

## Summary - Why it's green to go vegetarian

World Population	How much meat is produced worldwide?	Why is rearing animals such an environmental issue?
<ul> <li>6.9 billion (2010) this figure is expected to rise to 9 billion by 2050.</li> </ul>	<ul> <li>Global production has risen dramatically.</li> <li>1970's - 130 million tonnes.</li> <li>2000 - 230 million tonnes.</li> <li>2005 - 141 million tonnes of seafood.</li> <li>2006 - 276 tonnes of chicken, pork, beef, etc produced</li> <li>Demand is expected to more than double by the year 2050, with livestock rising from 60 to 120 billion.</li> <li>56 billion land animals are slaughtered annually Worldwide, over 2 million land animals are slaughtered in the UK every day.</li> </ul>	<ul> <li>Raising cattle is one of the most damaging components of agriculture as they cause the most environmental damage of any non-human species through;</li> <li>over-grazing.</li> <li>soil erosion.</li> <li>Desertification.</li> <li>tropical deforestation for ranches.</li> <li>gaseous emissions/manure products.</li> <li>Feeding the world's livestock consumes 80% soya bean crops and 1/2 of all corn crops.</li> </ul>

Climate Change	Carbon Dioxide (CO <sub>2</sub> )	Methane (CH <sub>4</sub> )	Nitrous Oxide (N <sub>2</sub> O)
<ul> <li>Greenhouse gases act like the glass of a greenhouse – trapping heat from the sun to warm up the earth.</li> <li>Farmed animals produce more greenhouse gas emissions than the world's entire transport system.</li> <li>2008 saw the introduction of the 'Climate Change Act' with the aim to reduce emissions by at least 80% by 2050.</li> </ul>	<ul> <li>9% of human-related CO<sub>2</sub> emissions are caused by the livestock sector, mostly due to;</li> <li>changes in land use - forests being cleared for grazing/growing animal feed.</li> <li>use of fossil fuels for farm operations.</li> <li>Approx 0.8 million metric tons of CO<sub>2</sub> are emitted annually from the transportation of feed and animal products to places where they will be consumed.</li> </ul>	<ul> <li>Methane has around 25 times the global warming impact of CO<sub>2</sub>.</li> <li>Ruminant mammals (cows and sheep) are responsible for 37% of the total methane generated by human activity.</li> <li>There are approximately 1.38 billion cattle and 1.07 billion sheep on the planet.</li> <li>A single cow can produce as much as 500 litres of methane per day.</li> </ul>	<ul> <li>Nitrous oxide is almost 300 times as damaging to the climate as carbon dioxide.</li> <li>65% of the total quantity produced by human activity coming from livestock - mostly their manure.</li> </ul>



scarcity.

consumption.

Fishing & the Oceans	How much fish is consume	ed?	What effects is fishing having	?	What effect does fishing have on other species?
<ul> <li>Over-fishing is depleting the ocear</li> <li>Fishing practices cause untold damage to both wildlife and the sea itself.</li> <li>Industrial-scale fish- farming (aquaculture is polluting our rivers and streams.</li> </ul>	<ul> <li>In 2008 total world fisheries produced 142 million tone fish, 90 million tonnes from capture and 52 million ton from aquaculture.</li> <li>115.1 million tonnes was consumed by humans with mt destined for non-food products (e.g fishmeal/oil)</li> <li>By the year 2030 an addition 37 million tonnes of fish per will be needed.</li> </ul>	nes of les 27.2 onal r year	<ul> <li>19% of major commercial ma fish socks monitored by the FA are overexploited, 8% are depleted and 1% ranked as recovering from depletion.</li> <li>Bottom-trawling and dredging harvest oysters, clams and scallops) destroys the fragile ecosystem of the sea-bed.</li> <li>Dynamite and poison are used catch fish in South East Asia, including the use of explosives coral reefs in the Philippines.</li> </ul>	rine O (to d to on	<ul> <li>300,000 whales, dolphins and porpoises are killed every year as 'by-catch' of the fishing industries.</li> <li>Over-fishing, by-catch, climate change, invasive species and coastal development have resulted in a decline in the number of marine species, such as sharks, seabirds and turtles.</li> </ul>
Water Use & Contamination	How much water does farming use?	How	much water is used to produce meat?	Wh	at effect does animal waste have on the waterways?
<ul> <li>Over 1 billion people worldwide do not have access to clean water and more than double do not have proper sanitation.</li> <li>By 2025 there will be 1.8 billion people living with absolute water</li> </ul>	<ul> <li>Farming accounts for around 70% of all freshwater withdrawn from lakes, waterways and aquifers.</li> <li>Meat production, especially the feeding of cattle, is a particularly water-intensive process.</li> <li>Livestock production accounts for over 8% of global human water</li> </ul>	•	Meat produced in different parts of the world requires different amounts of water. Estimates of the water required to produce a kilo of beef vary, from 13,000 litres up to 100,000 litres. The water required to produce a kilo of wheat is somewhere between 1,000-2,000 litres. Agricultural products account for 73% of the total water footprint.	•	<ul> <li>Animal waste (manure), antibiotics and hormones enter the water cycle alongside chemicals from tanneries, fertilizers and the pesticides used to spray feed crops.</li> <li>Pollutants, including nitrogen, phosphorus, antibiotics and pesticides, cause a great deal of damage to aquatic and human life.</li> </ul>



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Land Use	Why	is livestock farming inefficient?	What e	ffect is this having on the forests?	Does a ve differ	egetarian diet make a ence to land use?
• 30% of the earth's entire land surface (70% of all agricultural land) is used for rearing farmed animals.	<ul> <li>Mamma feed to r gross end (80-96% cereal/g converte</li> <li>Cattle re grain in c and pigs pork.</li> </ul>	Is are inefficient converters of neat - a vast percentage of ergy (89-97%) and protein 6) contained in the rain fed to animals is not ed into edible fat/protein. quire approximately 7kg of order to generate 1 kg of beef require 4kg grain for 1 kg of	<ul> <li>Livestock 70% of t Latin Am been cle</li> <li>Deforesta emissions stored in in the loss species c about 20 biomass.</li> </ul>	a production is responsible for he Amazon deforestation in erica, where the rainforest has eared to create new pastures. The increases greenhouse gas by releasing carbon previously the trees. It is also a major driver of biodiversity, just a few of livestock now account for 0% of total terrestrial animal	<ul> <li>A typical diet requires up to 2.5 times the amount of land compared to a vegetarian diet and 5 times that of a vegan diet.</li> <li>A farmer can feed up to 30 people throughout the year with vegetables fruits, cereals and vegetable fats on one hectare of land. If the same area is used for the production of eggs, mi and/or meat the number of people fed varies from 5-10.</li> </ul>	
Sustaina	bility	How much of the cereal fed to animals?	grown is	What makes meat prod inefficient?	duction	Why a vegetarian diet?
<ul> <li>Food security exists when all people, at all times, have access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life.</li> <li>In 2010, the number of hungry people was estimated at 925 million (FAO).</li> <li>In the UK alone, more than half of tonnes of cerea of wheat and ow</li> <li>Globally one this cereal harvest a soya is used for a typical vegetari half those of a typical vegetari</li> </ul>		<ul> <li>In the UK alone, livestoor more than half of the 2 tonnes of cereal grown of wheat and over 60%</li> <li>Globally one third of the cereal harvest and aro soya is used for animal</li> <li>The amount of feed graproduce the animal produce the animal protocol vegetarian diet half those of a meat-be</li> </ul>	<ul> <li>As well as land and wa production of animal products in a set are around</li> <li>To produce meat such lamb, the ratio of fossil expenditure (in produce output (in the form of n and 57:1 respectively).</li> <li>The average fossil fuel all the animal protein products in a set are around</li> <li>based diet.</li> </ul>		<ul> <li>Studies estimate that a meat-ba diet requires up times as many resources as a vegetarian diet</li> <li>nergy input for oduction ocalories per 1 oduced, more an that for h.</li> <li>Studies estimate that a meat-ba diet requires up times as many resources as a vegetarian diet</li> </ul>	