



# Climate Change and Your Diet

The climate change issue is constantly in our faces, on the tv, radio, newspaper, people chatting about it in the streets... The solutions, other than driving less, possibly buying a more economical vehicle, and changing light bulbs to more efficient ones, seem largely out of control of the individual. There is, however, something that everyone can do to make a difference in their lifetime. It is cheap, it is easy, but it has received relatively little media and government attention at this. That something is: change your diet!

In the words of Dr. Rajendra Pachauri, Chairman of UN Intergovernmental Panel on Climate Change, "Don't eat meat, ride a bike, and be a frugal shopper -- that's how you can help brake global warming."

There is plenty of evidence to support the fact that the modern western diet has a lot to answer for in relation to climate change. Let's take a look at the following facts and figures:

World Watch produced a report called Livestock and Climate Change in 2009. That report states that animals raised for food are a major source of greenhouse gases, responsible for 51% of gas emissions globally measured in CO<sub>2</sub> equivalent. [Livestock and Climate Change, World Watch 2009, p11]

That one figure speaks for itself, but it is worth looking in some more detail at how your food choices affect the planet we live on.

## Population and Meat Consumption

The human population of the planet is increasing at an alarming rate, along with it the desire for animal products of all descriptions has also been increasing on a per capita basis. This increase, although occurring in countries such as Australia and the US, is particularly notable in Asian countries as they develop a liking for western-style diets and fast foods.

### Kilograms of Meat Per Person Per Year

Country	1961	2002
Australia	104	114
US	92	126
Europe	56	89
Brazil	28	81
Japan	8	44
China	4	53

[Source: <http://earthtrends.wri.org>]

If meat consumption continues to increase at the current rate, and everyone eats as much meat as

the average American, by 2050 it would take 4 planets the size of earth to grow the crops to feed all the animals. [Eat Less Meat – It's costing the earth – CIWF 2004]

## Animal Industry Emissions

Now let's look more closely at the emissions that animal agriculture produces. A tonne of beef produces more than double the greenhouse gas emissions of a tonne of aluminium, and over a hundred times the emissions of a tonne of wheat (111.1 tonnes CO<sub>2</sub> equivalent for beef, compared to 20 tonnes for aluminium and 0.4 tonnes for wheat). [Meat's Carbon Hoofprint, Science, Nov/Dec 2007, p39]

Cows, goats and sheep are ruminant animals. Ruminants produce methane, the majority of which is through belching, the remainder via flatulence. Ruminants eat food, regurgitate it as cud and eat it again. Their stomachs are filled with bacteria that aid in digestion, but also produce methane. The average cow expels 100 to 200 litres of methane a day.

The 2.7 megatonnes of methane created by 28 million cows and 103 million sheep in Australia in 2005 accounted for over 55 per cent of total methane emissions in this country. Methane is 72 times more potent than carbon dioxide as a greenhouse gas. [Forster, V, et .al. (2007). Changes in Atmospheric Constituents and in Radiative Forcing. In S. Solomon et al. editors, *Climate Change 2007: The Physical Science Basis*. Cambridge University Press.]

The good news about methane is that it cycles out of the atmosphere in only 10-15 years (compared to about 100 years for carbon dioxide). The bad news is that while present it has a massive effect on the environment. By eliminating animal agriculture, or at the very least reducing it massively, methane levels will be quickly reduced, assisting the climate to stabilise. [B. Poon, Climate Change – Re-examining the data from a Vegan Perspective, 2007]

Methane isn't the only greenhouse gas caused by animal agriculture. The figure of 31% quoted above, also includes the emissions due to the energy used to produce animal-based products including pigs, chickens, eggs and dairy. Factory farming systems in particular use a lot of energy, then there is energy use in the growing and transport of feed, transport of livestock, the list goes on.

## Land Use and Feed

Using animals as a feed source is very inefficient. They have to be fed enormous amounts of feed, that could otherwise be fed directly to humans. It takes 20kg of plant protein fed to a cow to produce 1kg of beef protein.

The number of land animals slaughtered in Australia for human consumption is massive (Nearly 500 million cattle, calves, sheep, lambs, pigs, chickens and other birds – Year Book Australia, 2006, Australian Bureau of Statistics). Many of these animals are fed on grains specifically grown for the purpose. Feedlots of grain-fed cattle have grown enormously in popularity, even in Tasmania. Pigs and chickens are also factory farmed and grain fed en-masse. Around 80 percent of grain grown in eastern Australia is fed to animals, and 30 percent of that goes to feedlot cattle.

A huge amount of land could be returned to bushland, both to soak up carbon, and to provide habitat for our ever decreasing range of native species, were Australians to cut down on their meat intake. If land used for grazing of beef cattle and dairy herds was freed, this would make available around 110 million hectares (an area about the size of NSW and Victoria). [Lenzen and Murray, Ecological Footprint - Issues and Trends, University of Sydney, 2003]. Animals raised to be eaten currently account for 70 percent of global agricultural land, and 30 percent of the total land area of the earth. [Livestock's Long Shadow, FAO 2006, Page xxi]

Water is another huge issue. The total annual consumption of around 5,200 gegalitres for dairy farming, drinking water for livestock, and irrigation of pastures, is roughly 43% of all the water consumed by agriculture. This does not take account of the water used by farmers in growing feed exclusively for farm animals. [Australian Bureau of Statistics, 2006 Water Account] To produce a 100g potato, it takes 25 litres of water, for 1 apple, it takes 70 litres, for 1 hamburger (150g) it takes 2400 litres! [Hoekstra AK & Chapagain AK (2007) Water footprints of nations: water use by people as a function of their consumption pattern Water Resource Management 21: 35-48]

Thinking you might switch to eating sea creatures instead, afterall, they don't produce methane or take up land area do they? If everyone switched to eating seafood the oceans would soon be completely depleted. Seventy seven percent of world fisheries are either "fully exploited", "over-exploited" or "depleted" [State of World Fisheries and Aquaculture 2005, FAO]. The burgeoning human population already has many species on the brink of collapse. Nor is factory farming of fish a sustainable source of protein for the world's human population. It takes up to 5kg of wild caught fish to produce 1kg of factory farmed fish.

## Healthy You

Would you believe what is good for the planet is also good for you? It is now widely accepted that modern western diets are to blame for the huge rise in chronic health conditions and obesity. As many Asian countries increase their intake of meat and dairy products, so do they increase their incidence of 'western' diseases. Cutting down, or better still, cutting out meat and dairy products altogether greatly reduces the risk of heart disease, many types of cancer, diabetes type II, and obesity and generally being overweight. Vegetarian diets can even reverse Type II Diabetes and some types of heart disease. [T Colin Campbell, The China Study 2006; D Ornish, Program for Reversing Heart Disease 1991]

## Take Action

So now you know what a positive force you can be for the environment, starting today. You will be amazed at how great it will be for your health too. Sure the whole world isn't going to go vegetarian tomorrow, but just like choosing an energy saving light bulb, it is a personal and positive choice that can be made.

If you choose to cut down or cut out animal products from your diet, be sure to do it properly. Try initially replacing meat with direct alternatives such as vegetarian sausages and minces. Include other protein foods in your diet such as nuts, beans, lentils, tofu and tempeh. All sound a bit daunting? Members of Vegetarian Tasmania, will be only too happy to offer support and advice on how to make the change. Go to [www.tasveg.org](http://www.tasveg.org) or email [info@tasveg.org](mailto:info@tasveg.org).

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