



Women's
Environmental
Network

briefing

Sustainable Sustenance

Food transport and the environment

Never before have we enjoyed such a rich variety of fresh produce from around the globe readily available in our shops and supermarkets. Advances in freighting and storage technology mean that food we once would only have been able to sample abroad, is now available on our doorsteps, with some 25,000 food 'lines' available in an average supermarket.¹⁹ But is there an environmental price to pay for this privilege?

'Food miles' represent the distance food has travelled from the place where it was produced to where it is consumed, or 'from plough to plate'.

Recent estimates suggest the food chain contributes at least 17% to the UK's total emissions of the greenhouse gas carbon dioxide (CO₂)² - some estimates place it at nearer 27%.⁵ The vast majority of this is directly caused by transporting our food, not just from the supermarket to our homes, but from growers to distributors and processors, and from there onto the supermarkets and shops. This includes freighting by air, sea and land - predominantly road rather than rail. Food is responsible for 40% of UK road freight.⁵

If we continue to demand more convenient, more exotic and unseasonal food, our



JANIE AIREY/WEN

Why fly your food around the globe when you can grow it in your own back yard?

contribution to climate change through ever increasing food miles will grow.

In 1997, as part of the *Breathe Easy-Buy Local* campaign, WEN produced a briefing on food transport. With what is now Sustain, WEN was one of the first organisations to highlight the issue in the UK.

What you can do

- Grow your own. If you don't have a garden, ask your local authority for details of allotments or join (or start!) a local growing group - contact WEN for details.
- Eat seasonal food. It's more likely to be produced in the UK, so is easier to find and encourages biodiversity.
- Support farmers' markets and small local shops who tend to source goods locally, particularly perishables. If they don't, ask them to.
- Buy local organic produce where available and call on the UK government to do more to support organic farming.
- When salad is in season, buy organic and prepare your own, avoiding pre-packaged, prepared and chemically preserved options.
- Slow down! Enjoy preparing meals from raw ingredients - it's good for your tummy, good for the environment and good for your soul! see www.slowfood.com.
- Try an organic delivery box scheme - see www.bigbarn.co.uk.
- Find out the producers closest to where you live and work - try www.localfoodshop.co.uk or www.littlelocalfood.com.
- Join or start a food co-operative - contact WEN for details.
- Try to avoid the biggest supermarkets whose large scale operations tend to mean food travels further to and from regional distribution centres.³⁰ If you do have to use them, lobby them to supply local produce.
- Support increased taxation on aviation fuel - contact your local MP and ask what they are doing to reduce road and air freight.
- Call for air and sea freight CO₂ emissions to be counted in the UK and international inventories of greenhouse gases and emissions reduction legislation.
- Wherever possible, walk, cycle or use public transport to get to the shops or local farmers' market.
- Join WEN and our Taste of a Better Future network for regular newsletters.

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Eat fresh, seasonal, local

As huge swathes of land become dominated by a single crop, our current food culture means loss of biodiversity and increasing air pollution from the vehicles ferrying our food up and down the country. 'Fresh' produce has been shown to decline in nutritional value the longer it is left between harvesting and eating - as a general rule the sooner fruit and vegetables can be eaten after harvesting the better.⁴ Rather than flying in food from the other side of the planet, it is healthier to eat local, seasonal and preferably organic produce. Whilst not all local food is organic, it is less likely to have the extra chemicals used to preserve food during storage and transit.

Processed foods add to the problem (for example fish transported from Aberdeen to Cornwall to be smoked, or sprouts freighted from Kent to be processed in Scotland).³ The increase in demand for 'convenience' foods, pre-prepared highly processed and packaged meals, are also contributing to food miles. A supermarket lasagne for example may contain around 20 ingredients. Each of these is transported from different places to various parts of the country for processing and preparation before eventually ending up on your plate. This means a 'ready' meal may have travelled many more food miles than an identical meal prepared at home.

Estimates suggest that processed food could require around 15 times more energy than non-processed food and this doesn't include packaging. Food packaging accounts for 70% of all packaging waste.³¹ On average we spend one sixth of our household food budget on packaging.¹²

According to figures from the Department for Environment, Food and Rural Affairs 58% of the food we currently eat could be produced by British farmers.²¹ If we were to eat more native produce, this figure could increase to 71%. In 2006 we imported 43 million litres of raw milk and exported 610 million litres.¹⁸ We import half a million tonnes of apples every year, even though apples grow well in the British climate; since 1970 around 60% of UK orchards have disappeared.¹¹

“Nobody's counting how much emissions from air and sea freight contribute to greenhouse gases. They're not currently included in the UK's greenhouse gas inventory - or that of any country.”

A 2007 survey conducted by WEN and the National Federation of Women's Institutes showed that 93% of women are wholly or largely responsible for decision making about food buying.²⁰



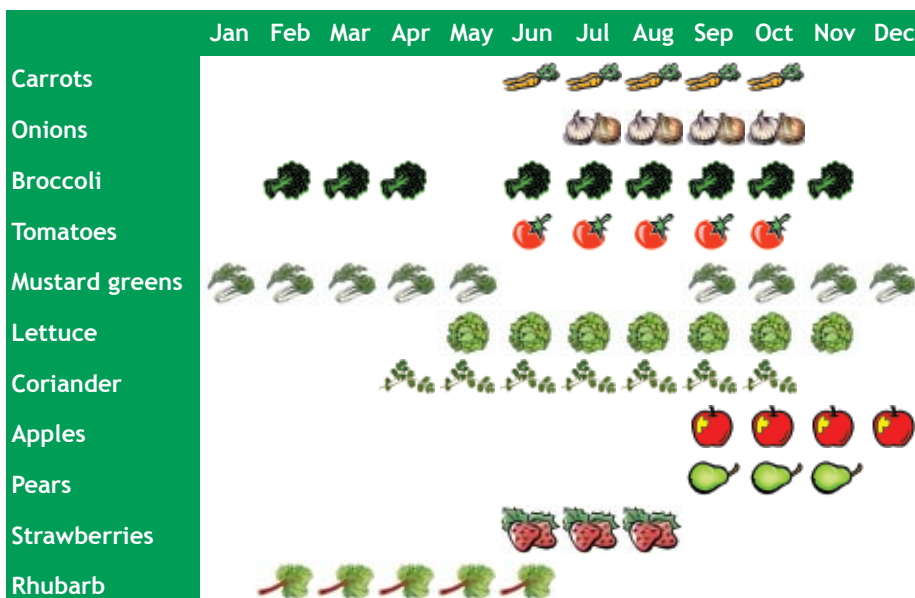
An inner city harvest.

Climate change

Climate change is one of the greatest environmental problems facing the world today. Caused by increasing amounts of 'greenhouse gases' in our atmosphere, current predictions suggest a 1.1-6.4°C increase in the average global temperature this century.⁹ This has wide-reaching implications for famine and disease, increased frequency of extreme weather, with drought and flooding decreasing availability of agricultural land. In July 2007 parts of England suffered the biggest floods on records, destroying homes, decimating crops and polluting drinking water.¹⁰

Nobody's counting how much emissions from air and sea freight contribute to greenhouse gases. They're not currently included in the UK's greenhouse gas inventory - or that of any country.² Nobody knows how much emissions would increase if the contribution from the food chain and other air and sea freight were included. Without figures, there's little incentive for legislators to reduce emissions.

What's in season when?



What's in season when? _____
Months shown represent the peak season for produce. Regional weather differences and good storage mean some produce displayed may be available earlier and/or later than the dates displayed.²³

Organic, fairtrade, local

The CO₂ emissions from air freighting mange tout from Kenya will be the same whether they are organic or not. However non-organic food requires more energy in fertilizers and pesticides used in production.

Choices, choices...what's best?

When faced with the bewildering array of produce available today, how do we pick between them? Here's a rough guide to the top five most ethical choices.

ORGANIC, LOCAL, SEASONAL

Least environmental impact.

LOCAL

Reduce CO₂ and climate change.

FAIRTRADE & ORGANIC

Fair price to producer, no pesticide exposure to producer or consumer.

ORGANIC

No pesticide exposure to producer or consumer.

FAIRTRADE

Fair price and better working conditions for producer.

The table (right), based on a typical Norfolk town, shows the effect of where we shop and what we buy on CO₂ emissions.⁵ Norfolk apples from the farmers' market travelled only 24 food miles but caused 109 g of CO₂ emissions. It may seem odd that apples from the village shop travelled further but caused less CO₂ - until you factor in the average trip to the supermarket or farmers' market is 9 km, whereas the average trip to the local shop is 1 km (under a mile). The average Briton travels 898 miles every year to shop for food.¹⁷ This short regular car journey to the supermarket or farmers' market makes a difference and illustrates that, if you can, a walk to the nearest shop, farmers' market or even supermarket is not only good for you but better for the planet.

The apples example demonstrates how sourcing apples abroad has a greater impact on climate change than growing apples in the UK. New Zealand apples are sea freighted the 17,840 km

(11,086 miles) from New Zealand to a UK port, hence the comparatively 'low' emissions of 300 g CO₂. Mange tout, air freighted from Kenya, travel 7,187 km (4,466 miles) from the producer in Africa to your plate, a much shorter distance than the New Zealand apples.⁵ However,

because of the massive contribution of air freighting to climate change (air freight produces 9 times more CO₂ than road freight, and 50 times more than shipping⁴), for each kg of mange tout transported, an enormous 3,998 g CO₂ will be released.⁵

1kg apples...	Distance travelled	CO ₂ /g
... from New Zealand, bought in a supermarket	18,227 km (11,326 miles)	300
... from Kent, bought in a supermarket	359 km (223 miles)	120
... from Norfolk, bought at a farmers' market	39 km (24 miles)	109
... from Norfolk, bought in a village shop	61 km (38 miles)	10
... from Norfolk, delivered in a box scheme	30 km (19 miles)	17

“It may seem odd that the apples from the village shop travelled further but produced less CO₂ - until you factor in the average trip to the supermarket or farmer's market is 9km.”



Children from Bigland Geen School, East London learn to grow herbs and vegetables with WEN.

How much do we consume?

In 2000, the population of London alone consumed 6.9 million tonnes of food, equivalent to 0.94 tonnes per person. For an average 11 stone adult, this is equivalent to eating over 13 times their own body weight!²⁴ A large amount of this food was imported from outside the UK. Londoners drink the bottled water equivalent to more than one Olympic-sized swimming pool each week - this amounts to more than 130 million litres

per year.²⁶ One of the most popular brands travels from the French Alps to the UK, a journey of around 760 km.¹

Estimates suggest that every tonne of food consumed in London had travelled approximately 640 km, which means some 3,558,650,000 tonne-km of road freight was needed to fill London's stomachs in 2000 alone.¹ This is equivalent to travelling to the Moon and back 4,628 times!^{6, 7}



Cheap food hides true cost

Why are we flying our food excessive distances when the British climate is ideally suited to growing much of it? Basically, it all comes down to money. Oddly, it is often cheaper to produce and import fresh fruit and vegetables from abroad, even accounting for transport costs, than it is to grow them here.¹³ We also demand cheap food - in the UK we spend a smaller proportion of our disposable income on food than any other European nation.¹³

According to recent estimates, aviation fuel accounts for around 24% of all UK transport fuel consumption.²⁷ Aviation fuel is artificially cheap because it is untaxed.²

It is not surprising that UK imports of fish and fruit/vegetables by air increased by 240% and 90% respectively between 1980-90.⁵ Figures controversially omitted from a recent environmental audit by the Office of National Statistics showed that between 1990-2002 freight increased by 59%.¹⁴ How sustainable is this? And can this be justified when the most recent science says that the UK must cut its emissions by at least 80% by 2050 in order to be doing its fair share to avoid catastrophic climate change?²⁹

The knock-on effect

By increasing demand for overseas crops from countries with a food-deficit, we are causing valuable land to be diverted from producing food for local consumption into producing food for export. This has huge negative implications for the people of these countries. Women are intricately involved in the (often unpaid) production of food to feed their families and communities, and use valuable local knowledge passed down through generations. Many of these women are now working 12 hour shifts with minimal breaks, little if any healthcare or sick pay, scant attention to health and safety, and no job security to prepare food destined for British plates.¹⁶

The references for this briefing can be downloaded from our website.

See www.wen.org.uk./local_food/resources.htm

About WEN

Women's Environmental Network is a registered charity educating, informing and empowering women and men who care about the environment. It researches and campaigns on environmental and health issues from a female perspective.

Individual membership (women & men)

£20 ordinary

£12 unwaged

£30 supporting

Affiliate membership (organisations)

£35-150 depending on size.

Meat miles

Animals bred and slaughtered for meat in the UK are not immune from the phenomenon of food miles - even locally bred non-organic livestock may have been fed on fodder grown abroad and shipped in. These crops are referred to as 'ghost acres'. In Brazil, for example, around 12 million acres of forest have been cut down to grow soya beans for European animal fodder.¹⁵

The humble carrot

Carrots are one of the many vegetables ideally suited to growing in the British climate. So why do so many carrots travel 5,979 miles from South Africa?⁸

The current system is grossly energy inefficient - it takes 66 calories of fuel to air freight 1 calorie of carrot from South Africa, and 127 calories of fuel to fly in a single calorie of iceberg lettuce from Los Angeles.⁴

Further reading & resources

CRed Carbon Reduction Plan www.cred-uk.org

Fairtrade Foundation www.fairtrade.org.uk

Food Climate Research Network www.fcfn.org.uk

Soil Association www.soilassociation.org

Sustain: The alliance for better food & farming
www.sustainweb.org

Eating oil: food supply in a changing climate
Andy Jones, pub. by Sustain and Elm Farm
Research Centre (2001) ISBN 1-903060-18-4

How to live a low-carbon life Chris Goodall,
Earthscan, 2007 ISBN 978-1-84407-426-6

The low-carbon diet: wise up, chill out and save
the world Polly Ghazi and Rachel Lewis, Short
Books, 2007 ISBN 978-1-90497-798-8

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