ENVIRONMENTAL PROBLEMS RELATED TO FOOD PRODUCTION AND CONSUMPTION

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> *If people of faith are serious about the environment, then a disciplined approach in modifying their lifestyles is paramount. Making meaningful changes in ourselves will serve as a commitment and example for others to emulate. Let us strive to make the world a better place for future generations.*

The world is facing an increasing environmental crisis in terms of global warming, air, soil and water pollution, melting of polar ice and rising sea levels with the potential to submerge coastal areas, negative health effects such as chronic respiratory diseases, loss of habitat and wildlife, loss of topsoil and land degradation and desertification, adverse weather conditions and many unforeseen deleterious effects. Scientists all over the world are giving dire warnings of the impending disasters if man does not make significant changes in his lifestyle to ease the negative environmental burden. We are in "shrinking world" due to increasing world population at the rate of about three people per second on the world population counter. Wiser use of resources in all aspects of life is essential, and urgently.

The world press and public domain knowledge are replete with discussions of various causes from energy generation, transportation, factories and automobiles to creation of waste products, all of which impact on the environment negatively. In this presentation I would discuss the environmental problems related to food production and consumption.

The Food and Agriculture Organization of the U. N. – Updated 2006 stated:

"A new report from FAO says livestock production contributes to the world's most pressing environ-mental problems, including global warming, land degradation, and air and water pollution.

"Since 1950, some two million sq km of rainforest and its associated biodiversity has been lost, with livestock ranching being a major culprit, especially in Latin America.

"The livestock sector is by far the single largest anthropogenic user of land. Grazing occupies 26 percent of the Earth's terrestrial surface, while feed crop production requires about a third of all arable land. Expansion of grazing land for livestock is a key factor in deforestation, especially in Latin America: some 70 percent of previously forested land in the Amazon is used as pasture, and feed crops cover a large part of the reminder. About 70 percent of all grazing land in dry areas is considered degraded, mostly because of overgrazing, compaction and erosion attributable to livestock activity.

"FAO estimated that livestock are responsible for 18 percent of greenhouse gas emissions, a bigger share than that of transport. It accounts for nine percent of anthropogenic carbon

dioxide emissions, most of it due to expansion of pastures and arable land for feed crops. It generates even bigger shares of emissions of other gases with greater potential to warm the atmosphere: as much as 37 percent of anthropogenic methane, mostly from enteric fermentation by ruminants, and 65 percent of anthropogenic nitrous oxide, mostly from manure.

“Livestock production also impacts heavily the world's water supply, accounting for more than 8 percent of global human water use, mainly for the irrigation of feed crops. Evidence suggests it is the largest sectoral source of water pollutants, principally animal wastes, antibiotics, hormones, chemicals from tanneries, fertilizers and pesticides used for feed crops, and sediments from eroded pastures.

The sheer quantity of animals being raised for human consumption also poses a threat of the Earth's biodiversity. Livestock account for about 20 percent of the total terrestrial animal biomass, and the land area they now occupy was once habitat for wildlife. In 306 of the 825 terrestrial eco-regions identified by the Worldwide Fund for Nature, livestock are identified as "a current threat", while 23 of Conservation International's 35 "global hotspots for biodiversity" - characterized by serious levels of habitat loss - are affected by livestock production.

DEPT. FOR ENVIRONMENT FOOD AND RURAL AFFAIRS (U. K.)

On the topic of animal farming in the U. K. several threats are identified.

The potential threats include:

-prolonged and more frequent droughts
-changes in rainfall distribution
-more storms and other extreme weather events
-rising sea levels
-increased and changing pest loads
-increased risk of heat stress in livestock farming
-possible changes in soil water balance.
-There also may be opportunities for new crops and enterprises as temperatures increase and growing seasons lengthen.

36% of the UK’s methane emissions, a greenhouse gas 21 times more potent than carbon dioxide, come from livestock and livestock manures. 67% of the UK’s nitrous oxide emissions, a greenhouse gas 310 times more potent than carbon dioxide, also come from agriculture, partly from livestock manures but mainly from the use of artificial fertiliser.

From The Times
October 16, 2007

Joanna Lumley stated, "Sadly it's cows themselves who are a big part of the problem, churning out massive amounts of methane in their burps and farts, and yet more from the decomposition of their liquid slurry. Carbon dioxide emissions are greatest from the massive deforestation carried out, mainly in Brazil, to raise beef cattle or to grow swaths of soya beans for turning into animal feed, a valuable export.

Based on the best scientific evidence to date, in a report out today Compassion in World Farming calculates that to reduce our impact on climate change we need to reduce consumption of meat and dairy products in line with government carbon reduction targets, that is, by one third by 2020 and by 60 per cent by 2050.

Only last month *The Lancet* published an article from public health experts in three countries, which said that cutting meat consumption in developed countries from the current 200-250g per person per day to 90g per day would help to reduce obesity and have several other health benefits, including a likely reduction in colorectal cancer."

From MacLean's Magazine, April 18, 2007
(NICHOLAS KOHLER)

Last year, in "How Canada Performs: A Report Card on Canada," the Conference Board of Canada ranked us 14th out of 17 industrialized countries on a range of environmental indicators (Belgium, Australia and the United States rounded out the list).

"Among the 30 nations that belong to the Organization of Economic Cooperation and Development, Canada ranks 28th in its performance on such key indicators as energy and water consumption, greenhouse gas emissions and air pollution, the David Suzuki Foundation concluded in 2004 in "Sustainability Within a Generation: A new vision for Canada."

From the Internet

BIOPLILE MAGAZINE

"It takes, on average, 28 calories of fossil fuel energy to produce 1 calorie of meat protein for human consumption, [whereas] it takes only 3.3 calories of fossil-fuel energy to produce 1 calorie of protein from grain for human consumption. – David Pimentel, Cornell University

Today, more than 70 percent of the grain produced in the United States is fed to livestock, much of it to cattle. – Jeremy Rifkin, Los Angeles Times May 2002

"The irony of the food production system is that millions of wealthy consumers in developed countries are dying from diseases of affluence – heart attacks, strokes, diabetes, and cancer – brought on by gorging on fatty grain-fed beef and other meats, while the poor in the Third World are dying of diseases of poverty brought on by being denied access to land to grow food grain for their families. – Jeremy Rifkin, Los Angeles Times

"Nothing will benefit human health and increase chances of survival of life on Earth as much as the evolution to a vegetarian diet."

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In a paper by Douglas Dunn "Eating Without Killing -
Vegetarian Health without animal cruelty" Word Wizards communications 1999, 2000 stated the following:

The amount of land needed to produce a one-year food supply for a person who has to support a meat-eating habit is 3.25 acres. The amount of land needed to produce a one-year food supply for a pure vegetarian is 1/6 acre. As cited by John Robbins in his book *Diet for a New America,* Lester Brown of the Overseas Development Council has estimated that if Americans would reduce their consumption of meat by only 10%, the amount of grain wasted on animal feed that could be diverted for direct human consumption would be sufficient to adequately feed every one of the 60 million people who die from hunger each year.

Producing one pound of meat requires about *2,500 gallons of water*. Those who eat meat require more than twelve times as much water as is needed for a pure vegetarian.

The Natural Resources Argument

User of more than half of all water used for all purposes in the U.S.: ***livestock production***
Amount of water used in production of the average cow: ***sufficient to float a destroyer***
Gallons of water needed to produce a pound of wheat: ***25*** Gallons of water needed to produce a pound of California beef: ***5,000*** Years the world's known oil reserves would last if every human ate a meat-centered diet: ***13*** Years they would last if human beings no longer ate meat: ***260*** Calories of fossil fuel expended to get 1 calorie of protein from beef: ***78*** To get 1 calorie of protein from soybeans: ***2*** Percentage of all raw materials (base products of farming, forestry and mining, including fossil fuels) consumed by U.S. that is devoted to the production of livestock: ***33*** Percentage of all raw materials consumed by the U.S. needed to produce a complete vegetarian diet: ***2***

Source = "Diet For A New America" by John Robbins

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