

The MEAT CRISIS

Developing More Sustainable Production
and Consumption



Edited by Joyce D'Silva
and John Webster

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the United Nations Secretary General; 'Modern farming practices and animal welfare' in *Ethics, Law and Society* Volume IV (2008); 'The urgency of change' in *The Future of Animal Farming* (Blackwell, 2008); and *Policies for Sustainable Production and Consumption* (Springer, in press) for the proceedings of the 2009 conference, 'The Integration of Sustainable Agriculture and Rural Development in the Context of Climate Change, the Energy Crisis and Food Insecurity'.

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Joyce D'Silva

Foreword

I am delighted to be able to write the foreword for this book, *The Meat Crisis: Developing More Sustainable Production and Consumption*, which has valuable contributions from a number of distinguished authors. I am very happy that Earthscan, a publisher that evokes a great deal of respect worldwide, has produced this extremely timely volume. There are, of course, several aspects of the meat crisis that deserve attention and which have been covered explicitly in the book, but my current focus is on the implications of the entire meat cycle for emissions of greenhouse gases, which are increasing rapidly as a result of higher meat consumption worldwide. As it happens, several societies that in the past had very low levels of meat consumption are now demanding larger quantities as a result of increased incomes and very effective marketing strategies pursued by the industry.

I have been reflecting personally on this issue for several years, particularly after I became a vegetarian myself in the realization that consuming meat was neither necessary for the good health of a human being, nor was it desirable if one was concerned about protecting the environment. However, vegetarianism was a personal preference, and I did not wish to speak about it in public. However, then in mid 2007 I was in Bangkok at the end of the plenary session of the Intergovernmental Panel on Climate Change (IPCC) where the Working Group III report, as part of the Fourth Assessment Report (AR4), was approved and released. At the end of that session a press conference was held to inform members of the media about the main findings of the report, covering a detailed assessment of mitigation measures to reduce the emissions of greenhouse gases, which are responsible for human-induced climate change. For the first time in that report we had highlighted the role of lifestyle changes as part of mitigation actions. One of the newsmen present on the occasion asked me a question regarding what kinds of lifestyle changes would reduce emissions of greenhouse gases? I responded by stating that a reduction in meat consumption would certainly be an important change in lifestyle. I had done some analysis and study of the meat cycle in arriving at this view. Having made this statement public, which did get coverage in several parts of the world, I felt that this was an issue that needed the attention of the global community, because otherwise

all the economic and demographic changes that were taking place round the world will result in increased emissions of greenhouse gases from this sector. I am delighted to observe that wherever I have spoken on the subject or written about it I have received a very enthusiastic response. Of course, there are some who ridicule the results I present and the conclusions I offer, because some believe that the concentration of greenhouse gases in the atmosphere has nothing to do with climate change and others completely ignore their role in being responsible for emissions from the meat cycle. But as I have always conveyed in my speeches, 'if you eat less meat you would be healthier and so would the planet'. We really need to ensure that we keep both aspects of this statement in mind and while perhaps the ideal situation would be for human beings to avoid meat consumption completely, for a start we should give up red meat and perhaps consume lesser quantities of poultry products as well. I would not suggest any ordinance or laws in this direction because dietary preference is very much a matter of individual choice and we only need to appeal to reason and logic to ensure that people understand the benefits of lifestyle changes that they follow by reducing dependence on diets consisting of animal protein.

I am sure this book will create a major influence through wide readership all over the world and I hope people will act on the basis of the knowledge that is conveyed through its pages.

R. K. Pachauri

*Director General, The Energy and Resources Institute (TERI) and Chairman,
Intergovernmental Panel on Climate Change (IPCC)*

List of Acronyms and Abbreviations

ADF	Assured Dairy Farms
AICR	American Institute for Cancer Research
ARC	Alliance of Religions and Conservation
AREN	Association for the Re-dynamization of Livestock in Niger
BAU	'business-as-usual'
BSE	Bovine Spongiform Encephalopathy
CAFO	Confined Animal Feeding Operation
CAP	Common Agricultural Policy
CEH	Centre for Ecology and Hydrology
CH ₄	methane
CHD	Coronary Heart Disease
CIA	Central Intelligence Agency
CO ₂ e	CO ₂ equivalent
CSIRO	Commonwealth Scientific and Research Organization
CVD	Cardiovascular Disease
DALY	Disability Adjusted Life Years
Defra	UK Department for the Environment, Food and Rural Affairs
DHA	docosahexaenoic acid
EASAC	European Academies Science Advisory Council
EBLEX	English Beef and Lamb Executive
EEA	European Environment Agency
EFSA	European Food Safety Authority
EU	European Union
FABRE	Farm Animal Breeding and Reproduction Technology Platform
FAO	Food and Agriculture Organization of the United Nations
FCE	Feed Conversion Efficiency
FCR	Feed Conversion Ratio
FDA	Food and Drug Administration
FSC	Forest Stewardship Council
GE	genetically engineered
GHG	greenhouse gas

GM	genetically modified
GMO	genetically modified organism
GPS	Global Positioning System
ha	hectare
HACCP	Hazards Analysis Critical Control Point
IAASTD	International Assessment of Agricultural Science and Technology Development
IPCC	Intergovernmental Panel on Climate Change
IUCN	International Union for Conservation of Nature
LCA	life cycle analysis
l/day	litres per day
LRNI	Lower Reference Nutrient Intake
LU	livestock units
MAFF	UK Ministry of Agriculture, Fisheries and Food (replaced by Defra)
MBM	meat and bone meal
MDPs	meat and dairy products
ME	metabolizable energy
MRSA	Methicillin-Resistant <i>Staphylococcus Aureus</i>
MSC	Marine Stewardship Council
mt	millions of tonnes
NCD	Non-Communicable Diseases
NDFAS	National Dairy Farm Assured Scheme
NGO	non-governmental organization
NHS	National Health Service
NINA	Norwegian Institute for Nature Research
NO ₂	nitrous oxide
OECD	Organisation for Economic Co-operation and Development
OIE	Office International des Epizooties
PE	Partial Equilibrium
PEF	Production Efficiency Factor
PMQ	Personal Meat Quota
ppb	parts per billion
ppm	parts per million
REDD	Reducing Emissions from Deforestation and Degradation
SACN	Scientific Advisory Committee on Nutrition
SARS	Severe Acute Respiratory System
SCC	Somatic Cell Counts
SDC	Sustainable Development Commission
TERI	The Energy and Resources Institute (India)
TMR	Total Mixed Ration
USDA	US Department of Agriculture

UV	ultraviolet
WCRF	World Cancer Research Fund
WHO	World Health Organization
WTO	World Trade Organization
WWF	World Wildlife Fund

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