

Introducing

# Material Health

A mass balance and ecological footprint analysis of the NHS in England and Wales



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## A mass balance and ecological footprint analysis of the NHS in England and Wales

In 2001, 2.4 million tonnes of resources (excluding water and oxygen) were consumed by the NHS in England and Wales. Almost 400,000 tonnes, or 15%, was discarded as waste, while over 1 million tonnes remained within the NHS as stock.

### Other interesting facts:

- The NHS was supplied 49.8 million litres of water, of which 14% was lost through leakage.
- 12,650 GWh of energy was consumed, of which 62% was gas. Overall, this is approximately 1% of the total energy consumed in England and Wales.
- Over 53 thousand tonnes of food was consumed. Milk & cream was the largest food category, making up 24% of total food consumed.
- Staff, patients and visitors travelled almost 25 billion passenger kilometres for NHS related purposes, of which 83% was by car or van.

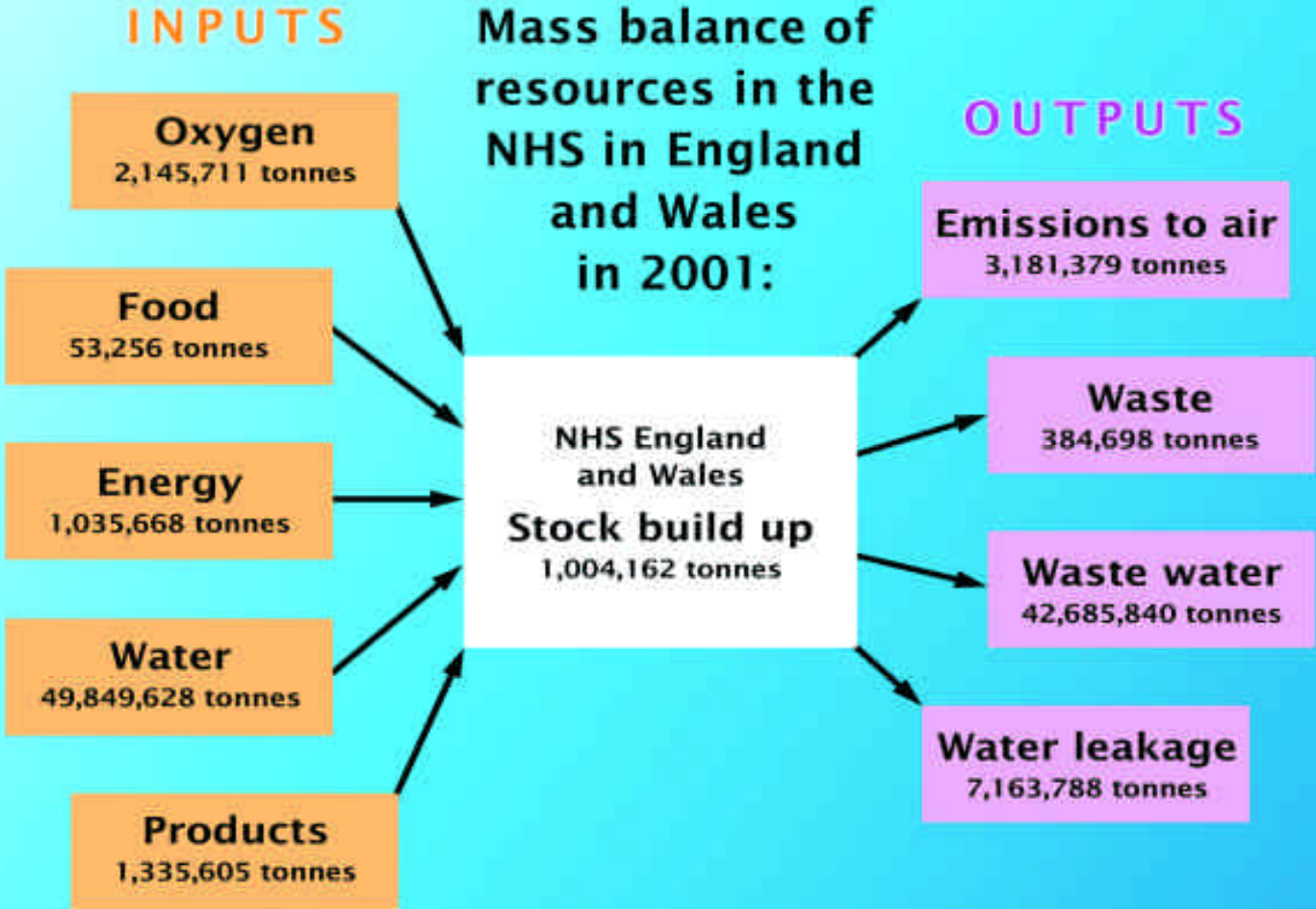
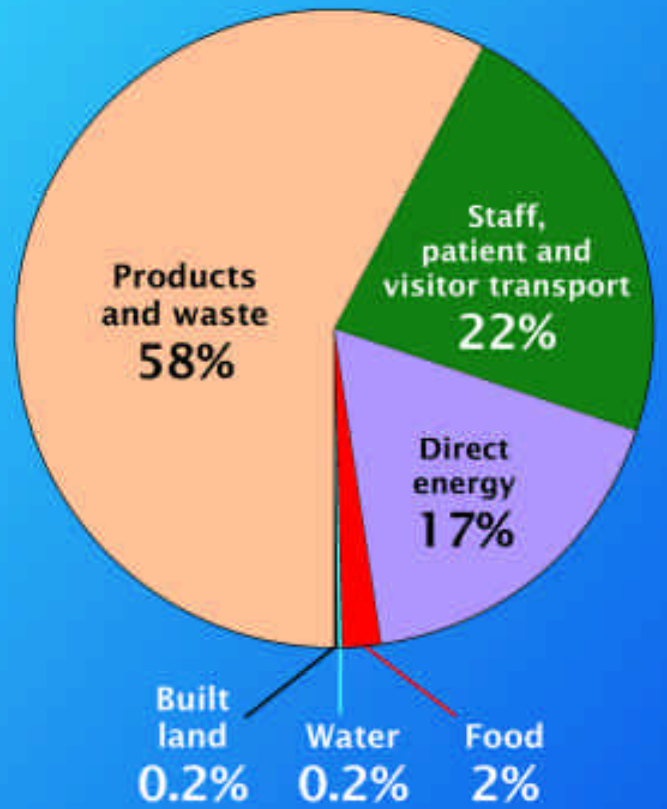
### Ecological footprint of the NHS in England and Wales in 2001:

An ecological footprint is an estimate of the land and sea area needed to provide all the energy, water, transport, food, materials, products and services that are consumed. The ecological footprint of the NHS in England and Wales was 4,964,825 global hectares in 2001.

The ecological footprint of NHS' service provision can also be allocated in other ways, such as:

- **Between the people it serves:** In 2001, the NHS accounted for 2% of the ecological footprint per person in England and Wales.
- **Between the 58 million patient episodes in 2001:** As an indicator of eco-efficiency of service provision, the ecological footprint per patient episode was 0.09 global hectares.

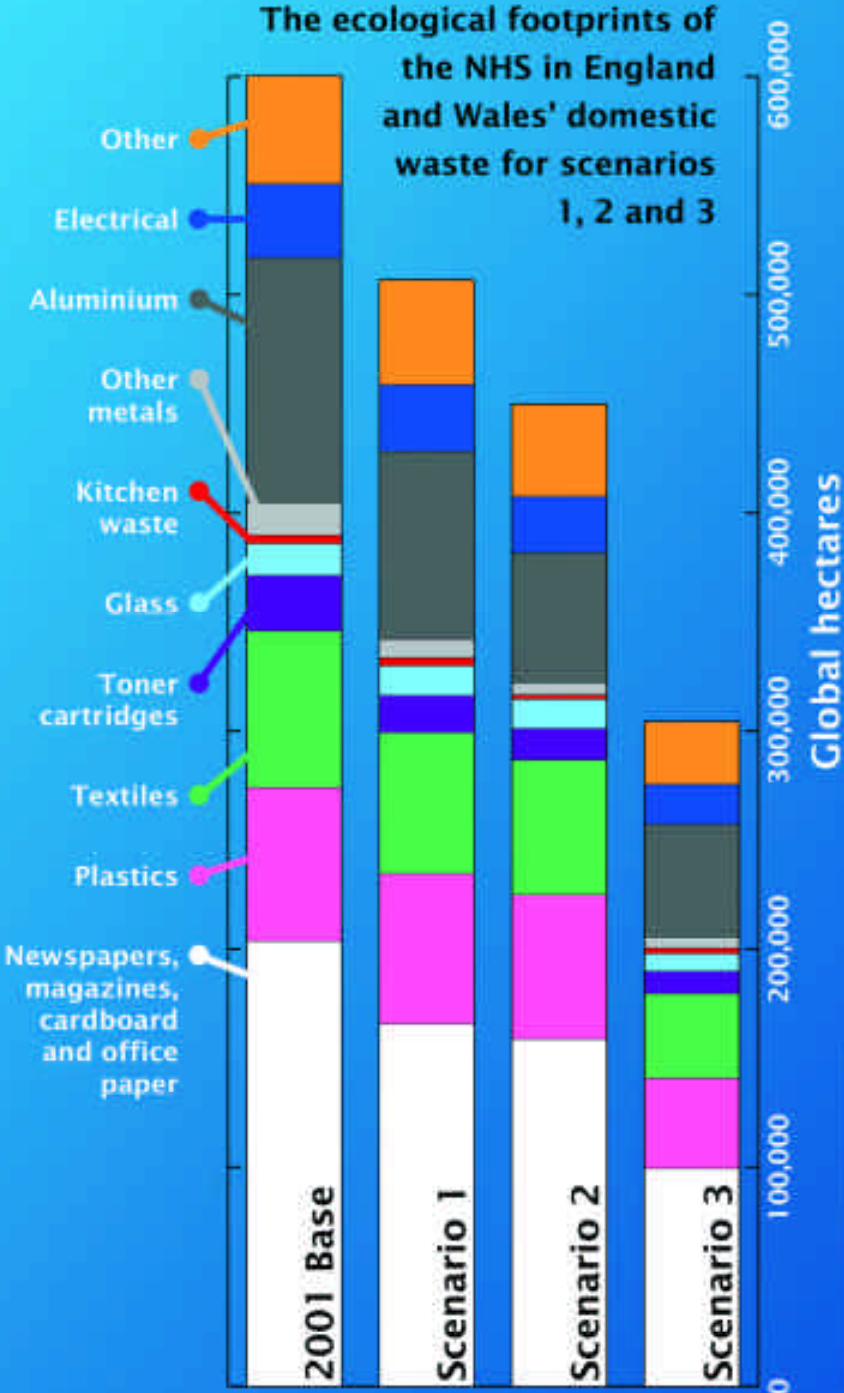
The ecological footprint of the NHS in England and Wales in 2001 by component:



Over 1 million tonnes of fuels were required to deliver the energy the NHS in England and Wales consumed. Emissions to air resulting from this consumption totalled 3.2 million tonnes, of which 99.6% was carbon dioxide.

Over 1.3 million tonnes of products were used, at an estimated value of £11.6 billion. Medical and surgical equipment, such as scanners and x-ray equipment, represented 31% of all materials used.

In comparison, medical and surgical supplies, such as pharmaceuticals, weighed only 52 thousand tonnes (4% of total consumption) but accounted for 73% of total expenditure.'



### Scenarios

The ecological footprint can be influenced by changes in consumption behaviour and/or changes in technology. Some of these influences were used to create 'snapshot' scenarios for hot water, transport and waste in the NHS. The waste scenario, for example, found that the ecological footprint of domestic waste could be reduced by up to 49%.

Download the full report from the Material Health website:

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

Prepared by

## Best Foot Forward

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in England and Wales

The aim of this report is to stimulate a healthy and informed debate, which will lead to the formation of evidence-based policies, and help all of us understand the action needed to achieve the vision of a more sustainable future.

Policy makers will be interested in:

- Putting NHS sustainability in a national sustainable development context, including the Sustainable Consumption and Production agenda.
- The scale of impact of health care service delivery.
- A baseline quantification against which progress can be measured.
- The efficiency of the sector.

Managers will be interested in:

- The identification of areas for improvement.
- Understanding the resource efficiency of facilities.
- Facts and figures to support decision making and communication.
- Realistic opportunities for change.

The report includes:

- A mass balance analysis of the NHS in England and Wales' products and waste, food, water and emissions to air.
- An ecological footprint (environmental impact) analysis of the NHS in England and Wales' direct energy and transport use; product, food and water consumption; waste generation and built land.
- An assessment of the organisation's ecological sustainability.
- Scenarios on hot water heating, waste and transport.
- A detailed methodology and data assessment.



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