: Ecological Footprint by region in 2001. The height of each bar is proportional to each region's average footprint per person, the width of the bar is proportional to its population, and the area of the bar is proportional to the region's total Ecological Footprint.

Map 5: GLOBAL DISTRIBUTION OF ECOLOGICAL FOOTPRINT INTENSITY

The Ecological Footprint intensity map shows how resource consumption is distributed around the world. Intensity increases with greater population densities, higher per capita consumption, or lower resource efficiencies.

Global hectares used per square kilometre of Earth's surface, 2001



# De Mondiale Voetafdruk

Gemiddeld per land,  
in gha per persoon

• Koeweit	10,3	• Wereldgemiddelde	2,6 gha
• België	7,3	• China	2,2
• USA	7,0	• Per wereldb. beschikb.	1,7
• Nederland	6,3	• Kenia	1,0
• Duitsland	4,5	• India	0,9
• Rusland	4,0	• Afganistan	0,6
• Brazilië	2,8	• Oost-Timor	0,4

*Bron:*

*Living Planet Report 2014*

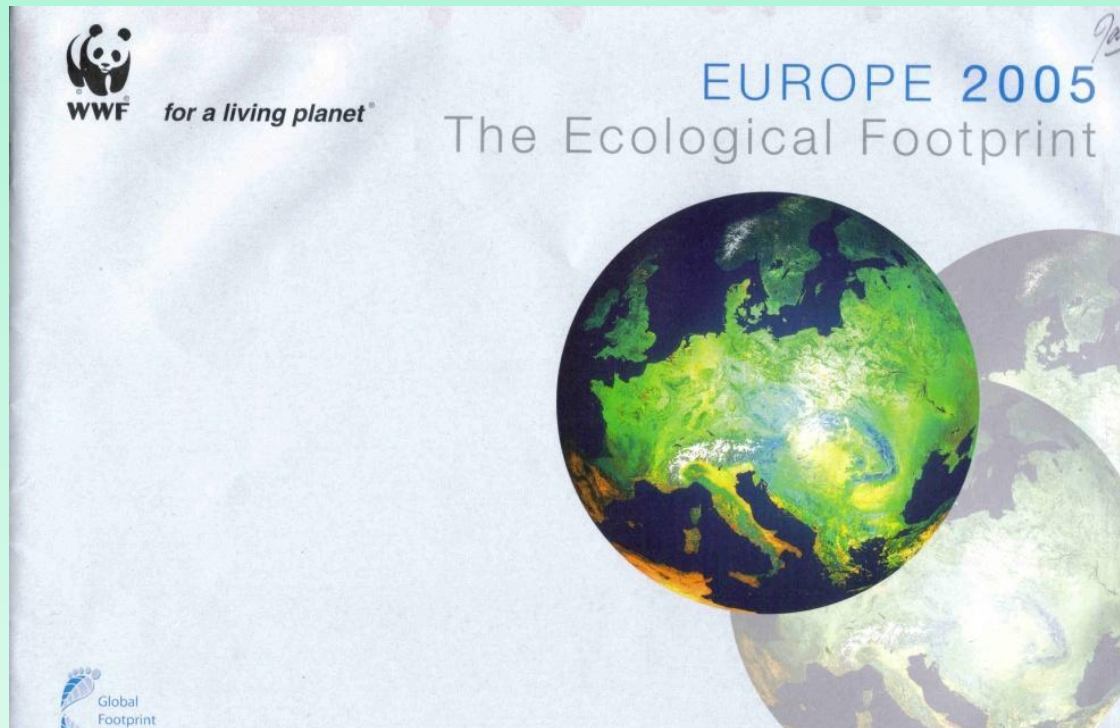




# De Mondiale Voetafdruk

## Het Europese Footprint-rapport 2005

Met minder dan 7% van de wereldbevolking, gebruiken we 17% van de mondiale gebruiksruimte



## De Mondiale Voetafdruk

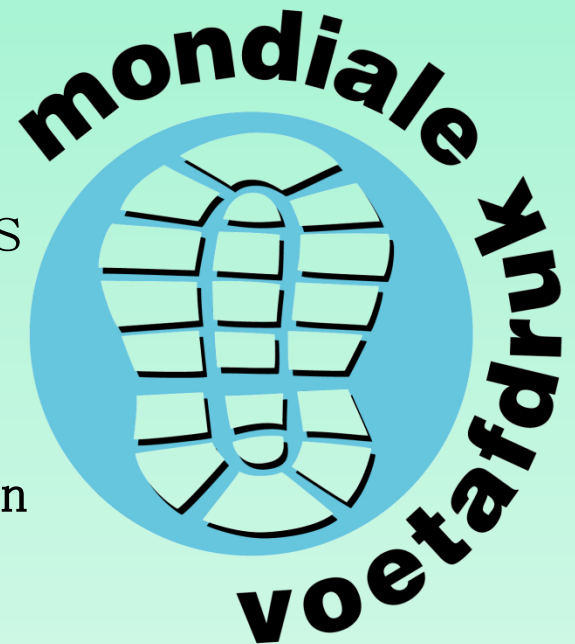
- Nu gebruiken de EU, UNEP en ook UNDP de Footprint
- Er zijn ook aparte rapporten over de Voetafdruk van Afrika, China en India
- De Voetafdruk is opgenomen in het beleid van: Ecuador, Finland, Japan, Letland, Luxemburg, Nieuw Zeeland, Schotland, Zwitserland, de Verenigde Arabische Emiraten en Wales.
- En Nederland? VROM-Raad-rapport 1999

Nota **Groene Groei** van de  
Taskforce Biodiversiteit en  
Natuurlijke Hulpbronnen  
2009 – 2011

H. Alders + wetenschappers,  
bedrijven en N&M-organisaties

Twee belangrijkste aanbevelingen:

1. Geen verlies meer van biodiversiteit in 2020.
2. **Een halvering van de Nederlandse Voetafdruk in 2030.**



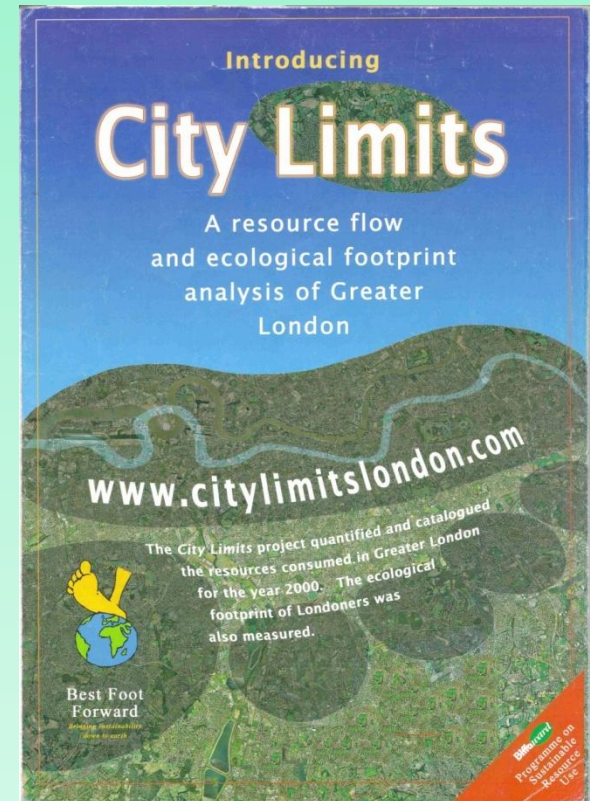


# De Mondiale Voetafdruk

## London: het mooie lokale Footprint-voorbeeld

Inleiding burgemeester  
Ken Livingstone

Vele acties, bijv.  
auto in centrum: 12 euro



# De Mondiale Voetafdruk

A graphic summary of the 2002 report

## City Limits

A resource flow and ecological footprint analysis of Greater London

In the year 2000 London consumed 49 million tonnes of materials and 154,407 GigaWatt hours (GWh) of energy (or 13,276,000 tonnes of oil equivalent). This produced 41 million tonnes of carbon dioxide. Less than 1% of London's energy came from renewable sources.

6.9 million tonnes of food were consumed in London in 2000, of which 81% was imported from outside the UK.



Water consumption reached 866,000,000,000 litres of which 28% was leakage.

Download or order the full report from the City Limits website:

[www.citylimitslondon.com](http://www.citylimitslondon.com)



**Bottled water**  
Londoners consume about 94 million litres of mineral water each year. Assuming all the bottles were 2 litres, this would create 2,260 tonnes of plastic waste. Today's top-selling brand of bottled water travels around 760 km from the French Alps to the UK.

Londoners travelled 64 billion passenger kilometres in 2000, of which 69% was by car.

**Carbon Dioxide**  
4,972,000 tonnes



An ecological footprint is an estimation of the area of land and sea needed to sustainably provide all the energy, water, food and other materials that we consume.

**Ecological Footprint of Londoners**  
49 million global hectares (gha)

This is 293 times its actual size, and 42 times its biocapacity. Its area is twice as big as the UK, about the size of Spain.

The ecological footprint of London's tourists is estimated at 25 million gha (additional 0.5 gha per tourist).

The footprint below shows the components:

Food 41%, Materials & wastes 44%, Personal Transport 5%, Energy 10%, Degraded land 0.7%, Water 0.3%, Metals 2%, Chemicals 2%.

This is equal to 6.63 global hectares per Londoner.

The UK average is 6.3 gha per person. The global 'earthshare' is 2.18 gha per person, but this will drop to about 1.44 gha by 2050.

City Limits used a range of Business-as-usual and Evolutionary scenarios to reflect current practice and existing improvement targets. Revolutionary scenarios were also created to show that a combination of lifestyle and technological changes could achieve interim sustainability targets for 2020.

Not all of the footprint is directly attributable to individual action. Government, businesses and others all have an impact.

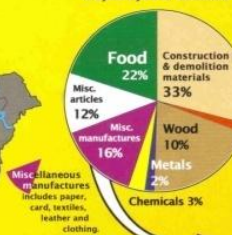
For Londoners to be sustainable by 2050 their ecological footprint will need a 35% reduction by 2020 and 80% by 2050.

Of household waste: 71% was landfilled, 20% incinerated, 9% was recycled.

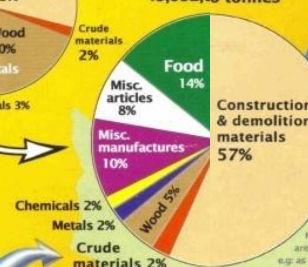
Prepared by **Best Foot Forward**  
Bringing sustainability down to earth  
[www.bestfootforward.com](http://www.bestfootforward.com)



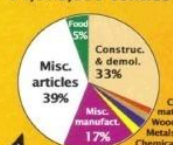
**Imports**  
25,029,000 tonnes



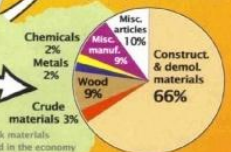
**Consumption**  
(Imports plus Production, less Exports)  
49,052,000 tonnes



**Exports**  
14,076,000 tonnes

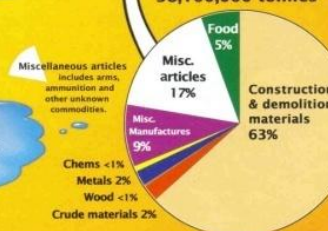


**Stock**  
16,442,000 tonnes



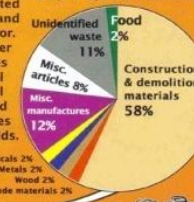
**Greater London Economy (2000)**

**Production**  
(including reused materials)  
38,100,000 tonnes



**Waste**  
26,273,000 tonnes

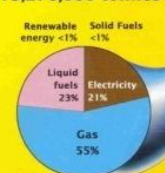
15 million tonnes of waste were generated by the construction and demolition sector. Another 7.9 million tonnes were from industrial and commercial sectors and 3.4 million tonnes were from households.



53% Reused or Recycled



**Energy inputs**  
(tonnes of oil equivalent)  
13,276,000 tonnes





# De Mondiale Voetafdruk

Footprint London was 6,6 ha

Ambities van London:

35 % reductie van de  
Footprint in 2020

Een duurzame  
Footprint in 2050

[www.citylimitslondon.com](http://www.citylimitslondon.com)



**City Limits**  
Can London be sustainable by 2050?

To order or download the City Limits report  
(A4, 68 BAW pages, 28 tables & 18 charts)  
visit the City Limits website:  
[www.citylimitslondon.com](http://www.citylimitslondon.com)  
or contact Best Foot Forward

City Limits found that in 2000 the average Londoner's lifestyle consumed:

- 13 MWh of gas and electricity
- almost 5 tonnes of materials
- over 8,400 km of travel
- more than 680kg of food

City Limits shows that this level of consumption results in an ecological footprint of 6.63 global hectares, which exceeds the global earthshare of 2.18 global hectares and is therefore not ecologically sustainable.

To attain a sustainable lifestyle by 2050, each Londoner's ecological footprint would need to be 35% lower by 2020. Continuing this reduction trend until 2050 would enable Londoners to reach ecological sustainability.

One way of reducing the ecological footprint by 35% would be if every Londoner:

- reduced gas consumption from 9.5MWh to 6.2MWh AND
- installed 11m<sup>2</sup> of solar panels AND
- travelled 3,000 km less per year OR switched 3,500 km of car travel to bicycle AND
- consumed 70% less meat, reducing food waste by over 100 kg AND
- ate more than 40% local seasonal unprocessed food AND
- produced over a tonne less waste.

But this reduction can be achieved in a myriad of other ways. You can choose how by visiting the interactive model at:

**[www.citylimitslondon.com](http://www.citylimitslondon.com)**

**IWM (EB)**  
Chartered Institution of Wastes Management Environmental Body

**Biffaward**  
Investing in the environment

**BEST FOOT FORWARD**  
The Future Centre  
115 Magdalen Road  
Oxford OX4 1RQ UK  
[mail@bestfootforward.com](mailto:mail@bestfootforward.com)  
[www.bestfootforward.com](http://www.bestfootforward.com)

This trailer and the report were funded by Seacourt Limited, Oxford, an Energy advice agency, a charity (non-profit) - at least 75% from consumer groups with less than 25% from Seacourt Design & Advertising  
Paul V. Nelson

**GREATER LONDON AUTHORITY**

# De Mondiale Voetafdruk van bedrijven en instellingen

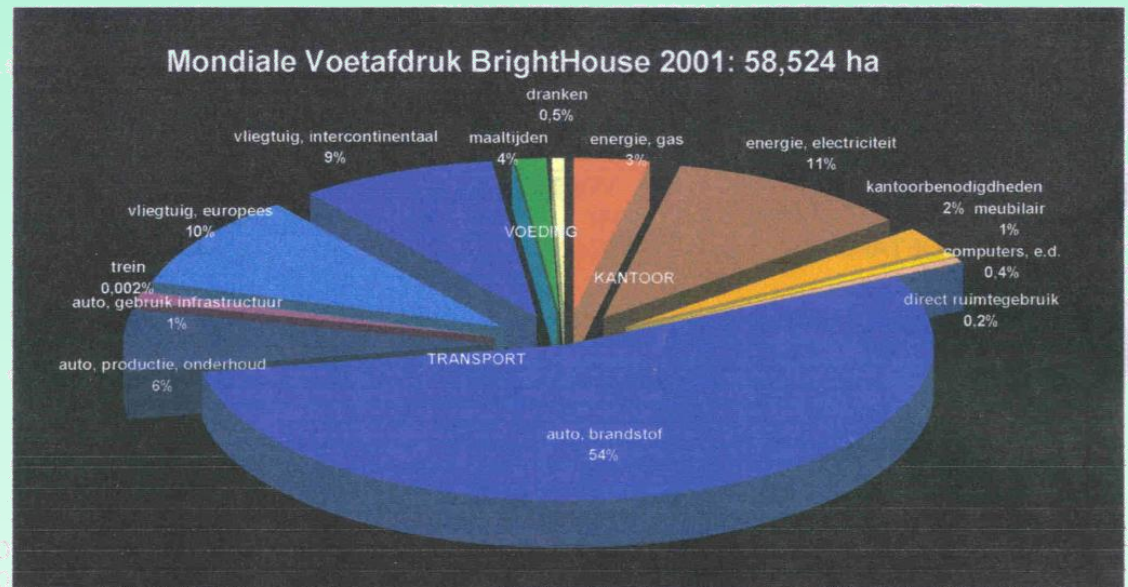
Eerste (2001):  
Brighthouse  
in Helvoirt

Unilever  
50% reductie  
in 10 jaar!

Akzo-Nobel



Instituut voor Toegepaste Milieu-Economie



# Footprints van producten & diensten

- \* Tesco (UK):  
Carbon Footprints  
Ook Japan en Frankrijk

- \* The Sustainability Consortium voor o.a.  
objectieve meting van  
de hele keten

- \* Ook meer Foodprints en  
Water Footprints





# Belangrijke sites:

Nederlands:

- [www.voetafdruk.eu](http://www.voetafdruk.eu)
- [www.ecolife.be](http://www.ecolife.be)
- zie ook de e-brochure!

Engels:

- [www.footprintnetwork.org](http://www.footprintnetwork.org)
- [www.waterfootprint.org](http://www.waterfootprint.org)

