





# **VISION FOR FAIR FOOD & FARMING**

This Vision for Fair Food and Farming seeks to achieve global adoption of food and farming policies which respect and protect the interests of people, animals and the planet. In particular, it calls for:

Good health by ensuring universal access to sufficient and nutritious food

## Sustainable farming methods which support rural livelihoods and relieve poverty

**Protection for the planet and its precious** resources: soil, water, forest and biodiversity

Reduced emissions of greenhouse gases and other pollutants from agriculture

Humane farming methods which promote the health and natural behaviour of sentient animals and avoid causing them pain and suffering

**Reduced consumption of animal products** in high-consuming populations to meet environmental, health and sustainability goals

This document outlines briefly the basis for the key statements of the Vision for Fair Food and Farming and suggests further resources and reading for those who wish to know more.

www.visionforfairfood.org



# We are facing a dilemma:

the world's population is growing, but the planet itself has little viable land left to farm, and water resources are under severe pressure. Many people are suffering from hunger, and the environment has been damaged by inappropriate farming methods. New technologies may increase productivity, but small-scale farmers may not have access to them. These technologies do not offer a complete solution to the key issue of providing enough food for all, while protecting the environment and ensuring fair treatment for animals too.

# Good health

by ensuring universal access to sufficient and nutritious food



Nearly 1 billion people are suffering from under-nutrition (FAO, 2010). This is a situation which signifies global failure to meet the Millennium Development Goals (UN, 2000). Currently it is the poor who bear the brunt of this situation, and millions of children go to sleep hungry, night after night.

The marketing of food and global trading in food commodities must be reformed so that prices of food staples are maintained at an affordable level for those on low incomes.

Trading companies should adopt the principles of Fair Trade: better prices, decent working conditions, local sustainability, fair terms of trade for farmers in the developing world and fair pay for workers. Companies should pay sustainable prices, which should never fall lower than the market price. The principles of the Green Economy should facilitate such developments.



The FAO estimates that one-third of the world's cropland is used to grow crops, not to feed people, but to feed animals (Steinfeld et al, 2006 (a)). Over 90% soy and around 40% global cereals are grown primarily for animal feed, not human consumption (Lundquist et al, 2008; Steinfeld et al, 2006(b)). Using so much of the earth's productivity to feed farm animals could only be justified if the animals produced more in output than was fed to them. Sadly this is not so.

With industrial intensive farming, research shows that to get 1kg edible beef you need to give the animal 20kg feed. For pigs the figure is around 7.3kg feed, and for chickens, around 4.5kg (Smil, 2000). This means that much of what we feed to animals is in fact wasted from the point of view of feeding the world.

A report by Oxfam on sustainable UK consumption concluded in 2009 that, "Increased demand for grains to feed livestock, coupled with the burgeoning >

demand from biofuels for feedstocks, is likely to push future food prices further beyond the limits of affordability for the world's poorest people. The recent rises in food prices have already caused misery for millions, but future price rises and pressures on food supplies are likely to be increasingly compounded by, perhaps even driven by, rising global demand for meat and dairy products" (Oxfam, 2009).

According to the 2011 Foresight Report: "Major increases in the consumption of meat, particularly grain-fed meat, would have serious implications for competition for land, water and other inputs"; and "a global increase in the proportion of calories obtained from grain-fed meat as opposed to grain will stimulate the overall demand for grain and lead to an upward pressure on grain prices" (Foresight, 2011).

It has been estimated that if the whole world ate the average US diet, heavy in animal products, the total world grain harvest could feed only 2.5 billion people (Brown, 2009).

To ensure global equity, those who cannot afford to consume balanced diets (which might include fresh vegetables, fruits and a range of cereals and some livestock products) - that is, mainly the poor in developing countries – should be supported by policy measures to achieve income levels where purchase of such products is possible.

## Sustainable farming methods which support rural livelihoods and relieve poverty

Small-scale farmers in developing countries must be supported in gaining access to adequate and appropriate animal feed and veterinary care for their farm animals. There should also be support for measures to assist with marketing of agricultural products, such as co-operatives, training and investment in rural infrastructure. It is vital that smallholders are protected from the effects of the competitive advantages enjoyed by largescale producers such as economy of scale and access to global markets.

The United Nations reports that "small farm holders are at the heart of the food security challenge" but also that "small-scale and diversified farming continues to have significant advantages over largescale monoculture systems in terms of productivity (20-60% higher yields), food production and environmental protection (including climate change mitigation)" (UN, 2011).



Wages and working conditions in the livestock sector, from farms to slaughterhouses and processing plants, must be raised to a level which ensures livelihoods, protects health and increases personal motivation.



## **Protection for the planet** and its precious resources: soil, water, forest and biodiversity



The planet's systems are in peril. Our precious global resources of soil, forests, grasslands and water are finite. But they are being overexploited - as if there were no tomorrow.

Industrial animal agriculture uses more land and more water than cereal, legume or most horticulture production. Nearly 80% of deforestation in the Brazilian Amazon results from cattle ranching (Greenpeace, 2009). Already 20% of pasture land has been degraded (Steinfeld et al, 2006(a)). Over-grazing is turning grassland into desert from north-west China to West Africa and Brazil. Conservation International reports that 23 of 35 global biodiversity hotspots are affected by livestock production (Steinfeld et al, 2006 (c)).

Intensification deprives birds of suitable habitat for feeding and breeding as a result of use of monocultures, pesticides, fertilizers, 'improvement' of semi-natural grassland, hedgerow removal and others. FAO says that the vast majority of vital food crops are pollinated by bees (FAO, 2005). Both wild bumblebees and domestic honeybees are endangered by the practices of modern agriculture (UNEP, 2010 (a)).

One third of our fellow humans live in areas suffering from a high level of water stress (Oki and Kanae, 2006). Water tables are falling in China, India, the Middle East, the United States and many other areas (Brown, 2006). Major rivers are drying up, whilst others are dangerously low at certain times of the year. Rising global temperatures will only exacerbate this dire situation.

To produce just 1kg of industrially-produced beef requires almost as much water as the annual water needs of one person, which is around 18,000 litres (Liu and Slavenije, 2008). To produce that 1kg of beef we use nearly 12 times as much water (15,500 litres) as we do to produce1kg of wheat (1,300 litres) (Hoekstra, 2010).

Water conservation measures must be adopted and farmers trained in the best irrigation methods, such as drip irrigation. The water footprint of animal (and other) products should be incorporated into commercial and international agreements and be communicated to citizens/consumers.

Livestock production is a major cause of environmental pollution, habitat damage and biodiversity loss. Pig slurry is 75 times more polluting than raw domestic sewage (Archer, 1992). Factory farms produce ammonia, sulphur dioxide and dust, all of which can harm the health of farm workers and nearby residents. Surveys have shown higher levels of lung problems in these populations (NALBOH, 2010: Pew, 2009). Ammonia emissions from large livestock units contribute to the formation of acid rain.

Over-use of nitrogen fertilizers can saturate soils, encouraging leaching of nitrates into water supplies, causing eutrophication, with potential damage not just to fish and other species, but to human health. (FAO, 1996). Use of nitrogen fertilizers must be better controlled. Alternative methods of enhancing soil fertility should be used where possible.

# **Reduced** emissions

#### of greenhouse gases and other pollutants from agriculture

Climate change is already affecting food production, livestock and farmers; these impacts are projected to increase over time, with potentially devastating effects. Agricultural systems need to adapt to these impacts.

Livestock production, on the other hand, is responsible for 18% of the global greenhouse gas emissions (GHGs) generated by human activity, making it a major contributor to global warming (Steinfeld et al, 2006(a)). Livestock is responsible for as much as 37% of our emissions of methane and 35% of nitrous oxide – both far more potent as greenhouse gases than carbon dioxide (Steinfeld et al, 2006 (a)).

Globally, we need to reduce greenhouse gas emissions by 80% by 2050. Agriculture has a role to play in mitigating its impact on climate change by, for example, more prudent use of nitrogen fertilizers, better manure management and protecting and enhancing carbon sinks such as forests and grasslands.

An increasing number of leading scientists believe that as well as technical measures to reduce emissions, we urgently need to reduce the greenhouse gas footprint of our food by reducing consumption of animal products (FCRN, 2008).

The World Bank says: "As a global public good, urgent action by the global community is required. This should start with creating awareness at the highest political levels because livestock emissions have not yet been addressed by global decision-making institutions" (World Bank, 2005).



Agricultural policies must not only be based on sound environmental principles, but must encompass long term impact on the climate. Forests and grasslands sequester carbon and must be protected and enhanced. Pastureland used for grazing farm animals can act as an environmentally beneficial carbon "sink" (Rotz et al, 2009).

Practical measures to reduce the amount of methane and nitrous oxide associated with livestock production need developing and adoption. Agricultural intensification can have negative impacts on animal welfare and any climate change mitigation measure which affects animals should undergo an assessment of its impact on animal health and welfare before adoption. Developed countries may need to introduce greenhouse gas emission taxes on livestock products. This could be partially offset by payment for carbon sequestration in grassland.



## Humane farming methods which promote the health and natural behaviour of sentient animals and avoid causing them pain and suffering



#### A major problem in animal farming is the impact of intensive, industrial 'factory farming' on the welfare of the animals themselves.

Animals are sentient beings. They can feel pain, fear, anticipation and pleasure. They can suffer. The Treaty of Lisbon, 2009, binding within the European Union, recognizes that animals are sentient beings and that their welfare must be protected (EU, 2008). Major veterinary bodies across the world have supported the call for a Universal Declaration on Animal Welfare to be adopted by the United Nations (WSPA, u.d.).

Factory farming abuses animals by denying their sentience, breeding them for such high rates of productivity that their own bodies are no longer capable of a normal life span, and keeping them in conditions of confinement, isolation or overcrowding so that their psychological, social and behavioural needs are thwarted.

Millions of animals are reared in totally abhorrent conditions: dairy cows permanently on concrete, pregnant pigs and veal calves confined in crates so narrow they cannot turn round, and laying hens in cages in which they cannot even stretch their wings.

Large scale factory farming has so many adverse effects on people, animals and the planet, that it is ethically and practically unsustainable.

All countries should adopt legal protection for animals and place a duty of care on the keepers of animals.

Regulations to protect the welfare of farm animals should be adopted. These could be based on the internationally recognised Five Freedoms (Farm Animal Welfare Council, u.d.):

#### The Five Freedoms

- **1. Freedom from Hunger and Thirst** by ready access to fresh water and a diet to maintain full health and vigour.
- 2. Freedom from Discomfort by providing an appropriate environment including shelter and a comfortable resting area.
- 3. Freedom from Pain, Injury or Disease by prevention or rapid diagnosis and treatment.
- 4. Freedom to Express Normal Behaviour by providing sufficient space, proper facilities and company of the animal's own kind.
- 5. Freedom from Fear and Distress by ensuring conditions and treatment which avoid mental suffering.

### **Reduced consumption of animal products** in high-consuming populations to meet environmental, health and sustainability goals

"Reducing consumption of meat and dairy products is likely to have the most significant and immediate impact on making our diets more sustainable, in which health, environmental, economic and social impacts are more likely to complement each other" (SDC, 2009).

Around half the adults in Europe are overweight or obese (OECD, 2010). In the United States, 65% of adults are overweight and 30% are classified as obese (USDHHS and USDA, 2005). There is a growing global epidemic of obesity and associated diseases such as diabetes, heart disease and certain cancers.

The World Cancer Research Fund (WCRF) and the American Institute for Cancer Research say there is now "convincing" evidence of the link between red and processed meats and colorectal cancer, the third most common cancer in the world, causing 50,000 deaths a year. They recommend that we eat a variety of mostly plant-based foods, limit consumption of red meat and avoid processed meats such as sausage, ham, bacon and salami (WCRF/AICR, 2007).

High intake of animal products is also associated with increased mortality from ischaemic heart disease. Studying the diets of 9,514 people, researchers found that eating lots of red meat increased a person's risk of suffering from a cluster of risk factors known as metabolic syndrome by 26%, compared to those who had only two servings of meat a week. The symptoms of metabolic syndrome include high cholesterol, high blood sugar and high blood pressure, all risk factors for heart disease (Lutsey et al, 2008).

Findings from a Swedish study suggest that red and processed meat consumption may increase the risk of cerebral infarction in women. Cerebral infarction is the most common kind of stroke caused by blockage of an artery that supplies blood to the brain (Truelsen et al, 2006).

Researchers at the Center for a Livable Future, Johns Hopkins Bloomberg School of Public Health, recommend public health measures to "curb the current increase in high-meat diets worldwide by changing policies to encourage diets lower in meat and saturated fat and higher in vegetable, fruits and grains" (Walker et al, 2005).

The World Health Organization says, "Industrialized countries need to reduce their meat consumption from the current 224g/person/day. Global convergence to 90g/person/day would have a significant effect on carbon levels and health" (WHO, 2008).

Whilst fish consumption can have beneficial health effects, there are health and environmental problems associated with some wild-caught and farmed fish, including toxic residues, heavy metal contamination in some species and pollution of local waters, as well as the known decline in wild fish populations.

A UK government Cabinet Office report concluded: "Evidence on health and the balance of environmental analysis suggests that a healthy, low-impact diet would contain less meat and fewer dairy products than we typically eat today" (Cabinet Office, 2008).

The United Nations Environment Programme noted that: "A substantial reduction of impacts [on the environment] would only be possible with a substantial worldwide diet change, away from animal products" (UNEP, 2010 (b)).

In recent years, 75% of emerging human diseases have originated in animals (Taylor et al, 2001). Intensive rearing of thousands of animals in enclosed environments provides an obvious environment for disease transmission and mutation of dangerous viral infections such as avian flu.

Intensive animal production relies heavily on antibiotics to treat and prevent disease outbreaks (and in some countries to promote growth in animals). Around half the world's antibiotics are used on animals (Save our Antibiotics! Alliance, in press). Over-use in animals is a contributor to the development of antibiotic-resistant bacteria, which can result in devastating illness in humans and make effective treatment very difficult. The use of such drugs in farm animals should be restricted to treatment of disease in individual animals under veterinary supervision.

Public health policy-makers, from governments to intergovernmental organisations, should promote diets lower in meat and dairy products and set an example in their public procurement policies. Such policies must be linked to their policies on livestock farming as a whole, so that production is also modified and high health, environmental and animal welfare standards incorporated.

#### References

Save our Antibiotics! Alliance (in press). 'Antibiotics in Food Animal Production: Public health and animal welfare'. Compassion in World Farming, Soil Association and Sustain

Archer J. R. and Nicholson R. J. (1992) 'Liquid Wastes form Farm Animal Enterprises', in Phillips, C. and Piggins, D. (eds) Farm Animals and the Environment. CAB International, Wallingford

Brown, L. (2009) 'Plan B 3.0: Mobilising to save civilisation'. Earth Policy Institute, Washington DC, p188 www.earth-policy.org/images/uploads/book\_files/pb3book.pdf

Cabinet Office (2008) 'Food Matters: Towards a Strategy for the 21st Century'. www.foodsecurity.ac.uk/assets/pdfs/cabinet-office-food-matters.pdf

EU (2008) Article 13 in: Consolidated Version of the Treaty on the Functioning of the European Union. Official Journal of the European Union C 115/47. http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2008:115:0047:0199:EN:PDF

FAO (2010) 'State of Food Insecurity in the World: Addressing food insecurity in protracted crises'. Food and Agriculture Organisation of the United Nations. www.fao.org/publications/sofi/en/

FAO (2005) 'Protecting the pollinators. Spotlight 2005'. Food and Agriculture Organisation of the United Nations. www.fao.org/ag/magazine/0512sp1.htm

FAO (1996) 'Control of water pollution from agriculture'. Food and Agriculture Organisation of the United Nations. www.fao.org/docrep/W2598E/W2598E00.htm

Farm Animal Welfare Council, UK (undated) 'The Five Freedoms'. www.fawc.org.uk/freedoms.htm

Food Climate Research Network and WWF-UK (2007) 'How Low Can We Go? An assessment of greenhouse gas emissions from the UK food system and the scope for reduction by 2050'. www.fcrn.org.uk

The Government Office for Science (2011) 'Foresight. The Future of Food and Farming: challenges and choices for global sustainability. Final Project Report'. The Government Office for Science, London. www.bis.gov.uk/assets/bispartners/foresight/docs/food-and-farming/11-546-future-of-food-and-farming-report

Greenpeace (2009) 'Slaughtering the Amazon'. Executive Summary. www.greenpeace.org/international/en/publications/reports/slaughtering-the-amazon/

Hoekstra, A.Y. (2010) 'The Water Footprint of Animal Products'. In: D'Silva, J. and Webster, J. The Meat Crisis: Developing more sustainable production and consumption. Earthscan, London, pg 25. ciwf.org/meatcrisis

IWMI (2007) 'Water for Food, Water for Life. A Comprehensive Assessment of Water Management in Agriculture'. Summary report. International Water Management Institute. www.iwmi.cgiar.org/Assessment/files\_new/synthesis/Summary\_SynthesisBook.pdf

Liu, J. and Slavenije, H.H.G. (2008) 'Food consumption patterns and their effect on water requirement in China'. Hydrol. Earth Syst. Sci., 12, 887-898

Lundqvist J., de Fraiture, C. and Molden, D.(2008) 'Saving Water: From Field to Fork - Curbing Losses and Wastage in the Food Chain'. SIWI Policy Brief, SIWI

Lutsey, P.L., Steffen, L.M. and Stevens, J. (2008) 'Dietary Intake and the Development of the Metabolic Syndrome'. Circulation, 117:754-761

NALBOH (2010) Understanding Concentrated Animal Feeding Operations and Their Impact on Communities. National Association of Local Boards of Health. www.cdc.gov/nceh/ehs/Docs/Understanding\_CAFOs\_NALBOH.pdf

OECD (2010) 'Health at a Glance: Europe'. OECD Publishing. www.oecd-ilibrary.org/social-issues-migration-health/health-at-a-glanceeurope-2010/overweight-and-obesity-among-adults\_9789264090316-28-en

Oki, T. and Kanae, S.(2006) 'Global hydrological cycles and world water resources'. Science 313 (5790):1068–1072. www.sciencemag.org/content/313/5790/1068.abstract

Oxfam (2009) '4-a-week: changing food consumption in the UK to benefit people and the planet'. Oxfam GB Briefing Paper. www.oxfam.org.uk/resources/policy/climate\_change/bp\_4aweek.html

Pew (2009) 'Putting Meat on the Table: Industrial Farm Animal Production in America'. Pew Commission. www.ncifap.org

Rotz, C.A. et al (2009) 'Grazing Can Reduce the Environmental Impact of Dairy Production Systems'. Plant Management Network International. Abstract at: www.ars.usda.gov/research/publications/publications.htm?seg\_no\_115=239774

Smil, V. (2000) Feeding the World: A challenge for the twenty-first century. MIT Press

Steinfeld, H., Gerber, P., Wassenaar, T., Castel, V., Rosales, M. and de Haan, C. (2006) (a) 'Livestock's Long Shadow: Environmental issues and options'. FAO, Rome, pg xxi

Steinfeld, H., Gerber, P., Wassenaar, T., Castel, V., Rosales, M. and de Haan, C. (2006) (b) 'Livestock's Long Shadow: Environmental issues and options'. FAO, Rome, pg 43

Steinfeld, H., Gerber, P., Wassenaar, T., Castel, V., Rosales, M. and de Haan, C. (2006) (c) 'Livestock's Long Shadow: Environmental issues and options'. FAO, Rome, pg 215

SDC (2009) 'Setting the Table: Advice to Government on priority elements of sustainable diets'. Sustainable Development Commission. www.sd-commission.org.uk/publications.php?id=1033

Taylor, L.H. et al. (2001) 'Risk Factors for Human Disease Emergence'. Phil Trans R Soc Lond B Biol Sci 356: 983-989

Truelsen, T., Begg, S. and Mathers, C. (2006) 'The global burden of cerebrovascular disease'. World Health Organisation. www.who.int/healthinfo/statistics/bod\_cerebrovasculardiseasestroke.pdf

UN (2010) 'United Nations Millennium Declaration'. www.un.org/millennium/declaration/ares552e.pdf

UN (2011) 'World Economic and Social Survey 2011: The Great Green Technological Transformation'. United Nations Development Policy and Analysis Division, ch. 3. www.un.org/en/development/desa/policy/wess/index.shtml

UNEP (undated). 'What is the Green Economy?' www.unep.org/greeneconomy/AboutGEI/WhatisGEI/tabid/29784/Default.aspx

UNEP (2010) (a) 'Global Honey Bee Colony Disorder and Other Threats to Insect Pollinators'. www.unep.org/Documents.Multilingual/Default.asp?DocumentID=664&ArticleID=6923&I=en

UNEP (2010) (b) 'Assessing the Environmental Impacts of Consumption and Production: Priority Products and Materials'. International Panel for Resource Management, United Nations Environment Programme. www.uneptie.org/scp/publications/details.asp?id=DTI/1262/PA

USDHHS and USDA (2005) 'Dietary Guidelines for Americans'. Department of Health and Human Services and US Department of Agriculture. www.health.gov/dietaryguidelines/dga2005/document/pdf/DGA2005.pdf

Walker, P., Rhubart-Berg, P., McKenzie, S., Kelling, K and Lawrence, R. S. (2005) 'Public health implications of meat production and consumption'. *Public Health Nutrition* 8(4), 348–356.

 $http://vegetarian.procon.org/sourcefiles/public_health_implications_of_meat\_production\_and\_consumption.pdf$ 

WCRF/AICR (2007) Food, Nutrition, Physical Activity, and the Prevention of Cancer: a global perspective. World Cancer Research Fund and the American Institute for Cancer Research. www.dietandcancerreport.org

World Health Organization (2008) 'Protecting Health from Climate Change'. Annex 1. www.who.int/world-health-day/toolkit/dyk\_whd2008\_annex1.pdf

World Society for the Protection of Animals. Universal Declaration. www.wspa.org.uk/wspaswork/udaw/Default.aspx

World Bank (2009) 'Minding the Stock: Bringing Public Policy to Bear on Livestock Sector Development'. World Bank, Washington DC, pg xv. http://siteresources.worldbank.org/INTARD/Resources/FinalMindingtheStock.pdf

#### **Further Reading**

**Compassion in World Farming (2009) Beyond Factory Farming Sustainable solutions for animals, people and the planet.** Outlines the environmental and economic factors that will impact global animal production this century, including climate change, the availability of natural resources and the rapidly growing world population. The report also presents evidence of the benefits to the environment and climate change mitigation of more extensive, humane livestock farming and responsible meat consumption. **ciwf.org/beyondfactoryfarming** 

**Compassion in World Farming and Friends of the Earth (2009) Eating the Planet: Feeding and fuelling the world sustainably, fairly and humanely**. Specially-commissioned research finds that it is possible to produce enough food for the predicted human population of 9 billion in 2050 without intensive agriculture and without further deforestation – good for animal welfare, biodiversity, people and the planet. ciwf.org/eatingtheplanet

**Compassion in World Farming (2008) Sustainable Agriculture.** The key sustainability imperatives for the future of agriculture. ciwf.org/globalwarning

**Compassion in World Farming (2006) Stop – Look – Listen: Recognising the sentience of farm animals.** The scientific evidence on animal awareness, cognition, feelings and emotions. Summary reports (2003) in French, Spanish and Portuguese. www.animalsentience.com

D'Silva, J. and Webster, J. (eds) (2010) The Meat Crisis: Developing London. www.ciwf.org/meatcrisis

Global experts discuss the key issues around climate change and agriculture, including insights on consumption and ethics. "Anyone who likes to eat and is concerned about the planet should read this visionary book" – Lester Brown, President of Earth Policy Institute and author of Plan B: Mobilising to save civilisation.

D'Silva, J. (2011) Policies for sustainable agricultural production and consumption. In Behnassi, M., Draggan, S. and Yaya, S. (eds) Global Food Insecurity: Rethinking Agricultural and Rural Development Paradigm and Policy. Springer. www.springer.com/environment/sustainable+development/book/978-94-007-0889-1

**De Schutter, O. (2009)** Twenty-sixth McDougall Memorial Lecture. Opening of the 36th Session of the FAO Conference "The Right to Food and the Political Economy of Hunger". www.srfood.org

**IAASTD (2008) Agriculture at a Crossroads. International Assessment of Agricultural Knowledge, Science and Technology for Development (IAASTD).** Compiled by 400 scientists. The IAASTD Project Director said: "Business as usual is not an option ... If we do persist with business as usual, the world's people cannot be fed over the next half-century. It will mean more environmental degradation, and the gap between the haves and have-nots will expand. We have an opportunity now to marshal our intellectual resources to avoid that sort of future. Otherwise we face a world nobody would want to inhabit." Professor Bob Watson, Director, IAASTD and Chief Scientist, Department for the Environment, Food and Rural Affairs, UK. www.agassessment.org

International Finance Corporation (2006) Animal Welfare in Livestock Operations. Good Practice Note. http://www.ifc.org/ifcext/media.nsf/Content/GPN\_AnimalWelfare

Jackson, T. (2009) Prosperity without Growth: Economics for a Finite Planet. Earthscan, London 'One of the best books of the year' – Financial Times

Jones, D.M. (2009) The School of Compassion: A Roman Catholic Theology of Animals. Gracewing, UK

Lenton, T. et al (2009) Planetary Boundaries: Exploring the Safe Operating Space for Humanity. Includes the Nitrogen cycle, water and climate thresholds. www.ecologyandsociety.org/vol14/iss2/art32/

Linzey, A. (2007) Creatures of the Same God: Explorations in Animal Theology. Winchester University Press

Linzey, A. and Cohn-Sherbok, D. (1997) After Noah: Animals and the Liberation of Theology. Continuum. Perspectives from Judaism and Christanity on the human relationship to animals.

Mang, P. (2009) Chinese beliefs, Lives and Views of Animals. Publisher: Chinese University of Politics & Law. A unique study of Chinese philosophy and literature which highlights the many references to animals and our need to protect their welfare. It was one of the Top 10 Recommended Books in Science and Culture and Science Communication of 2009 in China. Currently available only in Chinese. ciwf.org

**Masri, B.A. (2007) Animal Welfare in Islam.** 2nd edition. The Islamic Foundation, UK. This book highlights the wealth of teaching on animal welfare contained in the holy books of Islam and suggests how Muslims everywhere can incorporate this teaching into their daily lives.

**McMichael, A.J. et al (2007) Food, livestock production, energy, climate change, and health.** *Lancet* 370: 1253-1263 Proposes the model of contraction and convergence, where those on western diets cut back their consumption of meat and dairy, whilst allowing people in the poorer developing areas, e.g. in sub-Saharan Africa, to increase their consumption, with both converging at a level which is sustainable for human health and for the planet's resources and the environment.

Pollan, M. (2007) The Omnivore's Dilemma: The Search for a Perfect Meal in a Fast-food World. Bloomsbury Publishing PLC

Scully, M. (2003) Dominion: The Power of Man, the Suffering of Animals and the Call to Mercy. Saint Martin's Press. Written by a former US presidential speech writer, this book vividly describes the lives endured by animals in factory farms. "A classic defence of mercy" – Washington Post

Steinfeld, H., Gerber, P., Wassenaar, T., Castel, V., Rosales, M. and de Haan, C. (2006) Livestock's Long Shadow: Environmental issues and options. FAO, Rome. This ground-breaking report exposed the shocking finding that livestock production is responsible for 18% of anthropogenic greenhouse gas emissions. www.fao.org/docrep/010/a0701e/a0701e00.HTM

WSPA. Concepts in Animal Welfare. World Society for the Protection of Animals. Designed to facilitate teaching animal welfare at veterinary faculties worldwide. In Chinese at www.wspa.org.cn/wspaswork/education/concepts-animal-welfare-modules/concepts-animal-welfare-modules.aspx and English at www.wspa.org

WWF UK (2011) Livewell: A balance of healthy and sustainble food choices. In association with the Rowett Institute of Nutrition & Health (University of Aberdeen). www.wwf.org.uk/livewell2020

Wynne-Tyson, J. (1990) The Extended Circle: An anthology of humane thought. Cardinal Books, UK Voices of philosophers, religious leaders, writers, politicians and historians across the centuries who have called for humane treatment of the creatures with whom humans share the planet. "Until he extends the circle of his compassion to all living things, man will not himself find peace." (Albert Schweitzer, philosopher, from The Philosophy of Civilization, MacMillan, 1955).

#### D'Silva, J. and Webster, J. (eds) (2010) The Meat Crisis: Developing more sustainable production and consumption. Earthscan,



# **VISION FOR FAIR FOOD & FARMING**

The Vision is an initiative of Compassion in World Farming. visionforfairfood.org

Compassion in World Farming River Court Mill Lane Godalming Surrey GU7 1EZ UK

Tel: +44 (0) 1483 521 950 Email: info@visionforfairfood.org

Registered Charity No.1095050 A company limited by guarantee No. 04590804





ISBN 1-900156-57-1



100% post consumer reclaimed material. FSC 100% Recycled product, supporting responsible use of forest resources.